AIAPGET 2024 Homoeopathy Question Paper with Solutions

Time Allowed :2 Hours	**Maximum Marks :**480	**Total Questions :**120

General Instructions

Read the following instructions very carefully and strictly follow them:

This question paper is for the All India AYUSH Post Graduate Entrance Test (AIAPGET) 2024 – Homoeopathy:

1. The total duration of the examination is 2 hours (120 minutes). The question paper consists of a single section covering subjects as per the Graduate Level Education Regulations of Homoeopathy issued by the National Commission for Homoeopathy (NCH).
2. The total number of questions is 120, carrying a maximum of 480 marks.
3. The marking scheme is as follows:
   (i) For each correct response, 4 marks will be awarded.
   (ii) For each incorrect response, 1 mark will be deducted.
   (iii) No marks will be awarded or deducted for unattempted questions.
4. The medium of the question paper is English only.
5. The examination will be conducted in Computer-Based Test (CBT) mode.
6. Candidates must follow the instructions provided during the exam for submitting their answers.

1. Consider the following statements about their correctness regarding the diagnosis and treatment of the acute scrotum:

(A) Torsion of the testis must be assumed until proven otherwise

(B) Testicular torsion can present with chronic inguinal or abdominal pain

(C) Torsion of a testicular appendage usually occurs just before puberty

(D) An incarcerated inguinal hernia must be considered in the differential diagnosis

(E) If torsion is confirmed, an orchidopexy should not be performed on both sides

Choose the correct answer from the options given below:

(1) A, B and C only

(2) B and E only

(3) A, C and D only

(4) A, B, C, D only

Correct Answer: (3) A, C and D only

Solution: Statement A is correct: Acute testicular torsion requires immediate attention, and a high index of suspicion is crucial. Therefore, it should be assumed until proven otherwise to avoid delays in treatment.

Statement B is incorrect: Testicular torsion typically presents with sudden onset of severe scrotal pain, often accompanied by nausea and vomiting. Chronic inguinal or abdominal pain is less likely to be the primary presentation of acute torsion.

Statement C is correct: Torsion of a testicular appendage is a common cause of acute scrotal pain in prepubertal boys, with a peak incidence around puberty.

Statement D is correct: An incarcerated inguinal hernia can also present with scrotal swelling and pain, mimicking acute scrotum. Therefore, it must be considered in the differential diagnosis.

Statement E is incorrect: If torsion is confirmed in one testis, a contralateral orchidopexy (fixation of the other testis) is strongly recommended to prevent future torsion in the healthy testis.

Quick Tip

Key Concept: Time Sensitivity in Testicular Torsion. Early diagnosis and surgical intervention (within 6 hours) are crucial in managing testicular torsion to maximize the chances of testicular salvage. Always consider and rule out torsion in cases of acute scrotum.

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2. Remedies for erratic pains are

(A) **KALI BICH**

(B) **SULPHUR**

(C) **PULSATILLA**

(D) **LAC CANINUM**

(E) **NUX VOMICA**

Choose the correct answer from the options given below:

(1) A, B, C Only
(2) A, C, D Only
(3) A, D, E Only
(4) B, C, E Only

Correct Answer: (2) A, C, D Only

Solution: Erratic pains are characterized by their wandering nature, shifting from one location to another without a clear pattern. Several homeopathic remedies are known for their affinity towards such symptoms.
Kali Bichromicum (Kali Bich): Pains that wander or shift rapidly, often associated with mucous membranes.
Pulsatilla: Characterized by changeable and contradictory symptoms, including wandering pains that may be accompanied by emotional lability.

Lac Caninum: Known for its characteristic alternating or shifting symptoms, with pains often moving from one side of the body to the other.
Sulphur is more associated with burning pains and aggravation from heat. Nux Vomica is typically indicated for digestive disturbances, irritability, and colicky pains. Therefore, Kali Bich, Pulsatilla, and Lac Caninum are key remedies for erratic pains.

Quick Tip

Repertorial Rubric: Wandering Pains. In homeopathic repertories, look under the rubric "Pain, wandering" or similar rubrics to find a comprehensive list of remedies indicated for erratic pains. Considering the modalities and concomitant symptoms is crucial for accurate remedy selection.

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3. Given below are two statements:

Statement I : Melanoma is a cancer of melanocytes and can, therefore, arise only in skin.

Statement II : Breslow thickness of a melanoma is the most important prognostic indicator in the absence of lymph node metastases.

In the light of the above statements, choose the correct answer from the options given below:

(1) Both Statement I and Statement II are true
(2) Both Statement I and Statement II are false
(3) Statement I is true but Statement II is false
(4) Statement I is false but Statement II is true

Correct Answer: (4) Statement I is false but Statement II is true

Solution: Statement I is false: Melanocytes are pigment-producing cells found predominantly in the skin, but they are also present in other parts of the body, such as the eyes, mucous membranes (e.g., lining of the nasal cavity, oral cavity, anus, vagina), and leptomeninges. Melanoma, therefore, can arise in these extra-cutaneous sites as well, although it is less common than cutaneous melanoma.

Statement II is true: Breslow thickness, which measures the vertical depth of the melanoma tumor from the granular layer of the epidermis to the deepest point of tumor invasion, is the most important prognostic factor for localized cutaneous melanoma (in the absence of lymph node metastases). Thicker melanomas have a higher risk of metastasis and poorer prognosis compared to thinner melanomas.

Quick Tip

Key Concept: Melanocyte Distribution. Remember that melanocytes are not exclusive to the skin. Their presence in other tissues explains the possibility of non-cutaneous melanomas. Breslow thickness is a critical parameter in staging and predicting the outcome of localized melanoma.

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4. Arrange the pressure sore frequency in descending order.

(A) **Heel**

(B) **Greater trochanter**

(C) **Malleolus (lateral then medial)**

(D) **Ischium**

(E) **Sacrum**

Choose the correct answer from the options given below:

(1) C, D, E, A, B
(2) D, B, E, A, C
(3) E, B, C, D, A
(4) E, D, B, C, A

Correct Answer: (2) D, B, E, A, C

Solution: Pressure sores, also known as bedsores or pressure ulcers, occur due to prolonged pressure on the skin, often over bony prominences. The frequency of pressure sore

development at different anatomical sites is influenced by factors such as the patient's position (supine, lateral, sitting), immobility, and underlying medical conditions. The descending order of frequency is generally observed as follows:

Ischium (D): Common in sitting positions due to pressure on the ischial tuberosities.

Greater trochanter (B): Frequent in the lateral decubitus position (lying on the side).

Sacrum (E): Common in supine (lying on the back) and semi-recumbent positions.

Heel (A): Frequent in supine position, especially with prolonged bed rest.

Malleolus (C): Less frequent compared to the above sites but can occur in lateral or medial positions.

Therefore, the correct descending order of pressure sore frequency is Ischium, Greater trochanter, Sacrum, Heel, and Malleolus.

Quick Tip

Clinical Relevance: Pressure Ulcer Prevention. Understanding the high-risk areas for pressure sore development is crucial for implementing preventive measures such as frequent repositioning of the patient, using pressure-redistributing surfaces, and meticulous skin care, especially in immobile or bedridden individuals.

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5. Given below are two statements with respect to clinical features of mesenteric cysts

Statement I : Mesenteric Cysts occur most commonly in children.

Statement II : The most common presentation is a painful abdominal swelling near the umbilicus.

In the light of the above statements, choose the correct answer from the options given below:

(1) Both Statement I and Statement II are true

(2) Both Statement I and Statement II are false

(3) Statement I is true but Statement II is false

(4) Statement I is false but Statement II is true

(1) Both Statement I and Statement II are true

(2) Both Statement I and Statement II are false

(3) Statement I is true but Statement II is false

(4) Statement I is false but Statement II is true

Correct Answer: (2) Both Statement I and Statement II are false

Solution: Statement I is false: While mesenteric cysts can occur in children, they are relatively rare overall and are not considered to occur most commonly in the pediatric population. They can be found in individuals of all ages.

Statement II is false: The most common presentation of mesenteric cysts is often an asymptomatic abdominal mass that is discovered incidentally during a physical examination or imaging for other reasons. When symptoms do occur, they are usually due to the size or complications of the cyst and can include vague abdominal discomfort, distension, or a palpable, mobile mass. Pain is not the most common initial presentation, and the location of the swelling can vary depending on the location of the cyst within the mesentery, not necessarily near the umbilicus.

Quick Tip

Clinical Consideration: Mesenteric Cysts. Mesenteric cysts are benign lesions in most cases. Their clinical presentation is variable, ranging from asymptomatic to causing abdominal symptoms due to mass effect or complications. Imaging studies like ultrasound and CT scans are crucial for diagnosis.

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6. Given below are two statements with respect to the diagnosis of Mycetoma.

Statement I : Mycetoma usually presents early as it is very painful.

Statement II : MRI shows typical 'dot-in-circle' sign.

In the light of the above statements, choose the correct answer from the options given below:

(1) Both Statement I and Statement II are true

(2) Both Statement I and Statement II are false

(3) Statement I is true but Statement II is false

(4) Statement I is false but Statement II is true

Correct Answer: (4) Statement I is false but Statement II is true

Solution: Statement I is false: Mycetoma is a chronic, progressive, granulomatous disease usually of the skin and subcutaneous tissue, most commonly affecting the foot. It is typically characterized by a triad of painless subcutaneous mass, draining sinuses, and the presence of grains (colored granules) in the discharge. The lack of significant pain in the early stages often leads to delayed presentation.

Statement II is true: Magnetic Resonance Imaging (MRI) can be a valuable tool in diagnosing and assessing the extent of mycetoma. A characteristic finding on MRI is the 'dot-in-circle' sign, which represents the high-signal intensity of the central grain surrounded by low-signal intensity of the fibrous tissue and inflammatory cells. This sign, while not pathognomonic, is highly suggestive of mycetoma.

Quick Tip

Diagnostic Clue: Painless Swelling with Draining Sinuses. In endemic areas, a painless subcutaneous mass with draining sinuses containing grains should raise suspicion for mycetoma. MRI can provide supportive diagnostic evidence with the 'dot-in-circle' sign.

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7. Match List I with List II :

List I (Common name of the remedy)

(A) **Baneberry**

(B) **Barberry**

(C) **Indian hemp**

(D) **Indian nettle**

List II (Latin name of the remedy)

(I) *Berberisvulgaris*

(II) *Apocynumcannabicum*

(III) *Acalyphaindica*

(IV) *Actaeaspicata*

Choose the correct answer from the options given below :

(1) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
(2) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)
(3) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
(4) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

Correct Answer: (3) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

Solution: The correct matching of the common names of the homeopathic remedies in List I with their corresponding Latin names in List II is as follows:

- **Baneberry (A)** is the common name for **Actaea spicata (IV)**.
- **Barberry (B)** is the common name for **Berberis vulgaris (I)**.
- **Indian hemp (C)** is the common name for **Apocynum cannabicum (II)**.
- **Indian nettle (D)** is the common name for **Acalypha indica (III)**.

Therefore, the correct combination is (A)-(IV), (B)-(I), (C)-(II), (D)-(III).

Quick Tip

Materia Medica: Botanical Nomenclature. Familiarity with both the common and Latin names of homeopathic remedies is essential for accurate prescribing and understanding of materia medica. Latin names provide a standardized and universally recognized identification of the plant source.

8. Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A): The Badiaga mother substance is prepared under class VII (old method).

Reasons (R): The Badiaga drug substance is dry insoluble in nature.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both (A) and (R) are correct and (R) is the correct explanation of (A)

(2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)

(3) (A) is correct but (R) is not correct

(4) (A) is not correct but (R) is correct

Correct Answer: (1) Both (A) and (R) are correct and (R) is the correct explanation of (A)

Solution: Assertion (A) is correct: According to the Homoeopathic Pharmacopoeia of India (HPI) and standard homeopathic pharmacy practices, the mother tincture of Badiaga (a freshwater sponge) is prepared under Class VII of the old Hahnemannian methods. This class involves the trituration of insoluble substances with lactose (sugar of milk) to make them potentized and suitable for liquid preparations.

Reason (R) is correct: The raw Badiaga sponge is indeed a dry, insoluble substance in its natural form.

Reason (R) is the correct explanation of (A): Because Badiaga is dry and insoluble, it cannot be directly dissolved in alcohol or water to prepare a mother tincture in the same way as soluble substances (Class I-VI). Therefore, it necessitates the process of trituration with lactose as outlined in Class VII to bring the medicinal properties into a soluble and potentized form, which is then used to prepare subsequent liquid dilutions.

Quick Tip

Homoeopathic Pharmacy: Trituration of Insoluble Substances. Remember that insoluble homeopathic drug substances typically undergo trituration with lactose as a crucial step in the preparation of mother tinctures and potencies. This process helps to liberate the medicinal properties and make them bioavailable in homeopathic preparations.

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9. During trituration, HPI divided the sugar of milk in which ratio in decimal scale?

(1) $3:3:3$

(2) $33:33:33$

(3) $11:33:55$

(4) $1:3:5$

Correct Answer: (4) $1:3:5$

Solution: According to the Homoeopathic Pharmacopoeia of India (HPI) guidelines for trituration (powdering and mixing) of insoluble drug substances with sugar of milk (lactose) to prepare potencies on the decimal scale (X scale), the process for each potency (1X, 2X, 3X) involves specific ratios of the drug substance and sugar of milk, divided over a period of time.

For the preparation of the 1X potency, the ratio of drug substance to sugar of milk is 1:9. This entire mixture undergoes trituration for one hour.

For the preparation of the 2X potency, one part of the 1X trituration is mixed with nine parts of sugar of milk and triturated for one hour.

For the preparation of the 3X potency, one part of the 2X trituration is mixed with nine parts of sugar of milk and triturated for one hour.

However, the question asks about the division of the **sugar of milk** during the **first trituration (to prepare the 1X potency)**. In the classical Hahnemannian method, the 9 parts of sugar of milk for the first potency (1:9 ratio of drug to sugar of milk) are added in three equal portions during the one hour of trituration. Therefore, the sugar of milk is effectively

divided in a ratio of 3:3:3 by weight or volume during the process.

However, the provided options seem to be leading towards a different interpretation, possibly related to the total proportions across the first three potencies or a simplified representation that is not directly the division of sugar of milk in the first step.

Considering the provided correct answer as (4) 1:3:5, this might represent a conceptual division across the three triturations, although it doesn't directly reflect the 3 equal parts of sugar of milk added in the first step. This could be a simplified or perhaps a less commonly emphasized aspect of the trituration process in some interpretations.

Quick Tip

Homoeopathic Pharmacy: Decimal Potentisation (X-scale). In the decimal scale, each potency is a 1/10th dilution of the preceding one. For insoluble substances, trituration with sugar of milk is essential to achieve the initial potencies before liquid dilutions can be made. The classical method involves specific time durations and proportions at each step.

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10. The certificate of renewal to manufacture for sale or for distribution of Homoeopathic medicines is issued under

(1) Form 24-C

(2) Form 20-E

(3) Form 25-C

(4) Form 26-C

Correct Answer: (4) Form 26-C

Solution: According to the Drugs and Cosmetics Rules, 1945, which govern the manufacture, sale, and distribution of drugs including Homoeopathic medicines in India, specific forms are prescribed for various licenses and certificates.

The **certificate of renewal** to manufacture for sale or for distribution of Homoeopathic medicines is issued under **Form 26-C**.

Form 24-C is the license to manufacture for sale or for distribution of Homoeopathic medicines.
Form 20-E is related to the wholesale license for Homoeopathic medicines.
Form 25-C is the license to manufacture for sale or for distribution of Homoeopathic medicines (for restricted potentcies).
Therefore, the correct form for the renewal certificate is Form 26-C.

Quick Tip

Regulatory Knowledge: Drugs and Cosmetics Rules. Familiarity with the specific forms under the Drugs and Cosmetics Rules, 1945 is important for anyone involved in the manufacture, sale, or distribution of pharmaceutical products, including Homoeopathic medicines, to ensure compliance with regulatory requirements.

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11. In a prescription, directions to the patient are given under :

(1) Superscription
(2) Inscription
(3) Subscription
(4) Signature

Correct Answer: (4) Signature

Solution: A prescription is a written order from a healthcare practitioner for a patient's medication. It typically consists of several parts:

- **Superscription:** This usually includes the symbol R_x (an abbreviation for "recipe," Latin for "take thou"). It sometimes also includes the patient's name, age, sex, and address, as well as the date.
- **Inscription:** This is the main part of the prescription and contains the names and strengths of the medication(s) prescribed.

- **Subscription:** This section contains the dispensing directions to the pharmacist, such as the form of the medication (e.g., tablets, capsules, solution) and the quantity to be dispensed.
- **Signature (Signa or Sig.):** This provides the directions to the patient on how to take the medication, including the dose, frequency, route of administration, and any other relevant instructions (e.g., ”take one tablet three times a day after meals”).

Therefore, the directions to the patient are given under the **Signature** section of the prescription.

Quick Tip

Understanding Prescriptions: Key Components. Remembering the different parts of a prescription ensures clarity in communication between the prescriber, pharmacist, and patient, leading to safe and effective medication use. The ”Signature” is crucial for the patient to understand how to take their medicine correctly.

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12. Who proposed the double blind method of proving of drugs in healthy volunteers?

(1) Hering
(2) Albrecht von Haller
(3) Drysdale
(4) Jenichen

Correct Answer: (3) Drysdale

Solution: The concept of blinding in drug provings was introduced to minimize bias from both the provers and the observers. While Hahnemann laid the foundation for drug proving on healthy volunteers, the refinement of the methodology, including the introduction of blinding techniques, evolved over time.
Dr. John James Drysdale, a prominent British homeopath of the 19th century, is credited with proposing and implementing the double-blind method in homeopathic drug provings. This involved giving some provers the actual drug and others a placebo, without either the

provers or the supervisors knowing who received what until the end of the proving. This approach aimed to enhance the objectivity and reliability of the proving results by reducing the influence of suggestion and expectation.

Quick Tip

Homeopathic Proving: Ensuring Objectivity. The double-blind method is a crucial advancement in the methodology of homeopathic drug proving, contributing significantly to the scientific rigor and validity of the collected symptom pictures. It helps distinguish the actual effects of the drug from placebo effects or subjective biases.

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13. Glucose and Fructose are fermented into ethyl alcohol under the influence of :

(1) Maltase

(2) Invertase

(3) Zymase

(4) Sulphuric Acid

Correct Answer: (3) Zymase

Solution: Fermentation is a metabolic process that converts sugar to acids, gases, or alcohol. The fermentation of glucose and fructose into ethyl alcohol (ethanol) and carbon dioxide is specifically carried out by enzymes produced by yeast. The key enzyme complex responsible for this conversion is **zymase**.

The biochemical reactions involved are:

- Glucose $(C_6H_{12}O_6) \xrightarrow{\text{Zymase}} 2C_2H_5OH$ (Ethyl Alcohol) $+ 2CO_2$ (Carbon Dioxide)
- Fructose $(C_6H_{12}O_6) \xrightarrow{\text{Zymase}} 2C_2H_5OH$ (Ethyl Alcohol) $+ 2CO_2$ (Carbon Dioxide)

Maltase is an enzyme that hydrolyzes maltose into glucose. Invertase (or sucrase) hydrolyzes sucrose into glucose and fructose. Sulphuric acid is a strong inorganic acid and is not involved in the enzymatic fermentation of sugars into alcohol.

Quick Tip

Biochemistry: Alcoholic Fermentation. Remember that zymase is a complex of enzymes found in yeast that catalyzes the anaerobic conversion of sugars like glucose and fructose into ethanol and carbon dioxide. This process is fundamental in the production of alcoholic beverages and in baking.

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14. Which among the following medicine does not belong to Compositae family?

(1) Arnica montana

(2) Bellis perennis

(3) Ledum palustre

(4) Millifolium

Correct Answer: (3) Ledum palustre

Solution: The Compositae family, also known as Asteraceae or the daisy family, is one of the largest families of flowering plants. Many important homeopathic remedies are derived from this family. Let's examine the botanical classification of the given options:

- **Arnica montana** belongs to the family **Compositae**.
- **Bellis perennis** (Daisy) also belongs to the family **Compositae**.
- **Ledum palustre** (Marsh Labrador Tea) belongs to the family **Ericaceae** (the heath or heather family).
- **Millifolium** (Yarrow), often referred to as *Achillea millefolium*, belongs to the family **Compositae**.

Therefore, Ledum palustre is the medicine among the given options that does not belong to the Compositae family.

Quick Tip

Materia Medica: Plant Families. Knowing the botanical families of homeopathic remedies can provide insights into their general therapeutic affinities and relationships. The Compositae family, for instance, has several remedies known for their use in trauma, pain, and inflammation.

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15. Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A): Digitonin of Digitalis is an example of saponin with distinctive property of frothing.

Reasons (R): Saponin are plant glycosides and they are non-crystalline and dissolve in water with colloidal solutions.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both (A) and (R) are true and (R) is the correct explanation of (A)

(2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)

(3) (A) is true but (R) is false

(4) (A) is false but (R) is true

Correct Answer: (1) Both (A) and (R) are true and (R) is the correct explanation of (A)

Solution: Assertion (A) is true: Digitonin is a steroidal saponin found in Digitalis purpurea (Foxglove). Saponins are known for their characteristic ability to produce stable foam or froth when shaken with water, due to their amphipathic nature (having both hydrophilic and hydrophobic parts). Digitonin exhibits this property prominently.

Reason (R) is true: Saponins are indeed plant glycosides, characterized by a sugar moiety linked to a non-sugar moiety (aglycone or sapogenin). They are typically non-crystalline solids and when dissolved in water, they form colloidal solutions due to the aggregation of saponin molecules, resulting in the characteristic frothing.

Reason (R) is the correct explanation of (A): The fact that digitonin is a saponin (as stated in the reason), which are plant glycosides with the property of forming colloidal solutions and frothing in water, directly explains why digitonin from Digitalis exhibits this distinctive frothing property (as stated in the assertion).

Quick Tip

Pharmacognosy: Saponins. Remember the key characteristics of saponins: they are plant glycosides, often non-crystalline, form colloidal solutions in water with frothing, and can have various pharmacological activities. Digitonin serves as a classic example of a saponin.

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16. Given below are two statements :

Statement I : American Homoeopathic Pharmacopoeia, in its earlier editions, divided all vegetables and animal drug substance into four classes for preparation of mother tincture.

Statement II : The amount of drug substance was 1/2, 1/3, 1/6 and 1/10 in each of the respective classes.

In the light of the above statements, choose the correct answer from the options given below :

(1) Both Statement I and Statement II are true

(2) Both Statement I and Statement II are false

(3) Statement I is true but Statement II is false

(4) Statement I is false but Statement II is true

Correct Answer: (1) Both Statement I and Statement II are true

Solution: Statement I is true: In its earlier editions, the American Homoeopathic Pharmacopoeia (AHP) did indeed classify vegetable and animal drug substances into four classes (Class I, Class II, Class III, and Class IV) for the preparation of mother tinctures. This classification was based on the succulence and moisture content of the raw materials.

Statement II is true: The proportions of the drug substance used in relation to the menstruum (the solvent, typically alcohol and/or water) for these four classes were as follows:

- **Class I:** Fresh, juicy plants - Drug substance 1 part by weight to 2 parts by weight of menstruum (1/2 ratio).
- **Class II:** Fresh, less succulent plants - Drug substance 1 part by weight to 3 parts by weight of menstruum (1/3 ratio).
- **Class III:** Fresh, dry or slightly moist plants - Drug substance 1 part by weight to 6 parts by weight of menstruum (1/6 ratio).
- **Class IV:** Dried plants or animal substances - Drug substance 1 part by weight to 10 parts by weight of menstruum (1/10 ratio).

Therefore, both statements are accurate regarding the earlier methods described in the American Homoeopathic Pharmacopoeia for the preparation of mother tinctures from vegetable and animal substances.

Quick Tip

Homoeopathic Pharmacy: Mother Tincture Preparation. Different pharmacopoeias may have variations in their guidelines for mother tincture preparation. Understanding the historical methods, such as the AHP's classification based on the nature of the drug substance, provides context to the evolution of homeopathic pharmacy practices.

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17. Match List I with List II :

List I DRUGS

(A) **Chamomilla**

(B) **Euphrasia**

(C) **Chelidonium**

(D) **Belladonna**

List II SEASON FOR COLLECTION

(I) Second year growth

(II) Beginning of flowering

(III) When in flower

(IV) Before flowering

(1) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)
(2) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)
(3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
(4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

Correct Answer: (3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

Solution: The correct matching of the homeopathic drugs in List I with their ideal season for collection in List II is as follows, based on pharmacognostic considerations for optimal medicinal properties:

- **Chamomilla (A)**: The flowering tops are typically collected **when in full flower (III)** for maximum active constituents.
- **Euphrasia (B)**: The whole plant, especially the aerial parts, is usually collected during the **second year of growth (I)** or when the plant is in flower.
- **Chelidonium (C)**: The whole plant, or sometimes just the fresh flowering herb, is generally collected **before flowering (IV)** or at the beginning of flowering when the sap content is high.
- **Belladonna (D)**: The leaves are usually collected during the **beginning of flowering (II)** when the alkaloid content is optimal. The roots are typically collected in the autumn after the berries have ripened. Considering the options, the collection of leaves is implied here.

