

## Delhi CET Polytechnic 2018 Question Paper

<b>Time Allowed :2 Hours</b>	<b>Maximum Marks :600</b>	<b>Total questions :150</b>
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### General Instructions

**Read the following instructions very carefully and strictly follow them:**

1. **Mode of Examination:** Online (Computer Based exam)
2. **Number of Questions:** 150
3. **Type of Questions:** MCQ (Multiple Choice Questions)
4. **Duration:** 2 hours
5. **Negative Marking:** - 1 mark

## Mathematics

**1. Every point on a number line represents :**

- (1) An Irrational number
  - (2) A Rational number
  - (3) A Unique real number
  - (4) A Natural number
- 

**2. If a,b,c are positive real numbers, then  $\sqrt{a^{-1}b} \times \sqrt{b^{-1}c} \times \sqrt{c^{-1}a}$  is equal to :**

- (1) abc
  - (2)  $\sqrt{abc}$
  - (3)  $\frac{1}{abc}$
  - (4) 1
- 

**3. If  $x + \frac{1}{x} = 2$ , then  $x^3 + \frac{1}{x^3} =$**

- (1) 64
  - (2) 8
  - (3) 2
  - (4) 1
- 

**4. If  $(x - a)$  is a factor of  $x^3 - 3x^2a + 2a^2x + b$ , then the value of  $b$  is :**

- (1) 1
  - (2) 2
  - (3) 3
  - (4) 0
- 

**5. If  $(2K - 1, K)$  is a Solution of the equation  $10x - 9y = 12$ , then  $K =$**

- (1) 2
- (2) 1
- (3) 4

(4) 3

---

**6. The perpendicular distance of the point P (6,8) from x axis is :**

- (1) 8
  - (2) 6
  - (3) 10
  - (4) None of these
- 

**7. How many least number of distinct points determine a unique line ?**

- (1) 3
  - (2) 2
  - (3) 1
  - (4) 4
- 

**8. If two interior angles, on the same side of a transversal intersecting two parallel lines, are in the ratio 2 : 3, then the measure of the larger angle is :**

- (1)  $54^\circ$
  - (2)  $120^\circ$
  - (3)  $108^\circ$
  - (4)  $136^\circ$
- 

**9. If the bisectors of the acute angles of a right triangle meet at O, then the angle at O, between the two bisectors is :**

- (1)  $45^\circ$
  - (2)  $95^\circ$
  - (3)  $135^\circ$
  - (4)  $90^\circ$
- 

**10. If  $\triangle ABC \cong \triangle ACB$ , then  $\triangle ABC$  is Isosceles with :**

- (1)  $AB=AC$
  - (2)  $AB=BC$
  - (3)  $AC=BC$
  - (4) None of these
- 

**11. The figure formed by joining the mid points of the adjacent sides of a rectangle is :**

- (1) Square
  - (2) Rhombus
  - (3) Trapezium
  - (4) None of these
- 

**12. Diagonals AC and BD of trapezium ABCD, in which  $AB \parallel DC$  intersect each other at O. The triangle which is equal in area of  $\triangle AOD$  is :**

- (1)  $\triangle AOB$
  - (2)  $\triangle BOC$
  - (3)  $\triangle DOC$
  - (4)  $\triangle ADC$
- 

**13. The chord of a circle is equal to its radius. The angle subtended by this chord at the minor arc of the circle, is :**

- (1)  $60^\circ$
  - (2)  $75^\circ$
  - (3)  $120^\circ$
  - (4)  $150^\circ$
- 

**14. A square and an equilateral triangle have equal perimeters. If the diagonal of the square is  $12\sqrt{2}$  cm, then area of the equilateral triangle is :**

- (1)  $24\sqrt{2} \text{ cm}^2$
- (2)  $24\sqrt{3} \text{ cm}^2$
- (3)  $48\sqrt{3} \text{ cm}^2$

(4)  $64\sqrt{3} \text{ cm}^2$

---

**15. The length, width and height of a rectangular solid are in the ratio of 3:2:1. If the volume of the solid is  $48 \text{ cm}^3$ . The total surface area at the solid is :**

- (1)  $27 \text{ cm}^2$
  - (2)  $32 \text{ cm}^2$
  - (3)  $44 \text{ cm}^2$
  - (4)  $88 \text{ cm}^2$
- 

**16. If the diameter of the base of a closed right circular cylinder be equal to its height,  $h$ , then its whole surface area is :**

- (1)  $2\pi h^2$
  - (2)  $\frac{3}{2}\pi h^2$
  - (3)  $\frac{4}{3}\pi h^2$
  - (4)  $\pi h^2$
- 

**17. If the radius of the base of a right circular cone is  $3r$  and its height is equal to the radius of the base, then its volume is :**

