UPCATET 2024 PAG GROUP Question Paper

Time Allowed :3 Hours	Maximum Marks :800	Total Questions :200

General Instructions

Read the following instructions very carefully and strictly follow them:

- Candidates must bring their Admit Card and a valid ID proof.
- The exam will consist of multiple-choice questions (MCQs) on subjects like Biology, Chemistry, Physics, and Agriculture.
- Ensure you arrive at least 30 minutes before the exam time.
- No electronic devices (mobile phones, calculators, etc.) are allowed in the exam hall.

1. The dimensional formula of kinetic energy is equal to which of the following?
(A) Force
(B) Work
(C) Pressure
(D) Momentum

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2. Two resistors are connected in series in a meter bridge. The balance point is obtained at 20 cm from the left end. When a 15 ohm resistor is connected in series with the smaller resistor, the null point shifts to 40 cm. What is the value of the larger resistor?
(A) 9Ω
(B) 18Ω
(C) 27Ω
(D) 36Ω

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3. The refractive index of glass is maximum for which color?
(A) For red color
(B) For green color
(C) For yellow color
(D) For violet color

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4. Why do farmers irrigate their crops to protect them from heat?

(A) Water has a low specific heat.
(B) Water has a high specific heat.
(C) Water has a low latent heat.
(D) Water has a high latent heat.

---

5. Through which phenomenon can we separate different light waves into their respective colors?
(A) Refraction
(B) Reflection
(C) Dispersion
(D) Absorption

---

6. A wire of length L and radius R is stretched to get the radius of cross-section halved. What is the new resistance?
(A) $4R$
(B) $5R$
(C) $8R$
(D) $16R$

---

7. If the Earth loses its gravitational pull, what will happen to the weight and mass of an object?
(A) The mass will become zero, but the weight will not.
(B) The weight will become zero, but the mass will not.
(C) Both weight and mass will become zero.
(D) Neither the weight nor the mass will become zero.

---

8. Unit of surface tension is:
(A) Nm^{-1}
(B) Nm^{-2}
(C) Nm^{-3}
(D) $\mathrm{N}^2\mathrm{m}^{-1}$

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9. Newton's second law gives the measure of which physical quantity?
(A) Acceleration
(B) Force
(C) Momentum
(D) Angular momentum

---

10. If the electric field and the magnetic field are equal in magnitude and perpendicular to each other, then:
(A) The current in the circuit is zero $I = 0$
(B) The internal resistance of the cell is zero $r = 0$
(C) Both (A) and (B)
(D) None of these

---

11. Which type of reflection is produced when light reflects from curved and smooth surfaces?
(A) Concave reflection
(B) Convex reflection
(C) Diffused reflection
(D) None of these

---

12. A particle is moving with uniform speed in a circular path. What will be the acceleration of the particle?
(A) Acceleration in the direction of the circular path
(B) Acceleration in the direction of the tangential path
(C) Acceleration in the direction of the radius
(D) Zero

---

13. Kilowatt-hour is the unit of:
(A) Energy
(B) Power
(C) Voltage
(D) Electric Current

---

14. Which of the following is the SI unit of electric current?
(A) Frequency
(B) Electric current
(C) Force
(D) Acceleration

---

15. A 75 kg person lifts a 25 kg object to a height of 10 meters in 5 minutes. What is the power used?
(A) 7.33 J/S
(B) 8.33 J/S
(C) 9.33 J/S
(D) 10.33 J/S

16. The mechanical advantage of a wheel and axle system is:
(A) Less than 1
(B) Greater than 1
(C) Equal to 1
(D) Infinite

---

17. The emissivity of a substance is:
(A) Equal to the absorptivity
(B) Less than the absorptivity
(C) Greater than the absorptivity
(D) None of the above

---

18. A car covers one-third of the distance at a speed of 10 km/h, the second third at 20 km/h, and the last third at 60 km/h. Find the average speed of the car.
(A) 18 km/h
(B) 8 km/h
(C) 20 km/h
(D) 28 km/h

