CEEP MODEL PAPER 2012

TIME : 30 Min   MAX MARKS : 30

> **SECTION – II**
> **PHYSICS**

61.   While measuring the diameter of a lead shot using a screw gauge, the reading on the pitch scale is found to be 7.5mm and that on the head scale is 48. If the least count is 0.01mm, and the zero error is +o.o5mm, find the diameter of the lead shot.
1) 7.93mm   2) 8.03mm   3) 7.98mm   4) 7.5mm

62.   What will be the time period of the satellite to complete one revolution towards the earth? The radius of the earth is 6400Km; g is 10 m/sec^2
1) 5023.5 Sec   2) 5025.5 sec   3) 5028.5 sec   4) 5030.5 Sec

63.   A 100Kg object is kept at a height of 1/4th of its radius then its weight will be
1) 25Kg   2) 50Kg   3) 100Kg   4) 200Kg

64.   The relationship between s, u, a and t is
1) $S = ut + at^2$ 2) $S = ½ Ut + at^2$ 3) $S = Ut + ½ at^2$ 4) $2s = Ut + ½ at^2$

65.   The maximum height reached by a body travelling with initial velocity of 9.8 m/sec
1) 9.8 m   2) 19.6m   3) 4.9m   4) 39.2m

66.   A stone is projected up with a velocity 'u' and at the same time, another is dropped from a height '2u'. The time required for them to meet in air is
1) 1sec   2) 3 sec   3) 5 sec   4) 2 sec

67.   Time period of the pendulum is 1.2 sec. then find the length of the pendulum
1) 35Cm   2)35.6cm   3) 35.2 cm   4) 35.7 cm

68.   The quantity which is constant in uniform circular motion is
1) Speed   2) direction   3) speed and direction   4) none

69.   A bucket full of water is whirled in a vertical circle. The water does not come out from the bucket. This is due to
1) Centripetal force, weight are equal   2) Weight is more than centrifugal force
3) Centrifugal force, Weight are equal   4) Weight is more than centripetal force.

70.   The wave length limit of IR is -----
1) 0.1 μm – 0.7μm   2) 0.7μm - 100μm   3) 10μm – 10m   4) 1m – 100Km

71.   The method of using X – rays in medical diagnosis is called
1) Radio therapy   2) Halography   3) Radiography   4) Radio astronomy

72.   The ratio of densities of two gases is 16:25. Then the ratio of velocities in them at the same pressure and temperature is
1) 3:4   2) 4:5   3) 1:1   4) 5:4

73.   In a standing wave, the distance between two adjacent antinodes is equal to
1) λ   2) 3 λ/4   3) λ/2   4) λ/4

74. The life time of electron in the metastable state is in the order of
    1) 10^{-8} Sec   2) 3×10^{-3} Sec   3) 3×10^{-8} Sec   4) 3×10^{-10} Sec

75. The refractive index of water is 4/3. The velocity of light in water is
    1) 4×10^8 ms^{-1} 2) 4.5×10^8 ms^{-1} 3) 2.25×10^8 ms^{-1} 4) 2×10^8 ms^{-1}

76. A special three dimensional photography in which lasers are employed is
    1) Spectrography   2) holography   3) autography   4) biography

77. The units of intensity of magnetization is
    1) ampere/meter   2) ampere   3) ampere – meter   4) meter

78. The poles of strengths in the ratio 1:2 are separated in air by a distance of 0.2m. The pole strength when the force between them is 2×10^{-5} N are ------- A – m
    1) 1.2   2) 2.4   3) 4.8   4) 8.16

79. The force between two magnetic poles is 9×10^{-5} N. If the distance between them is tripled then the force is
    1) 3×10^{-5} N   2) 9×10^{-5} N   3) 27×10^{-5} N   4) 1×10^{-5} N

80. The magnetic induction at a distance 20 cm from the magnetic pole of pole strength 20 A – m is
    1) 5×10^{-5} tesla   2) 4×10^{-4} tesla   3) 5×10^{-4} tesla   4) 10^{-5} tesla

81. Resistance of two Aluminium wires are 7Ω and x Ω. Lengths of those wires are 2m, 8m and of equal cross section. What is x?
    1) $22\ \Omega$ 2) $25\ \Omega$ 3) $28\ \Omega$ 4) $30\ \Omega$

82. The effective resistance of two conductors when connected in series and parallel are $9\ \Omega$ and $2\ \Omega$. What are their resistances?
    1) $5\ \Omega, 4\ \Omega$ 2) $7\ \Omega, 2\ \Omega$ 3) $1\ \Omega, 8\ \Omega$ 4) $6\ \Omega, 3\ \Omega$

83. The current in the following circuit is
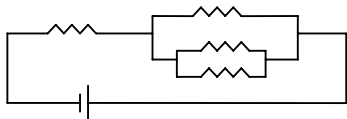
    1) 2 A   2) 1.5A   3) 1A   4) 2.5A
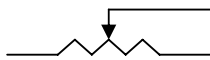
84. The given picture is the symbol for
    1) Electric resistance   2) Electric cell
    3) Parallel connection between cells   4) Rheostat

85. The mass defect and binding energy of $_{27}Co^{59}$ which has nuclear mass 58.933 amu is
    1) 0.556 amu, 517.914 MeV   2) 5.556 amu, 527.914 MeV
    3) 0.556 amu, 537.914 MeV   4) 10.556 amu, 517.914 MeV

86. Uranium series is
    1) 4n   2) 4n + 2   3) 4n + 3   4) 4n + 1

87. Among the following Isotones are
    1) $_{14}Si^{31}, _{7}N^{13}$ 2) $_{8}O^{18}, _{7}N^{17}$ 3) 1 and 2   4) $_{6}C^{13}, _{7}N^{13}$

88. The decay constant of a radioactive substance is λ, its half life is
    1) $1/\lambda$ 2) $1/2\lambda$ 3) $0.693/\lambda$ 4) $0.346/\lambda$

89. The minority charge carriers in an n – type semiconductors are
    1) Holes   2) electrons   3) holes, electrons   4) negative ions

90. Which of the following is not true
    1) 'Compiler' translates high level language instructions to machine language instructions
    2) The digit '0' or '1' is called BIT
    3) A high level language is independent of the hardware of a computer
    4) ASSEMBLER is a high level language

KEY

SECTION – II PHYSICS			
61)	1	76)	2
62)	3	77)	1
63)	2	78)	2
64)	3	79)	4
65)	3	80)	1
66)	4	81)	3
67)	4	82)	4
68)	1	83)	3
69)	3	84)	4
70)	2	85)	1
71)	3	86)	2
72)	4	87)	2
73)	3	88)	3
74)	2	89)	1
75)	3	90)	4