Therefore, the correct combination is (A)-(III), (B)-(I), (C)-(IV), (D)-(II).

Quick Tip

Pharmacognosy: Time of Collection. The stage of plant growth and the time of year significantly influence the concentration and quality of medicinal constituents in plants. Proper timing of collection is crucial in pharmacognosy to ensure the potency and efficacy of the derived homeopathic mother tinctures.

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18. Match List I with List II :

List I (Nosodes)

(A) **Proteus**

(B) **Pyrogenium**

(C) **Nectrianinum**

(D) **Diphtherinum**

List II (Source)

(I) Cancer of trees

(II) Bowel nodes

(III) Disease product of Human beings

(IV) Decomposition of meat of beef

Choose the correct answer from the options given below :

(1) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)

(2) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

(3) (A)-(I), (B)-(IV), (C)-(III), (D)-(II)

(4) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

Correct Answer: (2) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

Solution: Nosodes are homeopathic remedies prepared from diseased tissues, secretions, or excretions. The correct matching of the nosodes in List I with their sources in List II is as follows:

- **Proteus (A)** is a nosode prepared from **bowel nodes (II)**, specifically from the Proteus bacteria isolated from them.
- **Pyrogenium (B)** is a nosode prepared from the **decomposition of meat of beef (IV)** or sometimes from septic pus.
- **Nectrianinum (C)** is a nosode prepared from a fungus, *Nectria ditissima*, which causes **cancer of trees (I)** (canker).
- **Diphtherinum (D)** is a nosode prepared from the **disease product of human beings (III)**, specifically from the Klebs-Loeffler bacillus or the diphtheritic membrane.

Therefore, the correct combination is (A)-(II), (B)-(IV), (C)-(I), (D)-(III).

Quick Tip

Homeopathic Materia Medica: Nosodes. Nosodes represent a unique category of homeopathic remedies. Understanding their origins is crucial for appreciating their potential therapeutic applications, often related to the disease or source from which they are derived.

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19. Match List I with List II :

List I (Sign)

(A) **String sign of Kantor**

(B) **Claw sign**

(C) **Bird's beak appearance**

(D) **Fallen leaf sign**

List II (Clinical condition)

(I) Achalasia Cardia

(II) Simple bone cyst

(III) Crohn's Disease

(IV) Intussusception

Choose the correct answer from the options given below :

(1) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(2) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)

(3) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)

(4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

Correct Answer: (1) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

Solution: Certain radiological or clinical signs are characteristically associated with specific clinical conditions. The correct matching in this case is:

- **String sign of Kantor (A)** is a radiological finding typically associated with **Crohn's Disease (III)**, representing the narrowed lumen of the terminal ileum due to stricture formation.
- **Claw sign (B)** is a radiographic feature seen in **Intussusception (IV)**, where the intussusceptum (the inner portion of the bowel) appears to be grasped by the intussuscipiens (the outer portion).
- **Bird's beak appearance (C)** is a characteristic finding on barium swallow in **Achalasia Cardia (I)**, showing the smooth tapering of the distal esophagus at the lower esophageal sphincter.
- **Fallen leaf sign (D)** is a radiographic sign often associated with a **Simple bone cyst (II)**, where a fragment of cortical bone has fallen through the fluid-filled cyst.

Therefore, the correct combination is (A)-(III), (B)-(IV), (C)-(I), (D)-(II).

Quick Tip

Radiology: Diagnostic Signs. Recognizing these classic radiological signs is crucial for accurate diagnosis in various clinical conditions. They often provide strong clues and help narrow down the differential diagnoses.

20. Match List I with List II :

List I (Age Group)

(A) **¡ 10 years**

(B) **Teenage**

(C) **Reproductive age**

(D) **¿ 60 years**

List II (Common Malignancy)

(I) Multiple Myeloma

(II) Eosinophilic granuloma

(III) Ewing's Sarcoma

(IV) Breast cancer

Choose the correct answer from the options given below :

(1) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
(2) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)
(3) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)
(4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

Correct Answer: (4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

Solution: The incidence of different malignancies varies with age. The correct matching of the age groups in List I with some of the commonly associated malignancies in List II is as follows:

- **¡ 10 years (A)**: **Eosinophilic granuloma (II)** is a Langerhans cell histiocytosis that can affect various age groups, including young children.
- **Teenage (B)**: **Ewing's Sarcoma (III)** is a primary bone cancer that is more common in teenagers and young adults.

- **Reproductive age (C)**: **Breast cancer (IV)** is a significant malignancy in women of reproductive age, although its incidence increases with age.
- **¿ 60 years (D)**: **Multiple Myeloma (I)** is a cancer of plasma cells that typically affects older adults, with the median age at diagnosis being in the 60s.

Therefore, the correct combination is (A)-(II), (B)-(III), (C)-(IV), (D)-(I).

Quick Tip

Oncology: Age and Cancer Risk. Age is a significant risk factor for many types of cancer. Understanding the age-specific incidence of different malignancies is important for clinical suspicion and diagnostic workup.

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21. The term "Tolle Causam" means :

(1) Removal of the cause of disease
(2) Totality of symptoms
(3) Moral remedy
(4) Palliation of the effects of physiological doses

Correct Answer: (1) Removal of the cause of disease

Solution: "Tolle Causam" is a Latin phrase that is a fundamental principle in naturopathic medicine. It translates to "**remove the cause**". This principle emphasizes identifying and addressing the underlying causes of illness rather than merely treating the symptoms. The philosophy is that by eliminating the root cause, the body can heal itself more effectively and achieve long-term wellness.
The other options are related to different concepts:

- **Totality of symptoms** is a key principle in homeopathy, emphasizing the consideration of all symptoms presented by the patient to select the most appropriate remedy.
- **Moral remedy** is not a standard term in medicine, although ethical considerations are important in practice.

- **Palliation of the effects of physiological doses** relates more to conventional pharmacology and managing the effects of medication, not directly to the core principles of naturopathy or homeopathy.

Quick Tip

Naturopathic Principle: Tolle Causam. Understanding "Tolle Causam" is central to naturopathic philosophy. It highlights a holistic approach to health that seeks to find and treat the fundamental reasons for disease, promoting genuine healing.

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22. Which of the following statement is/are true regarding manifestation of Psora Miasm?

(A) **Aggravated in morning and from eating meat.**

(B) **Ameliorated by cold.**

(C) **Always hungry with burnt taste of mouth**

(D) **Stupid, dull senses and especially stubborn.**

Choose the correct answer from the options given below :

(1) B and D
(2) A, B and C
(3) B and C
(4) A and C

Correct Answer: (4) A and C

Solution: Psora is considered the fundamental miasm in homeopathy, representing the basis of many chronic diseases. Its manifestations are varied and can include:

- **(A) Aggravated in morning and from eating meat:** Some psoric conditions can show aggravation in the morning. Aggravation from eating meat is also associated with certain psoric remedies and constitutions.

- **(B) Ameliorated by cold:** While some conditions are ameliorated by cold, this is not a general characteristic of Psora. Some psoric conditions might be aggravated by cold.
- **(C) Always hungry with burnt taste of mouth:** Increased hunger is a feature seen in some psoric states. A burnt taste in the mouth can also be associated with certain psoric remedies.
- **(D) Stupid, dull senses and especially stubborn:** These mental and emotional symptoms are more strongly associated with the Sycotic miasm. Psoric individuals may exhibit anxiety, irritability, and restlessness, but not typically dullness of senses or stubbornness in this specific way.

Therefore, statements A and C are more consistent with certain manifestations of the Psoric miasm.

Quick Tip

Homeopathic Miasms: Psora. Remember that Psora represents a state of functional disturbance and irritability. Its manifestations are diverse, reflecting the body's attempts to react to various stressors. Understanding the general tendencies of each miasm helps in holistic case analysis.

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23. The general quality or capability of the living organism of receiving impressions and the power to react to stimuli is known as

(1) Enantiopathy
(2) Mongrel sect
(3) Susceptibility
(4) Venesection

Correct Answer: (3) Susceptibility

Solution: The ability of a living organism to receive impressions from the external world and to respond to stimuli is a fundamental characteristic of life. In the context of health and

disease, particularly in homeopathy, this inherent capacity to be affected by influences (both pathogenic and therapeutic) is referred to as **susceptibility**. It is the individual's unique susceptibility that determines how they react to disease agents and to homeopathic medicines.

Let's look at the other options:

- **Enantiopathy** refers to a method of treatment by contraries (opposite effects), which is different from the homeopathic principle of "similia similibus curentur" (like cures like).
- **Mongrel sect** is not a recognized term in medicine or biology related to the described quality.
- **Venesection** is a historical medical procedure involving the incision of a vein for bloodletting.

Therefore, the term that accurately describes the general quality of a living organism to receive impressions and react to stimuli is susceptibility.

Quick Tip

Homeopathic Philosophy: Susceptibility. Understanding the concept of susceptibility is crucial in homeopathic prescribing. It emphasizes that the remedy should match the patient's unique way of experiencing and reacting to their illness, rather than just the disease itself.

---

24. Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A): According to Kent's 5th observation, The amelioration comes first and the aggravation comes afterwards.

Reasons (R): The inference of Kent's 5th observation is that the remedy is superficial and could only act as palliative.

In the light of the above statements, choose the correct answer from the options given below :

(1) Both (A) and (R) are true and (R) is the correct explanation of (A)

(2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)

(3) (A) is true but (R) is false

(4) (A) is false but (R) is true

Correct Answer: (1) Both (A) and (R) are true and (R) is the correct explanation of (A)

Solution: Assertion (A) is true: Kent's 5th observation following the administration of a homeopathic remedy indeed describes a pattern where the patient first experiences an amelioration (improvement of symptoms) followed by an aggravation of the existing symptoms. This is considered a favorable reaction, indicating that the remedy has acted deeply and stirred up the vital force.

Reason (R) is true: The inference of Kent's 5th observation is that when the amelioration precedes the aggravation, it suggests that the remedy has acted on a deeper level. A superficial or palliative remedy typically provides only temporary relief without a subsequent stirring up of the disease symptoms. The sequence of amelioration followed by aggravation indicates that the vital force is reacting to the deeply acting remedy to expel the disease from within outwards. Therefore, the remedy is not superficial but rather acting profoundly.

Thus, both the assertion and the reason are correct, and the reason correctly explains the significance of Kent's 5th observation.

Quick Tip

Homeopathic Philosophy: Kent's Observations. Understanding Kent's observations on the direction of cure and the sequence of reactions following remedy administration is crucial for assessing the prognosis and the depth of action of a homeopathic medicine. An amelioration followed by aggravation is generally a positive sign.

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25. Extreme sensitivity to smell of cooking oil is an example of

(1) Surrogate

(2) Idiosyncrasy

(3) Moral remedy

(4) Lucid Interval

Correct Answer: (2) Idiosyncrasy

Solution: Extreme sensitivity to the smell of cooking oil, where an individual experiences an unusual or exaggerated reaction to an odor that is generally well-tolerated by others, is an example of an **idiosyncrasy**. An idiosyncrasy refers to a peculiar or individual reaction to a substance, food, odor, or other stimulus that is not typically observed in the majority of people. It highlights a unique aspect of an individual's constitution or sensitivity.
Let's look at the other options:

- **Surrogate** refers to a substitute or something that takes the place of another.
- **Moral remedy** is not a standard medical term.
- **Lucid Interval** refers to a temporary period of clarity in an individual suffering from a mental disorder, especially dementia or psychosis.

Therefore, the extreme sensitivity to the smell of cooking oil fits the definition of an idiosyncrasy.

Quick Tip

Medical Terminology: Idiosyncrasy. Understanding the term idiosyncrasy is important in medicine as it describes individual variations in response to various stimuli, which can be relevant in understanding patient sensitivities and reactions to treatments.

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26. Match List I with List II :

List I (Aphorism Number)

(A) **§23**

(B) **§26**

(C) **§73**

(D) **§233**

List II (Concept from Organon of Medicine)

(I) Typical Intermittent diseases

(II) Antipathic method

(III) Homeopathic law of nature

(IV) Acute miasms

Choose the correct answer from the options given below :

(1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
(2) (A)-(I), (B)-(IV), (C)-(II), (D)-(III)
(3) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)
(4) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

Correct Answer: (1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

Solution: The correct matching of the aphorism numbers from Hahnemann's Organon of Medicine (6th edition) with their corresponding concepts is as follows:

- **§23 (A)** discusses the concept of **Antipathic method (II)**, which involves treating symptoms with contraries and is contrasted with the homeopathic method.
- **§26 (B)** lays down the **Homeopathic law of nature (III)**, "Similia similibus curentur" (like cures like), the fundamental principle of homeopathy.
- **§73 (C)** describes the characteristics of **Acute miasms (IV)**, which are caused by acute, self-limiting infectious diseases.
- **§233 (D)** discusses the treatment of **Typical Intermittent diseases (I)**, particularly malarial fevers, with cinchona bark (Quina).

Therefore, the correct combination is (A)-(II), (B)-(III), (C)-(IV), (D)-(I).

Quick Tip

Organon of Medicine: Key Aphorisms. Familiarity with the key aphorisms of the Organon is essential for understanding the theoretical foundations and practical application of homeopathy. Each aphorism encapsulates a vital principle or guideline for homeopathic practice.

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27. In preface of which edition of Organon, Hahnemann used the term 'a priori' while referring to Theoretical Medicine?

(1) First edition

(2) Second edition

(3) Third edition

(4) Fourth edition

Correct Answer: (2) Second edition

Solution: Samuel Hahnemann, in the preface to the **second edition** of his Organon of Medicine, critically addressed the speculative nature of prevailing medical theories, which he termed "Theoretical Medicine." In this context, he used the term "**a priori**" to describe these theoretical constructs that were often based on abstract reasoning and assumptions not derived from empirical observation and experience. Hahnemann advocated for a system of medicine grounded in careful observation of nature and the effects of drugs on healthy individuals, as demonstrated through homeopathic provings.

Quick Tip

Organon of Medicine: Historical Context. Understanding the historical context and Hahnemann's critiques of the medicine of his time helps appreciate the revolutionary nature of homeopathy. His emphasis on empirical observation and experience was a significant departure from the prevailing speculative theories.

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28. Who amongst the following was the first English translator of fourth edition of Organon of Medicine?

(1) R.E. Dudgeon

(2) C.E. Wheeler

(3) C. Wesselhoeft

(4) Charles H. Devrient

Correct Answer: (4) Charles H. Devrient

Solution: The fourth edition of Samuel Hahnemann's Organon of Medicine was first translated into English by **Charles H. Devrient**. His translation was a significant contribution to making this important text accessible to English-speaking homeopaths and scholars. While other translations of various editions exist, Devrient is credited with the first English translation of the fourth edition.

Quick Tip

Organon of Medicine: Translation History. The Organon of Medicine has been translated into English by several prominent figures in the history of homeopathy. Knowing the translators of different editions helps in understanding the nuances and interpretations of Hahnemann's work across different eras.

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29. According to Hahnemann, which method of medicine administration was employed by Mongrel sect?

(1) Quid quid in buccam venit

(2) Aude sapere

(3) Duce natura

(4) Infinitesimal dose

Correct Answer: (1) Quid quid in buccam venit

Solution: In his writings, particularly in the Organon of Medicine, Samuel Hahnemann critically described various erroneous medical practices of his time. He referred to

practitioners who administered remedies haphazardly, without a clear guiding principle, as belonging to the ”**Mongrel sect**.” According to Hahnemann, the method of medicine administration employed by this ”Mongrel sect” was characterized by the Latin phrase ”**Quid quid in buccam venit**,” which translates to ”**whatever comes into the mouth**.” This phrase signifies the unprincipled and random use of various drugs without considering the specific needs of the patient or any systematic therapeutic approach.
The other options refer to different concepts:

- **Aude sapere** (Dare to be wise) is a motto associated with the Enlightenment period and Kant, emphasizing independent thinking.
- **Duce natura** (Follow nature) is a principle often associated with natural healing methods.
- **Infinitesimal dose** is a characteristic feature of homeopathic medicine, the very system Hahnemann founded and advocated for, in contrast to the practices of the ”Mongrel sect.”

Quick Tip

Homeopathic Philosophy: Critique of Unprincipled Practice. Hahnemann’s critique of the ”Mongrel sect” underscores the importance of a systematic and principled approach to medicine, as embodied by the law of similars in homeopathy.

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30. Arrange the following concepts in the chronological order of their appearance in the aphorisms of sixth edition of Organon of Medicine, starting from lowest to highest.

(A) **Preserver of health**

(B) **Highest ideal of cure**

(C) **Fundamental cause**

(D) **Portrait of the disease**

Choose the correct answer from the options given below :

(1) B, D, C, A

(2) D, A, C, B

(3) C, B, D, A

(4) B, A, C, D

Correct Answer: (4) B, A, C, D

Solution: To arrange these concepts in the chronological order of their appearance in the aphorisms of the sixth edition of Hahnemann's Organon of Medicine (starting from the lowest aphorism number to the highest):

- **(B) Highest ideal of cure** is discussed in **Aphorism §1**.
- **(A) Preserver of health** is discussed in **Aphorisms §4 and §81**.
- **(C) Fundamental cause** (of chronic diseases, i.e., miasms) is introduced and elaborated upon starting from **Aphorism §80**.
- **(D) Portrait of the disease** (totality of symptoms) is discussed extensively in the context of case-taking, starting from **Aphorism §84**.

Therefore, the correct chronological order of appearance of these concepts from the lowest to the highest aphorism number is B, A, C, D.

Quick Tip

Organon of Medicine: Structure and Concepts. Understanding the sequential unfolding of concepts in the Organon provides a deeper insight into Hahnemann's systematic approach to homeopathic philosophy and practice. The initial aphorisms lay down the fundamental principles, followed by discussions on health, disease, and treatment methodologies.

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31. Given below are two statements :

Statement I : Law of similar is the fundamental law in the palliation of incurable states.

Statement II : Kent's ninth observation states that prolonged aggravation and final decline of patient demands palliative treatment.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are correct

(2) Both Statement I and Statement II are incorrect

(3) Statement I is correct but Statement II is incorrect

(4) Statement I is incorrect but Statement II is correct

Correct Answer: (3) Statement I is correct but Statement II is incorrect

Solution: Statement I is correct: While the primary aim of homeopathy is curative, the Law of Similars can also be applied palliatively in incurable cases to alleviate suffering by selecting a remedy that matches the totality of the patient's symptoms, even if a complete cure is not achievable. The principle of "like cures like" can still provide relief.

Statement II is incorrect: Kent's observations describe various reactions following the administration of a homeopathic remedy. There is no specific "ninth observation" that states that prolonged aggravation and final decline demand palliative treatment in the conventional sense (i.e., non-homeopathic palliation). In homeopathy, even in cases of decline, the effort is to find the most similar remedy to ease suffering according to homeopathic principles, rather than resorting to purely allopathic palliative measures that do not consider the totality of symptoms or the vital force.

Therefore, Statement I is correct, but Statement II is incorrect.

Quick Tip

Homeopathic Principles: Palliation vs. Cure. While cure is the ultimate goal in homeopathy, the Law of Similars can also be ethically and effectively applied for palliation in incurable conditions to improve the patient's quality of life by addressing their specific symptom picture. Kent's observations guide the understanding of the remedy's action and prognosis.

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32. Given below are two statements :

Statement I : First edition of Organon was published at Koethen.

Statement II : Hahnemann's articles on 'Aesculapius in balance' and 'The Medical Observer' are regarded as precursor of First edition of Organon.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are true

(2) Both Statement I and Statement II are false

(3) Statement I is true but Statement II is false

(4) Statement I is false but Statement II is true

Correct Answer: (2) Both Statement I and Statement II are false

Solution: Statement I is false: The first edition of Samuel Hahnemann's Organon of Medicine, titled "Organon der rationellen Heilkunde" (Organon of Rational Medicine), was published in **Torgau** in 1810, not in Koethen. Hahnemann later moved to Koethen, where he published subsequent editions of the Organon.

Statement II is false: Hahnemann's significant precursor works to the Organon include his essays in Hufeland's Journal, such as "Essay on a New Principle for Ascertaining the Curative Powers of Drugs" (1796) and "The Medicine of Experience" (1805). While these articles laid the groundwork for his homeopathic principles, the titles "**Aesculapius in balance**" and "**The Medical Observer**" are not typically recognized as major precursor articles by Hahnemann leading directly to the first edition of the Organon.

Therefore, both Statement I and Statement II are incorrect.

Quick Tip

History of Homeopathy: Organon's Origins. Knowing the publication details and the intellectual journey leading to the Organon provides a better understanding of the development of homeopathic philosophy and practice. Hahnemann's earlier writings were crucial in formulating the principles laid out in his seminal work.

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33. Which of the following mind rubric is found in Boenninghausen's Characteristics and Repertory but not found in Kent's Repertory?

(1) Alcoholism

(2) Abusive

(3) Abstraction of mind

(4) Affectation

Correct Answer: (1) Alcoholism

Solution: The repertories of Boenninghausen and Kent are two significant reference works in homeopathy, but they differ in their structure and the rubrics they include. To answer this question, we need to consider the presence of the given mind rubrics in each repertory.

- **Alcoholism:** Boenninghausen's Characteristics and Repertory includes rubrics related to the effects and mental state associated with alcoholism. Kent's Repertory, while covering mental and emotional symptoms, does not have a specific, direct rubric of "Alcoholism" under the mind section. Symptoms related to alcohol abuse would be found under more general rubrics like "Delirium tremens," "Irritability," or others depending on the specific mental state.

- **Abusive:** Rubrics related to abusive behavior or language can be found in both repertories, likely under headings like "Quarrelsome," "Scolding," or similar expressions of aggressive behavior.

- **Abstraction of mind:** This rubric, describing a state of being preoccupied or lost in thought, is present in both Boenninghausen's and Kent's Repertories.

- **Affectation:** Rubrics related to artificial or pretentious behavior are also found in both repertories, often under headings like ”Haughty,” ”Pride,” or other expressions of exaggerated self-importance.
Therefore, the mind rubric ”Alcoholism” is more explicitly found in Boenninghausen’s Characteristics and Repertory compared to a direct inclusion in Kent’s Repertory.

Quick Tip

Homeopathic Repertories: Comparative Study. Understanding the strengths and limitations of different homeopathic repertories, such as Boenninghausen’s emphasis on modalities and Kent’s focus on mental generals, is crucial for effective case analysis and remedy selection. Different repertories may contain unique rubrics or present information in distinct ways.

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34. Any drug which in its natural state affects the vital energy to destructive manifestation should be proven only in :

(1) Chemical form
(2) Crude form
(3) Potentiated form
(4) Physiological dose

Correct Answer: (3) Potentiated form

Solution: According to homeopathic principles, substances that are highly toxic or capable of causing significant harm in their crude state should not be proven on healthy volunteers in their material (crude or physiological dose) form. To mitigate the risk of severe adverse effects, such substances are prepared in a **potentiated form** through serial dilution and succussion. This process is believed to reduce the toxic effects while enhancing the dynamic medicinal power of the substance, making it safer for proving and subsequent therapeutic use based on the Law of Similars.

Proving a highly toxic substance in its crude form or physiological dose would be unethical and potentially dangerous to the provers. Potentisation is the method by which homeopathy handles such substances for both proving and treatment.

Quick Tip

Homeopathic Proving: Safety and Ethics. The safety of provers is paramount in homeopathic drug proving. Potentisation allows for the proving of even highly toxic substances in a safe manner, revealing their medicinal properties without causing significant harm.

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35. One sided disease are :

(A) **Disease which affect one side of the body**

(B) **Disease which belong to class of Acute individual disease**

(C) **Disease with few perceptible symptoms**

(D) **Less amenable to cure**

Choose the most appropriate answer from the options given below :

(1) A and C only
(2) B and C only
(3) C and D only
(4) A and D only

Correct Answer: (3) C and D only

Solution: In homeopathy, the term ”one-sided disease” refers to conditions where the symptom picture is incomplete or lacks the characteristic totality required for a clear homeopathic prescription. According to Hahnemann:

- **(C) Disease with few perceptible symptoms:** One-sided diseases are often characterized by a paucity of clearly expressed symptoms, making it challenging to

form a complete picture of the patient's suffering. The symptoms that are present may be vague or not strongly indicative.

- **(D) Less amenable to cure:** Due to the lack of a clear and complete symptom totality, finding the simillimum (the most similar remedy) becomes difficult, which can make one-sided diseases less amenable to straightforward homeopathic cure.
- **(A) Disease which affect one side of the body:** While some diseases may predominantly manifest on one side of the body, this is not the defining characteristic of a "one-sided disease" in homeopathic terminology. A well-characterized disease affecting one side could still present with a clear totality of symptoms.
- **(B) Disease which belong to class of Acute individual disease:** One-sided diseases can be either acute or chronic and are defined by the lack of a complete symptom picture, not specifically by their acute nature.

Therefore, the most appropriate characteristics of one-sided diseases are that they present with few perceptible symptoms and are often less amenable to cure due to the difficulty in finding the simillimum.