- (1)  $\frac{1}{3}\pi r^3$
  - (2)  $\frac{2}{3}\pi r^3$
  - (3)  $3\pi r^3$
  - (4)  $9\pi r^3$
- 

**18. If the ratio of volumes of two spheres is 1:8, then the ratio of their surface area is :**

- (1) 1:2
  - (2) 1:4
  - (3) 1:8
  - (4) 1:16
-

**19. Let  $l$  be the lower class limit of a class-interval in a frequency distribution and  $m$  be the mid point of the class. Then the upper class limit of the class is :**

- (1)  $m + \frac{l+m}{2}$
  - (2)  $l + \frac{m+l}{2}$
  - (3)  $2m - l$
  - (4)  $m - 2l$
- 

**20. Two coins are tossed simultaneously. The probability of getting atmost one head is :**

- (1)  $\frac{1}{4}$
  - (2)  $\frac{3}{4}$
  - (3)  $\frac{1}{2}$
  - (4)  $\frac{5}{4}$
- 

**21. If  $n$  is a natural number then  $9^{2n} - 4^{2n}$  is always divisible by :**

- (1) 5
  - (2) 13
  - (3) both 5 and 13
  - (4) none of these
- 

**22. If  $n$  is any natural number then  $6^n - 5^n$  always ends with :**

- (1) 1
  - (2) 3
  - (3) 5
  - (4) 7
- 

**23. If  $\alpha, \beta$  are the zeroes of the polynomial :**

$f(x) = x^2 - p(x + 1) - C$  such that  $(\alpha + 1)(\beta + 1) = 0$  then  $C =$

- (1) 1
- (2) 0
- (3) -1

(4) 2

---

**24. In  $\triangle ABC$  and  $\triangle DEF$ ,  $\angle A = \angle E = 40^\circ$  and  $AB : ED = AC : EF$  and  $\angle F = 65^\circ$  then  $\angle B = ?$**

(1)  $35^\circ$

(2)  $65^\circ$

(3)  $75^\circ$

(4)  $85^\circ$

---

**25. If  $\tan \theta = \frac{a}{b}$  then  $\frac{a \sin \theta + b \cos \theta}{a \sin \theta - b \cos \theta} =$**

(1)  $\frac{a^2+b^2}{a^2-b^2}$

(2)  $\frac{a^2-b^2}{a^2+b^2}$

(3)  $\frac{a+b}{a-b}$

(4)  $\frac{a-b}{a+b}$

---

**26. If  $\csc \theta = 2x$  and  $\cot \theta = \frac{2}{x}$  then  $2 \left( x^2 - \frac{1}{x^2} \right) = ?$**

(1) 1

(2) 0

(3)  $\frac{1}{2}$

(4) -1

---

**27. If the mean of 1,3,4,5,7,4 is  $m$  and mean of 3,2,2,4,3,3, $p$  is  $(m - 1)$  and median is  $q$  then  $p + q =$**

(1) 4

(2) 5

(3) 6

(4) 7

---

**28. If  $\sin \alpha$  and  $\cos \alpha$  are the roots of equation :  $ax^2 + bx + c = 0$  then  $b^2 =$**

- (1)  $a^2 - 2ac$
  - (2)  $a^2 + 2ac$
  - (3)  $a^2 - ac$
  - (4)  $a^2 + ac$
- 

**29. What will be the sum of n terms of the following arithmetic progression if the arithmetic progression is:  $(x - y)^2, (x^2 + y^2), (x + y)^2, \dots$  up to n terms:**

- (1)  $n\{(x - y)^2 + (n - 1)xy\}$
  - (2)  $\{n(x - y)^2 + n(x + y)^2\}$
  - (3)  $\frac{n}{2}(x^2 + y^2) - (x + y)$
  - (4) None of these
- 

**30. If  $\frac{5+9+13+\dots \text{ to } n \text{ terms}}{7+9+11+\dots \text{ to } (n+1) \text{ terms}} = \frac{17}{16}$  then  $n =$**

- (1) 8
  - (2) 7
  - (3) 10
  - (4) 11
- 

**31. In figure : AD = 4 cm, BD = 3 cm, CB = 12 cm, then  $\cot \theta =$**

- (1)  $\frac{3}{4}$
  - (2)  $\frac{5}{12}$
  - (3)  $\frac{4}{3}$
  - (4)  $\frac{12}{5}$
- 

**32. If  $\sin 3\theta = \cos(\theta - 6^\circ)$ , where  $(3\theta)$  and  $(\theta - 6^\circ)$  are both acute angles then the value of  $\theta$  is :**