---

19. In which process is the rate of heat transfer maximum?
(A) Conduction
(B) Convection
(C) Radiation
(D) All of the above have the same rate of transfer

---

20. If the momentum of a body doubles, then its kinetic energy will:
(A) Become twice
(B) Become half
(C) Become four times
(D) Become nine times

---

21. The force that is naturally present in the environment is:
(A) Electric force
(B) Magnetic force
(C) Gravitational force
(D) Frictional force

---

22. Which color has the minimum frequency in the visible spectrum?
(A) Violet
(B) Blue
(C) Red
(D) Yellow

---

23. What physical quantity is associated with the change in wavelength of a wave?
(A) Force
(B) Frequency
(C) Speed
(D) Energy

---

24. The total energy of a freely falling object:
(A) Increases
(B) Decreases
(C) Remains constant
(D) Becomes zero

---

25. Two bodies of masses 4 kg and 5 kg are moving with equal momentum. Then, the ratio of their respective kinetic energies is:
(A) 4:5
(B) 2:1
(C) 1:3
(D) 5:4

---

26 . The solution of the equation $2^{x+2} + 2^{x+1} = 48$ will be:
(A) $x = 2$
(B) $x = 4$
(C) $x = 3$
(D) $x = 5$

---

27. The total surface area of a cuboid is 1332 square cm, and its sides are in the ratio 4:5:6. What will be the length of the sides?
(A) 12, 15, 18
(B) 20, 25, 30
(C) 8, 10, 12
(D) None of the above

---

28. The vertices of a triangle are $(7, 5)$, $(5, 7)$, and $(-3, 3)$. Then the centroid of the triangle will be:
(A) $(3, 5)$
(B) $(-3, 5)$
(C) $(3, -5)$
(D) $(5, 3)$

---

29. The geometric mean of numbers 10, 16, and 50 will be:
(A) 40
(B) 20
(C) 60
(D) 50

---

30. If $2^{x+6} = 8^{x+1}$, then the value of x is:
(A) 1
(B) 1.5
(C) 2
(D) 2.5

---

31. If $A = 240°$, then the value of $\tan^2 A + \sec A$ is:
(A) $\sqrt{3}$
(B) 2
(C) 1
(D) 0

---

32. If the area of the cross-section of a cylinder is doubled, what will be the ratio of its height and radius of the base?
(A) 1:2
(B) 2:1
(C) 1:1
(D) 3:1

---

33. If $\tan A = \frac{1}{2}$ and $\tan B = \frac{1}{3}$, then the value of $A + B$ will be:
(A) $\frac{5}{6}$
(B) $30°$
(C) $45°$
(D) $60°$

---

34. In the analysis of a bar bending, the bending is expressed in which axis:
(A) X-axis
(B) Y-axis
(C) Both axes
(D) None of these

---

35. The mode of the following data: 2, 2, 4, 6, 8, 4, 14, 4, 6, 16, 4 is:
(A) 14
(B) 2
(C) 6
(D) 4

---

36. The value of $\sin 22^{\frac{1}{2}}$ is:
(A) $\frac{\sqrt{2}-1}{2\sqrt{2}}$
(B) $\frac{\sqrt{2}-1}{2}$
(C) $\frac{\sqrt{2}+1}{2\sqrt{2}}$
(D) None of these

---

37. The mean of the numbers 7, 8, 10, 16, 13, and 11 is:
(A) 10.83
(B) 11.5
(C) 13
(D) 13.5

---

38. If $\sin\theta_1 + \sin\theta_2 + \sin\theta_3 = 3$, then what is the value of $\cos\theta_1 + \cos\theta_2 + \cos\theta_3$?