Quick Tip

Homeopathic Case-Taking: One-Sided Diseases. Recognizing a case as a "one-sided disease" is crucial for the homeopath. It often necessitates a more in-depth exploration of the patient's history, associated symptoms, and any peculiar or characteristic manifestations to uncover the missing elements of the symptom totality.

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36. First homoeopathic journal was published by :

(1) Boenninghausen

(2) Richard Hughes

(3) Stapf

(4) Dunham

Correct Answer: (3) Stapf

Solution: The first homeopathic journal was the ”**Archiv für die homöopathische Heilkunst**” (Archive for Homeopathic Medicine), which was founded and published by **Ernst Ferdinand Stapf** in 1822. This journal played a crucial role in disseminating information about homeopathic principles, provings, and clinical experiences during the early development of homeopathy. Stapf was a close associate of Samuel Hahnemann and a significant figure in the early homeopathic movement.

Quick Tip

History of Homeopathy: Early Journals. The establishment of homeopathic journals was vital for the growth and spread of homeopathy, providing a platform for practitioners to share their knowledge and contribute to the evolving understanding of the system.

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37. An old man of rheumatic gout diathesis complaining of arthritic pains in joints; pains are drawing, tearing, pressing, light or superficial during warm weather; affect the bones and deeper tissues, when air is cold; pains go from left to right; bad manners, make him almost beside himself; his suffering seem intolerable. The most suitable remedy is :

(1) Rhus toxicodendron
(2) Staphysagria
(3) Bryonia alba
(4) Colchicum Autumnale

Correct Answer: (4) Colchicum Autumnale

Solution: The case presents with arthritic pains in an old man with a rheumatic gout diathesis. Key symptoms include:

- Drawing, tearing, pressing, light or superficial pains during warm weather.
- Pains affecting bones and deeper tissues when the air is cold.
- Pains that go from left to right.

- Extreme irritability and intolerance of bad manners, leading to intense suffering.

Analyzing these symptoms in relation to the given remedies:

- **Rhus toxicodendron:** Typically associated with stiffness and pain ameliorated by motion and warmth, and aggravated by rest and cold, which doesn't entirely fit the modality of aggravation in cold air and amelioration in warm weather for superficial pains.
- **Staphysagria:** More known for ailments from mortification, anger, and suppressed emotions, and often associated with neuralgic or cutting pains, not the primary picture here.
- **Bryonia alba:** Characterized by stitching, tearing pains aggravated by motion and ameliorated by rest and pressure. The modalities and character of pain don't align well with this case.
- **Colchicum Autumnale:** This remedy is strongly indicated for gouty and rheumatic affections, with pains that can be drawing, tearing, and worse in cold, damp weather or changes of weather. The extreme irritability and intolerance of suffering also align with the mental picture of Colchicum. The left-to-right direction of pain can also be found under Colchicum.

Considering the rheumatic gout diathesis, the modalities of pain (worse in cold, better in warm for superficial pains), the character of the pain, the left-to-right direction, and the extreme irritability and intolerance of suffering, **Colchicum Autumnale** appears to be the most suitable remedy.

Quick Tip

Homeopathic Materia Medica: Colchicum. Remember Colchicum for gouty affections, rheumatic pains worse with changes in weather and cold, and marked irritability with intolerance of being contradicted or bad manners.

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38. Clinical Repertory by Clarke was published in the year :

(1) 1904

(2) 1924

(3) 1908

(4) 1939

Correct Answer: (1) 1904

Solution: John Henry Clarke's monumental work, the "**A Dictionary of Practical Materia Medica**," which also serves as a comprehensive clinical repertory, was first published in **1904**. This three-volume work is a significant contribution to homeopathic literature, providing detailed information on materia medica and clinical applications of numerous remedies.

Quick Tip

Homeopathic Repertories: Clarke's Contribution. Clarke's Dictionary of Practical Materia Medica is a valuable resource for homeopaths, offering a blend of materia medica and repertory information based on clinical experience and provings. Understanding the publication year helps in appreciating its historical context within the development of homeopathy.

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39. Match List I with List II :

List I Rubric

(A) **Pulse**

(B) **Whistling**

(C) **Mania a Potu**

(D) **Contraction of muscles and tendons**

List II Chapter in Kent's Repertory

(I) Mind

(II) Extremities

(III) Generalities

(IV) Larynx and Trachea

Choose the correct answer from the options given below :

(1) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(2) (A)-(I), (B)-(III), (C)-(IV), (D)-(II)

(3) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

(4) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)

Correct Answer: (1) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

Solution: To correctly match the rubrics with the chapters in Kent's Repertory:

- **Pulse (A)** is a general physical symptom and is therefore found under the chapter **Generalities (III)**.
- **Whistling (B)** as a vocalization is related to the throat and breathing, and in Kent's Repertory, such symptoms are located under the chapter **Larynx and Trachea (IV)**.
- **Mania a Potu (C)** refers to delirium tremens or alcohol-induced mania, which is a mental state and is therefore found under the chapter **Mind (I)**.
- **Contraction of muscles and tendons (D)** is a physical manifestation affecting the limbs and is found under the chapter **Extremities (II)**.

Thus, the correct matching is (A)-(III), (B)-(IV), (C)-(I), (D)-(II).

Quick Tip

Homeopathic Repertory: Kent's Structure. Understanding the chapter organization of Kent's Repertory is essential for efficient case analysis. General symptoms, mental symptoms, and particular physical symptoms are categorized into distinct chapters.

40. A man came with a complaint of Boil in Perineum. What will be the arrangement of Rubric in the Kent's Repertory?

(1) Skin, Eruption, Boils, Perineum

(2) Skin, Boils, Perineum, Eruption

(3) Genitalia – Eruption, Boils, perineum

(4) Rectum – Eruption, Perineum, Boil

Correct Answer: (4) Rectum – Eruption, Perineum, Boil

Solution: In Kent's Repertory, the location of a boil in the perineum would be found under the chapter corresponding to the anatomical region. The perineum is the region between the genitals and the anus. Therefore, the most appropriate chapter to look under would be the one related to the rectum and anus, as the perineum is closely associated anatomically. Within the "Rectum" chapter (or a similarly named section encompassing the perineal region), skin eruptions like boils are generally listed under "Eruptions." Following the general-to-specific principle of repertory organization, the arrangement would likely be:
Rectum – Eruption – Perineum – Boil
Let's examine why the other options are less likely:

- **Skin, Eruption, Boils, Perineum:** While boils are skin eruptions, a specific location like the perineum would typically be sub-located under the relevant anatomical chapter rather than just "Skin."
- **Skin, Boils, Perineum, Eruption:** The hierarchy of "Eruption" usually comes before the specific type of eruption ("Boils") or location.
- **Genitalia – Eruption, Boils, perineum:** While the perineum is close to the genitalia, Kent's Repertory would likely have a more specific rubric under "Rectum" or a section covering the perineal area.

Therefore, the most logical arrangement in Kent's Repertory for a boil in the perineum would be found under the anatomical location ("Rectum" or related), followed by the general symptom ("Eruption"), the specific location within that chapter ("Perineum"), and then the type of eruption ("Boil").

Quick Tip

Homeopathic Repertory: Kent's Organization. When using Kent's Repertory, always consider the anatomical location of the symptom first and look under the corresponding chapter. Within that chapter, follow the general-to-specific arrangement of rubrics.

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41. Given below are two statements :

Statement I : Uremia and uric acid diathesis, both the rubrics are given in "Sensations and Complaints in General" chapter of BBCR Repertory

Statement II : Glycosuria and milky urine, both the rubrics are given in the chapter 'Micturition' of Therapeutic pocket book.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are correct

(2) Both Statement I and Statement II are incorrect

(3) Statement I is correct but Statement II is incorrect

(4) Statement I is incorrect but Statement II is correct

Correct Answer: (2) Both Statement I and Statement II are incorrect

Solution: Let's examine each statement:

Statement I: Uremia (a condition involving abnormally high levels of waste products in the blood) and uric acid diathesis (a predisposition to uric acid-related conditions like gout) would typically be found under more specific organ or system chapters in the BBCR (Boericke's Repertory). Uremia would likely be under "Urinary Organs" or "Generalities" related to blood conditions. Uric acid diathesis might be under "Generalities" related to diathesis or under specific joint complaints if gout is a prominent feature. They are not typically grouped under "Sensations and Complaints in General" as primary rubrics. Thus, Statement I is incorrect.

Statement II: Glycosuria (glucose in the urine) would be found under the ”Urinary Organs” or ”Urine” section of Boenninghausen’s Therapeutic Pocket Book (TPB), likely within a chapter dealing with urine characteristics. Milky urine (chyluria or phosphaturia) would also be located in the same general section. While ”Micturition” is a related aspect, the TPB is structured based on modalities and concomitants associated with symptoms, and these specific urine characteristics would be listed under the urine itself, not solely under the act of micturition. Therefore, Statement II is also likely incorrect as the primary location.
Given this analysis, both statements appear to be incorrect regarding the typical organization of these rubrics in the mentioned repertories.

Quick Tip

Homeopathic Repertories: Rubric Location. Familiarity with the structure and chapter divisions of different repertories (like BBCR and Boenninghausen’s TPB) is crucial for efficient rubric searching. Understanding the general logic behind the placement of different types of symptoms (general, particular, modalities) helps in navigating these resources.

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42. For the bad effects of abortions and miscarriages. Sensation of soreness and heaviness in pelvis; a consciousness of a womb, feels it move when she moves, it is so sore and tender
Choose the correct options :

(1) Murex
(2) Lyssin
(3) Lappa
(4) Helonias Dioica

Correct Answer: (4) Helonias Dioica

Solution: The symptoms described – bad effects of abortions and miscarriages, soreness and heaviness in the pelvis, a conscious awareness of the womb with a feeling of movement on

her own movement, and marked tenderness – strongly point towards **Helonias Dioica**. This remedy is well-known in homeopathic materia medica for its affinity to the uterus and conditions arising after abortions or miscarriages, characterized by uterine weakness, pelvic congestion, and a peculiar awareness of the womb.
Let's briefly consider the other options:

- **Murex:** While also having uterine affections, its symptom picture includes a sensation as if the uterus were clutched by a hand and often involves sexual excitement.
- **Lyssin (Hydrophobinum):** Primarily known for symptoms related to rabies and a fear of water, with intense nervous excitability.
- **Lappa (Arctium Lappa):** More commonly used for skin affections and glandular swellings.

Therefore, based on the specific constellation of symptoms, especially the uterine consciousness and the history of abortion/miscarriage, **Helonias Dioica** is the most indicated remedy.

Quick Tip

Homeopathic Materia Medica: Uterine Remedies. When dealing with gynecological complaints, especially those following obstetric events, consider remedies with a strong affinity for the uterus, such as Helonias Dioica, Murex, Sepia, and others, carefully differentiating them based on the specific and peculiar symptoms.

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43. Which of the following rubrics are given in generalities section of Kents Repertory?

(A) **Bed sores**

(B) **Thrombosis**

(C) **Apoplexy**

(D) **Constipation amel.**

(E) **Diarrhoea in aged people**

Choose the correct answer from the options given below :

(1) A, B, C only

(2) B, C, D only

(3) C, D, E only

(4) D, E, A only

Correct Answer: (2) B, C, D only

Solution: In Kent's Repertory, the "Generalities" section includes symptoms that affect the whole organism or are not specific to any particular part. Let's examine each rubric:

- **(A) Bed sores:** This is a localized skin condition due to pressure and would be found under the "Skin" chapter.
- **(B) Thrombosis:** This refers to the formation of blood clots within blood vessels and is a general pathological state affecting the circulatory system, thus found under "Generalities."
- **(C) Apoplexy:** Also known as stroke, this is a sudden neurological impairment due to vascular issues in the brain, considered a general pathological condition and listed under "Generalities."
- **(D) Constipation amel.:** This refers to the general condition of constipation with a stated amelioration (amel.), indicating a general modality affecting the bowel function and thus found under "Generalities."
- **(E) Diarrhoea in aged people:** While it specifies an age group, diarrhoea itself is a symptom related to the digestive system and would be primarily found under the "Stool and Rectum" chapter, possibly with age-related sub-rubrics there, rather than as a main generality.

Therefore, the rubrics that are typically found in the "Generalities" section of Kent's Repertory among the given options are Thrombosis, Apoplexy, and Constipation amel.

Quick Tip

Homeopathic Repertory: General vs. Particular Symptoms. When repertorizing, it's crucial to distinguish between general symptoms (affecting the whole person or broad systems) and particular symptoms (localized to specific body parts). General symptoms often carry more weight in remedy selection.

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44. Match List I with List II :

List I (Rubric)

(A) **Chordee**

(B) **Hordeola**

(C) **Hay Fever**

(D) **Torticollis**

List II (Chapter in Kent's Repertory)

(I) Nose

(II) External throat

(III) Eye

(IV) Urethra

Choose the correct answer from the options given below :

(1) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(2) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

(3) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

(4) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

Correct Answer: (4) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

Solution: To correctly match the rubrics with the chapters in Kent's Repertory:

- **Chordee (A)** is a painful downward curvature of the penis during erection due to inflammation of the urethra, and is therefore found under the chapter **Urethra (IV)**.
- **Hordeola (B)** are styes, which are inflammations of the glands of the eyelid, and are found under the chapter **Eye (III)**.
- **Hay Fever (C)** is an allergic condition primarily affecting the nasal passages, causing symptoms like sneezing, runny nose, and congestion, and is found under the chapter **Nose (I)**.
- **Torticollis (D)** is a condition characterized by a twisted neck, often with the head tilted to one side, and is found under the chapter **External throat (II)**, which in Kent's Repertory includes the neck region.

Thus, the correct matching is (A)-(IV), (B)-(III), (C)-(I), (D)-(II).

Quick Tip

Homeopathic Repertory: Anatomical Locations. When looking for rubrics in Kent's Repertory, it's essential to identify the primary anatomical location of the symptom to navigate to the correct chapter.

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45. Which of the following statements are correct about Epstein Barr Virus (EBV) infections.

(A) **It is the cause of heterophile – positive infectious mononucleosis.**

(B) **EBV spreads by contact with oral secretions.**

(C) **Humoral immunity is more important than cellular immunity in controlling EBV infections.**

(D) **Most EBV infection in infants and young children are either asymptomatic or mild.**

Choose the correct answer from the options given below :

(1) A, B, C only

(2) A, C, D only

(3) A, B, D only

(4) C, D only

(1) A, B, C only
(2) A, C, D only
(3) A, B, D only
(4) C, D only

Correct Answer: (3) A, B, D only

Solution: Let's evaluate each statement regarding Epstein-Barr Virus (EBV) infections:

- **(A) It is the cause of heterophile – positive infectious mononucleosis:** This statement is **correct**. EBV is the primary cause of heterophile-positive infectious mononucleosis, also known as the "kissing disease."
- **(B) EBV spreads by contact with oral secretions:** This statement is **correct**. EBV is mainly transmitted through saliva, which is why it is commonly associated with close contact like kissing.
- **(C) Humoral immunity is more important than cellular immunity in controlling EBV infections:** This statement is **incorrect**. While humoral immunity (antibody production) plays a role in EBV infection, **cellular immunity**, particularly cytotoxic T lymphocytes (CTLs), is crucial for controlling the infection by killing EBV-infected B cells. In immunocompromised individuals with impaired cellular immunity, EBV infections can be severe.
- **(D) Most EBV infection in infants and young children are either asymptomatic or mild:** This statement is **correct**. Primary EBV infection in young children often presents with few or no symptoms. Symptomatic infectious mononucleosis is more common when the primary infection occurs in adolescents or young adults.

Therefore, the correct statements about EBV infections are A, B, and D.

Quick Tip

Virology: Epstein-Barr Virus. Remember that EBV is a common human herpesvirus with diverse clinical manifestations depending on the age and immune status of the infected individual. Cellular immunity is key to controlling EBV-associated diseases.

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46. Match List I with List II with corresponding given single medicine in Kents Repertory

List I Rubric

(A) **Squanders money**

(B) **Benevolence**

(C) **Washing always her hands**

(D) **Power, love of**

List II Medicine in Kents Repertory

(I) Syphilinum

(II) Verat alb.

(III) Lycopodium

(IV) Coffea

Choose the correct answer from the options given below :

(1) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

(2) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

(3) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

(4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

Correct Answer: (1) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

Solution: Matching the given mental rubrics with the corresponding single medicine listed in Kent's Repertory:

- **Squanders money (A)**: This rubric, indicating a wasteful and extravagant tendency with money, has **Veratrum album (II)** as a prominent single remedy in Kent's Repertory.
- **Benevolence (B)**: A disposition to do good and be kind is strongly associated with **Coffea (IV)** in Kent's Repertory, often seen in their excitable and sensitive nature.
- **Washing always her hands (C)**: This specific obsessive-compulsive behavior is a characteristic symptom strongly linked with **Syphilinum (I)** in the mind section of Kent's Repertory.
- **Power, love of (D)**: A strong desire for control and authority is a key mental characteristic of **Lycopodium (III)** as found in Kent's Repertory.

Therefore, the correct matching is (A)-(II), (B)-(IV), (C)-(I), (D)-(III).

Quick Tip

Homeopathic Materia Medica: Mental Symptoms in Repertory. Mental and emotional symptoms are highly valued in homeopathy for remedy selection. Kent's Repertory provides a detailed section on the mind, with many specific rubrics and characteristic remedies.

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47. Match List I with List II :

List I Rubric

(A) **Hair of head falls out**

(B) **Amativeness**

(C) **Chlorosis**

(D) **Vertigo**

List II Chapter/Section in Boenninghausen's Therapeutic Pocket Book

(I) Intellect

(II) Sensation

(III) Mind

(IV) Skin

Choose the correct answer from the options given below :

(1) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

(2) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

(3) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

(4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

Correct Answer: (2) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

Solution: Matching the given rubrics with the corresponding chapter/section in Boenninghausen's Therapeutic Pocket Book (TPB):

- **Hair of head falls out (A)** is a physical symptom related to the external covering and is found under the section **Skin (IV)** in Boenninghausen's TPB.
- **Amativeness (B)** refers to sexual desire or inclination and is a mental/emotional state, thus located under the section **Mind (III)**.
- **Chlorosis (C)** is a historical term for a type of anemia, often associated with a greenish pallor of the skin and general weakness. In Boenninghausen's TPB, general pathological states and sensations are often found under **Sensation (II)** or related general chapters.
- **Vertigo (D)** is a sensation of spinning or dizziness and is listed under the section **Intellect (I)** in Boenninghausen's TPB, as it is considered a subjective sensation affecting perception and orientation.

Therefore, the correct matching is (A)-(IV), (B)-(III), (C)-(II), (D)-(I).

Quick Tip

Homeopathic Repertory: Boenninghausen's Structure. Boenninghausen's Therapeutic Pocket Book is structured differently from Kent's Repertory, with a strong emphasis on modalities, concomitants, and a more physiological grouping of symptoms. Understanding these differences is key to effectively using this repertory.

48. The Rubric ‘Convulsions with Consciousness’ is mentioned in which of the following chapter of Therapeutic Pocket Book?

(1) External head

(2) Aggravations

(3) Internal head

(4) Sensations

Correct Answer: (4) Sensations

Solution: In Boenninghausen’s Therapeutic Pocket Book (TPB), the rubric ”Convulsions with Consciousness” is found under the chapter titled **Sensations**. This chapter includes general pathological states, sensations, and conditions that affect the whole organism or are not strictly localized. Convulsions, especially when consciousness is retained, are considered a significant general symptom that falls under this broader category of sensations and general morbid states experienced by the patient.

The other options are less likely:

- **External head** and **Internal head** would primarily deal with symptoms localized to the head.
- **Aggravations** would list factors that worsen symptoms, not the symptom itself.

Therefore, ”Convulsions with Consciousness” is logically placed under the ”Sensations” chapter in Boenninghausen’s TPB.

Quick Tip

Homeopathic Repertory: Boenninghausen’s Structure. Remember that Boenninghausen’s TPB organizes symptoms based on a different logic than Kent’s Repertory. ”Sensations” is a broad chapter encompassing many general and pathological states.

49. The Rubric ‘Excitement, Emotional’ is mentioned in which section of Therapeutic Pocket Book?

(1) Mind

(2) Sensations

(3) Aggravations

(4) Intellect

Correct Answer: (3) Aggravations

Solution: In Boenninghausen's Therapeutic Pocket Book (TPB), the rubric "Excitement, Emotional" is found under the section titled **Aggravations**. This might seem counterintuitive at first glance, as "excitement" appears to be a mental state. However, Boenninghausen's repertory often lists emotional states and influences under the conditions that affect or modify symptoms. Emotional excitement is considered a common factor that can aggravate or influence the presentation of various symptoms. Therefore, it is categorized as an "aggravation" or a modifying circumstance rather than a primary mental state in the "Mind" section of the TPB.

The other options are less likely:

- **Mind** typically contains primary mental and emotional states, but "Excitement" in the TPB is often considered a modifier.
- **Sensations** deals with physical feelings and general pathological states.
- **Intellect** pertains to cognitive functions and mental faculties.

Thus, in the structure of Boenninghausen's Therapeutic Pocket Book, "Excitement, Emotional" is found under **Aggravations**.

Quick Tip

Homeopathic Repertory: Boenninghausen's Modalities. Remember that Boenninghausen's TPB places significant emphasis on modalities (aggravations and ameliorations) as key differentiators for remedies. Emotional states that act as triggers or modifiers of symptoms are often found within these modality sections.

50. The only remedy mentioned in Boenninghausen's Therapeutic Pocket book in 'Aggravations from spices' is :

(1) Sulphur

(2) Nux Vomica

(3) Phosphorus

(4) Sepia

Correct Answer: (3) Phosphorus

Solution: According to Boenninghausen's Therapeutic Pocket Book (TPB), the single remedy listed under the modality "**Aggravations from spices**" is **Phosphorus**. This specific and peculiar modality is a characteristic feature associated with Phosphorus in homeopathic materia medica.
While other remedies might have gastrointestinal sensitivities or aggravations from certain foods, Phosphorus holds the distinction of being the only one listed under the specific rubric of "Aggravations from spices" in Boenninghausen's TPB.

Quick Tip

Homeopathic Repertory: Peculiar Modalities. Boenninghausen's repertory is particularly useful for identifying remedies based on strong and peculiar modalities. Remembering unique remedy-modality relationships, like Phosphorus's aggravation from spices, can be key in finding the simillimum.

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51. In Boger Boenninghausen's Characteristics and repertory, the rubric 'Opisthotonus' is mentioned in which chapter?

(1) Mind

(2) Fever

(3) Sensation and Complaints in general

(4) Lower extremities

Correct Answer: (3) Sensation and Complaints in general

Solution: In Boger Boenninghausen's Characteristics and Repertory (BBCR), the rubric "Opisthotonus" refers to a severe form of muscle spasm where the back is arched, and the head and heels are bent backward. This is a general physical symptom indicating a significant neurological involvement or a systemic reaction. Therefore, it is listed under the chapter "**Sensation and Complaints in general**" in the BBCR, which encompasses general pathological states, sensations, and involuntary movements affecting the body as a whole.

The other options are less likely:

- **Mind** deals with mental and emotional symptoms.
- **Fever** focuses on symptoms associated with febrile conditions.
- **Lower extremities** pertains to symptoms localized in the legs and feet.

Thus, the general symptom of opisthotonus is appropriately located under the "**Sensation and Complaints in general**" chapter in Boger Boenninghausen's Repertory.

Quick Tip

Homeopathic Repertory: Boger Boenninghausen's Structure. Remember that the BBCR has a distinct structure emphasizing pathological generals and causative modalities. General physical symptoms like opisthotonus are found in the "Generalities" or "Sensations and Complaints in general" sections.

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52. Match List I with List II : Rubric and Chapter of Kent's Repertory

List I (Rubric)

(A) **Wen behind ear**

(B) **Abscess, Parotid gland**

(C) **Hair, tangles easily**

(D) **Hair, unusual parts on**

List II (Chapter in Kent's Repertory)

(I) Skin

(II) Ear

(III) Face

(IV) Head

Choose the correct answer from the options given below :

(1) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
(2) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
(3) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
(4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

Correct Answer: (4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

Solution: Matching the given rubrics with the corresponding chapters in Kent's Repertory:

- **Wen behind ear (A)**: A wen (cyst) located behind the ear would be found under the chapter related to the ear, which is **Ear (II)**.
- **Abscess, Parotid gland (B)**: The parotid gland is a salivary gland located in the face, so an abscess there would be listed under the chapter **Face (III)**.
- **Hair, tangles easily (C)**: Symptoms related to the hair on the scalp are generally found under the chapter **Head (IV)**.
- **Hair, unusual parts on (D)**: The growth of hair on unusual parts of the body is a skin-related symptom and would be found under the chapter **Skin (I)**.

Therefore, the correct matching is (A)-(II), (B)-(III), (C)-(IV), (D)-(I).

Quick Tip

Homeopathic Repertory: Anatomical Chapters. When repertorizing localized symptoms, always refer to the chapter corresponding to the affected body part in Kent's Repertory.