- (1)  $18^\circ$
- (2)  $24^\circ$
- (3)  $36^\circ$
- (4)  $30^\circ$



---

**33.  $\sin(60^\circ + \theta) - \cos(30^\circ - \theta)$  is equal to :**

- (1)  $2 \cos \theta$
  - (2)  $2 \sin \theta$
  - (3) 0
  - (4) 1
- 

**34. If  $\sin A + \sin^2 A = 1$ , then the value of  $\cos^2 A + \cos^4 A$  is :**

- (1) 2
  - (2) 1
  - (3) -2
  - (4) 0
- 

**35. If the equation :  $(a^2 + b^2)x^2 - 2(ac + bd)x + (c^2 + d^2) = 0$  has equal roots then :**

- (1)  $ab = cd$
  - (2)  $ad = bc$
  - (3)  $ad = \sqrt{bc}$
  - (4)  $ab = \sqrt{cd}$
- 

**36. If  $a$  and  $b$  can take values 1,2,3,4. Then the number of the equations of the form :  $ax^2 + bx + 1 = 0$  having real roots is :**

- (1) 10
  - (2) 7
  - (3) 6
  - (4) 12
- 

**37. If the sum of first  $n$  terms of an A.P. is  $\frac{3n^2}{2} + \frac{5n}{2}$  then its 25th term is :**

- (1) 70
- (2)  $-n$

- (3) 76
  - (4) none of these
- 

**38. Sum of all 3 digit natural numbers which are divisible by 13 :**

- (1) 3774
  - (2) 37674
  - (3) 37697
  - (4) 37650
- 

**39. A cone, a hemisphere and a cylinder stands on equal bases and have the same height. What is the ratio of their volumes :**

- (1) 1 : 2 : 3
  - (2) 2 : 3 : 4
  - (3) 1 : 3 : 4
  - (4) none of these
- 

**40. The circumference of a circle is 100 cm. The side of a square inscribed in the circle is :**

- (1)  $50\sqrt{2}$  cm
  - (2)  $\frac{100}{\pi}$  cm
  - (3)  $\frac{50\sqrt{2}}{\pi}$  cm
  - (4)  $\frac{100\sqrt{2}}{\pi}$  cm
- 

**41. The exponent of 3 in the prime factorisation of 864 is :**

- (1) 2
  - (2) 5
  - (3) 4
  - (4) 3
-

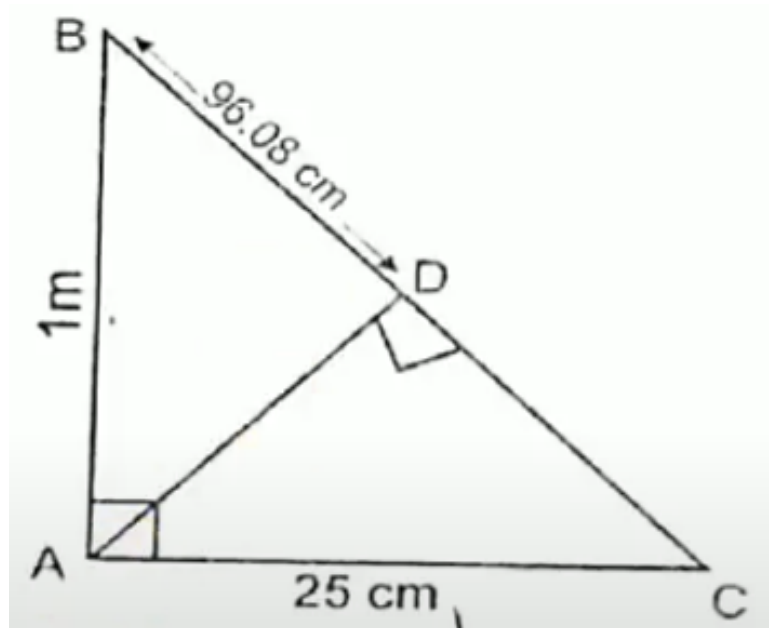
**42. The least numbers divisible by 2,3,7 and 9 is :**

- (1) 126
  - (2) 256
  - (3) 251
  - (4) 189
- 

**43. Graphically, the two systems of equations  $x + 7 = 0, y - 2 = 0$  and  $x - 2 = 0, y + 7 = 0$  enclose a :**

- (1) Square region
  - (2) Rectangular region
  - (3) A triangular region
  - (4) Trapezium shaped region
- 

**44. In the given figure  $\angle CAB = 90^\circ$  and  $AD \perp BC$ . If  $AC = 25$  cm,  $AB = 1$  m and  $BD = 96.08$  cm, then find the value of  $AD$**



Visual shows triangle CAB with right angle at A. AD is perpendicular to BC, with D on BC.  
Labels: AC=25cm, AB=1m. BD=96.08cm is marked on the hypotenuse segment.