(A) 1
(B) 0
(C) 2
(D) 3

---

39. The geometric mean of 2, 4, and 8 is:

(A) 2
(B) 12
(C) 8
(D) 4

---

40. The next term in the sequence $2, 6, 18, 54, \ldots$ will be:

(A) 486
(B) 1458
(C) 4374
(D) 13122

---

41. If $10^x = 1$, then the value of x will be:

(A) 0
(B) 1
(C) -1
(D) $-\frac{1}{2}$

---

42. If the numbers 10, 8, 5, 7, x, and 4 have an arithmetic mean of 8, then the value of x will be:

(A) 10
(B) 13
(C) 14
(D) 15

---

43. Find the arithmetic mean of the following numbers: 46, 65, 86, 41, 56, 77, 35, 91, 54, 94, 30

(A) 54
(B) 56
(C) 61.36
(D) 77

---

44. Find the mode of the following numbers: 57, 17, 26, 90, 0, 83, 80, 26, 57, 115, 26

(A) 105
(B) 57
(C) 51
(D) 26

---

45. Find the harmonic mean of the following numbers: 5, 10, 15

(A) 10
(B) 8.18

(C) 15
(D) 9.08

---

46. The number of valence electrons in Chromium (atomic number 24) is:

(A) 2
(B) 3
(C) 5
(D) 6

---

47. The atomic number describes which of the following:

(A) Shape of orbitals
(B) Shape of the orbit
(C) Orbitals' magnetic field
(D) Orbitals' energy levels

---

48. In the modern periodic table, the elements are arranged in:

(A) Increasing atomic mass order
(B) Increasing atomic volume order
(C) Increasing atomic number order
(D) Increasing group order

---

49. Which of the following salts has the highest pH in water?

(A) KCl
(B) Na_2CO_3
(C) NaCl
(D) $CuSO_4$

---

50. What is the method to remove temporary hardness of water?

(A) Ion exchange method
(B) Distillation method
(C) Boiling method
(D) Clark's method

---

51. Which of the following metals is present in chlorophyll?

(A) Mg
(B) Be
(C) Cr
(D) None

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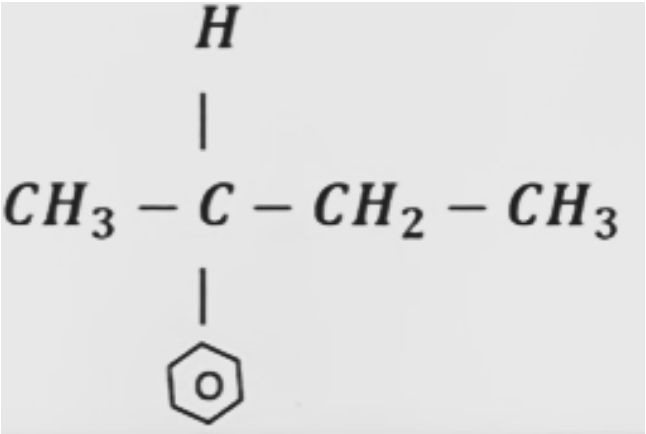
52. What is the IUPAC name of the following compound?



(A) Phenyl butane
(B) 3-Hexyl hexane
(C) 3-Hexyl butane
(D) 2-Phenyl butane

---

53. Which of the following is an alcohol?

(A) Phenol
(B) Phenyl benzoate
(C) Phenyl acetate
(D) Salol

---

54. Which of the following reactions is suitable for converting an acid amide to an imidazole?

(A) Carbon Emission Reaction
(B) Hofmann Bromide Reaction
(C) Stepan Reaction
(D) Gabriel Thalamide Condensation

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55. Which of the following is a chemical transformation?

(A) Melting of ice
(B) Formation of ice from water

(C) Formation of curd from milk
(D) Melting of wax

---

56. The formula of the nitrate of a metal is $M(NO_3)_2$. What will be the formula of its phosphate?

(A) MPO_4
(B) M_2PO_4
(C) $M_3(PO_4)_2$
(D) $M(PO_4)_2$

---

57. What is the molar mass of the carbonate ion CO_3^{2-}?

(A) 15
(B) 20
(C) 25
(D) 60

---

58. How many valence electrons are there in the outer shell of Cl^-?

(A) 8
(B) 17
(C) 18
(D) 7

---

59. What is the oxidation state of sulfur in H_2SO_4?

(A) +4
(B) +6
(C) +7
(D) +2

---

60. What is the scientific name of the person who made the periodic table?

(A) A.I. Mendelief
(B) B.I. Mendelief
(C) C.I. Mendelief
(D) D.I. Mendelief

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61. What is formed when chlorine gas is passed through slaked lime?