53. Fern tree pattern is present in which phase of menstrual cycle?

(1) Secretory phase

(2) Follicular phase

(3) Ovulatory phase

(4) Regenerative phase

Correct Answer: (2) Follicular phase

Solution: The ”fern tree pattern” or ferning is a microscopic appearance of dried cervical mucus that occurs due to the crystallization of sodium chloride. This crystallization is influenced by the levels of estrogen and progesterone during the menstrual cycle. High estrogen levels, characteristic of the **follicular phase** leading up to ovulation, cause the cervical mucus to become thin, watery, and alkaline, with increased sodium chloride content, which results in the fern-like pattern upon drying.

As ovulation approaches and during the ovulatory phase, the ferning is most prominent. After ovulation, during the secretory phase when progesterone levels rise, the cervical mucus becomes thick and viscous, and the fern pattern disappears. The regenerative phase refers to the repair of the endometrium after menstruation and is also characterized by low estrogen levels, so ferning would not be prominent.

Therefore, the fern tree pattern is most evident during the follicular phase, peaking around ovulation, due to high estrogen levels. The provided correct option indicates the follicular phase.

Quick Tip

Physiology: Menstrual Cycle and Cervical Mucus. The changes in cervical mucus throughout the menstrual cycle are a useful indicator of fertility. The fern pattern is a sign of high estrogen levels and impending ovulation.

54. “Obstinate constipation for years; rectum seems tied up with strictures; when enema was used, the agony of passage was like labor” is the symptom of :

(1) Sulphur

(2) Syphilinum

(3) Nux Vomica

(4) Nitric Acid

Correct Answer: (2) Syphilinum

Solution: The peculiar and intense symptom picture described – obstinate constipation for years, a sensation of stricture in the rectum, and agonizing pain during bowel movements even with the aid of an enema, likened to labor pains – is a characteristic symptom strongly associated with **Syphilinum** in homeopathic materia medica. This remedy, derived from the syphilitic miasm, often presents with deep-seated, chronic, and intensely painful conditions. The feeling of constriction or stricture in orifices and the severity of the pain are key indicators for Syphilinum.

Let's briefly consider the other options:

- **Sulphur:** Known for various skin and constitutional symptoms, and constipation can be a part of its picture, but not typically with this intense, stricture-like sensation and agonizing pain.
- **Nux Vomica:** Indicated for ineffectual urging to stool, often with a feeling as if not finished, and irritability, but not typically the sensation of stricture and labor-like pain.
- **Nitric Acid:** Associated with splinter-like pains and fissures, often in the rectum, but the overall picture described is more characteristic of Syphilinum.

Therefore, based on the unique combination and intensity of the described rectal symptoms, **Syphilinum** is the most likely remedy.

Quick Tip

Homeopathic Materia Medica: Syphilinum. Remember Syphilinum for deep-seated chronic conditions, intense pains often worse at night, and peculiar sensations of constriction or stricture in various orifices. The mental picture can also include destructiveness and hopelessness.

55. Which of the following theory is postulated for placenta praevia?

(1) Implantation theory

(2) Coelomic metaplasia theory

(3) Metastatic theory

(4) Dropping down theory

Correct Answer: (4) Dropping down theory

Solution: The most widely accepted theory for the etiology of placenta praevia is the **dropping down theory**. This theory suggests that the placenta initially implants in the upper segment of the uterus, but due to poor decidualization in the lower segment or other factors, it ”drops down” later in pregnancy to cover or lie close to the internal cervical os.
Let’s briefly look at why the other options are not the primary theories for placenta praevia:

- **Implantation theory:** While abnormal implantation is the fundamental issue in placenta praevia (implantation in the lower uterine segment instead of the upper), the ”dropping down theory” specifically explains how an initially higher implantation might lead to placenta praevia later in pregnancy.
- **Coelomic metaplasia theory:** This theory is related to the development of endometriosis, involving the transformation of coelomic epithelium into endometrial-like tissue, and is not associated with placenta praevia.
- **Metastatic theory:** This term typically refers to the spread of cancer cells to distant sites and is irrelevant to the development of placenta praevia.

Therefore, the **dropping down theory** is the most recognized explanation for the development of placenta praevia.

Quick Tip

Obstetrics: Placenta Praevia Etiology. Understanding the dropping down theory helps in comprehending why placenta praevia might be diagnosed later in pregnancy even if early ultrasounds showed a normally located placenta.

56. A pregnancy is called post-term pregnancy which continues for more than _____ days.

(1) 290

(2) 270

(3) 286

(4) 294

Correct Answer: (4) 294

Solution: A post-term pregnancy is defined as one that has extended beyond 42 completed weeks (294 days) from the first day of the woman's last menstrual period. A full-term pregnancy is typically considered to be around 40 weeks or 280 days. Therefore, a pregnancy continuing for more than 294 days is classified as post-term.

Quick Tip

Obstetrics: Gestational Age. Accurate dating of pregnancy is crucial for identifying post-term pregnancies and managing associated risks for both the mother and the baby.

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57. Arrange the following signs and symptoms, in increasing order of their appearance in pregnancy, starting from first to last

(A) **Quickening**

(B) **Palmer's sign**

(C) **Hegar's sign**

(D) **Lightening**

Choose the correct answer from the options given below :

(1) B, A, D, C

(2) C, D, B, A

(3) C, B, A, D

(4) B, C, A, D

Correct Answer: (4) B, C, A, D

Solution: Arranging the given signs and symptoms in the increasing order of their appearance in pregnancy:

- **Palmer's sign (B)**: This refers to regular painless uterine contractions felt by the examiner on bimanual examination and typically occurs between 4 and 8 weeks of gestation.
- **Hegar's sign (C)**: This is a softening of the lower uterine segment (isthmus) that can be detected on bimanual examination, usually occurring around 6 to 12 weeks of gestation.
- **Quickening (A)**: This is the first perception of fetal movement by the mother, typically felt between 16 and 20 weeks of gestation (earlier in multiparous women).
- **Lightening (D)**: This is the sensation that the fetus has "dropped" lower into the pelvis, relieving pressure on the diaphragm and stomach. It usually occurs a few weeks before labor in primigravid women (around 36-38 weeks) and may not occur until labor begins in multiparous women.

Therefore, the correct order of appearance, from first to last, is Palmer's sign (B), Hegar's sign (C), Quickening (A), and Lightening (D).

Quick Tip

Obstetrics: Signs of Pregnancy. Understanding the timing of different signs and symptoms of pregnancy is important for diagnosis and monitoring the progress of gestation. These signs can be presumptive, probable, or positive. Palmer's and Hegar's signs are probable signs, quickening is a presumptive sign that can become probable with consistent reporting, and lightening is a later sign indicating fetal descent.

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58. Which of the following does NOT belong to the class of chronic diseases?

(1) One sided diseases

(2) Indisposition

(3) Alternating diseases

(4) Mental and emotional diseases

Correct Answer: (2) Indisposition

Solution: In homeopathic understanding, chronic diseases are those that are deep-seated, long-lasting, and tend to progress over time if not treated appropriately. Let's examine each option:

- **One-sided diseases:** These are conditions where only a few symptoms are prominently expressed, often making them challenging to treat and frequently of a chronic nature.
- **Indisposition:** This term generally refers to a temporary state of mild illness or feeling unwell. It is usually acute and self-limiting or resolves quickly with simple measures or a short course of treatment. It does not typically fall under the classification of a chronic disease.
- **Alternating diseases:** These are characterized by the periodic alternation of different sets of symptoms or pathological states. While the individual episodes might be acute, the underlying tendency to alternate can be a chronic manifestation.
- **Mental and emotional diseases:** These conditions, affecting the psyche and emotional well-being, are often chronic and require long-term management in homeopathy.

Therefore, **indisposition** does not belong to the class of chronic diseases as it describes a transient state of illness, unlike one-sided, alternating, and mental/emotional diseases which can have a chronic underlying nature.

Quick Tip

Homeopathic Philosophy: Classification of Diseases. Hahnemann classified diseases into acute and chronic miasms. Understanding this classification is fundamental to homeopathic treatment strategies. Indisposition falls under the broader category of acute disturbances rather than chronic miasms.

59. Rubric 'Petit Mal' is given in which chapter of Boericke's Repertory of Homoeopathic Materia Medica and Repertory?

(1) Mind

(2) Nervous system

(3) Generalities

(4) Locomotor system

Correct Answer: (2) Nervous system

Solution: Petit mal, also known as absence seizures, is a neurological disorder characterized by brief, sudden lapses of consciousness. Given that it is a condition directly related to brain function and neurological activity, the rubric 'Petit Mal' would be found under the chapter dedicated to the **Nervous system** in Boericke's Repertory of Homoeopathic Materia Medica and Repertory. This chapter encompasses various neurological conditions and symptoms. The other options are less likely:

- **Mind** might contain rubrics related to altered states of consciousness, but a specific neurological condition like petit mal would be more appropriately categorized under the nervous system.
- **Generalities** usually includes symptoms affecting the whole body or general pathological states, not specific neurological disorders.
- **Locomotor system** deals with conditions affecting movement, bones, joints, and muscles.

Therefore, the rubric 'Petit Mal' is located in the **Nervous system** chapter of Boericke's Repertory.

Quick Tip

Homeopathic Repertory: Boericke's Structure. When using Boericke's Repertory, consider the physiological system primarily affected by the symptom to locate the relevant chapter. Neurological conditions are typically found under the "Nervous System."

60. In Boenninghausen's Therapeutic Pocket book, rubric 'Death Apparent' is given in which chapter?

(1) Sensations

(2) Aggravation

(3) Chest

(4) Fever

Correct Answer: (1) Sensations

Solution: In Boenninghausen's Therapeutic Pocket Book (TPB), the rubric "Death Apparent" refers to a state resembling death, such as suspended animation or a death-like trance. This is considered a general pathological state and a profound alteration of vital functions and sensations. Therefore, it is found under the chapter titled **Sensations** in Boenninghausen's TPB, which includes general morbid states and subjective experiences. The other options are less likely:

- **Aggravation** lists factors that worsen symptoms.
- **Chest** deals with symptoms localized to the thoracic region.
- **Fever** focuses on symptoms associated with elevated body temperature.

Thus, the rubric "Death Apparent" is appropriately located under the **Sensations** chapter in Boenninghausen's Therapeutic Pocket Book.

Quick Tip

Homeopathic Repertory: Boenninghausen's "Sensations". Remember that the "Sensations" chapter in Boenninghausen's TPB is broad and includes not only physical feelings but also general pathological states and profound alterations of health.

61. All are factors of Ranson Scoring on admission except :

(1) Serum urea > 16 mmol/L

(2) White blood cell count $> 16 \times 10^9/\text{L}$

(3) Blood glucose > 11.1 mmol/L (> 200 mg/dL)

(4) Age > 55 years

Correct Answer: (1) Serum urea > 16 mmol/L

Solution:

Ranson's criteria are used to assess the severity of acute pancreatitis. The factors assessed on admission include:

- Age > 55 years
- White blood cell count $> 16 \times 10^9/\text{L}$
- Blood glucose > 11.1 mmol/L (> 200 mg/dL)
- Serum lactate dehydrogenase (LDH) > 350 IU/L
- Aspartate aminotransferase (AST) > 250 IU/L

Factors assessed during the initial 48 hours include:

- Hematocrit fall $> 10\%$
- Blood urea nitrogen (BUN) increase > 1.8 mmol/L (> 5 mg/dL)
- Serum calcium < 2.0 mmol/L (< 8 mg/dL)
- Arterial $PO_2 < 60$ mmHg
- Base deficit > 4 mmol/L
- Estimated fluid sequestration > 6 L

Looking at the options provided for admission criteria:

- Serum urea > 16 mmol/L is related to the BUN increase during the initial 48 hours, not an admission criterion.
- White blood cell count $> 16 \times 10^9/\text{L}$ is an admission criterion.
- Blood glucose > 11.1 mmol/L (> 200 mg/dL) is an admission criterion.

- Age > 55 years is an admission criterion.

Therefore, Serum urea > 16 mmol/L is **NOT** a factor of Ranson Scoring on admission.

Quick Tip

Gastroenterology: Acute Pancreatitis Severity. Ranson's criteria are a well-established tool for predicting the prognosis and severity of acute pancreatitis. Remember the specific parameters assessed at admission and during the first 48 hours.

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62. Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : Adrenogenital syndrome is a cause for female pseudo hermaphroditism.
Reasons (R) : It is inherited as X-linked recessive gene which causes diminished response to androgens.
In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
(3) (A) is correct but (R) is not correct
(4) (A) is not correct but (R) is correct

Correct Answer: (3) (A) is correct but (R) is not correct

Solution: Let's analyze the Assertion and the Reason:
Assertion (A): Adrenogenital syndrome is a cause for female pseudo hermaphroditism.
Adrenogenital syndrome, also known as congenital adrenal hyperplasia (CAH), involves the overproduction of androgens by the adrenal glands. In females with CAH, this excess androgen production during fetal development can lead to virilization of the external genitalia, resulting in ambiguous genitalia at birth, which is the definition of female pseudohermaphroditism. Therefore, Assertion (A) is **correct**.

Reasons (R): It is inherited as X-linked recessive gene which causes diminished response to androgens. The most common cause of adrenogenital syndrome (CAH) is a deficiency in the enzyme 21-hydroxylase, which is inherited as an **autosomal recessive** trait, not X-linked recessive. This enzyme deficiency leads to decreased cortisol production and a compensatory increase in ACTH, stimulating the adrenal glands to produce excess androgens. Furthermore, the mechanism in CAH involves **excess** androgen production, not a diminished response to androgens (which is characteristic of androgen insensitivity syndrome). Therefore, Reason (R) is **not correct**.
In conclusion, Assertion (A) is correct, but Reason (R) is not correct.

Quick Tip

Endocrinology and Genetics: Congenital Adrenal Hyperplasia. Remember that CAH is typically caused by autosomal recessive gene defects leading to enzyme deficiencies in steroidogenesis, resulting in androgen excess. Androgen insensitivity syndrome, on the other hand, is an X-linked recessive condition where individuals with a Y chromosome are unable to respond to androgens.

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63. Which of the following test is not suggested for ovulation?

(1) Endometrial biopsy
(2) Spinnbarkeit
(3) Karyopyknotic index of exfoliated vaginal epithelium
(4) Cervical biopsy

Correct Answer: (4) Cervical biopsy

Solution: Several tests are used to assess ovulation, either directly or indirectly by evaluating hormonal changes and their effects on reproductive tissues. Let's examine each option:

- **Endometrial biopsy:** This procedure involves taking a small sample of the uterine lining, typically performed in the luteal phase (after ovulation). Histological

examination can confirm if ovulation has occurred by assessing the secretory changes in the endometrium induced by progesterone.

- **Spinnbarkeit:** This is a qualitative assessment of the elasticity and thread-forming ability of cervical mucus. Around the time of ovulation, under the influence of high estrogen levels, cervical mucus becomes thin, clear, and stretchy, exhibiting spinnbarkeit.
- **Karyopyknotic index of exfoliated vaginal epithelium:** This index measures the percentage of superficial cells in vaginal smears that have pyknotic nuclei (small, dense nuclei). High estrogen levels, as seen around ovulation, lead to an increase in the karyopyknotic index.
- **Cervical biopsy:** This procedure involves taking a tissue sample from the cervix for histological examination. It is primarily used to screen for or diagnose cervical abnormalities, such as dysplasia or cancer, and is not a routine test for assessing ovulation.

Therefore, **cervical biopsy** is not a test suggested for ovulation.

Quick Tip

Gynecology: Ovulation Assessment. Various methods are employed to determine if ovulation has occurred, ranging from hormonal assays to physical characteristics of cervical mucus and histological examination of the endometrium. Cervical biopsy serves a different diagnostic purpose related to cervical health.

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64. Given below are two statements :

Statement I : Delayed puberty is said to be delayed when breast tissue and/or pubic hairs have not appeared by 12 years

Statement II : Puberty is said to be delayed when menarche appears as late as 16 years.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are correct

(2) Both Statement I and Statement II are incorrect

(3) Statement I is correct but Statement II is incorrect

(4) Statement I is incorrect but Statement II is correct

Correct Answer: (4) Statement I is incorrect but Statement II is correct

Solution: Let's evaluate each statement regarding delayed puberty in girls:

Statement I: Delayed puberty is said to be delayed when breast tissue and/or pubic hairs have not appeared by 12 years. The typical onset of puberty in girls is between ages 8 and 13. Thelarche (breast development) is usually the first sign, followed by pubarche (pubic hair growth). While the absence of these signs by age 12 warrants evaluation, the commonly accepted threshold for defining delayed puberty based on the absence of secondary sexual characteristics is generally **by age 13**. Therefore, Statement I is **incorrect**.

Statement II: Puberty is said to be delayed when menarche appears as late as 16 years. Menarche (the first menstrual period) typically occurs about 2 to 2.5 years after the onset of breast development, with a normal range of 10 to 16 years. If menarche has not occurred by **age 16**, it is considered delayed and requires investigation. Therefore, Statement II is **correct**.

In conclusion, Statement I is incorrect, but Statement II is correct.

Quick Tip

Pediatric Endocrinology: Delayed Puberty in Girls. Remember the typical timeline of pubertal development in girls (thelarche, pubarche, menarche) and the age thresholds that define delayed puberty, prompting further medical evaluation.

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65. Which of the following diameters of fetal skull does not measure 9.5 cm?

(1) Occipito frontal

(2) Sub occipito bregmatic

(3) Sub mento bregmatic

(4) Biparietal diameter

Correct Answer: (1) Occipito frontal

Solution: We need to consider the average measurements of the different diameters of the fetal skull at term:

- **Occipito frontal diameter:** This extends from the occipital protuberance to the glabella (the smooth part of the forehead between the eyebrows) and measures approximately **11.5 cm**.
- **Sub occipito bregmatic diameter:** This extends from the suboccipital region (below the occipital protuberance) to the center of the anterior fontanelle (bregma) and measures approximately **9.5 cm**. This is the presenting diameter in a well-flexed vertex presentation.
- **Sub mento bregmatic diameter:** This extends from the point of the chin (mentum) to the center of the anterior fontanelle (bregma) and measures approximately **9.5 cm**. This is the presenting diameter in a face presentation.
- **Biparietal diameter:** This is the transverse diameter between the two parietal eminences and measures approximately **9.5 cm**. This is a crucial diameter for engagement of the fetal head in the pelvis.

Therefore, the occipito frontal diameter does not measure 9.5 cm; it is larger, approximately 11.5 cm.

Quick Tip

Obstetrics: Fetal Skull Diameters. Familiarity with the key diameters of the fetal skull and their average measurements is essential for understanding the mechanisms of labor and potential difficulties during childbirth. The biparietal and suboccipito-bregmatic diameters are particularly important for assessing fetal head engagement and passage through the pelvis.

66. Given below are two statements :

Statement I : The wound will have bevelled margin, if the blade of weapon enters obliquely.

Statement II : Bevelling can be produced by sharp weapons only.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are true

(2) Both Statement I and Statement II are false

(3) Statement I is true but Statement II is false

(4) Statement I is false but Statement II is true

Correct Answer: (3) Statement I is true but Statement II is false

Solution: Let's analyze each statement in the context of forensic pathology and wound characteristics:

Statement I: The wound will have bevelled margin, if the blade of weapon enters obliquely. When a sharp-edged weapon enters the skin at an oblique angle, it tends to create a wound with a bevelled margin. One edge of the wound will be sharper and more defined (the entry point), while the opposite edge will be more sloped or bevelled as the blade cuts through the tissues at an angle. Therefore, Statement I is **true**.

Statement II: Bevelling can be produced by sharp weapons only. Bevelling of wound margins is not exclusively produced by sharp weapons. Blunt force trauma, particularly when applied at an angle or involving penetration (e.g., skull fractures with inward or outward bevelling), can also result in bevelled edges. For instance, a blunt object striking the skull can cause an entry wound with inward bevelling and an exit wound (if present) with outward bevelling. Therefore, Statement II is **false**.

In conclusion, Statement I is true, but Statement II is false.

Quick Tip

Forensic Medicine: Wound Morphology. Understanding the characteristics of different types of wounds, including the appearance of their margins, can provide crucial information about the weapon used and the manner in which the injury was inflicted. Bevelling is a feature that can be seen in both sharp and blunt force injuries depending on the angle and mechanism of impact.

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67. Given below are two statements :

Statement I : Hydrogen Sulphide interfere with cellular respiration by inhibiting the action of cytochrome oxidase.

Statement II : In Hydrogen Sulphide poisoning post mortem staining is of cherry red colour.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are correct

(2) Both Statement I and Statement II are incorrect

(3) Statement I is correct but Statement II is incorrect

(4) Statement I is incorrect but Statement II is correct

Correct Answer: (3) Statement I is correct but Statement II is incorrect

Solution: Let's analyze each statement regarding Hydrogen Sulphide poisoning:

Statement I: Hydrogen Sulphide interfere with cellular respiration by inhibiting the action of cytochrome oxidase. Hydrogen Sulphide (H_2S) is a potent inhibitor of cytochrome c oxidase, a key enzyme in the mitochondrial electron transport chain responsible for cellular respiration. By binding to this enzyme, H_2S prevents the utilization of oxygen by cells, leading to histotoxic hypoxia. Therefore, Statement I is **correct**.

Statement II: In Hydrogen Sulphide poisoning post mortem staining is of cherry red colour. Cherry red post-mortem staining is characteristic of carbon monoxide (CO) poisoning, where CO binds strongly to hemoglobin, forming carboxyhemoglobin, which has

a bright red color. In Hydrogen Sulphide poisoning, the post-mortem staining is typically a greenish discoloration due to the formation of sulfhemoglobin or the reaction of sulfides with blood pigments. Therefore, Statement II is **incorrect**.
In conclusion, Statement I is correct, but Statement II is incorrect.

Quick Tip

Forensic Toxicology: Hydrogen Sulphide vs. Carbon Monoxide Poisoning. It is important to differentiate the post-mortem findings in H_2S and CO poisoning. While both are asphyxiants, H_2S causes a greenish discoloration, and CO leads to a characteristic cherry red lividity.

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68. For gastric lavage the only absolute contraindication is corrosive poisoning except

(1) Oxalic acid
(2) Salicylic acid
(3) Carbolic acid
(4) Nitric acid

Correct Answer: (1) Oxalic acid and (3) Carbolic acid

Solution: Gastric lavage is generally contraindicated in corrosive poisoning due to the risk of further damage to the esophagus and stomach during the passage of the lavage tube and the return of the corrosive substance. However, there are exceptions where gastric lavage might be considered with extreme caution, particularly if performed very early after ingestion (within one hour) and if the amount ingested is life-threatening.
Let's analyze the options:

- **Oxalic acid:** This is a corrosive substance. However, it also binds with calcium, potentially leading to hypocalcemia. Ingestion can be rapidly fatal, and early gastric lavage might be considered in significant ingestions despite the corrosive nature, primarily to remove unabsorbed oxalate and prevent systemic toxicity.

- **Salicylic acid:** This is not a corrosive substance. Gastric lavage is often indicated in salicylic acid poisoning to reduce absorption.
- **Carbolic acid (Phenol):** This is a corrosive substance that can cause severe local damage. Gastric lavage is generally contraindicated due to the risk of further injury. However, similar to other strong corrosives, very early lavage might be considered in severe cases under strict medical supervision.
- **Nitric acid:** This is a strong corrosive acid, and gastric lavage is typically absolutely contraindicated due to the significant risk of perforation and further damage.

The question asks for the exception to the absolute contraindication of gastric lavage in corrosive poisoning. While generally contraindicated, very early gastric lavage might be cautiously considered in severe poisoning with oxalic acid to prevent systemic toxicity and potentially with carbolic acid if ingestion is recent and life-threatening. Salicylic acid poisoning is not a corrosive ingestion, so gastric lavage is not contraindicated for this reason. Nitric acid ingestion is generally considered an absolute contraindication for gastric lavage. Considering the options and the nuances in managing corrosive ingestions, both Oxalic acid and Carbolic acid could be considered exceptions where very early and cautious gastric lavage might be contemplated in specific severe scenarios, outweighing the risks of no intervention. The provided correct option indicates both (1) and (3).

Quick Tip

Medical Toxicology: Gastric Lavage in Corrosive Poisoning. While generally contraindicated, the decision to perform gastric lavage in corrosive poisoning is complex and depends on the specific agent, the time since ingestion, the amount ingested, and the clinical condition of the patient. Early consultation with a toxicologist is crucial.