- (1) 23cm
- (2) 98cm

- (3) 24.02cm  
(4) none of these
- 

**45. If  $\alpha$  and  $\beta$  are the roots of  $2x^2 - 4x + 1 = 0$ . Then  $\frac{1}{\alpha^2\beta} + \frac{1}{\alpha\beta^2} =$**

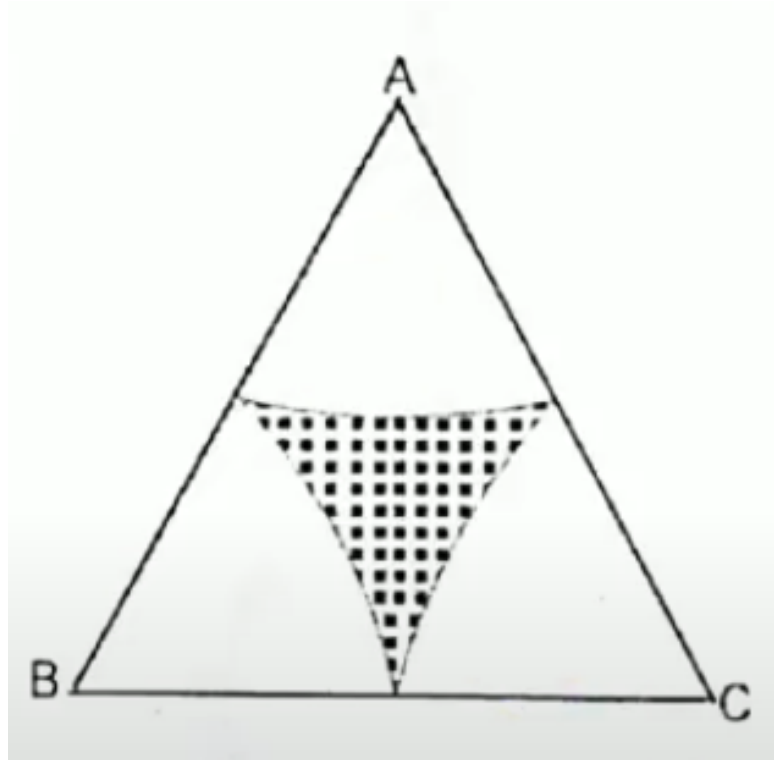
- (1) -4  
(2) 8  
(3) 1  
(4) 0
- 

**46. From the top of a tower  $h$  meter high, the angle of depression of two objects, which lie on either side of it are  $\alpha$  and  $\beta$ . The distance between the two objects is :**

- (1)  $h(\cot \alpha + \cot \beta)$   
(2)  $h(\cot \alpha - \cot \beta)$   
(3)  $h(\tan \alpha + \tan \beta)$   
(4)  $h(\tan \alpha - \tan \beta)$
- 

**47. In the given figure  $\triangle ABC$  is an equilateral triangle of side 8 cm. A, B and C are the centres of circular arcs of radius 4 cm. Find the area of the shaded region correct upto 2 decimal places ( $\pi = 3.142$ ,  $\sqrt{3} = 1.732$ )**

Equilateral triangle ABC. From each vertex (A, B, C), a circular sector is drawn inside the triangle.



Radius of each sector is 4 cm. Side of triangle is 8 cm. The shaded region is the area of the triangle MINUS the areas of these three sectors.

- (1)  $2.57 \text{ cm}^2$
- (2)  $3.45 \text{ cm}^2$
- (3)  $1.67 \text{ cm}^2$
- (4) none of these

---

**48. In a single throw of pair of dice, the probability of getting a multiple of 2 on one and a multiple of 3 on the other will be :**

- (1)  $\frac{5}{36}$
- (2)  $\frac{1}{18}$
- (3)  $\frac{11}{36}$
- (4)  $\frac{1}{6}$

---

**49. Two dice are numbered 1,2,3,4,5,6 and 1,1,2,2,3,3 respectively. They are thrown and the sum of the numbers on them is noted. The probability of getting a sum of 5 will be :**

- (1)  $\frac{1}{9}$

(2)  $\frac{1}{18}$

(3)  $\frac{1}{6}$

(4)  $\frac{1}{36}$

---

**50. A bag contains 14 balls of which  $x$  are white. If 6 more white balls are added to the bag, the probability of drawing a white ball is  $\frac{1}{2}$ . Then the value of  $x =$**

(1) 7

(2) 4

(3) 8

(4) none of these

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### Physics

**51. The minimum distance between source and reflecting surface for echo is :**

(1) 10.2 m

(2) 17.2 m

(3) 20.4 m

(4) 27.4 m

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**52. If time period is 0.02 second, then frequency will be :**

(1) 50 Hz

(2) 5 Hz

(3) 0.02 Hz

(4) 500 Hz

---

**53. In SONAR, we use :**

(1) Audible Sound

(2) Radio Sound

(3) Ultra Sound

(4) Infra Sound

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**54. The velocity of an object becomes double then its kinetic energy will be :**