(A) Mohr's salt
(B) Zinc
(C) Plaster of Paris
(D) Bleaching powder

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62. What is the IUPAC name of isopropyl alcohol?

(A) Propanol-2
(B) Propanone-2
(C) Propanal-2
(D) None of these

---

63. Which of the following formula represents Alkene?

(A) C_nH_{2n+1}
(B) C_nH_{2n}
(C) C_nH_{2n+4}
(D) C_nH_{2n-2}

---

64. By heating ethyl alcohol from 160°C to 170°C, we obtain:

(A) $C_2H_5OC_2H_5$
(B) C_2H_6
(C) C_2H_4
(D) CH_3COCH_3

---

65. What is the molecular formula of urea?

(A) KNO_3
(B) $Ca(NO_3)_2$
(C) $CaCN_2$
(D) NH_2CONH_2

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66. What is the chemical formula of Marsh gas?

(A) C_2H_6
(B) CH_4
(C) C_2H_4
(D) C_3H_8

67. What is the chemical name of Vitamin B2?

(A) Retinol
(B) Ascorbic acid
(C) Riboflavin
(D) Folic acid

68. Which of the following is a non-reducing sugar?

(A) Maltose
(B) Lactose
(C) Glucose
(D) Sucrose

69. What is the source of bile?

(A) Pituitary
(B) Appendix
(C) Pancreas
(D) Liver

70. Who is the current director of the Indian Agricultural Research Institute?

(A) Dr. T.C. Mahapatra
(B) Dr. Mangala Ray
(C) Dr. Himanshu Pathak
(D) Dr. A.R.C. Agrawal

71. Who is the current Chief Justice of the Allahabad High Court?

(A) Rajesh Bindal
(B) Sanjay Yadav
(C) Govind Mathur
(D) Arvind Kumar Mishra

72. Which state does India's Vice President, Jagdeep Dhankhar, belong to?

(A) Haryana
(B) Rajasthan
(C) Uttar Pradesh
(D) Punjab

73. How many divisions are there in Uttar Pradesh?

(A) 16
(B) 17
(C) 18
(D) 15

74. Where is the maximum ozone concentration found in the atmosphere?

(A) Stratosphere
(B) Troposphere
(C) Mesosphere
(D) None of these

75. What was the other name of Chanakya?

(A) Bhattaswami
(B) Rajsevar
(C) Vishnugupta
(D) Vishakhdutt

76. What is the shape of a cyclone?

(A) Spherical
(B) Triangular
(C) Irregular
(D) Rectangular

77. Which planet is called the Red Planet in the solar system?

(A) Mercury
(B) Venus
(C) Jupiter
(D) Mars

78. Which mission was launched in India for the rescue of people affected by the earthquake?

(A) Operation Kavari
(B) Operation Mitra

(C) Operation Dost
(D) Operation Ganga

---

79. Who is referred to as the Napoleon of India?

(A) Pushyamitra
(B) Chandragupta Maurya
(C) Samudragupta
(D) Kanisk

---

80. Who discovered insulin?

(A) Edward Jenner
(B) Frederick Banting
(C) M.O. Westman
(D) Ronald Ross

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81. In which state did the Hydrogen Valley Innovation Cluster project begin in April 2023?

(A) Tamil Nadu
(B) Telangana
(C) Maharashtra
(D) Gujarat

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82. Which sport is associated with the Euro Cup?

(A) Cricket
(B) Polo
(C) Football
(D) Badminton

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83. Who is the author of the "Natya Shastra"?

(A) Bharat Muni
(B) Mahadevi Verma
(C) Mushi Premchand
(D) Ramdhari Singh Dinkar

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84. How many bones are there in the human body?

(A) 206
(B) 260
(C) 306
(D) 360

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85. Who is the current Chief Election Commissioner of India?

(A) Anup Chand Pandey
(B) Arun Goyal
(C) Sushil Kumar
(D) Rajiv Kumar

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86. What is the other name of quick silver?