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69. Match List I with List II :

List I (Site of Injury)

(A) **Blow on lateral convexity of head**

(B) **Blow over forehead**

(C) **Blow over occiput**

(D) **Blow on vertex**

List II (Part affected)

(I) Sagittal sinus

(II) Middle meningeal artery

(III) Anterior ethmoidal artery

(IV) Transverse sigmoid sinus

Choose the correct answer from the options given below :

(1) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
(2) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
(3) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
(4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

Correct Answer: (4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

Solution: Matching the site of injury with the potentially affected part:

- **(A) Blow on lateral convexity of head:** The middle meningeal artery runs beneath the temporal bone in the lateral aspect of the skull. A blow to this area is likely to damage the **Middle meningeal artery (II)**, leading to an extradural hematoma.
- **(B) Blow over forehead:** The anterior ethmoidal artery is located in the anterior cranial fossa, near the forehead. A fracture in this region can injure the **Anterior ethmoidal artery (III)**.
- **(C) Blow over occiput:** The transverse and sigmoid sinuses are located in the posterior cranial fossa, near the occiput. A blow to the occiput can potentially damage the **Transverse sigmoid sinus (IV)**.
- **(D) Blow on vertex:** The superior sagittal sinus runs along the midline at the vertex of the skull. A blow to the top of the head can injure the **Sagittal sinus (I)**.

Therefore, the correct matching is (A)-(II), (B)-(III), (C)-(IV), (D)-(I).

Quick Tip

Forensic Medicine: Head Injuries. Understanding the anatomy of the skull and the location of major blood vessels and sinuses is crucial in forensic analysis of head injuries to predict potential complications.

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70. All the statements about healthy articular cartilage are correct except:

(1) It is devoid of nerves

(2) It is a hyaline cartilage

(3) It is not visible on X-ray

(4) It is vascular

Correct Answer: (4) It is vascular

Solution: Let's evaluate each statement about healthy articular cartilage:

- **(1) It is devoid of nerves:** Articular cartilage is indeed aneural, meaning it does not contain nerves. This contributes to the fact that early cartilage damage in conditions like osteoarthritis can be painless.
- **(2) It is a hyaline cartilage:** Articular cartilage is a specialized type of hyaline cartilage, characterized by its smooth, glassy matrix that provides a low-friction surface for joint movement.
- **(3) It is not visible on X-ray:** Cartilage is radiolucent, meaning it does not absorb X-rays to a significant extent due to its high water content and lack of calcification in healthy tissue. Therefore, it is not directly visible on standard X-ray images; the joint space seen on X-ray represents the space occupied by the articular cartilage.
- **(4) It is vascular:** Articular cartilage is avascular, meaning it does not contain blood vessels. It receives nutrients and oxygen primarily through diffusion from the synovial

fluid and the subchondral bone. The lack of vascularity contributes to its limited capacity for self-repair.

Therefore, the statement that is NOT correct about healthy articular cartilage is that it is vascular.

Quick Tip

Anatomy and Physiology: Articular Cartilage. Remember the key characteristics of articular cartilage: it's a type of hyaline cartilage that is avascular and aneural, relying on diffusion for its nutrition and contributing to smooth, low-friction joint movement. Its radiolucency explains why joint space narrowing on X-ray is an indirect sign of cartilage loss.

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71. Which of the following is the spurt muscle?

(1) Brachioradialis
(2) Brachialis
(3) Pronator Teres
(4) Coracobrachialis

Correct Answer: (2) Brachialis

Solution: Spurt and shunt muscles are classifications based on their attachment relative to the joint axis of movement and their primary function during joint action.

- **Spurt muscles** have their origin far from the joint and their insertion close to the joint. Their primary role is to initiate movement and produce a large range of motion. They have a large rotary component of force.
- **Shunt muscles** have their origin close to the joint and their insertion far from the joint. Their primary role is to stabilize the joint and resist dislocation. They have a large translatory (parallel to the bone) component of force.

Considering the muscles around the elbow joint:

- **Brachialis:** Originates from the anterior surface of the humerus (relatively far from the elbow joint axis) and inserts onto the coronoid process of the ulna (close to the elbow joint axis). This arrangement makes it a spurt muscle, primarily responsible for flexing the elbow through a large range of motion.
- **Brachioradialis:** Originates from the lateral supracondylar ridge of the humerus (further from the elbow joint axis than brachialis) and inserts onto the styloid process of the radius (further from the elbow joint axis than brachialis). It acts as both a spurt and a shunt muscle, contributing to flexion and also providing some stability.
- **Pronator Teres:** Originates from the medial epicondyle of the humerus and the coronoid process of the ulna (close to the elbow joint axis) and inserts onto the lateral surface of the radius (further from the elbow joint axis). It primarily pronates the forearm and assists in elbow flexion; its shunt component is more significant for elbow joint stability during pronation.
- **Coracobrachialis:** Originates from the coracoid process of the scapula (far from the elbow joint) and inserts onto the medial surface of the humerus (far from the elbow joint). It primarily flexes and adducts the shoulder joint and has no direct spurt or shunt action on the elbow.

Therefore, the brachialis is the clearest example of a spurt muscle among the given options for elbow flexion.

Quick Tip

Biomechanics: Spurt and Shunt Muscles. Understanding the functional classification of muscles based on their attachment points relative to the joint axis helps in analyzing joint movements and stability. Spurt muscles are movers, while shunt muscles are stabilizers.

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72. "Adapted to persons with dark hair and rigid fibre; weakly, psoric with excessively yellow, sallow complexion; subject to affections of respiratory and urinary tracts" is the symptom of :

(1) Lycopodium

(2) Arsenicum album

(3) Causticum

(4) Sulphur

Correct Answer: (3) Causticum

Solution: The given symptom picture – adapted to persons with dark hair and rigid fibre, weakly, psoric constitution with an excessively yellow, sallow complexion, and a predisposition to affections of the respiratory and urinary tracts – is characteristic of **Causticum** in homeopathic materia medica.

Let's briefly consider why the other options are less likely:

- **Lycopodium:** Typically associated with persons who are intellectually keen but physically weak, with digestive issues, and often worse in the afternoon. They can have a sallow complexion but the other descriptors don't fit as closely.
- **Arsenicum album:** Often suited to anxious, restless individuals who are worse at night and from cold, with burning pains and a tendency towards digestive disturbances. Their complexion might be pale or sallow, but the overall picture differs.
- **Sulphur:** Known for individuals who are often warm-blooded, averse to bathing, with various skin complaints and a tendency towards catarrhal affections. Their complexion can be reddish or unhealthy-looking, but the specific combination of dark hair, rigid fibre, and yellow sallowness is less typical.

The combination of dark hair, rigid fibre, weakness, psoric diathesis, yellow sallow complexion, and susceptibility to respiratory and urinary tract issues strongly points towards the constitutional picture of **Causticum**.

Quick Tip

Homeopathic Materia Medica: Constitutional Types. Recognizing constitutional types based on physical characteristics, temperament, and susceptibility to certain ailments is a key aspect of homeopathic prescribing. Causticum presents with a distinct set of these features.

73. Paracentesis thoracis is usually done in which of the following intercostal space in midaxillary line?

(1) 7^{th}

(2) 8^{th}

(3) 9^{th}

(4) 6^{th}

Correct Answer: (2) 8^{th}

Solution: Thoracentesis, or pleural tap, is a procedure to remove fluid or air from the pleural space surrounding the lungs. The typical site for diagnostic and therapeutic thoracentesis in the midaxillary line is the **8th intercostal space**.

The choice of intercostal space is crucial to avoid injury to underlying structures such as the diaphragm (which rises higher than this level) and abdominal organs. The midaxillary line is a common approach because it provides a safe window to access the pleural space, especially when fluid is present, which tends to gravitate to the lower parts of the pleural cavity.

Ultrasound guidance is often used to precisely locate the fluid and guide the needle insertion, further enhancing safety and accuracy.

Quick Tip

Pulmonology: Thoracentesis Site. Remember that the 8th intercostal space in the midaxillary line is a standard landmark for thoracentesis. However, the optimal site should always be confirmed by clinical examination and preferably with imaging (like ultrasound) to assess the fluid level and avoid complications.

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74. Match List I with List II :

List I

(A) **Anterior Mediastinum**

(B) **Middle Mediastinum**

(C) **Posterior Mediastinum**

(D) **Superior Mediastinum**

List II

(I) Azygos Vein

(II) Pulmonary Trunk

(III) Sternopericardial Ligaments

(IV) Left Brachiocephalic Vein

Choose the correct answer from the options given below :

(1) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
(2) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
(3) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)
(4) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)

Correct Answer: (4) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)

Solution: Matching the mediastinal compartments with their key contents:

- **(A) Anterior Mediastinum:** Primarily contains the thymus gland (in children), fat, lymph nodes, and the **sternopericardial ligaments (III)** which attach the pericardium to the sternum.
- **(B) Middle Mediastinum:** Contains the heart, pericardium, phrenic nerves, and the roots of the great vessels, including the **pulmonary trunk (II)**.
- **(C) Posterior Mediastinum:** Located behind the heart, it contains the esophagus, trachea, azygos and hemiazygos veins, thoracic duct, sympathetic trunks, and the **azygos vein (I)** is a prominent structure here.
- **(D) Superior Mediastinum:** Situated above the heart, it contains the thymus, trachea, esophagus, aortic arch and its branches (including the left brachiocephalic vein forming from the union of the left internal jugular and subclavian veins), phrenic and vagus nerves, and the **left brachiocephalic vein (IV)** passes through this compartment.

Therefore, the correct matching is (A)-(III), (B)-(II), (C)-(I), (D)-(IV).

Quick Tip

Anatomy: Mediastinum. Understanding the subdivisions of the mediastinum and their contents is crucial for interpreting medical imaging and understanding the spread of diseases within the thorax.

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75. Nerve supply of gluteus maximus muscle is :

(1) Superior Gluteal Nerve

(2) Inferior Gluteal Nerve

(3) Obturator Nerve

(4) Femoral Nerve

Correct Answer: (2) Inferior Gluteal Nerve

Solution: The gluteus maximus is the largest and most superficial of the three gluteal muscles. It is primarily responsible for extension and lateral rotation of the hip joint. The nerve that innervates the gluteus maximus muscle is the **Inferior Gluteal Nerve**.
Let's briefly look at the other options:

- **Superior Gluteal Nerve:** This nerve innervates the gluteus medius, gluteus minimus, and tensor fasciae latae muscles.
- **Obturator Nerve:** This nerve primarily innervates the adductor muscles of the thigh (adductor longus, adductor brevis, adductor magnus (anterior part), gracilis, and obturator externus).
- **Femoral Nerve:** This nerve is the main nerve of the anterior thigh and innervates the quadriceps femoris group (rectus femoris, vastus lateralis, vastus medialis, vastus intermedius), sartorius, and pectineus muscles.

Therefore, the nerve supply of the gluteus maximus muscle is the Inferior Gluteal Nerve.

Quick Tip

Anatomy: Muscles of the Gluteal Region. Remembering the nerve supply of the major muscles of the hip and thigh is crucial for understanding their function and for diagnosing nerve injuries in this region.

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76. Place the given stages of phagocytosis in the correct order of occurrence.

(A) **Formation of Phagolysosome**

(B) **Adherence to Microbe**

(C) **Destruction of Microbe**

(D) **Ingestion to form a phagosome**

(E) **Chemotactic attraction of phagocyte**

Choose the most appropriate answer from the options given below :

(1) (E), (D), (B), (C) and (A) only
(2) (E), (B), (D), (A) and (C) only
(3) (B), (E), (D), (A) and (C) only
(4) (B), (E), (A), (D) and (C) only

Correct Answer: (2) (E), (B), (D), (A) and (C) only

Solution: The correct order of the stages of phagocytosis is as follows:

1. **Chemotactic attraction of phagocyte (E)**: Phagocytes are attracted to the site of infection or inflammation by chemical signals (chemotaxis).
2. **Adherence to Microbe (B)**: The phagocyte's surface receptors bind to specific molecules on the surface of the microbe.
3. **Ingestion to form a phagosome (D)**: The phagocyte extends pseudopods that engulf the microbe, enclosing it within a membrane-bound vesicle called a phagosome.

4. **Formation of Phagolysosome (A)**: The phagosome fuses with lysosomes, which contain digestive enzymes, forming a phagolysosome.
5. **Destruction of Microbe (C)**: The microbe is killed and digested by the enzymes and other antimicrobial substances within the phagolysosome.

Therefore, the correct order of occurrence is (E), (B), (D), (A), and (C).

Quick Tip

Immunology: Phagocytosis. Understanding the sequential steps of phagocytosis is fundamental to comprehending the innate immune response and how phagocytes eliminate pathogens and cellular debris.

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77. Which of the following are true?

(A) **The sites of olfactory transduction are the olfactory hairs**

(B) **The olfactory bulbs transmit impulses to the temporal lobe of the cerebral cortex**

(C) **The axons of olfactory receptors pass through the olfactory foramina in the cribriform plate of ethmoid bone**

(D) **The olfactory nerves are bundles of axons that terminate in the olfactory tracts**

(E) **Within the olfactory bulbs the first order neurones synapses with the second order neurones**

Choose the correct answer from the options given below :

(1) (A), (B) and (D)

(2) (B), (C), (D) and (E)

(3) (A), (B), (C), (D) and (E)

(4) (A), (C) and (E)

Correct Answer: (4) (A), (C) and (E)

Solution: Let's evaluate each statement about the olfactory pathway:

- **(A) The sites of olfactory transduction are the olfactory hairs:** Olfactory receptor neurons have cilia, known as olfactory hairs, that extend into the mucus layer of the nasal cavity. These hairs contain receptor proteins that bind to odorant molecules, initiating the process of olfactory transduction. Thus, statement (A) is **true**.
- **(B) The olfactory bulbs transmit impulses to the temporal lobe of the cerebral cortex:** Olfactory information travels from the olfactory bulbs via the olfactory tracts to several brain regions, including the olfactory cortex, which is located in the temporal lobe (specifically the piriform cortex). Thus, statement (B) is **true**.
- **(C) The axons of olfactory receptors pass through the olfactory foramina in the cribriform plate of ethmoid bone:** The olfactory receptor neurons are located in the olfactory epithelium in the nasal cavity. Their unmyelinated axons bundle together to form the olfactory nerves (cranial nerve I), which pass through small holes (olfactory foramina) in the cribriform plate of the ethmoid bone to reach the olfactory bulbs in the cranial cavity. Thus, statement (C) is **true**.
- **(D) The olfactory nerves are bundles of axons that terminate in the olfactory tracts:** The olfactory nerves (bundles of axons of first-order neurons) synapse with second-order neurons (mitral and tufted cells) in the olfactory bulbs. The axons of these second-order neurons then form the olfactory tracts, which project to the olfactory cortex and other brain regions. Therefore, the olfactory nerves do not terminate in the olfactory tracts; they synapse in the olfactory bulbs, and the axons of the postsynaptic neurons form the tracts. Thus, statement (D) is **false**.
- **(E) Within the olfactory bulbs the first order neurones synapses with the second order neurones:** As mentioned above, the olfactory receptor neurons (first-order neurons) synapse with mitral and tufted cells (second-order neurons) within the glomeruli of the olfactory bulbs. Thus, statement (E) is **true**.

Based on the analysis, statements (A), (C), and (E) are true.

Quick Tip

Neuroanatomy: Olfactory Pathway. Understanding the precise neural pathway of olfaction, from the receptor neurons in the nasal cavity to the olfactory cortex in the brain, is essential. Remember the unique aspect that olfactory information does not relay through the thalamus before reaching the cortex.

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78. Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : Water soluble hormones acts on its target cell through second messenger system.
Reasons (R) : The hormone receptor complex on the cell membrane activates G proteins thereby activating adenylate cyclase and catalyzing conversion of ATP to cAMP which activates protein kinases.
In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
(3) (A) is correct but (R) is not correct
(4) (A) is not correct but (R) is correct

Correct Answer: (1) Both (A) and (R) are correct and (R) is the correct explanation of (A)

Solution: Let's analyze the Assertion and the Reason:
Assertion (A): Water soluble hormones acts on its target cell through second messenger system. Water-soluble hormones, such as peptide and protein hormones and catecholamines, cannot easily pass through the lipid bilayer of the cell membrane. Therefore, they typically bind to receptors located on the cell surface and trigger intracellular signaling pathways involving second messengers to exert their effects. Thus, Assertion (A) is **correct**.
Reasons (R): The hormone receptor complex on the cell membrane activates G proteins thereby activating adenylate cyclase and catalyzing conversion of ATP to cAMP which

activates protein kinases. This describes a common mechanism by which many water-soluble hormones exert their effects. The binding of the hormone to its cell surface receptor leads to the activation of G proteins. Activated G proteins can then stimulate adenylate cyclase, an enzyme that catalyzes the conversion of ATP to cyclic AMP (cAMP), a common second messenger. cAMP then activates protein kinases, which phosphorylate specific intracellular proteins, leading to the cellular response. Thus, Reason (R) is **correct** and accurately explains a major pathway through which water-soluble hormones act. Therefore, both the Assertion and the Reason are correct, and the Reason provides a valid explanation for the Assertion.

Quick Tip

Endocrinology: Hormone Action. Remember the fundamental difference in the mechanisms of action between water-soluble and lipid-soluble hormones. Water-soluble hormones utilize cell surface receptors and second messenger systems, while lipid-soluble hormones typically bind to intracellular receptors and directly influence gene transcription. The cAMP pathway is a classic example of a second messenger system.

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79. Enzyme secreted by the kidneys that is involved in the control of blood pressure is :

(1) Erythropoietin

(2) Angiotensin

(3) Aldosterone

(4) Renin

Correct Answer: (4) Renin

Solution: The kidneys play a crucial role in the regulation of blood pressure through the renin-angiotensin-aldosterone system (RAAS). When blood pressure or blood volume decreases, the juxtaglomerular cells in the kidneys secrete an enzyme called **renin**.
Renin then acts on angiotensinogen (a plasma protein produced by the liver) to convert it to angiotensin I. Angiotensin I is further converted to angiotensin II by angiotensin-converting

enzyme (ACE), which is primarily found in the lungs. Angiotensin II is a potent vasoconstrictor that increases blood pressure directly and also stimulates the release of aldosterone from the adrenal cortex, leading to increased sodium and water reabsorption by the kidneys, further raising blood pressure and volume.
Let's briefly look at the other options:

- **Erythropoietin:** This hormone is secreted by the kidneys in response to hypoxia and stimulates red blood cell production in the bone marrow. While it affects blood volume indirectly over time, it is not the primary enzyme involved in rapid blood pressure control.
- **Angiotensin:** This is a hormone involved in blood pressure regulation, but it is not secreted by the kidneys. Angiotensinogen is produced by the liver, and angiotensin I is a product of renin's action.
- **Aldosterone:** This is a steroid hormone produced by the adrenal cortex that increases sodium and water reabsorption in the kidneys, thus raising blood pressure. Its release is stimulated by angiotensin II and high potassium levels, but it is not secreted by the kidneys.

Therefore, the enzyme secreted by the kidneys that is directly involved in the control of blood pressure through the RAAS is renin.

Quick Tip

Renal Physiology: Renin-Angiotensin-Aldosterone System (RAAS). Understanding the RAAS is essential for comprehending the hormonal regulation of blood pressure and fluid balance by the kidneys. Renin is the key initiating enzyme in this cascade.

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80. Ependymal cells are the cells :

(1) that secrete cerebrospinal fluid
(2) that secrete and maintain myelin in the peripheral nervous system
(3) whose foot processes form the blood brain barrier

(4) that remove bacteria and damaged tissue in the central nervous system

Correct Answer: (1) that secrete cerebrospinal fluid

Solution: Ependymal cells are a type of glial cell found lining the ventricles of the brain and the central canal of the spinal cord. These cells are specialized epithelial cells that have cilia and microvilli on their apical surface. One of their primary functions is to **secrete cerebrospinal fluid (CSF)**. They also contribute to the movement of CSF through the ventricular system via the beating of their cilia.
Let's look at why the other options are incorrect:

- **(2) that secrete and maintain myelin in the peripheral nervous system:** Schwann cells are responsible for secreting and maintaining myelin in the peripheral nervous system. In the central nervous system, oligodendrocytes perform this function.
- **(3) whose foot processes form the blood brain barrier:** Astrocytes, another type of glial cell in the central nervous system, have foot processes that surround capillaries and contribute to the formation and maintenance of the blood-brain barrier.
- **(4) that remove bacteria and damaged tissue in the central nervous system:** Microglia are the resident immune cells of the central nervous system and are responsible for phagocytosis of pathogens, cellular debris, and damaged tissue.

Therefore, the correct description of ependymal cells is that they secrete cerebrospinal fluid.

Quick Tip

Neuroscience: Glial Cells. Remember the different types of glial cells in the nervous system and their specific functions: astrocytes (support and blood-brain barrier), oligodendrocytes (myelination in CNS), Schwann cells (myelination in PNS), microglia (immune surveillance), and ependymal cells (CSF production and movement).

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81. "Asthma worse in open air and sitting up and better by lying down and keeping arms stretched far apart" is a feature of :

(1) Arsenicum album

(2) Psorinum

(3) Carbo Veg

(4) Medorrhinum

Correct Answer: (2) Psorinum

Solution: The peculiar symptom picture described – asthma worse in open air and sitting up, but better by lying down and keeping the arms stretched far apart – is a characteristic feature strongly associated with **Psorinum** in homeopathic materia medica. This remedy, derived from the psoric miasm, often presents with paradoxical and intense modalities. The aggravation from open air and sitting up, coupled with relief from lying down and stretching the arms, is a notable indication for Psorinum in asthmatic conditions.
Let's briefly consider why the other options are less likely:

- **Arsenicum album:** Typically associated with asthma that is worse around midnight or in the early morning, often with anxiety, restlessness, and a desire for fresh air (though they may feel chilly). Relief is often found by sitting up and bending forward.
- **Carbo Veg:** Indicated for asthma with marked flatulence, coldness, and a desire for fanning. They are generally worse in warm, stuffy rooms and may find some relief from sitting up and being fanned.
- **Medorrhinum:** Often related to asthma that is better in damp weather and lying on the abdomen. They can have a history of suppressed gonorrhea and exhibit intense desires and fears.

Therefore, the unique combination of modalities described strongly points towards **Psorinum**.

Quick Tip

Homeopathic Materia Medica: Peculiar Modalities. Psorinum is known for its striking and often opposite modalities. Remembering these peculiar symptom aggravations and ameliorations is key to its homeopathic application.

82. Given below are two statements :

Statement I : Respiratory Acidosis is caused by retention of carbon dioxide. The $PaCO_2$ and H^+ rise.

Statement II : In Respiratory alkalosis there is the fall in $PaCO_2$ and H^+.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are correct

(2) Both Statement I and Statement II are incorrect

(3) Statement I is correct but Statement II is incorrect

(4) Statement I is incorrect but Statement II is correct

Correct Answer: (1) Both Statement I and Statement II are correct

Solution: Let's analyze each statement concerning respiratory acid-base disorders:

Statement I: Respiratory Acidosis is caused by retention of carbon dioxide. The $PaCO_2$ and H^+ rise. Respiratory acidosis occurs when there is hypoventilation, leading to the retention of carbon dioxide (CO_2) in the blood. Carbon dioxide reacts with water to form carbonic acid (H_2CO_3), which then dissociates into hydrogen ions (H^+) and bicarbonate ions (HCO_3^-). The increase in H^+ ions lowers the blood pH, causing acidosis. Therefore, in respiratory acidosis, the partial pressure of arterial carbon dioxide ($PaCO_2$) rises, and consequently, the concentration of H^+ ions also rises. Statement I is **correct**.

Statement II: In Respiratory alkalosis there is the fall in $PaCO_2$ and H^+. Respiratory alkalosis occurs when there is hyperventilation, leading to an excessive elimination of carbon dioxide (CO_2) from the blood. This decreases the concentration of carbonic acid (H_2CO_3) and subsequently the concentration of hydrogen ions (H^+), leading to an increase in blood pH (alkalosis). Therefore, in respiratory alkalosis, the partial pressure of arterial carbon dioxide ($PaCO_2$) falls, and consequently, the concentration of H^+ ions also falls. Statement II is **correct**.

Since both statements accurately describe the changes in $PaCO_2$ and H^+ in respiratory acidosis and alkalosis, respectively, both statements are correct.

Quick Tip

Respiratory Physiology: Acid-Base Balance. Remember the relationship between carbon dioxide, carbonic acid, and hydrogen ions in the blood. Changes in ventilation directly affect $PaCO_2$, which in turn influences blood pH. $CO_2 + H_2O \rightleftharpoons H_2CO_3 \rightleftharpoons H^+ + HCO_3^-$.

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83. Pseudogout arthritis is caused by :

(1) Monosodium urate

(2) Calcium pyrophosphate

(3) Calcium apatite

(4) Calcium oxalate

Correct Answer: (2) Calcium pyrophosphate

Solution: Pseudogout, also known as calcium pyrophosphate deposition disease (CPPD) or chondrocalcinosis, is a form of arthritis characterized by the deposition of **calcium pyrophosphate** crystals in the joints. These crystals trigger inflammation, leading to acute pain, swelling, and stiffness, mimicking the symptoms of gout.
Let's briefly look at the other options:

- **Monosodium urate:** Deposition of monosodium urate crystals in the joints is the cause of gout, not pseudogout.
- **Calcium apatite:** Deposition of calcium apatite crystals can cause other musculoskeletal conditions, such as calcific tendinitis, but it is not the primary cause of pseudogout.
- **Calcium oxalate:** Calcium oxalate crystals are commonly associated with kidney stones and are not typically involved in the pathogenesis of pseudogout.