- (1) Kinetic Energy does not depend on velocity
  - (2) Two times
  - (3) Four times
  - (4) Eight times
- 

**55. Maximum work is done, when the angle between force and displacement is :**

- (1)  $60^\circ$
  - (2)  $45^\circ$
  - (3)  $30^\circ$
  - (4)  $0^\circ$
- 

**56. An object of mass 2 Kg is lifted up to height 2 m. The work done will be :**

- (1) 39.20 J
  - (2) 9.80 J
  - (3) 98 J
  - (4) 980 J
- 

**57. SI unit of gravitational constant (G) is :**

- (1)  $\text{Nm}^2\text{kg}^{-1}$
  - (2)  $\text{Nm kg}^{-2}$
  - (3)  $\text{N}^2\text{m kg}^{-2}$
  - (4)  $\text{Nm}^2\text{kg}^{-2}$
- 

**58. Mass of a man is 60 Kg, his mass on the moon will be :**

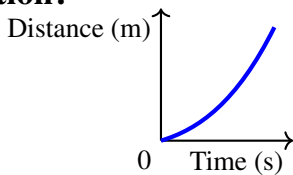
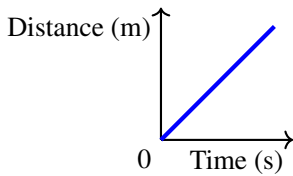
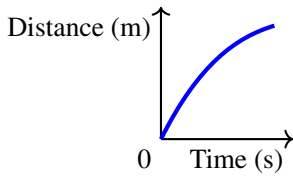
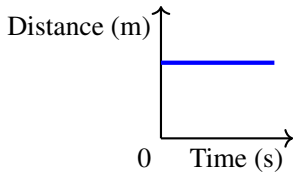
- (1) 60 Kg
- (2) 10 Kg

(3) 98 Kg

(4) 0 Kg

---

**59. Which of the following distance-time graphs represents an object in uniform motion?**

- (1) 
- (2)  ✓
- (3) 
- (4) 

---

**60. A particle is moving on a circular path of radius  $r$ . Its displacement after one revolution :**

- (1)  $2\pi r$
- (2)  $\pi r$
- (3) 0 (zero)
- (4)  $2r$

---

**61. In velocity time graph, area under v-t graph represents :**

- (1) Displacement
- (2) Velocity
- (3) Acceleration
- (4) Time



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**62. Rocket works on the principle of conservation of :**

- (1) Mass
- (2) Energy
- (3) Charge
- (4) Momentum

---

**63. Force on an object can not change its :**

- (1) Shape
- (2) Mass
- (3) Direction
- (4) Speed

---

**64. The mass of a goods lorry is 3500 Kg and the mass of goods loaded on it is 1500 Kg. If the lorry is moving with a velocity 10m/s. What will be its momentum ?**

- (1) 25000 Kg m/s
- (2) 30000 Kg m/s
- (3) 40000 Kg m/s
- (4) 50000 Kg m/s

---

**65. SI unit of weight is :**

- (1) Kg
- (2)  $\text{Kg ms}^{-1}$
- (3) N
- (4) None of these

---

**66. Which of the following materials cannot be used to make a lens ?**

- (1) Water
- (2) Glass
- (3) Clay

(4) Plastic

---

**67. S. I. unit of power of lens is :**

- (1) Diopter
  - (2) Decibel
  - (3) Meter
  - (4) Gauss
- 

**68. The angle of incidence of any light passing through the centre of curvature of a spherical mirror is :**

- (1)  $0^\circ$
  - (2)  $45^\circ$
  - (3)  $90^\circ$
  - (4)  $60^\circ$
- 

**69. Refractive index of water w.r.t. air is 1.33. What is the refractive index of air w.r.t. water ?**

- (1) 0.75
  - (2) 0.50
  - (3) 75.0
  - (4) 0.25
- 

**70. The focal length of a convex lens is 18 cm and the size of the image is a quarter of the object. The object is situated at a distance of:**

- (1) 90 cm
  - (2) 54 cm
  - (3) 22.5 cm
  - (4) 60 cm
- 

**71. The range of vision of a normal human eye is from :**

- (1) 100m to 25cm
  - (2) infinity to 25m
  - (3) 1km to 25cm
  - (4) infinity to 25cm
- 

**72. Stars twinkle due to :**

- (1) atmospheric refraction
  - (2) atmospheric reflection
  - (3) scattering of light
  - (4) dispersion of light
- 

**73. Name the two phenomenon involved in the formation of rainbow :**

- (1) Dispersion and reflection of light
  - (2) Refraction and reflection of light
  - (3) Scattering and refraction of light
  - (4) Scattering and reflection of light
- 