(A) Aluminium
(B) Mercury
(C) Silver
(D) Zinc

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87. Herbicide resistant gene in plants is?

(A) Ct
(B) Mt
(C) Bt
(D) GST

---

88. Cry gene prevents which crop from bollworms?

(A) Cotton
(B) Mango
(C) Tea
(D) Wheat

---

89. Which soil amendments are used to reclaim sodic soil?

(A) Gypsum
(B) Pyrite
(C) Lime sulphur
(D) All these

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90. Which element is known as the energy currency for plants?

(A) N
(B) S
(C) P
(D) K

---

91. Which Rhizobium species fixes nitrogen in the soybean crop?

(A) Rhizobium meliloti
(B) Rhizobium lupini
(C) Rhizobium phaseoli
(D) Rhizobium japonicum

---

92. What is the size of a clay particle?

(A) < 0.20 mm
(B) < 0.02 mm
(C) 0.003 mm
(D) < 0.002 mm

---

93. What is the electrical conductivity of saline soil?

(A) 2 ds/m
(B) 3.5 ds/m
(C) ¿ 4 ds/m
(D) 4 ds/m

---

94. What is the electrical conductivity of saline soil?

(A) 2 ds/m
(B) 3.5 ds/m
(C) > 4 ds/m
(D) 4 ds/m

---

95. Single super phosphate supply provides which nutrients?

(A) Only P
(B) Only S
(C) Only Ca
(D) All these three

96. Which one of the following is a concentrated organic manure?

(A) Ground nut Cake
(B) Compost
(C) FYM
(D) Vermi compost

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97. Indian Institute of Pulses Research is located at:

(A) New Delhi
(B) Varanasi
(C) Bhopal
(D) Kanpur

---

98. Requirement of N and P for pulses is:

(A) Equal Amount of N and P
(B) More N and less P
(C) Less N and more P
(D) Cannot say

---

99. Number of essential plant nutrients is:

(A) 15
(B) 16
(C) 17
(D) 20

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100. The crop containing most protein is:

(A) Gram
(B) Pea
(C) Moong
(D) Soybean

---

101. Which of the following is a primary nutrient?

(A) Sulphur
(B) Zinc

(C) Magnesium
(D) Nitrogen

---

102. The chemical formula of soil improver pyrite is:

(A) MnS
(B) AgS
(C) CuS
(D) FeS_2

---

103. In urea nitrogen is found as:

(A) In amide form
(B) In nitrate form
(C) In ammonical form
(D) None of the above

---

104. Tikka disease is related to which crop?

(A) URD
(B) Soyabean
(C) PEA
(D) Groundnut

---

105. Which crop requires more sulphur?

(A) Maize
(B) Mustard
(C) Paddy
(D) Wheat

---

106. What is the use of Planimeter?

(A) plant growth
(B) thickness of leaves
(C) area of leaves
(D) Numbers of stomata

---

107. Lysine amino acid is found in which crop?
(A) Soyaben
(B) Groundnut
(C) Sunflower
(D) Linseed

---

108. SRI know as?
(A) System of rice intensification
(B) System of rice irrigation
(C) System of rice index
(D) System of rice identification

---

109. Ergot disease of pearl millet is due to?
(A) Sclerospora graminicola
(B) Claviceps fusiformis
(C) Tolyposporium penicillariae
(D) Puccinia penniseti

---

110. What is the B layer in the soil profile called?
(A) Eluvial layer
(B) Illuvial layer
(C) Solum
(D) Regolith

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111. Which of the following is the day neutral crop?
(A) Safflower
(B) Soyabean
(C) Linseed
(D) Eluvial layer

---

112. What is the formula for extracting the required nitrogen $\times$ 2.17?

(A) Ammonium Sulphate content
(B) C.A.N. content
(C) FYM content
(D) Urea content

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113. Earthworms are found in what depth in the ground?
(A) At a depth of 1 meter to 2 meters in the soil
(B) At a depth of $\frac{1}{2}$ a meter to 1 meter in the soil
(C) At a depth of $\frac{1}{2}$ a meter to 2 meters in the soil
(D) On the surface of the soil