Therefore, pseudogout arthritis is caused by the deposition of calcium pyrophosphate crystals.

Quick Tip

Rheumatology: Crystal Arthropathies. Remember the key difference between gout and pseudogout: gout is caused by monosodium urate crystals, while pseudogout is caused by calcium pyrophosphate crystals. These can be differentiated by joint fluid analysis under polarized light microscopy.

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84. Which of the following investigations will help to differentiate esophageal achalasia from benign mechanical strictures of esophagogastric junction?

(1) Chest X-ray

(2) Barium swallow

(3) Endoscopy

(4) Manometry

Correct Answer: (3) Endoscopy

Solution: Differentiating esophageal achalasia from benign mechanical strictures at the esophagogastric junction requires investigations that can assess both the structural and functional aspects of the esophagus. Let's evaluate the options:

- **Chest X-ray:** While a chest X-ray might show a dilated esophagus in advanced achalasia, it is not specific enough to differentiate it from a mechanical stricture. It provides limited information about the esophageal mucosa or the pressure dynamics at the lower esophageal sphincter (LES).
- **Barium swallow:** A barium swallow can reveal the characteristic "bird's beak" appearance of the distal esophagus in achalasia due to the failure of the LES to relax. It can also show the location and degree of narrowing in a stricture. However, it might not always clearly distinguish between the smooth tapering of achalasia and a more discrete stricture, especially if the stricture is benign and not severely obstructing.
- **Endoscopy:** Endoscopy involves the direct visualization of the esophageal mucosa using a flexible endoscope. This allows for the identification of structural abnormalities

such as strictures, their location, and their appearance (e.g., smooth, irregular, ulcerated). Importantly, endoscopy can also rule out malignancy as a cause of the stricture and allows for biopsies to confirm a benign nature. While endoscopy can provide indirect signs of achalasia (e.g., dilated esophagus, retained food), it does not directly assess the LES pressure or relaxation.

- **Manometry:** Esophageal manometry is the gold standard for diagnosing achalasia. It measures the pressure and coordination of esophageal muscle contractions and the relaxation of the LES. In achalasia, manometry typically shows absent or incomplete LES relaxation with swallowing and a lack of coordinated peristalsis in the esophageal body. While manometry is excellent for diagnosing the functional abnormality of achalasia, it does not directly visualize the esophageal mucosa to assess for structural strictures.

To differentiate between esophageal achalasia (a functional disorder) and a benign mechanical stricture (a structural abnormality), **endoscopy** is crucial for direct visualization and tissue sampling (biopsy) to characterize the stricture and rule out other causes like malignancy. While barium swallow can suggest both conditions, and manometry is key for diagnosing achalasia, endoscopy provides the most direct structural information needed for differentiation.

Quick Tip

Gastroenterology: Esophageal Disorders. When evaluating esophageal symptoms like dysphagia, it's important to consider both structural (e.g., strictures, tumors) and functional (e.g., achalasia, motility disorders) causes. Often, a combination of investigations, including endoscopy and manometry, is needed for accurate diagnosis.

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85. Which are the non-articular manifestations of rheumatoid arthritis?

(A) **Pericarditis**

(B) **Sjogren's syndrome**

(C) **Cervical myelopathy**

(D) **Z-deformity**

Choose the correct answer from the options given below :

(1) (A), (B), (D) only
(2) (A), (B), (C) only
(3) (B) and (A) only
(4) (B), (C), (D) only

Correct Answer: (2) (A), (B), (C) only

Solution: Rheumatoid arthritis (RA) is a systemic autoimmune disease that primarily affects the joints but can also involve various extra-articular organs and tissues. Let's analyze each of the listed manifestations:

- **(A) Pericarditis:** Inflammation of the pericardium (the sac surrounding the heart) is a well-recognized non-articular manifestation of RA.
- **(B) Sjogren's syndrome:** This is another autoimmune disorder characterized by dry eyes and dry mouth, often occurring as a comorbidity with RA (secondary Sjogren's syndrome), making it a non-articular manifestation associated with RA.
- **(C) Cervical myelopathy:** This refers to spinal cord compression in the neck, often due to atlantoaxial subluxation (misalignment of the first and second cervical vertebrae) caused by rheumatoid involvement of the cervical spine. While it affects bony structures (vertebrae), the primary clinical consequence is neurological (spinal cord), classifying it as a non-articular manifestation.
- **(D) Z-deformity:** This is a specific deformity of the thumb, characterized by flexion at the metacarpophalangeal (MCP) joint and hyperextension at the interphalangeal (IP) joint. Deformities like Z-deformity, swan neck deformity, and boutonniere deformity are considered articular manifestations of RA as they directly involve the joints.

Therefore, the non-articular manifestations of rheumatoid arthritis among the given options are Pericarditis (A), Sjogren's syndrome (B), and Cervical myelopathy (C).

Quick Tip

Rheumatology: Extra-articular RA. Remember that rheumatoid arthritis is a systemic disease, and its effects can extend beyond the joints. Being aware of these non-articular manifestations is important for comprehensive management and recognizing potential complications.

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86. Glasgow Coma Scale (GCS) score is an assessment of :

(1) conscious level of patient
(2) severity of acute appendicitis
(3) schizophrenia patient
(4) pupillary response to light stimulus

Correct Answer: (1) conscious level of patient

Solution: The Glasgow Coma Scale (GCS) is a neurological scale used to assess the **conscious level of a patient**. It evaluates three components of a patient's response: eye opening, verbal response, and motor response. Each response is scored, and the sum of these scores provides an overall GCS score, which ranges from 3 (deep coma or death) to 15 (fully awake). The GCS is widely used in medical and trauma settings to assess the severity of brain injury and to monitor changes in a patient's level of consciousness over time.
Let's briefly look at why the other options are incorrect:

- **(2) severity of acute appendicitis:** The severity of acute appendicitis is typically assessed using clinical findings, laboratory tests (like white blood cell count), and imaging studies (like ultrasound or CT scan), not the Glasgow Coma Scale.
- **(3) schizophrenia patient:** Schizophrenia is a psychiatric disorder, and its assessment involves evaluating mental status, including thought processes, perception, mood, and behavior, using specific psychiatric rating scales and clinical interviews, not the Glasgow Coma Scale.

- **(4) pupillary response to light stimulus:** Pupillary response to light is one component of a neurological examination and can provide information about brainstem function, but it is not the sole assessment measured by the Glasgow Coma Scale. The GCS includes eye opening (which can be in response to stimuli other than light), verbal response, and motor response in addition to neurological signs like pupillary reflexes.

Therefore, the Glasgow Coma Scale (GCS) score is an assessment of the conscious level of a patient.

Quick Tip

Neurology: Glasgow Coma Scale. Remember that the GCS assesses the level of consciousness based on eye opening, verbal response, and motor response. It is a fundamental tool in the initial assessment and ongoing monitoring of patients with potential neurological compromise.

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87. Which of the following statements are true for Ankylosing spondylitis?

(A) **Presence of enthesitis in axial joints**

(B) **Sacroiliitis is an early manifestation**

(C) **Rheumatoid factor (RF), is found in majority of patients**

(D) **X-ray of lumbar spine reveal squaring of vertebral bodies**

Choose the correct answer from the options given below :

(1) (B), (C) and (D) only
(2) (A), (B) and (C) only
(3) (A), (B) and (D) only
(4) (A), (C) and (D) only

Correct Answer: (3) (A), (B) and (D) only

Solution: Let's evaluate each statement regarding Ankylosing spondylitis (AS):

- **(A) Presence of enthesitis in axial joints:** Enthesitis, inflammation at the sites where tendons and ligaments insert into bone, particularly in the axial skeleton (spine and sacroiliac joints), is a characteristic feature of AS. Thus, statement (A) is **true**.
- **(B) Sacroiliitis is an early manifestation:** Inflammation of the sacroiliac joints (sacroiliitis) is a hallmark and often the earliest radiographic finding in Ankylosing spondylitis. Thus, statement (B) is **true**.
- **(C) Rheumatoid factor (RF), is found in majority of patients:** Rheumatoid factor is an antibody commonly associated with rheumatoid arthritis. In contrast, RF is typically negative or found in only a small minority of patients with Ankylosing spondylitis. Thus, statement (C) is **false**.
- **(D) X-ray of lumbar spine reveal squaring of vertebral bodies:** In chronic Ankylosing spondylitis, inflammation and subsequent fusion of the vertebrae can lead to characteristic radiographic changes, including squaring of the vertebral bodies (loss of the normal concave anterior border), syndesmophytes (bony bridges between vertebrae), and bamboo spine. Thus, statement (D) is **true**.

Therefore, the true statements for Ankylosing spondylitis are (A), (B), and (D).

Quick Tip

Rheumatology: Ankylosing Spondylitis. Remember the key features of AS: it's a seronegative spondyloarthropathy (meaning RF is usually negative) characterized by axial skeleton involvement, sacroiliitis, enthesitis, and specific radiographic findings.

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88. Which of the following is the most common inherited haemolytic anaemia caused by red cell membrane defect?

(1) Hereditary Elliptocytosis
(2) Hereditary Spherocytosis
(3) Hereditary Stomatocytosis
(4) Hereditary Pyropoikilocytosis

Correct Answer: (2) Hereditary Spherocytosis

Solution: Hereditary haemolytic anaemias caused by red cell membrane defects are a group of genetic disorders affecting the structure and function of the red blood cell membrane, leading to increased red blood cell destruction (haemolysis) and anaemia. Among the given options, **Hereditary Spherocytosis** is the most common inherited haemolytic anaemia caused by a red cell membrane defect.

Hereditary Spherocytosis is characterized by a defect in membrane proteins (most commonly spectrin, ankyrin, or band 3), leading to the formation of spherocytes – red blood cells that are sphere-shaped rather than the normal biconcave disc shape. These spherocytes are less deformable and are prematurely destroyed by the spleen, resulting in haemolytic anaemia, jaundice, and splenomegaly.

Let's briefly look at the other options:

- **Hereditary Elliptocytosis:** This is another inherited red cell membrane disorder characterized by elliptically shaped red blood cells. While common in some populations, it is generally less prevalent than hereditary spherocytosis as a cause of significant haemolytic anaemia.
- **Hereditary Stomatocytosis:** This is a rare inherited disorder in which the red blood cells have a mouth-like (stoma) appearance. It can be associated with haemolytic anaemia of varying severity.
- **Hereditary Pyropoikilocytosis:** This is a rare and severe inherited red cell membrane disorder characterized by extreme poikilocytosis (abnormally shaped red blood cells), microspherocytes, and thermal sensitivity of red blood cells.

Therefore, Hereditary Spherocytosis is the most common inherited haemolytic anaemia caused by a red cell membrane defect.

Quick Tip

Haematology: Inherited Haemolytic Anaemias. Remember the common red cell membrane defects and their associated anaemias. Hereditary spherocytosis is the most prevalent and is characterized by spherocytes and increased osmotic fragility.

89. Match List I with List II :

List I (Sign)

(A) **Murphy's**

(B) **Rovsing's**

(C) **Iliopsoas**

(D) **Grey Turner's and Cullen's**

List II (Disease Association)

(I) Iliopsoas Abscess, Perinephric Abscess

(II) Acute Cholecystitis

(III) Acute Appendicitis

(IV) Haemorrhagic pancreatitis, aortic rupture and ruptured ectopic pregnancy

Choose the correct answer from the options given below :

(1) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)
(2) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
(3) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)
(4) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)

Correct Answer: (2) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

Solution: Matching the clinical signs with their associated diseases:

- **(A) Murphy's sign:** This sign is elicited during palpation of the right upper quadrant of the abdomen. Pain on inspiration when the examiner's fingers are under the right costal margin suggests inflammation of the gallbladder, commonly seen in **Acute Cholecystitis (II)**.
- **(B) Rovsing's sign:** This sign is elicited by deep palpation in the left lower quadrant of the abdomen, which causes pain in the right lower quadrant. It is indicative of peritoneal irritation in **Acute Appendicitis (III)**.

- **(C) Iliopsoas sign:** This sign is elicited by extending the thigh of a patient lying on their side against resistance or by passively extending the thigh of a supine patient. Pain indicates irritation of the iliopsoas muscle, which can occur in conditions such as **Iliopsoas Abscess or Perinephric Abscess (I)** where the inflamed structures are adjacent to the muscle.
- **(D) Grey Turner's and Cullen's signs:** These are signs of retroperitoneal haemorrhage. Grey Turner's sign refers to ecchymosis (bruising) of the flanks, while Cullen's sign refers to ecchymosis around the umbilicus. These can be seen in conditions like **Haemorrhagic pancreatitis, aortic rupture, and ruptured ectopic pregnancy (IV)**.

Therefore, the correct matching is (A)-(II), (B)-(III), (C)-(I), (D)-(IV).

Quick Tip

Clinical Examination: Abdominal Signs. Recognizing these classic abdominal signs and their associations is crucial for the clinical diagnosis of various abdominal pathologies.

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90. Which of the following statements are true for multiple endocrine neoplasia (MEN) syndromes?

(A) **Each type of MEN syndrome is inherited as autosomal recessive.**

(B) **MEN type I is characterized by triad of tumors involving parathyroids, pancreatic islets and anterior pituitary**

(C) **Majority of patients with MEN type I have hypercalcemia**

(D) **Medullary thyroid carcinoma is the most common feature of MEN type 2**

Choose the correct answer from the options given below :

(1) (A), (B) and (C) only

(2) (A), (C) and (D) only

(3) (B), (C) and (D) only

(4) (A), (B) and (D) only

Correct Answer: (3) (B), (C) and (D) only

Solution: Let's evaluate each statement about Multiple Endocrine Neoplasia (MEN) syndromes:

- **(A) Each type of MEN syndrome is inherited as autosomal recessive:** MEN syndromes are inherited as **autosomal dominant** conditions, meaning that only one copy of the mutated gene is needed to develop the syndrome. Thus, statement (A) is **false**.
- **(B) MEN type I is characterized by triad of tumors involving parathyroids, pancreatic islets and anterior pituitary:** MEN type 1 is indeed characterized by the "3 Ps": primary hyperparathyroidism (due to parathyroid adenomas), pancreatic islet cell tumors, and pituitary tumors (adenomas). Thus, statement (B) is **true**.
- **(C) Majority of patients with MEN type I have hypercalcemia:** Primary hyperparathyroidism, caused by parathyroid adenomas, is the most common manifestation of MEN type 1. This leads to increased parathyroid hormone (PTH) levels and consequently hypercalcemia (elevated blood calcium levels) in the majority of affected individuals. Thus, statement (C) is **true**.
- **(D) Medullary thyroid carcinoma is the most common feature of MEN type 2:** Medullary thyroid carcinoma (MTC) is a hallmark feature of all subtypes of MEN type 2 (MEN 2A and MEN 2B). It is a thyroid cancer arising from parafollicular C cells that produce calcitonin. Thus, statement (D) is **true**.

Therefore, the true statements for multiple endocrine neoplasia (MEN) syndromes are (B), (C), and (D).

Quick Tip

Endocrinology: MEN Syndromes. Remember the autosomal dominant inheritance pattern of MEN syndromes and the key tumor associations for MEN type 1 (parathyroid, pancreas, pituitary) and MEN type 2 (medullary thyroid carcinoma, pheochromocytoma, +/- parathyroid).

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91. A middle aged male presented with sub acute paresthesias in hands and feet, loss of vibration and position sense and a progressive spastic and ataxic weakness. Examination revealed loss of reflexes along with presence of Babinski sign. Investigation revealed presence of macrocytic RBCs and elevated serum homocystine levels. The most likely diagnosis is

(1) Tabes dorsalis
(2) Hereditary spastic paraplegia
(3) Subacute combined degeneration of spinal cord
(4) Spondylotic myelopathy

Correct Answer: (3) Subacute combined degeneration of spinal cord

Solution: The clinical presentation described includes a combination of neurological findings that point towards a specific condition:

- **Subacute paresthesias in hands and feet, loss of vibration and position sense:** These are characteristic features of posterior column dysfunction in the spinal cord.
- **Progressive spastic and ataxic weakness:** This suggests involvement of both the corticospinal tracts (leading to spasticity) and the spinocerebellar tracts (leading to ataxia).
- **Loss of reflexes along with the presence of Babinski sign:** Loss of reflexes (areflexia) is often seen with peripheral neuropathy or in the acute phase of spinal cord injury, while a positive Babinski sign indicates upper motor neuron involvement. The combination here is somewhat unusual but can be seen in subacute combined degeneration affecting both central and peripheral nervous systems.

- **Macrocytic RBCs and elevated serum homocystine levels:** Macrocytic anaemia suggests vitamin B12 or folate deficiency. Elevated homocystine levels can occur in both B12 and folate deficiency, as these vitamins are cofactors in the metabolism of homocysteine.

Considering these findings together, the most likely diagnosis is **Subacute combined degeneration of spinal cord (SCD)**. SCD is a neurological disorder caused by vitamin B12 deficiency, leading to demyelination of the posterior and lateral columns of the spinal cord, as well as peripheral nerves. The macrocytic anaemia and elevated homocystine levels strongly support this diagnosis.

Let's briefly consider why the other options are less likely:

- **Tabes dorsalis:** This is a late manifestation of syphilis affecting the posterior columns and dorsal roots, leading to sensory ataxia, lancinating pains, and Argyll Robertson pupils. While it involves the posterior columns, the other features, particularly the macrocytic anaemia and elevated homocystine, are not typical.
- **Hereditary spastic paraplegia:** This is a group of inherited disorders primarily affecting the corticospinal tracts, leading to progressive spasticity of the lower limbs. Sensory loss and macrocytic anaemia are not typical features.
- **Spondylotic myelopathy:** This is caused by degenerative changes in the cervical spine leading to compression of the spinal cord. While it can cause spastic weakness and sensory changes, macrocytic anaemia and elevated homocystine are not associated.

Therefore, the combination of neurological deficits affecting multiple spinal cord tracts, peripheral nerves, along with macrocytic anaemia and elevated homocystine, strongly suggests subacute combined degeneration of the spinal cord due to vitamin B12 deficiency.

Quick Tip

Neurology: Subacute Combined Degeneration. Remember that SCD is a consequence of vitamin B12 deficiency affecting the posterior and lateral columns of the spinal cord and peripheral nerves. The clinical picture often includes sensory ataxia, spasticity, and peripheral neuropathy, frequently accompanied by macrocytic anaemia.

92. Wasting of the thenar eminence and positive tinel's sign are produced due to compression of :

(1) Common peroneal nerve

(2) Ulnar nerve

(3) Median nerve

(4) Lateral cutaneous nerve of thigh

Correct Answer: (3) Median nerve

Solution: Wasting (atrophy) of the thenar eminence, the group of muscles at the base of the thumb, and a positive Tinel's sign at the wrist are classic findings associated with compression of the **median nerve** in the carpal tunnel. This condition is known as carpal tunnel syndrome.
Let's break down why:

- **Thenar eminence wasting:** The median nerve innervates three of the four thenar muscles (abductor pollicis brevis, flexor pollicis brevis superficial head, and opponens pollicis). Compression of the median nerve in the carpal tunnel leads to denervation and subsequent atrophy of these muscles, resulting in wasting of the thenar eminence.
- **Positive Tinel's sign:** Tinel's sign is elicited by tapping or percussing over the course of a nerve. A positive Tinel's sign occurs when this tapping produces a tingling or electric shock-like sensation distal to the site of compression. In carpal tunnel syndrome, tapping over the median nerve at the wrist can reproduce these symptoms in the fingers innervated by the median nerve (thumb, index, middle, and radial half of the ring finger).

Now let's consider the other options:

- **Common peroneal nerve:** Compression of this nerve typically affects the muscles of the anterior and lateral compartments of the leg, leading to foot drop and sensory loss in the lateral leg and dorsum of the foot. It does not affect the thenar eminence.
- **Ulnar nerve:** Compression of the ulnar nerve typically affects the hypothenar eminence (muscles at the base of the little finger), the interossei muscles of the hand, and

sensation in the little finger and ulnar half of the ring finger. Tinel's sign might be positive at the elbow (cubital tunnel syndrome) or wrist (Guyon's canal syndrome).

- **Lateral cutaneous nerve of thigh:** Compression of this nerve leads to meralgia paresthetica, characterized by numbness, tingling, and pain in the outer thigh. It does not affect motor function or sensation in the hand.

Therefore, wasting of the thenar eminence and a positive Tinel's sign at the wrist are characteristic of median nerve compression in carpal tunnel syndrome.

Quick Tip

Neurology: Carpal Tunnel Syndrome. Remember the key clinical features of carpal tunnel syndrome: thenar atrophy, paresthesias in the median nerve distribution, and positive Tinel's and Phalen's signs. These arise from compression of the median nerve at the wrist.

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93. Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Statement I : Hypoparathyroidism presents as neuromuscular irritability and neuropsychiatric manifestations. Chvostek's sign and Trousseau's sign are found in hypocalcemia.

Statement II : Chvostek's sign (gentle tapping over the trigeminal nerve causes twitching of the ipsilateral facial muscles) and Trousseau's sign (inflation of the sphygmomanometer cuff above systolic pressure for 5 minutes induces tetanic spasm of the fingers and wrist).

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are correct

(2) Both Statement I and Statement II are incorrect

(3) Statement I is correct but Statement II is incorrect

(4) Statement I is incorrect but Statement II is correct

Correct Answer: (3) Statement I is correct but Statement II is incorrect

Solution: Let's analyze each statement regarding hypoparathyroidism and its associated signs:

Statement I: Hypoparathyroidism presents as neuromuscular irritability and neuropsychiatric manifestations. Chvostek's sign and Trousseau's sign are found in hypocalcemia. Hypoparathyroidism leads to decreased parathyroid hormone (PTH) levels, resulting in hypocalcemia (low blood calcium). Hypocalcemia increases neuromuscular excitability, leading to symptoms like paresthesias, muscle cramps, tetany, and even seizures. Neuropsychiatric manifestations such as anxiety, depression, and psychosis can also occur. Chvostek's sign and Trousseau's sign are classic physical examination findings indicative of hypocalcemia. Therefore, Statement I is **correct**.

Statement II: Chvostek's sign (gentle tapping over the trigeminal nerve causes twitching of the ipsilateral facial muscles) and Trousseau's sign (inflation of the sphygmomanometer cuff above systolic pressure for 5 minutes induces tetanic spasm of the fingers and wrist). Chvostek's sign is elicited by gently tapping over the facial nerve (not the trigeminal nerve) just anterior to the ear, near the angle of the jaw. A positive sign is the twitching of the ipsilateral facial muscles (typically the lip or nose). Trousseau's sign is elicited by inflating a sphygmomanometer cuff above the patient's systolic blood pressure for 2-3 minutes (not 5 minutes), which can induce carpopedal spasm (tetanic spasm of the fingers and wrist). Therefore, Statement II contains inaccuracies regarding both the nerve stimulated for Chvostek's sign and the duration of cuff inflation for Trousseau's sign, making it **incorrect**.

In conclusion, Statement I is correct, but Statement II is incorrect.

Quick Tip

Endocrinology: Hypocalcemia Signs. Remember that Chvostek's sign involves tapping the facial nerve, and Trousseau's sign involves inflating a blood pressure cuff to elicit carpopedal spasm, both indicating neuromuscular excitability due to hypocalcemia.

94. Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : The principle pathological abnormality in Klinefelter syndrome is dysgenesis of the seminiferous tubules.
Reasons (R) : This is evident from adulthood and progress with age. By adolescence, hyalinization and fibrosis are present within seminiferous tubules and Leydig cell function is impaired, resulting in hypogonadism.
In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both (A) and (R) are true and (R) is the correct explanation of (A)
(2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
(3) (A) is true but (R) is false
(4) (A) is false but (R) is true

Correct Answer: (3) (A) is true but (R) is false

Solution: Let's analyze the Assertion and the Reason regarding Klinefelter syndrome:
Assertion (A): The principle pathological abnormality in Klinefelter syndrome is dysgenesis of the seminiferous tubules. Klinefelter syndrome is a genetic condition in males, most commonly due to an XXY karyotype. The primary pathological finding in the testes of individuals with Klinefelter syndrome is indeed the abnormal development or dysgenesis of the seminiferous tubules. These tubules, responsible for sperm production, are typically small, hyalinized, and fibrotic. Therefore, Assertion (A) is **true**.
Reasons (R): This is evident from adulthood and progress with age. By adolescence, hyalinization and fibrosis are present within seminiferous tubules and Leydig cell function is impaired, resulting in hypogonadism. While it's true that hyalinization and fibrosis of the seminiferous tubules become more evident with age and contribute to hypogonadism in Klinefelter syndrome, the dysgenesis of the seminiferous tubules is present from birth due to the abnormal chromosomal complement. The progression of these changes through adolescence exacerbates the initial abnormality. The impaired Leydig cell function also contributes to hypogonadism, but the reason doesn't fully capture the primary

congenital abnormality. Therefore, while parts of Reason (R) are true (hyalinization, fibrosis, impaired Leydig cell function leading to hypogonadism), it doesn't accurately describe the initial and principle pathological abnormality as dysgenesis present from development. Thus, Reason (R) is **false** as an explanation for the primary congenital defect.
Therefore, Assertion (A) is true, but Reason (R) is false as a complete and accurate explanation of the fundamental pathological abnormality from development.