**74. Unit of electrical current is :**

- (1) ampere
  - (2) coulomb
  - (3) joule
  - (4) volt
- 

**75. An electric bulb is connected to a 220 V generator. The current is 0.50 A. What is the power of bulb ?**

- (1) 110 watt
  - (2) 100 watt
  - (3) 220 watt
  - (4) 55 watt
-

**76. The electric device used for producing electric current is called a :**

- (1) generator
  - (2) galvanometer
  - (3) ammeter
  - (4) motor
- 

**77. At the time of short circuit the current in the circuit :**

- (1) reduces substantially
  - (2) does not change
  - (3) increases heavily
  - (4) vary continuously
- 

**78. What kind of mirror would be best suited for use in Solar Cooker ?**

- (1) concave
  - (2) convex
  - (3) plain
  - (4) plano-concave
- 

**79. A Solar water heater cannot be used to get hot water on :**

- (1) cloudy day
  - (2) sunny day
  - (3) a hot day
  - (4) a windy day
- 

**80. The change in focal length of an eye lens is caused by the action of :**

- (1) pupil
  - (2) retina
  - (3) ciliary muscle
  - (4) iris
-

**81. The phenomenon of splitting of white light through prism into a band of colours is called :**

- (1) Dispersion of light
  - (2) Reflection of light
  - (3) Refraction of light
  - (4) Scattering of light
- 

**82. A current of 0.5 ampere is drawn by a filament of an electric bulb for 10 minutes. Find the amount of electrical charge :**

- (1) 300 Coulomb
  - (2) 600 Coulomb
  - (3) 60 Coulomb
  - (4) 30 Coulomb
- 

**83. Which of the following is not an example of a bio mass energy source ?**

- (1) Wood
  - (2) Gobar Gas
  - (3) Nuclear Energy
  - (4) Coal
- 

**84. A generator converts :**

- (1) electrical energy to mechanical energy
  - (2) mechanical energy to electrical energy
  - (3) mechanical energy to solar energy
  - (4) solar energy to electrical energy
- 

**85. The speed of light is :**

- (1)  $3 \times 10^8$  meter/sec
- (2)  $3 \times 10^{10}$  meter/sec
- (3)  $0.3 \times 10^8$  meter/sec

(4)  $0.03 \times 10^8$  meter/sec

---

**86. The charge of electron is :**

- (1)  $1.6 \times 10^{-19}$  Coulomb
  - (2)  $16 \times 10^{-19}$  Coulomb
  - (3)  $0.16 \times 10^{-19}$  Coulomb
  - (4)  $166 \times 10^{-19}$  Coulomb
- 

**87. The coil of a solenoid is made from :**

- (1) Silicon
  - (2) Carbon
  - (3) Germanium
  - (4) Copper
- 

**88. Magnetic field inside a long straight solenoid carrying current :**

- (1) is zero
  - (2) decreases as we move towards its end
  - (3) increases as we move towards its end
  - (4) is the same at all points
- 

**89. Voltmeter in a circuit is connected in :**

- (1) parallel
  - (2) series
  - (3) in any way
  - (4) none of these
- 

**90. Oersted is the unit of :**

- (1) Magnetic field
- (2) Electrical current

- (3) Electrical field
  - (4) Magnetic current
- 

## **Chemistry**

**91. The compound that can be purified by sublimation is :**

- (1) Ammonium Chloride
  - (2) Calcium Carbonate
  - (3) Sodium Carbonate
  - (4) Aluminium Chloride
- 

**92. A gel toothpaste is a mixture of a :**

- (1) liquid in a solid
  - (2) solid in a gas
  - (3) liquid in liquid
  - (4) gas in solid
- 

**93. During summer, water kept in an earthen pot becomes cool because of the phenomenon of :**

- (1) diffusion
  - (2) transpiration
  - (3) osmosis
  - (4) evaporation
- 

**94. Tincture of iodine has antiseptic properties. This solution is made by dissolving :**

- (1) iodine in potassium iodide
  - (2) iodine in acetone
  - (3) iodine in alcohol
  - (4) iodine in water
-

**95. The Chemical symbol for tin is :**

- (1) Ti
  - (2) Sb
  - (3) Sn
  - (4) Te
- 

**96. The names of the elements present in quick lime are :**

(i) Ca      (ii) H      (iii) O      (iv) C

- (1) (i), (ii) and (iii)
  - (2) (i), (iii) and (iv)
  - (3) (i) and (iii)
  - (4) (i), (ii), (iii) and (iv)
- 

**97. Which of the following has maximum number of atoms ?**

- (1) 18g of H<sub>2</sub>O
  - (2) 18g of O<sub>2</sub>
  - (3) 18g of CO<sub>2</sub>
  - (4) 18g of CH<sub>4</sub>
- 