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114. Basic slag is byproduct of?
(A) Milk industries
(B) Fertilizer industries
(C) Cotton industries
(D) Steel industries

---

115. Basic slag is byproduct of?
(A) Milk industries
(B) Fertilizer industries
(C) Cotton industries
(D) Steel industries

---

116. How much energy is present in 1 litre cow milk?
(A) 600 calorie
(B) 700 calorie
(C) 750 calorie
(D) 800 calorie

---

117. If milk contains 5% fat, 4% protein and 85% water, then what will be solid not fat?

(A) 9.0%
(B) 15.0%
(C) 11.0%
(D) 10.0%

---

118. Main causes of foot and mouth disease
(A) Bacteria
(B) Virus
(C) Fungus
(D) None of the above

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119. Castration done at the age of ..... in goat
(A) 3-5 weeks
(B) 4-6 weeks
(C) 2-4 weeks
(D) 6-8 weeks

---

120. Average period of lactation in Buffalo?
(A) 281 days
(B) 145 days
(C) 175 days
(D) 332 days

---

121. In milch animal, the strip-cup method is used for the diagnosis of which disease?
(A) Fever
(B) Mastitis
(C) Bloat
(D) Pneumonia

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122. The amount of semen used for artificial insemination in cows.

(A) 1-2 cubic cm
(B) 2-3 cubic cm
(C) 3-4 cubic cm
(D) 5 cubic cm

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123. The width of single row animal shed is
(A) 18 feet
(B) 20 feet
(C) 30 feet
(D) 10 feet

---

124. The function of hydraulics in a machine is
(A) To stop the engine
(B) To change gears
(C) To hitch to a trailer
(D) To lift and lower agricultural implements

---

125. Gestation period of sheep is -
(A) 252 days
(B) 307 days
(C) 150 days
(D) none of these

---

126. The 'hybrid breed' of Buffalo is -
(A) Soorti
(B) Murra
(C) Mahshana
(D) Bhadawari

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127. Which type of hair is also called 'bagh ka hair' (tiger's hair)?
(A) Woolly hair
(B) Offset hair

(C) Tandem hair
(D) None of these

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128. For spraying insecticides to control pests, which type of nozzle is used in spray machines?
(A) Hollow cone type
(B) Thick cone type
(C) Flat fan type
(D) All of the above

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129. The melting point of cast iron is
(A) 1200°C
(B) 1100°C
(C) 800°C
(D) 1300°C

---

130. How much water will be discharged by a centrifugal pump in one hour?
(A) 1200 liters
(B) 20000 liters
(C) 50000 liters
(D) 100000 liters

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131. The percentage of carbon in wrought iron is
(A) 7-8%
(B) 2-4%
(C) 9-10%
(D) 1-2%

---

132. The function of hydraulics in a tractor is
(A) To stop the engine
(B) To change gears
(C) To hitch to a trailer

(D) To lift and lower agricultural implements

---

133. The specific fuel consumption of a diesel engine is
(A) Incomparable with petrol engine
(B) Same as petrol engine
(C) More than petrol engine
(D) Less than petrol engine

---

134. Which of the following is a primary tillage implement?
(A) Desi plough (Desi hal)
(B) Hoe
(C) Rotary plough
(D) Cultivator

---

135. The maximum suction lift of a centrifugal pump is
(A) 12 meters
(B) 15 meters
(C) 10 meters
(D) 6.5 meters

---

136. Which type of agricultural machine uses 'loop cylinders'?
(A) Allpad thresher
(B) Corn thresher
(C) Combine
(D) Van thresher

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137. Botanical name of bitter gourd is
(A) Cucumis melo
(B) Momordica charantia
(C) Luffa cylindrica
(D) Lagenaria siceraria

138. Pungency in chilli is due to
(A) Capsin
(B) Oxalate
(C) Capsaicin
(D) Ascorbic acid

---

139. Element used to protect tomato from cracking is
(A) Sulphur
(B) Magnesium
(C) Boron
(D) Manganese

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140. Place of origin of papaya is
(A) India
(B) America
(C) Sri Lanka
(D) Africa