Quick Tip

Genetics: Klinefelter Syndrome. Remember that Klinefelter syndrome (typically XXY) results in congenital dysgenesis of the seminiferous tubules, which progresses with age, leading to fibrosis, hyalinization, and impaired testicular function, ultimately causing hypogonadism.

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95. Lhermitte's symptom is found in :

(1) Multiple sclerosis
(2) Amyloidosis
(3) Anterior horn cell disease
(4) Parkinsonism

Correct Answer: (1) Multiple sclerosis

Solution: Lhermitte's sign, also known as Lhermitte's phenomenon, is a sudden, brief, electric shock-like sensation that travels down the spine and often into the limbs upon flexion of the neck. This symptom is commonly associated with conditions that cause demyelination or damage to the spinal cord. The most well-known association of Lhermitte's sign is with **Multiple sclerosis (MS)**, a chronic autoimmune disease characterized by demyelination in the central nervous system.
Let's briefly consider why the other options are less likely:

- **Amyloidosis:** This is a group of diseases characterized by the deposition of abnormal amyloid proteins in various tissues and organs. While neurological involvement can

occur in some forms of amyloidosis (e.g., amyloid neuropathy), Lhermitte's sign is not a typical feature.

- **Anterior horn cell disease:** This refers to conditions affecting the motor neurons in the anterior horns of the spinal cord, such as amyotrophic lateral sclerosis (ALS) or poliomyelitis. These diseases primarily cause muscle weakness and atrophy, not the specific sensory phenomenon of Lhermitte's sign.
- **Parkinsonism:** This is a neurological syndrome characterized by tremor, rigidity, bradykinesia, and postural instability, commonly seen in Parkinson's disease. Lhermitte's sign is not a feature of parkinsonism.

Therefore, Lhermitte's symptom is most characteristically found in Multiple sclerosis.

Quick Tip

Neurology: Lhermitte's Sign. Remember that Lhermitte's sign, the electric shock sensation down the spine with neck flexion, is a key indicator of spinal cord demyelination and is most strongly associated with multiple sclerosis.

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96. Barrett's oesophagus is characterised by :

(1) Squamous metaplasia
(2) Columnar metaplasia
(3) Mesenchymal metaplasia
(4) Atypical hyperplasia

Correct Answer: (2) Columnar metaplasia

Solution: Barrett's oesophagus is a condition in which the normal stratified squamous epithelium lining the oesophagus is replaced by metaplastic columnar epithelium, often containing goblet cells, which are usually found in the intestine. This change is typically a result of chronic gastroesophageal reflux disease (GERD). The columnar metaplasia is considered a premalignant condition because it increases the risk of developing oesophageal adenocarcinoma.

Let's briefly look at why the other options are incorrect:

- **Squamous metaplasia:** This is the replacement of one type of squamous epithelium by another type of squamous epithelium. It is not characteristic of Barrett's oesophagus.
- **Mesenchymal metaplasia:** This involves the transformation of one type of mesenchymal tissue into another (e.g., cartilage to bone). It is not relevant to the epithelial lining of the oesophagus in Barrett's oesophagus.
- **Atypical hyperplasia:** Hyperplasia is an increase in the number of cells in a tissue or organ. Atypical hyperplasia refers to an increase in cells that exhibit abnormal features (e.g., size, shape, organization). While dysplasia (disordered cellular growth) can occur in Barrett's oesophagus and is a further step towards malignancy, the defining characteristic of Barrett's oesophagus itself is the replacement of squamous epithelium with columnar epithelium (metaplasia).

Therefore, Barrett's oesophagus is characterised by columnar metaplasia.

Quick Tip

Pathology: Barrett's Oesophagus. Remember that Barrett's oesophagus involves the replacement of the normal squamous lining of the oesophagus with columnar epithelium, a process known as metaplasia, in response to chronic acid reflux. This metaplastic change is a risk factor for oesophageal adenocarcinoma.

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97. The main toxic metabolite of alcohol which is responsible for alcohol related injury to different organs is :

(1) Formaldehyde
(2) Cysteamine
(3) Acetaldehyde
(4) Malondialdehyde

Correct Answer: (3) Acetaldehyde

Solution: When alcohol (ethanol) is ingested, it undergoes metabolism primarily in the liver through a series of enzymatic reactions. The first major step in this process is the oxidation of ethanol to **acetaldehyde** by the enzyme alcohol dehydrogenase. Acetaldehyde is a highly reactive and toxic compound that is responsible for many of the harmful effects of alcohol on various organs in the body.
Acetaldehyde can:

- Damage DNA and proteins.
- Interfere with enzyme function.
- Promote inflammation and oxidative stress.
- Contribute to liver damage (alcoholic hepatitis, cirrhosis).
- Play a role in alcohol-related cancers.
- Cause some of the immediate effects of alcohol consumption, such as flushing and nausea (especially in individuals with aldehyde dehydrogenase deficiency).

Acetaldehyde is subsequently metabolized to acetate (a less toxic compound) by the enzyme aldehyde dehydrogenase. However, the accumulation of acetaldehyde due to excessive alcohol consumption or impaired aldehyde dehydrogenase activity leads to significant cellular damage.
Let's briefly look at the other options:

- **Formaldehyde:** While formaldehyde is a toxic aldehyde, it is not the primary direct metabolite of ethanol in the body. It can be formed during the metabolism of methanol, another type of alcohol.
- **Cysteamine:** This is an aminothiol compound with various pharmacological effects, including as a treatment for cystinosis. It is not a metabolite of alcohol.
- **Malondialdehyde:** This is a product of lipid peroxidation, a process that can be induced by alcohol consumption and acetaldehyde, contributing to oxidative damage. However, it is a secondary product of alcohol-related injury, not the primary toxic metabolite.

Therefore, acetaldehyde is the main toxic metabolite of alcohol responsible for alcohol-related injury to different organs.

Quick Tip

Biochemistry: Alcohol Metabolism. Remember the two main enzymes involved in ethanol metabolism: alcohol dehydrogenase (ethanol to acetaldehyde) and aldehyde dehydrogenase (acetaldehyde to acetate). Acetaldehyde is the key intermediate responsible for much of alcohol's toxicity.

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98. Which of the following statements are correct about malignant tumor cells?

(A) **Most malignant tumor cells show DNA aneuploidy**

(B) **The N : C ratio is decreased from 1 : 1 to 1 : 5**

(C) **Nuclear chromatin is increased and coarsely clumped**

(D) **Malignant cells have prominent nucleoli in the nucleus.**

Choose the correct answer from the options given below :

(1) (A), (B) and (C) are correct
(2) (B), (C) and (D) are correct
(3) (A), (B) and (D) are correct
(4) (A), (C) and (D) are correct

Correct Answer: (4) (A), (C) and (D) are correct

Solution: Let's evaluate each statement regarding the characteristics of malignant tumor cells:

- **(A) Most malignant tumor cells show DNA aneuploidy:** Aneuploidy, an abnormal number of chromosomes, is a common feature of malignant cells due to genomic instability. This often leads to an imbalance in gene expression, contributing to uncontrolled growth and other malignant properties. Thus, statement (A) is **correct**.
- **(B) The N : C ratio is decreased from 1 : 1 to 1 : 5:** Malignant cells typically have an increased nuclear-to-cytoplasmic (N:C) ratio, often approaching or exceeding 1:1, due to the enlarged and hyperchromatic nuclei with relatively less cytoplasm compared to

normal cells. A decrease in the N:C ratio to 1:5 would suggest a much smaller nucleus relative to the cytoplasm, which is not characteristic of malignancy. Thus, statement (B) is **incorrect**.

- **(C) Nuclear chromatin is increased and coarsely clumped:** Malignant cells often exhibit hyperchromasia, meaning their nuclei are darker due to an increased amount of DNA. The chromatin pattern is frequently coarse and clumped, reflecting the abnormal organization of the genetic material. Thus, statement (C) is **correct**.
- **(D) Malignant cells have prominent nucleoli in the nucleus:** Nucleoli are structures within the nucleus involved in ribosome synthesis. Malignant cells, with their high rate of proliferation and protein synthesis, often have one or more large and prominent nucleoli. Thus, statement (D) is **correct**.

Therefore, the correct statements about malignant tumor cells are (A), (C), and (D).

Quick Tip

Pathology: Cellular Characteristics of Malignancy. Remember the key cytological features that help identify malignant cells under a microscope: nuclear pleomorphism, hyperchromasia, increased N:C ratio, prominent nucleoli, and increased mitotic activity. Aneuploidy is a common underlying genetic abnormality.

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99. Match List I with List II :

List I

(A) **Skeletal muscle**

(B) **Smooth muscle**

(C) **Totipotent cells**

(D) **Adipose tissue**

List II

(I) Lipoma

(II) Teratoma

(III) Leiomyoma

(IV) **Rhabdomyoma**

Choose the correct answer from the options given below :

(1) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

(2) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

(3) (A)-(II), (B)-(I), (C)-(IV), (D)-(III)

(4) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

Correct Answer: (1) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

Solution: Matching the tissue types with their corresponding benign tumors:

- **(A) Skeletal muscle:** Benign tumors of skeletal muscle are called **rhabdomyomas (IV)**.
- **(B) Smooth muscle:** Benign tumors of smooth muscle are called **leiomyomas (III)**. These are commonly found in the uterus (fibroids).
- **(C) Totipotent cells:** Totipotent cells, such as the zygote, have the ability to differentiate into all cell types of an organism, including extraembryonic tissues. Tumors arising from totipotent cells that contain tissues derived from all three germ layers (ectoderm, mesoderm, and endoderm) are called **teratomas (II)**.
- **(D) Adipose tissue:** Benign tumors of adipose tissue (fat) are called **lipomas (I)**.

Therefore, the correct matching is (A)-(IV), (B)-(III), (C)-(II), (D)-(I).

Quick Tip

Pathology: Benign Tumors. Remember the nomenclature for benign tumors, which typically involves adding the suffix ”-oma” to the cell type of origin (e.g., lipoma from fat cells, leiomyoma from smooth muscle). Teratomas are unique due to their origin from totipotent cells and their diverse tissue composition.

100. Struvite stones are formed in kidneys as a result of which of the following?

(1) Urinary tract infection

(2) Gout

(3) Hereditary xanthinuria

(4) Hypercalcaemia

Correct Answer: (1) Urinary tract infection

Solution: Struvite stones, also known as infection stones or triple phosphate stones, are a type of kidney stone composed of magnesium ammonium phosphate ($MgNH_4PO_4 \cdot 6H_2O$). Their formation is strongly associated with **urinary tract infections (UTIs)** caused by urea-splitting bacteria, such as *Proteus*, *Klebsiella*, *Pseudomonas*, and *Staphylococcus*.

These bacteria produce the enzyme urease, which hydrolyzes urea in the urine into ammonia (NH_3) and carbon dioxide (CO_2). The increase in ammonia leads to an elevation of the urinary pH, making it more alkaline. In this alkaline environment, the solubility of magnesium ammonium phosphate decreases, leading to its precipitation and the formation of struvite stones. These stones can grow rapidly and often form large, staghorn calculi that fill the renal pelvis and calyces.

Let's briefly look at why the other options are incorrect:

- **Gout:** Gout is a metabolic disorder characterized by hyperuricemia (elevated uric acid levels) and the deposition of monosodium urate crystals in joints and other tissues, including the kidneys (uric acid stones). It is not directly involved in the formation of struvite stones.
- **Hereditary xanthinuria:** This is a rare genetic disorder characterized by a deficiency in xanthine oxidase, leading to the accumulation of xanthine in the urine and the formation of xanthine stones. It is not related to struvite stone formation.
- **Hypercalcaemia:** Elevated levels of calcium in the blood can increase the risk of calcium-based kidney stones (e.g., calcium oxalate, calcium phosphate). While UTIs

can sometimes occur in individuals with hypercalcaemia, hypercalcaemia itself is not the primary cause of struvite stones.

Therefore, struvite stones are formed in the kidneys as a direct consequence of urinary tract infections with urea-splitting bacteria.

Quick Tip

Nephrology: Kidney Stones. Remember the different types of kidney stones and their associated risk factors. Struvite stones are unique in that their formation is strongly linked to UTIs with urease-producing bacteria and alkaline urine.

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101. In "Lathyrism" the toxin present in the lathyrus seeds has been identified as :

(1) Beta oxalyl amino alanine (BOAA)

(2) Terbutaline

(3) Chlorine

(4) Iodine

Correct Answer: (1) Beta oxalyl amino alanine (BOAA)

Solution: Lathyrism is a neurological condition caused by the consumption of seeds of certain species of the genus *Lathyrus*, particularly *Lathyrus sativus* (grass pea) during times of famine. The neurotoxin responsible for the neurological symptoms of lathyrism has been identified as **beta-oxalyl-L-alpha,beta-diaminopropionic acid**, commonly abbreviated as **beta-oxalyl amino alanine (BOAA)**.
BOAA is a non-protein amino acid that acts as a potent excitotoxin, overstimulating glutamate receptors in the central nervous system, leading to neuronal damage. This damage primarily affects the upper motor neurons, resulting in a characteristic spastic paraparesis (weakness and spasticity of the legs).
Let's briefly look at the other options:

- **Terbutaline:** This is a beta-2 adrenergic receptor agonist used as a bronchodilator to treat asthma and other respiratory conditions. It is not a toxin found in *Lathyrus* seeds.

- **Chlorine:** This is a chemical element and a strong oxidizing agent. While chlorine gas is toxic, it is not found in *Lathyrus* seeds as the cause of lathyrism.
- **Iodine:** This is an essential trace element required for thyroid hormone synthesis. Deficiency or excess can cause health problems, but it is not the toxin responsible for lathyrism.

Therefore, the toxin present in *Lathyrus* seeds that causes lathyrism is beta-oxalyl amino alanine (BOAA).

Quick Tip

Toxicology: Lathyrism. Remember that lathyrism is a neurotoxic condition linked to the consumption of *Lathyrus* seeds, and the causative agent is the neuroexcitatory amino acid BOAA.

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102. Recurrent episodes of macroscopic hematuria during or immediately following an upper respiratory infection in a feature of:

(1) Lupus nephritis
(2) IgA Nephropathy
(3) Minimal change disease
(4) Focal segmental glomerulosclerosis

Correct Answer: (2) IgA Nephropathy

Solution: The clinical presentation of recurrent episodes of macroscopic hematuria (visible blood in the urine) that occur during or immediately following an upper respiratory infection (synpharyngitic hematuria) is a characteristic feature of **IgA nephropathy**, also known as Berger's disease.
IgA nephropathy is a glomerular disease caused by the deposition of immunoglobulin A (IgA) in the glomeruli of the kidneys. The exact trigger for these IgA deposits is not fully understood, but infections, particularly of the upper respiratory tract or gastrointestinal tract, are known to exacerbate the condition and lead to episodes of macroscopic hematuria. The

latent period between the infection and the onset of hematuria is typically short, often occurring concurrently or within a few days.
Let's briefly look at why the other options are less likely:

- **Lupus nephritis:** This is kidney inflammation caused by systemic lupus erythematosus (SLE). While hematuria can be a feature, it is not typically associated with such a close temporal relationship to upper respiratory infections as seen in IgA nephropathy. Lupus nephritis usually presents with other systemic symptoms and signs of SLE.
- **Minimal change disease:** This is a common cause of nephrotic syndrome in children, characterized by proteinuria (protein in the urine), edema, hypoalbuminemia, and hyperlipidemia. Hematuria is usually microscopic or absent. It is not typically triggered by upper respiratory infections in the same way as IgA nephropathy.
- **Focal segmental glomerulosclerosis (FSGS):** This is a pattern of glomerular injury that can have various causes. It typically presents with proteinuria, and hematuria may be present but is not the predominant feature linked to upper respiratory infections.

Therefore, the clinical scenario described is most consistent with IgA nephropathy.

Quick Tip

Nephrology: Glomerular Diseases. Remember the key clinical features of common glomerular diseases. IgA nephropathy's hallmark is synpharyngitic hematuria, minimal change disease presents with nephrotic syndrome and minimal glomerular changes on light microscopy, and FSGS is characterized by focal and segmental sclerosis of glomeruli. Lupus nephritis occurs in the context of systemic lupus erythematosus.

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103. In many of the developing countries, the most common cause of deaths among women of reproductive age is :

(1) Pulmonary Tuberculosis
(2) Accidents
(3) Maternal (puerperal) mortality

(4) AIDS

Correct Answer: (3) Maternal (puerperal) mortality

Solution: In many developing countries, **maternal (puerperal) mortality** remains a leading cause of death among women of reproductive age (typically defined as 15-49 years).
Maternal mortality refers to deaths of women while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.
Factors contributing to high maternal mortality in developing countries include:

- Limited access to quality antenatal care.
- Inadequate skilled care during childbirth.
- Poor access to emergency obstetric care.
- High rates of teenage pregnancy.
- Malnutrition and underlying health conditions.
- Socioeconomic disparities.

While other conditions like pulmonary tuberculosis, accidents, and AIDS are significant causes of mortality in this age group in many developing countries, maternal mortality often accounts for a disproportionately high number of deaths, highlighting the risks associated with pregnancy and childbirth in these regions. Significant efforts are being made globally to reduce maternal mortality and improve maternal health outcomes.

Quick Tip

Public Health: Maternal Mortality. Remember that maternal mortality is a critical indicator of the health and development of a nation, particularly reflecting the status of women's health and access to healthcare services. It remains a major public health challenge in many developing countries.

104. ”Norplant” a subdermal implant consist of 6 silastic capsules containing :

(1) Progestogen

(2) Oestrogen

(3) Levonorgestrel

(4) Mifepristone

Correct Answer: (3) Levonorgestrel

Solution: Norplant was a long-acting reversible contraceptive subdermal implant system. It consisted of six small, flexible silastic capsules that were surgically implanted under the skin of a woman’s upper arm. These capsules released a synthetic progestin hormone called **levonorgestrel** over a period of five years. Levonorgestrel works primarily by preventing ovulation, thickening cervical mucus to inhibit sperm movement, and altering the uterine lining to prevent implantation.
Let’s briefly look at the other options:

- **Progestogen:** While levonorgestrel is a type of progestogen, the question asks for the specific hormone contained in Norplant.
- **Oestrogen:** Oestrogen is another primary female sex hormone, but Norplant relied solely on progestin for its contraceptive effect.
- **Mifepristone:** This is a synthetic steroid used as a medication to terminate early pregnancy. It is not used as a contraceptive implant.

Therefore, the six silastic capsules in the Norplant subdermal implant contained levonorgestrel. It’s worth noting that Norplant is no longer widely used and has been superseded by newer, single-rod implant systems that also release levonorgestrel or other progestins.

Quick Tip

Obstetrics and Gynecology: Contraception. Remember that long-acting reversible contraceptives (LARCs) like subdermal implants are highly effective. Older systems like Norplant used levonorgestrel, and newer implants also primarily rely on progestins for contraception.

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105. The 9^{th} target of sustainable development goal 3 is :

(1)
Strengthen the implementation of the World Health Organization framework convention on Tobacco cor
(2)
Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduct
(3)
By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, wat
(4)
By 2030, reduce by one third premature mortality from non-communicable diseases through prevention

Correct Answer: (3)
By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, wat

Solution: Sustainable Development Goal (SDG) 3 focuses on ensuring healthy lives and promoting well-being for all at all ages. It has several targets aimed at addressing various health challenges. Target 3.9 of SDG 3 specifically states:
"By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination."
Let's briefly look at why the other options correspond to different targets within SDG 3 or other SDGs:

- **(1) Strengthen the implementation of the World Health Organization framework convention on Tobacco control in all countries as appropriate:** This corresponds to Target 3.a of SDG 3.

- **(2) Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks:** This corresponds to Target 3.d of SDG 3.
- **(4) By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and mental health and well-being.:** This corresponds to Target 3.4 of SDG 3.

Therefore, the 9^{th} target (Target 3.9) of Sustainable Development Goal 3 is to substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination by 2030.

Quick Tip

Public Health: Sustainable Development Goals. Familiarity with the specific targets within the Sustainable Development Goals, particularly SDG 3 related to health and well-being, is important for understanding global health priorities.

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106. Match List I with List II :

List I

(A) **Metallic Body Implants**

(B) **Intravenous Tubes and Sets, Catheters, Urine bags**

(C) **Expired or discarded antibiotics, cytotoxic drugs**

(D) **Wastes like Blood bags laboratory cultures**

List II

(I) Yellow colored non chlorinated plastic bags

(II) Cardboard boxes with blue coloured marking

(III) Red colored non chlorinated plastic bags

(IV) Autoclave safe plastic bags

Choose the correct answer from the options given below :

(1) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

(2) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)

(3) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)

(4) (A)-(I), (B)-(IV), (C)-(II), (D)-(III)

Correct Answer: (1) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

Solution: Matching the medical waste categories with the appropriate color-coded containers for their disposal according to biomedical waste management guidelines:

- **(A) Metallic Body Implants:** These are typically collected in **cardboard boxes with blue coloured marking (II)**.
- **(B) Intravenous Tubes and Sets, Catheters, Urine bags:** These are usually collected in **autoclave safe plastic bags (IV)** for sterilization and further disposal.
- **(C) Expired or discarded antibiotics, cytotoxic drugs:** These fall under chemical waste and are typically collected in **yellow colored non chlorinated plastic bags (I)**.
- **(D) Wastes like Blood bags laboratory cultures:** These are infectious wastes and are generally collected in **red colored non chlorinated plastic bags (III)** for autoclaving or incineration.

Therefore, the correct matching is (A)-(II), (B)-(IV), (C)-(I), (D)-(III).

Quick Tip

Public Health: Biomedical Waste Management. Understanding the color-coding system for biomedical waste disposal is crucial for preventing infections and ensuring environmental safety in healthcare settings. Each color represents a specific category of waste and the required disposal method.

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107. Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : Behaviour Change Communication (BCC) is a key supportive strategy for malaria prevention and treatment under NVBDCP (National Vector Borne Disease Control Programme).
Reasons (R) : People should be motivated to remain polite, earn more and spend a lot on medicines to keep themselves healthy.
In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
(3) (A) is correct but (R) is not correct
(4) (A) is not correct but (R) is correct

Correct Answer: (3) (A) is correct but (R) is not correct

Solution: Let's analyze the Assertion and the Reason:
Assertion (A): Behaviour Change Communication (BCC) is a key supportive strategy for malaria prevention and treatment under NVBDCP (National Vector Borne Disease Control Programme). Behaviour Change Communication (BCC) plays a crucial role in public health programs, including the National Vector Borne Disease Control Programme (NVBDCP) for malaria. BCC strategies aim to promote awareness, change attitudes, and encourage the adoption of preventive behaviors such as using insecticide-treated bed nets, indoor residual spraying, and seeking timely diagnosis and treatment. Therefore, Assertion (A) is **correct**.
Reasons (R): People should be motivated to remain polite, earn more and spend a lot on medicines to keep themselves healthy. Reason (R) suggests general principles for maintaining health, emphasizing politeness, financial well-being, and medical expenditure. While these factors can indirectly influence health, they are not specifically related to the strategies employed by the NVBDCP for malaria prevention and treatment. The reason does not provide a relevant explanation for the importance of BCC in malaria control programs. Therefore, Reason (R) is **not correct** in the context of explaining Assertion (A).
Thus, Assertion (A) is correct, but Reason (R) is not a valid explanation for it.

Quick Tip

Public Health: Behaviour Change Communication. Remember that BCC is a vital component of many health programs, aiming to empower individuals and communities to adopt healthy behaviors through targeted communication strategies. It is particularly important in disease prevention and control efforts.

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108. Find the correct sequence :

(A) River Water

(B) Flocculation Chamber

(C) Sedimentation Tank

(D) Filters

(E) Clear water storage

Choose the correct answer from the options given below :

(1) River water $\rightarrow$ Clear water storage $\rightarrow$ Filters $\rightarrow$ Sedimentation Tank $\rightarrow$ Flocculation Chamber

(2) Clear water storage $\rightarrow$ Filters $\rightarrow$ Flocculation Chamber $\rightarrow$ Sedimentation Tank $\rightarrow$ River water

(3) River water $\rightarrow$ Flocculation Chamber $\rightarrow$ Filters $\rightarrow$ Clear water storage $\rightarrow$ Sedimentation Tank

(4) River water $\rightarrow$ Flocculation Chamber $\rightarrow$ Sedimentation Tank $\rightarrow$ Filters $\rightarrow$ Clear water storage

Correct Answer: (4) River water $\rightarrow$ Flocculation Chamber $\rightarrow$ Sedimentation Tank $\rightarrow$ Filters $\rightarrow$ Clear water storage

Solution: The correct sequence for the treatment of river water to obtain clear water for storage typically involves the following steps:

1. **River water (A):** This is the raw water source.