**98. The number of electrons in an element X is 6 and the number of neutron is 8.**

**Which of the following is the correct representation of the element ?**

- (1)  ${}^8_6\text{X}$
  - (2)  ${}^{14}_6\text{X}$
  - (3)  ${}^6_8\text{X}$
  - (4)  ${}^{14}_8\text{X}$
- 

**99. The ion of an element has 3 positive charges. Mass number of the atom is 27 and the number of neutrons is 14. What is the number of electrons in the ion ?**

- (1) 13
- (2) 10



(3) 14

(4) 16

---

**100. Isotopes of an element have :**

(1) The same physical properties

(2) different chemical properties

(3) different number of neutrons

(4) different atomic number

---

**101. The most abundant gas found in the earth atmosphere is :**

(1) CO<sub>2</sub>

(2) O<sub>2</sub>

(3) CH<sub>4</sub>

(4) N<sub>2</sub>

---

**102. Select from the following a set of three metals which are found in free state :**

(1) Al, Cu, Ag

(2) Au, Fe, Ag

(3) Cu, Au, Fe

(4) Ag, Au, Pt

---

**103. The gas which may cause explosion in coal mines is :**

(1) Methane

(2) Ethane

(3) Nitrogen

(4) Oxygen

---

**104. Which of the following is the most electronegative element in the periodic table ?**

(1) Oxygen

- (2) Nitrogen
  - (3) Flourine
  - (4) Chlorine
- 

**105. Natural Rubber obtained from Rubber tree is basically a polymer of :**

- (1) Ethylene
  - (2) Propylene
  - (3) Acetylene
  - (4) Isoprene
- 

**106. Metal, which will displace hydrogen from dilute HCl is :**

- (1) Ag
  - (2) Au
  - (3) Mg
  - (4) Cu
- 

**107. Which was the first organic compound synthesized in the laboratory ?**

- (1) Methane
  - (2) Urea
  - (3) Thiourea
  - (4) Ethanol
- 

**108. Which of the following is a member of the Halogen family ?**

- (1) Cl
  - (2) Ca
  - (3) Cu
  - (4) Cr
- 

**109. The metal most commonly used for making filament of an electric bulb is :**

- (1) Tungsten
  - (2) Copper
  - (3) Silver
  - (4) Aluminium
- 

**110. Vinegar, used in kitchen is a dilute solution of :**

- (1) Oxalic Acid
  - (2) Citric Acid
  - (3) Benzoic Acid
  - (4) Ethanoic Acid
- 

**111. When water is poured over sodium peroxide, which colourless gas is produced ?**

- (1) Dihydrogen
  - (2) Ozone
  - (3) Dioxygen
  - (4) Dinitrogen
- 

**112. Sodium metal is usually stored under :**

- (1) Water
  - (2) Kerosene Oil
  - (3) Alcohol
  - (4) Hydrogen
- 

**113. Galvanized Iron (GI) sheets are coated with :**

- (1) Sn
  - (2) Ni
  - (3) Cu
  - (4) Zn
-

**114. The most abundant element found in the earth's crust is :**

- (1) O
  - (2) Cl
  - (3) Si
  - (4) S
- 

**115. Calamine is an ore of which of the following ?**

- (1) Ca
  - (2) Zn
  - (3) Mg
  - (4) Hg
- 

**116. The red colouring pigment Haemoglobin in our blood contains which metal ?**

- (1) Fe
  - (2) Co
  - (3) Mg
  - (4) Na
- 

**117. Which of the following organic compounds will exhibit Geometrical Isomerism ?**

- (1) Butanol-2
  - (2) Butene-1
  - (3) Butene-2
  - (4) Butyne-1
- 

**118. The most pure form of Iron is :**

- (1) Cast Iron
  - (2) Pig Iron
  - (3) Wrought Iron
  - (4) Steel
-

**119. The property of carbon element responsible for a large number of organic compounds is :**

- (1) Allotropy
  - (2) Catenation
  - (3) Hybridisation
  - (4) None of these
- 

**120. Which of the following is a natural polymer ?**

- (1) Bakelite
  - (2) PVC
  - (3) Polythene
  - (4) Protein
- 

## **Biology**

**121. Which one is made of dead cells :**

- (1) Parenchyma
  - (2) Meristematic tissues
  - (3) Sclerenchyma
  - (4) Companion cells
- 

**122. Nodules with nitrogen-fixing bacteria are present in :**

- (1) Mustard
  - (2) Gram
  - (3) Wheat
  - (4) Cotton
- 

**123. Which of the following is not a green-house gas ?**

- (1) Methane

- (2) Carbon-di-oxide
  - (3) Carbon mono-oxide
  - (4) Ammonia
- 

**124. Kala-azar is caused by :**

- (1) protozoan
  - (2) fungus
  - (3) bacteria
  - (4) virus
- 

**125. Amphibians do not have the following :**

- (1) three chambered heart
  - (2) gills or lungs
  - (3) scales
  - (4) mucus glands
- 