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141. In how many years does a grafted mango start fruiting?
(A) 2 years
(B) 4-5 years
(C) 8-10 years
(D) 15 years

---

142. What is the cause of citrus canker disease in lemon?
(A) Fungi
(B) Bacteria
(C) Nematode
(D) None of these

---

143. Rhamnaceae is the family of
(A) Plum (Ber)
(B) Apple
(C) Litchi
(D) Pomegranate

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144. Number of chromosomes in garlic is
(A) 22
(B) 20
(C) 28
(D) 16

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145. Red colour in tomato is due to
(A) Lycopene
(B) Anthocyanine
(C) Curcumein
(D) Solanin

---

146. Pusha Jwala is a variety of
(A) Garlic
(B) Carrot
(C) Ginger
(D) Chilli

---

147. Which of the following vegetables is a good source of Vitamin C?
(A) Potato
(B) Ground Sweet Potato
(C) Ginger
(D) Green Chilli

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148. Vitamin K is found in which of the following fruits?

(A) Pineapple
(B) Litchi
(C) Strawberry
(D) Papaya

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149. Duodenum is a part of
(A) Large intestine
(B) Small intestine
(C) Buccal cavity
(D) Stomach

---

150. The cavity of blastula is
(A) Blastocoel
(B) Coelome
(C) Archentron
(D) Homocoel

---

151. Who introduced the chromosomal theory of inheritance?
(A) Mendel
(B) Sutton
(C) Reginald
(D) Boveri

---

152. A person suffering from colour blindness cannot recognise
(A) Red and Yellow colours
(B) Red and Green colours
(C) Blue and Green colours
(D) None of these

---

153. Antibiotics are
(A) Medicines
(B) Toxin

(C) Plants
(D) Syrups

---

154. Blood is a type of
(A) Connective tissue
(B) Epithelial tissue
(C) Muscular tissue
(D) Adipose tissue

---

155. Bacteria have
(A) Plasmid DNA
(B) RNA
(C) Both (A) & (B)
(D) None of these

---

156. Cockroach is classified in which of the following orders?
(A) Blattodea
(B) Arachnid
(C) Squamata
(D) Gastropoda

---

157. Exceptions to Mendel's law include
(A) Dominance
(B) Purity of gametes
(C) Linkage
(D) Independent assortment

---

158. The enzyme involved in transcription is
(A) DNA Polymerase I
(B) DNA Polymerase II
(C) RNA Polymerase

(D) DNA Polymerase III

---

159. BCG vaccine is a preventive measure against
(A) Tuberculosis
(B) Typhoid
(C) AIDS
(D) Cholera

---

160. In the life cycle of Ascaris, the infective stage is
(A) First stage larva
(B) Second stage larva
(C) Third stage larva
(D) Fertilized eggs

---

161. Tussar silk is produced by
(A) Antheraea paphia
(B) Antheraea asumensis
(C) Bombyx mori
(D) Antheraea pernyi

---

162. What is the life span of adult Bombyx mori?
(A) 2 days
(B) 6 days
(C) 3 to 4 days
(D) 10 days

---

163. Honey is
(A) Nectar of a flower
(B) Nectar mixed with saliva and stored in the honey sac
(C) Saliva mixed with water stored in honey sac
(D) Nectar and water sucked by honey bee

164. In which part of the respiratory system does gaseous exchange take place?
(A) Alveoli
(B) Bronchioles
(C) Larynx
(D) Trachea

---

165. Lymph differs from blood by having
(A) No plasma
(B) Plasma without protein
(C) More RBCs and less WBCs
(D) More WBCs and no RBCs

---

166. Which of these animals is hermaphrodite?
(A) Honey bee
(B) Ascaris
(C) Leech
(D) House fly

---

167. Sequence of taxonomy is -
(A) Kingdom, phylum, class, order, family, genus, species
(B) Phylum, kingdom, family, genus, species
(C) Family, genus, kingdom, species, order
(D) Class, order, phylum, genus, species