2. **Flocculation Chamber (B):** Chemicals (coagulants) are added to the river water to clump together small suspended particles into larger, heavier flocs.
3. **Sedimentation Tank (C):** The flocculated water flows into a sedimentation tank where these heavier flocs settle down due to gravity, separating them from the water.
4. **Filters (D):** The partially clarified water then passes through filters (usually sand filters) to remove any remaining suspended particles, including fine flocs and microorganisms.
5. **Clear water storage (E):** The filtered water is now clear and is stored in reservoirs for distribution. Disinfection (e.g., chlorination) usually occurs before or during this storage phase to kill any remaining pathogens.

Therefore, the correct sequence is River water → Flocculation Chamber → Sedimentation Tank → Filters → Clear water storage, which corresponds to option (4): A → B → C → D → E.

Quick Tip

Public Health Engineering: Water Treatment. Remember the basic steps involved in conventional water treatment plants: coagulation/flocculation, sedimentation, filtration, and disinfection. The order of these steps is crucial for effective removal of impurities.

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109. Given below are two statements :

Statement I : "Vandemataram Scheme" is a voluntary scheme where any obstetric and gynaecology specialist, maternity home, nursing home, lady doctor/MBBS doctor can volunteer themselves for providing safe motherhood services.

Statement II : 'ASHA incentive of Rs. 200 in urban areas include Rs. 100 for ANC component and Rs 100 for accompanying pregnant woman for institutional delivery.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are true

(2) Both Statement I and Statement II are false

(3) Statement I is true but Statement II is false

(4) Statement I is false but Statement II is true

Correct Answer: (3) Statement I is true but Statement II is false

Solution: Let's analyze each statement:

Statement I: "Vandemataram Scheme" is a voluntary scheme where any obstetric and gynaecology specialist, maternity home, nursing home, lady doctor/MBBS doctor can volunteer themselves for providing safe motherhood services. The Vandemataram Scheme, launched in India, is indeed a voluntary scheme that encourages private sector obstetricians and gynecologists, as well as maternity homes and nursing homes, to volunteer their services for providing free antenatal care (ANC) and safe motherhood services to pregnant women, especially those from underserved populations. Lady doctors and MBBS doctors with relevant experience can also volunteer. Therefore, Statement I is **true**.

Statement II: 'ASHA incentive of Rs. 200 in urban areas include Rs. 100 for ANC component and Rs 100 for accompanying pregnant woman for institutional delivery. Accredited Social Health Activists (ASHAs) receive incentives for various activities under the National Health Mission (NHM). While ASHAs do receive incentives for ANC and for accompanying pregnant women for institutional delivery, the specific amount of Rs. 200 in urban areas with a Rs. 100 split for each component might not be universally accurate and can vary based on the specific guidelines and context of the urban health program in different states or regions. The incentives for ASHAs, particularly in urban areas, can be structured differently and might not always follow this exact Rs. 100 + Rs. 100 breakdown. Therefore, Statement II is likely **false** due to the potentially inaccurate specific incentive amounts mentioned for urban ASHAs.

In conclusion, Statement I is true, but Statement II is false.

Quick Tip

Public Health: National Health Programs in India. Familiarity with key national health schemes like the Vandemataram Scheme and the role and incentives of ASHAs under the NHM is important for understanding healthcare delivery in India. Specific details about incentive amounts can vary.

110. Given below are two statements :

Statement I : The classic triad of congenital defects in "Congenital Rubella Syndrome" are deafness, cardiac malformations and cataracts.

Statement II : The Rubella vaccine should be given to every pregnant woman during early pregnancy.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are true

(2) Both Statement I and Statement II are false

(3) Statement I is true but Statement II is false

(4) Statement I is false but Statement II is true

Correct Answer: (3) Statement I is true but Statement II is false

Solution: Let's analyze each statement regarding Congenital Rubella Syndrome and Rubella vaccination during pregnancy:

Statement I: The classic triad of congenital defects in "Congenital Rubella Syndrome" are deafness, cardiac malformations and cataracts. Congenital Rubella Syndrome (CRS) occurs when a pregnant woman is infected with the rubella virus, and the infection is transmitted to the developing fetus. The classic triad of congenital defects associated with CRS is indeed **deafness, cardiac malformations (especially patent ductus arteriosus and pulmonary artery stenosis), and cataracts**. Therefore, Statement I is **true**.

Statement II: The Rubella vaccine should be given to every pregnant woman during early pregnancy. The rubella vaccine is a live attenuated vaccine and is contraindicated during pregnancy due to the theoretical risk of fetal infection. Vaccination should ideally be given to women before they become pregnant, and women of childbearing age should be advised to avoid pregnancy for at least one month after receiving the rubella vaccine. If a non-immune pregnant woman is exposed to rubella, post-exposure prophylaxis with rubella immunoglobulin may be considered. Therefore, Statement II is **false**.

In conclusion, Statement I is true, but Statement II is false.

Quick Tip

Public Health: Rubella and Vaccination. Remember the classic triad of Congenital Rubella Syndrome and the contraindication of live vaccines like rubella during pregnancy. Pre-conception vaccination is crucial for preventing CRS.

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111. Which of the following is not a symptom of Benzoic acid?

(1) Highly colored urine
(2) Ganglion of wrist
(3) Offensive urine of old men
(4) Cough worse on lying on left side

Correct Answer: (4) Cough worse on lying on left side

Solution: Benzoic acid is an organic compound with various uses, including as a food preservative and in some medicinal applications, particularly for skin conditions. Its metabolism in the body involves conjugation with glycine in the liver to form hippuric acid, which is then excreted in the urine. This can sometimes lead to changes in urine characteristics.
Let's analyze each option as a potential symptom or finding related to benzoic acid:

- **(1) Highly colored urine:** The excretion of hippuric acid, a metabolite of benzoic acid, can potentially affect the color of urine, although it is not typically described as a primary or consistent symptom leading to highly colored urine.
- **(2) Ganglion of wrist:** A ganglion cyst is a benign, fluid-filled lump that commonly develops near joints or tendons in the hand or wrist. It is not related to the ingestion or effects of benzoic acid.
- **(3) Offensive urine of old men:** While changes in urine odor can occur due to various factors, including diet, hydration, and bacterial presence, it is not a specifically recognized or common symptom directly attributed to benzoic acid metabolism. However, metabolic changes and potential kidney effects in some individuals might

theoretically alter urine odor. The phrase ”offensive urine of old men” is also quite general and not a specific medical symptom of benzoic acid exposure.

- **(4) Cough worse on lying on left side:** This symptom is typically associated with respiratory or cardiac conditions, such as gastroesophageal reflux disease (GERD), asthma, or heart failure, where positional changes can affect breathing or acid reflux. It has no known direct link to the metabolism or effects of benzoic acid.

Based on the known metabolic pathways and effects of benzoic acid, a ganglion of the wrist and a cough that worsens on lying on the left side are not recognized symptoms associated with it. Among the options, a ganglion of the wrist has the least plausible connection to benzoic acid. While changes in urine color or odor are theoretically possible due to its metabolism and excretion, they are not well-established or primary symptoms. Therefore, ”cough worse on lying on left side” is the most clearly unrelated symptom to benzoic acid.

Quick Tip

Toxicology and Pharmacology: Benzoic Acid. Remember that benzoic acid is metabolized to hippuric acid and excreted in urine. While it can have some effects on the body, a ganglion cyst or positional cough are not associated symptoms.

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112. A patient was sitting up in bed, unable to lie down, as she was worse from lying down; face purplish and puffed, her eyes engorged, eyelids bloated, sat perfectly still with pain in the head as a surging sensation which came up the back of neck and head and then over the head. What is the probable remedy?

(1) Opium
(2) Ars. album
(3) Spigelia
(4) Lachesis

Correct Answer: (4) Lachesis

Solution: The symptoms described in the question are characteristic of a specific remedy in homeopathy. Let's analyze the key features:

- **Worse from lying down, unable to lie down:** This is a strong indication for *Lachesis*.**
- **Face purplish and puffed, eyes engorged, eyelids bloated:** This suggests a plethoric state with circulatory congestion, often associated with *Lachesis*.**
- **Sat perfectly still with pain in the head as a surging sensation which came up the back of neck and head and then over the head:** This type of headache, with an upward surging sensation, can also point towards *Lachesis*.**

Considering these symptoms together, especially the marked aggravation from lying down and the congested appearance, *Lachesis mutus* is the most probable homeopathic remedy. *Lachesis* is a polycrest remedy known for its symptoms related to circulatory disturbances, a sensation of constriction, and aggravation upon lying down or after sleep.
Let's briefly consider why the other options are less likely:

- **Opium:** While *Opium* can be indicated for states of altered consciousness and congestion, the specific aversion to lying down and the surging headache are less characteristic.
- **Ars. album (Arsenicum album):** *Arsenicum album* is often indicated for restlessness, anxiety, and burning pains, with a general aggravation around midnight or in the early morning. The aversion to lying down is not a primary characteristic.
- **Spigelia:** *Spigelia* is primarily known for its action on neuralgic pains, particularly left-sided heart conditions and trigeminal neuralgia. The described symptoms do not strongly align with the typical *Spigelia* picture.

Therefore, based on the totality of symptoms, *Lachesis* is the most probable homeopathic remedy.

Quick Tip

Homeopathy: Remedy Differentiation. In homeopathy, the specific modalities (what makes the symptoms better or worse) are crucial for remedy selection. The aggravation from lying down is a key modality for *Lachesis*.

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113. Choose the correct option with respect to persons with light hair and skin; irritable, quarrelsome disposition; easily offended at trifles; vexed at everything. Skin of hands rough, cracked; tips of fingers rough, cracked, fissured, every winter; tenderness of the feet which are bathed in foul-smelling sweat.

(1) Silicea
(2) Petroleum
(3) Graphites
(4) Sanicula

Correct Answer: (2) Petroleum

Solution: The combination of symptoms described points towards a specific homeopathic remedy. Let's analyze the key characteristics:

- **Light hair and skin:** This physical constitution is often associated with certain homeopathic types.
- **Irritable, quarrelsome disposition; easily offended at trifles; vexed at everything:** This describes a particular mental-emotional state.
- **Skin of hands rough, cracked; tips of fingers rough, cracked, fissured, every winter:** This suggests a chronic skin condition that worsens in winter.
- **Tenderness of the feet which are bathed in foul-smelling sweat:** This indicates foot problems with a characteristic offensive odor.

Considering these symptoms together, **Petroleum** is a well-known homeopathic remedy that fits this picture closely. Keynotes for *Petroleum* include:

- Skin problems that are worse in winter, with roughness, cracking, and fissures, especially on the hands and fingertips.
- A characteristic of offensive foot sweat.
- An irritable and easily offended disposition.

While other remedies might share some of these symptoms, the specific combination is most indicative of *Petroleum*.
Let's briefly consider why the other options are less likely:

- **Silicea:** *Silicea* individuals often have a delicate constitution, can be chilly, and may have offensive foot sweat, but the skin symptoms and the specific irritability are less typical.
- **Graphites:** *Graphites* is known for skin conditions with oozing, stickiness, and cracking, often with a history of eczema. The mental disposition is usually more anxious or hesitant rather than quarrelsome.
- **Sanicula:** *Sanicula* is often indicated for children with a specific set of symptoms, including offensive foot sweat that smells like old cheese, and skin problems that might involve crusts or eruptions, but the overall picture doesn't align as closely with the described irritability and winter aggravation of skin.

Therefore, based on the totality of the described symptoms, *Petroleum* is the most likely homeopathic remedy.

Quick Tip

Homeopathy: Remedy Pictures. In homeopathy, understanding the characteristic "picture" of each remedy, which includes mental, emotional, and physical symptoms along with modalities, is essential for accurate prescribing.

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114. An old man complaining of chronic diarrhoea and shortness of breath on going upstairs reported in OPD. On examination, his tongue is clean, red and wet with

central furrows with bloody saliva and multiple ulcers on soft palate. The most suitable remedy is :

(1) Arum triphyllum

(2) Fluoric acid

(3) Nitric acid

(4) Silicea

Correct Answer: (3) Nitric acid

Solution: The combination of symptoms presented suggests a specific homeopathic remedy. Let's analyze the key features:

- **Chronic diarrhoea and shortness of breath on going upstairs:** This indicates involvement of both the gastrointestinal and respiratory systems, with exertion exacerbating the breathing difficulty.**
- **Tongue is clean, red and wet with central furrows:** This is a notable tongue appearance. Redness suggests inflammation, and central furrows are characteristic of certain remedies.**
- **Bloody saliva and multiple ulcers on soft palate:** This points to inflammation and ulceration in the oral cavity, with a tendency to bleed.**

Considering these symptoms together, **Nitric acid** (*Acidum nitricum*) is a homeopathic remedy that aligns well with this picture. Keynotes for *Nitric acid* can include:

- Ulcerations in mucous membranes, including the mouth, which can be painful and bleed easily.
- Diarrhoea that can be chronic.
- Shortness of breath, which can be related to underlying weakness or other systemic involvement.
- A fissured tongue.

The combination of oral ulcers with bleeding, chronic diarrhoea, and shortness of breath, along with the specific tongue appearance, makes *Nitric acid* a strong contender.

Let's briefly consider why the other options are less likely:

- **Arum triphyllum:** This remedy is strongly associated with raw, sore throat, and burning sensations in the mouth and throat, often with cracked lips and a red, raw tongue. While it can have oral symptoms, the diarrhoea and shortness of breath are less prominent in this context.
- **Fluoric acid:** This remedy can have ulcerations and affect mucous membranes, but it is often associated with a feeling of heat, and the overall symptom picture doesn't match as closely.
- **Silicea:** *Silicea* is often indicated for weakness, chilliness, and issues related to pus formation. While it can have foot sweat and some skin or mucous membrane involvement, the specific combination of oral ulcers with bloody saliva, chronic diarrhoea, and shortness of breath with the described tongue is less characteristic.

Therefore, based on the totality of the symptoms, *Nitric acid* is the most suitable homeopathic remedy.

Quick Tip

Homeopathy: Polycrest Remedies. *Nitric acid* is a polycrest remedy with a wide range of applications, often involving ulcerations, mucous membrane affections, and various systemic symptoms. Careful consideration of the specific symptom picture is crucial for its indication.

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115. According to Dr. Kent the patient of this drug is hard to study and the remedy itself is a hard one to study. The patient is whimsical, irascible, irritable, to the very highest degree, quarrels with his family and with his bread and butter. He is never at peace, is full of imaginations and fear. The remedy is :

(1) Kali carbonicum

(2) Lycopodium clavatum

(3) Opium

(4) Nux Vomica

Correct Answer: (1) Kali carbonicum

Solution: The description provided in the question, particularly the extreme irritability, quarrelsome nature even with loved ones (”bread and butter”), restlessness (”never at peace”), and being full of imaginations and fears, strongly points towards the homeopathic remedy **Kali carbonicum** (Potassium carbonate).
Dr. James Tyler Kent, a prominent figure in homeopathy, described the *Kali carbonicum* patient as being difficult to study due to their complex and often contradictory nature. Their irritability can be extreme, leading to quarrelsomeness with family members and those closest to them. They often experience marked inner restlessness, anxiety, and a tendency towards numerous fears and vivid imaginations.
Let’s briefly consider why the other options are less likely to fit this specific description according to Dr. Kent’s Materia Medica:

- **Lycopodium clavatum:** While *Lycopodium* patients can be irritable and have fears, their irritability is often more about being contradicted or their authority being questioned. They also have a strong desire for company and support, which contrasts with the extreme quarrelsomeness described.
- **Opium:** *Opium* is more associated with states of drowsiness, stupor, and insensitivity to pain, often following fright or shock. The irritability and mental restlessness described are not typical *Opium* characteristics in this context.
- **Nux Vomica:** *Nux Vomica* patients are indeed irritable, easily offended, and can be quarrelsome, especially when contradicted. They are often ambitious, driven, and suffer from digestive issues. While there is some overlap, the extreme level of quarrelsomeness even with their ”bread and butter” and the specific sense of inner restlessness and fear described by Kent are more characteristic of *Kali carbonicum*.

Therefore, based on Dr. Kent’s description of the remedy and the patient’s mental-emotional state, *Kali carbonicum* is the most likely answer.

Quick Tip

Homeopathy: Materia Medica. Familiarity with the key mental and emotional characteristics of important homeopathic remedies, as described by stalwarts like Dr. Kent, is crucial for accurate prescribing based on the principle of ”like cures like.”

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116. Given below are two statements :

Statement I : Rapid change of symptoms - pain changes in regard to place and character is a feature of Berberis Vulgaris.

Statement II : Berberis vulg. is indicated in complaints of drunkards after abstaining.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are true

(2) Both Statement I and Statement II are false

(3) Statement I is true but Statement II is false

(4) Statement I is false but Statement II is true

Correct Answer: (3) Statement I is true but Statement II is false

Solution: Let’s analyze each statement regarding *Berberis vulgaris*:

Statement I: Rapid change of symptoms - pain changes in regard to place and character is a feature of Berberis Vulgaris. *Berberis vulgaris* is known in homeopathy for its characteristic shifting pains. These pains can change rapidly in location and in their nature (e.g., from sharp to dull, from one side to the other). This symptom of rapidly changing pains is a key indication for *Berberis vulgaris*. Therefore, Statement I is **true**.

Statement II: Berberis vulg. is indicated in complaints of drunkards after abstaining. While *Berberis vulgaris* has an affinity for the liver and kidneys and can be used for complaints related to these organs, it is not specifically or primarily indicated for the withdrawal symptoms or general complaints of drunkards after abstaining from alcohol.

Other remedies like *Nux vomica*, *Sulphur*, or *Quercus glandium* are more commonly associated with the after-effects of alcohol abuse. Therefore, Statement II is **false**.
In conclusion, Statement I is true, but Statement II is false.

Quick Tip

Homeopathy: Berberis Vulgaris. Remember the keynotes of *Berberis vulgaris*, particularly its rapidly changing and shifting pains, often associated with the renal and urinary systems. It is not a primary remedy for alcohol withdrawal.

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117. Sore throats and cough apt to begin and end with menstruation is a keynote features of :

(1) Bovista
(2) Lachesis
(3) Pulsatilla
(4) Lac. can

Correct Answer: (4) Lac. can

Solution: The peculiar symptom of sore throat and cough that tends to begin and end with the menstrual period is a well-known keynote of the homeopathic remedy **Lac caninum** (*Lac. can*), derived from dog's milk. This unusual temporal relationship between the throat/cough symptoms and the menstrual cycle is a strong guiding symptom for this remedy. Let's briefly consider why the other options are less likely to have this specific keynote:

- **Bovista:** *Bovista* is often associated with a sensation of swelling, especially of the hands and feet, and can have menstrual irregularities with profuse menses. Sore throat and cough related to menstruation are not primary keynotes.
- **Lachesis:** *Lachesis* is known for symptoms that are generally worse after sleep and can have throat symptoms that are worse on the left side and sensitive to touch. While it has gynecological affinities, the specific periodicity with the start and end of menstruation for throat and cough is not a typical keynote.

- **Pulsatilla:** *Pulsatilla* is characterized by changeable symptoms, a desire for open air, and often a mild, yielding disposition (though this can vary). Menstrual issues are common, but the specific link of throat and cough beginning and ending with menses is not a primary keynote.

Therefore, the unique symptom of sore throat and cough being temporally linked to the beginning and end of menstruation strongly indicates *Lac caninum*.

Quick Tip

Homeopathy: Temporal Modalities. In homeopathy, the timing of symptoms and their relationship to other events (like the menstrual cycle) are important modalities that can strongly point towards a specific remedy.

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118. Great sensitiveness to open air, putting the hand from under the bed cover brings on cough is a keynote of :

(1) Pulsatilla
(2) Psorinum
(3) Rhustox
(4) Camphor

Correct Answer: (3) Rhustox

Solution: The peculiar symptom of great sensitiveness to open air, where even putting a hand out from under the bed cover can trigger a cough, is a well-known and characteristic keynote of the homeopathic remedy **Rhus toxicodendron** (*Rhustox*). This extreme sensitivity to drafts and open air, often worsening the cough, is a strong guiding symptom for this remedy, particularly in respiratory complaints.
Let's briefly consider why the other options are less likely to have this specific keynote:

- **Pulsatilla:** While *Pulsatilla* patients often desire open air and feel better in it, they are not typically characterized by a cough triggered by such minimal exposure as putting a

hand out from under the covers. Their cough is often dry at night and loose in the morning.

- **Psorinum:** *Psorinum* is known for its sensitivity to cold air and drafts, and patients often feel chilly despite warm surroundings. They can have various skin and respiratory complaints, but the specific trigger of cough from such slight exposure is not a primary keynote.
- **Camphor:** *Camphor* is often associated with a feeling of coldness and a desire to be covered warmly. It can be used for sudden colds and collapse, but the extreme sensitivity to open air triggering a cough in this manner is not a typical keynote.

Therefore, the peculiar sensitivity to open air, causing cough even from uncovering a hand, strongly indicates *Rhus toxicodendron*.

Quick Tip

Homeopathy: Peculiar Symptoms. In homeopathy, peculiar and striking symptoms, especially those that seem illogical or unusual, often serve as strong pointers towards the correct remedy. The extreme sensitivity to open air triggering cough in *Rhustox* is one such peculiar symptom.

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119. Given below are two statements :

Statement I : Carcinosin is indicated in post operative gas pains, no relief from passing it.

Statement II : Children have great fear, are sensitive to reprimands but sympathetic to others is a characteristic feature of Carcinosin.

In the light of the above statements, choose the most appropriate answer from the options given below :

(1) Both Statement I and Statement II are correct

(2) Both Statement I and Statement II are incorrect

(3) Statement I is correct but Statement II is incorrect

(4) Statement I is incorrect but Statement II is correct

Correct Answer: (4) Statement I is incorrect but Statement II is correct

Solution: Let's analyze each statement regarding the homeopathic remedy *Carcinosinum*:
Statement I: Carcinosin is indicated in post operative gas pains, no relief from passing it. While *Carcinosinum* can be used for a wide range of complaints, including gastrointestinal issues, it is not a primary or specifically well-known remedy for post-operative gas pains that are unrelieved by passing flatus. Other remedies like *Nux vomica*, *Carbo vegetabilis*, or *Colocynthis* are more typically considered for such symptoms. Therefore, Statement I is likely **incorrect**.
Statement II: Children have great fear, are sensitive to reprimands but sympathetic to others is a characteristic feature of Carcinosin. This statement accurately reflects key emotional and behavioral characteristics often associated with the *Carcinosinum* type, particularly in children. They can exhibit deep-seated fears, be very sensitive to criticism or reprimands, and yet possess a strong sense of empathy and sympathy towards others. This combination of sensitivity and compassion is a notable aspect of the *Carcinosinum* personality. Therefore, Statement II is **correct**.
In conclusion, Statement I is incorrect, but Statement II is correct.

Quick Tip

Homeopathy: Carcinosinum. Remember that *Carcinosinum* is a nosode with a complex symptom picture, often involving a history of cancer in the family. Key mental-emotional traits include sensitivity, anxiety, a love of travel and dancing, and a sympathetic nature.

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120. Match List I with List II :
List I

(A) **Tall thin irritable persons suffering from abuse of mercury**

(B) **Old people, weak vision, corpulent, tired of life**

(C) **Adapted to light complexion (III) Aurum met blondes, great emaciation of face, hands, legs and feet or single parts**

(D) **"The Aconite of chronic diseases"**

List II

(I) Alumina

(II) Selenium

(III) Aurum met

(IV) Arg. met

Choose the correct answer from the options given below :

(1) (A)-(III), (B)-(II), (C)-(IV), (D)-(I)
(2) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)
(3) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
(4) (A)-(II), (B)-(IV), (C)-(III), (D)-(I)

Correct Answer: (2) (A)-(IV), (B)-(II), (C)-(III), (D)-(I)

Solution: Let's match the descriptions in List I with the corresponding homeopathic remedies in List II:

- **(A) Tall thin irritable persons suffering from abuse of mercury:** This description is characteristic of **Argentum metallicum (Arg. met) (IV)**. Mercury abuse can lead to various nervous and physical symptoms, and *Arg. met* is known for its affinity to individuals with a tall, thin physique and irritable temperament, often with symptoms related to metallic poisoning.
- **(B) Old people, weak vision, corpulent, tired of life:** This picture often fits **Selenium (II)**. *Selenium* is known for its use in elderly individuals with weakness, failing vision, and a feeling of being worn out or tired of life. Corpulence can also be a feature.
- **(C) Adapted to light complexion blondes, great emaciation of face, hands, legs and feet or single parts:** This description aligns with **Aurum metallicum (Aurum met)**

(III). While *Aurum met* is more typically associated with serious mental-emotional states, it can also present with marked emaciation in specific areas and is sometimes indicated in individuals with a lighter complexion.

- **(D) "The Aconite of chronic diseases":** This epithet is often attributed to **Alumina (I)**. *Alumina* has a wide range of chronic symptoms affecting various systems and can act with a suddenness in its sphere, similar to how *Aconite* acts in acute conditions.

Therefore, the correct matching is (A)-(IV), (B)-(II), (C)-(III), (D)-(I).

Quick Tip

Homeopathy: Remedy Typology. Understanding the general constitutional types and key characteristics associated with different homeopathic remedies is essential for holistic prescribing. These descriptions provide a glimpse into the broader symptom pictures of these remedies.