**126. Which of the following species of honey bee is an Italian species ?**

- (1) Apis mellifera
  - (2) Apis dorsata
  - (3) Apis florae
  - (4) Apis cerana indica
- 

**127. Enzyme present in the saliva of human being ?**

- (1) Pepsin
  - (2) Trypsin
  - (3) Tylin
  - (4) Lipase
- 

**128. Oxygenated blood is present in :**

- (1) Right auricle
  - (2) Pulmonary artery
  - (3) Right ventricle
  - (4) Pulmonary vein
- 

**129. Evaporation of water from the surface of leaf is called :**

- (1) Respiration
  - (2) Photosynthesis
  - (3) Transpiration
  - (4) Evaporation
- 

**130. Auxin is a :**

- (1) Plant hormone
  - (2) Enzyme
  - (3) Fat
  - (4) Protein
- 

**131. Asexual reproduction by budding is present in :**

- (1) Amoeba
  - (2) Spirogyra
  - (3) Moss
  - (4) Yeast
- 

**132. Example of homologous organs is :**

- (1) Fore arm of human and wings of bird
  - (2) Wings of insect and bird
  - (3) Vermiform appendix and nictitating membrane
  - (4) Muscles of pinna and tail vertebrae
-

**133. Energy stored in respiration :**

- (1) In the form of ADP
  - (2) In the form of ATP
  - (3) In the form of NADP
  - (4) In the form of PI
- 

**134. Example of bisexual flower is :**

- (1) Papaya
  - (2) Hibiscus
  - (3) Cucumber
  - (4) Maize
- 

**135. Bowman's capsule is present in :**

- (1) Small intestine
  - (2) Kidney
  - (3) Heart
  - (4) Brain
- 

### **English**

**136. Fill in the blanks with correct form of the verb :**

**I finished my home-work while my mother ..... the food.**

- (1) cooked
  - (2) was cooking
  - (3) had cooked
  - (4) cook
- 

**137. Fill in the blanks with correct word :**

**I prefer milk ..... Coffee.**

- (1) to



- (2) than
  - (3) of
  - (4) for
- 

**138. Find the correct spelling :**

- (1) desicion
  - (2) decision
  - (3) desision
  - (4) decicion
- 

**139. The correct narrated form of the given sentence is :**

**”I will go to Delhi tomorrow,” he told me.**

- (1) He told me that I would go to Delhi tomorrow.
  - (2) He told me that he will go to Delhi the next day.
  - (3) He told me that he would go to Delhi the next day.
  - (4) He told me that he would go to Delhi tomorrow.
- 

**140. Fill in the blank with correct word :**

**The Principal is giving .....the prizes.**

- (1) into
  - (2) away
  - (3) for
  - (4) at
- 

**141. Fill in the blank with correct word :**

**Can I give you some .....?**

- (1) advise
- (2) advised
- (3) advising
- (4) advice

---

**142. Find the correct auxiliary verb for the following sentence :**

**One or the other of those fellows ..... stolen the car.**

- (1) has
- (2) have
- (3) has been
- (4) have been

---

**143. Choose the sentence which is grammatically correct :**

- (1) Politics are not meant for students.
- (2) New Delhi is a capital of India.
- (3) Many a man has done so.
- (4) The novelist and poet are dead.

---

**144. Find the correct antonym to the underlined word :**

**There was a marked improvement in his condition.**

- (1) reformation
- (2) amendment
- (3) deterioration
- (4) revision

---

**145. Choose the correct narrated form for the following sentence :**

**He said to me, "Where are you going?"**

- (1) He says where I am going.
- (2) He told me where I was going.
- (3) He asked me where they are going.
- (4) He asked me where I was going.

---

**146. Choose the right option for the synonym of the underlined word :**

**We must eradicate corruption.**

- (1) minimise
  - (2) uproot
  - (3) condemn
  - (4) control
- 

**147. Choose the correct passive form of the following sentence :**

**I have already seen this movie.**

- (1) This movie is already seen by me.
  - (2) This movie has already seen by me.
  - (3) This movie was already seen by me.
  - (4) This movie has already been seen by me.
- 

**148. Fill in the blank with the correct word :**

**Security arrangements have been tightened up in all .....areas.**

- (1) sensible
  - (2) sensual
  - (3) sensitive
  - (4) sensational
- 

**149. Choose the correct option for the following sentence :**

**If I had worked hard, I .....very high marks in the examination.**

- (1) would have scored
  - (2) scored
  - (3) would score
  - (4) could score
- 

**150. Choose the right option which best expresses the meaning of the underlined idiom :**

**The luxury car that they bought turned out to be a white elephant.**

- (1) a rare article
- (2) useful mode of transport

(3) costly or trouble some possession

(4) a proud possession

---