---

168. Sequence of taxonomy is -
(A) Kingdom, phylum, class, order, family, genus, species
(B) Phylum, kingdom, family, genus, species
(C) Family, genus, kingdom, species, order
(D) Class, order, phylum, genus, species

---

169. In which section of earthworm are the male genital apertures present?
(A) 17, 19
(B) 18
(C) 26
(D) 14

---

170. Which substances are most essential for body growth and formation of new cells?
(A) Fats
(B) Vitamins
(C) Hormones
(D) Proteins

---

171. What is the approximate pH value in the stomach?
(A) 3
(B) 8
(C) 7
(D) 11

---

172. Pseudopodia, flagella, and cilia are present in which phylum?
(A) Protozoa
(B) Porifera
(C) Arthropoda
(D) Mollusca

---

173. Chromosome structure can be observed best during
(A) Anaphase
(B) Metaphase
(C) Prophase
(D) Telophase

---

174. Chromosome structure can be observed best during

(A) Anaphase
(B) Metaphase
(C) Prophase
(D) Telophase

---

175. Chromosome structure can be observed best during
(A) Anaphase
(B) Metaphase
(C) Prophase
(D) Telophase

---

176. Bulliform cells are present in
(A) Bundle sheath
(B) Mesophyll tissue
(C) Vascular tissue
(D) Epidermis

---

177. Secondary cortex is produced by
(A) Cork cambium
(B) Inter fascicular cambium
(C) Intra fascicular cambium
(D) (A) and (B) both

---

178. Tetradynamous condition occurs in
(A) Cruciferae
(B) Malvaceae
(C) Solanaceae
(D) Graminae

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179. Genome of the virus is
(A) DNA
(B) RNA

(C) DNA & RNA
(D) DNA or RNA

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180. Name of the protein which holds two sister chromatids?
(A) Securine
(B) Separase
(C) Cohesin
(D) APC

---

181. Highest rate of photosynthesis is found in
(A) C3 plants
(B) C4 plants
(C) CAM plants
(D) None of these

---

182. On the basis of the organizational structure of the nucleus, cells are divided into how many parts?
(A) 1
(B) 2
(C) 3
(D) 4

---

183. Edible part of litchi is
(A) Aril
(B) Mesocarp
(C) Exocarp
(D) Cotyledon

---

184. Which is nourished by the endosperm?
(A) Seed
(B) Fruit
(C) Andosperm

(D) Fetus

---

185. Krebs cycle is
(A) Oxy/Aerobic
(B) Anaerobic
(C) Anabolic
(D) None of the above

---

186. Double fertilization is a characteristic of
(A) Bryophyta
(B) Pteridophyta
(C) Gymnosperm
(D) Angiosperm

---

187. Where is ATP formed in the cell?
(A) Cytoplasm
(B) Ribosome
(C) Mitochondria
(D) Lysosome

---

188. With increasing turgidity, wall pressure
(A) Decrease
(B) Increase
(C) Will keep changing
(D) Will not increase

---

189. Flowering is affected by
(A) Soil water content
(B) Soil acidity
(C) Photoperiod
(D) Amount of green pigment

190. Which of the following is known as the suicidal bag of the cell?
(A) Mitochondria
(B) Lysosome
(C) Dictyosome
(D) Plastid

191. Minerals are absorbed by plants in the form of
(A) Solid form
(B) Liquid form
(C) Gaseous form
(D) Ionic form

192. What happens in the dark reaction of photosynthesis?
(A) Formation of ATP
(B) Evolution of Oxygen
(C) Evolution of Hydrogen
(D) PGAL synthesis

193. Which of the following does not have a double membrane?
(A) Mitochondria
(B) Chloroplast
(C) Nucleus
(D) Lysosome

194. Development of egg without fertilization is called
(A) Parthenogenesis
(B) Asexual reproduction
(C) Apomixis
(D) Apocarpy

195. Roots become adventitious when change occurs
(A) In action
(B) Pneumatic or underground
(C) In the place of origin
(D) Morphologically

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196. Entomophilous flowers have a pollination medium of
(A) Ant
(B) Insect
(C) Bird
(D) Air
