VERY SIMILAR
PRACTICE TEST 7

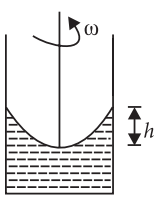
Time : 3 hrs. Max. Marks : 300

PHYSICS

1. An electron of mass m and charge e initially at rest gets accelerated by a constant electric field E. The rate of change of de-Broglie wavelength of this electron at time t (Ignoring relativistic effects) is

(a) $\frac{-h}{eEt^2}$ (b) $\frac{-mh}{eEt^2}$ (c) $\frac{-h}{eEt}$ (d) $\frac{-eEt}{h}$

2. A liquid is kept in a cylindrical vessel which is rotated along its axis. The liquid rises at the sides (as shown in figure). If the radius of the vessel is 0.05 m and the speed of rotation is 2 rad s^{-1}, find the difference in the height of the liquid at the centre of the vessel and its sides.



(a) 20 cm (b) 4 cm (c) 2 cm (d) 0.2 cm

3. A 10 watt source of sound of frequency 1 kHz sends out waves in air. The displacement amplitude at a distance of 10 m from the source is (Given speed of sound in air is 340 m s^{-1} and density of air is 1.29 kg m^{-3})

(a) 0.62 μm (b) 1.6 μm
(c) 0.96 μm (d) 4.2 μm

4. A telephone cable at a place has four long straight horizontal wires carrying a current of 4.0 A in the same direction east to west. The earth's magnetic field at the place is 0.39 G, and the angle of dip is 35°. The magnetic declination is nearly zero. What is the resultant magnetic field at points 4.0 cm below the cable?

(a) 0.25 G (b) 2.32 G (c) 1.93 G (d) 3.11 G

5. The change in the gravitational potential energy when a body of mass m is raised to a height nR above the surface of the earth is (here R is the radius of the earth)

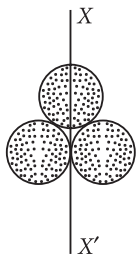
(a) $\left(\frac{n}{n+1}\right)mgR$ (b) $\left(\frac{n}{n-1}\right)mgR$

(c) $nmgR$ (d) $\frac{mgR}{n}$

6. 3 moles of a monatomic gas ($\gamma = 5/3$) is mixed with 1 mole of a diatomic gas ($\gamma = 7/5$). The value of γ for the mixture will be

(a) 9/11 (b) 11/7
(c) 12/7 (d) 15/7

7. Three identical spherical shells, each of mass m and radius r are placed as shown in figure. Consider an axis XX' which is touching to two shells and passing through diameter of third shell. Moment of inertia of the system consisting of these three spherical shells about XX' axis is



(a) $\frac{16}{5}mr^2$ (b) $4mr^2$

(c) $\frac{11}{5}mr^2$ (d) $3mr^2$

8. A particle moves in x-y plane. The position vector of particle at any time t is $\vec{r} = \{(2t)\hat{i} + (2t^2)\hat{j}\}$ m. The rate of change of θ at time $t = 2$ s (where θ is the angle which its velocity vector makes with positive x-axis) is

(a) $\frac{2}{17}$ rad s^{-1} (b) $\frac{1}{14}$ rad s^{-1}

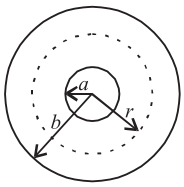
(c) $\frac{4}{7}$ rad s^{-1} (d) $\frac{6}{5}$ rad s^{-1}

9. A magnetic flux through a stationary loop with a resistance R varies during the time interval τ as $\phi = at(\tau - t)$. Determine the amount of heat generated in the loop during that time. The inductance of the loop is to be neglected.

(a) $\frac{a\tau^3}{3R}$ (b) $\frac{a^2\tau^3}{3R}$ (c) $\frac{a^3\tau^3}{3R}$ (d) $\frac{a\tau}{3R}$

10. A force F acting on a body depends on its displacement S as $F \propto S^{-1/3}$. The power delivered by F will depend on displacement as
(a) $S^{2/3}$ (b) $S^{1/2}$ (c) S^0 (d) $S^{-5/3}$

11. The figure shows the cross-section of a long conducting cylinder of inner radius a and outer radius b. The cylinder carries a current whose current density $J = Cr^2$ where C is a constant. What is the magnitude of the magnetic field B at a point r, where $a < r < b$?



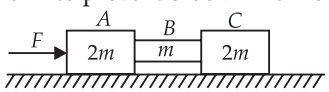
(a) $B = \frac{\mu_0 \pi C}{4r^2}(r^2 - a^2)$

(b) $B = \frac{\mu_0 C}{4r^2}(r^4 - a^4)$

(c) $B = \frac{\mu_0 \pi C}{4r}(r^2 - a^2)$

(d) $B = \frac{\mu_0 C}{4r}(r^4 - a^4)$

12. The system of three blocks as shown in figure is pushed by a force F. All surfaces are smooth except between B and C. Coefficient of friction between B and C is μ. Minimum value of F to prevent block B from slipping is



(a) $\left(\frac{3}{2\mu}\right)mg$ (b) $\left(\frac{5}{2\mu}\right)mg$

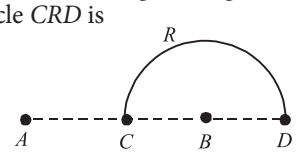
(c) $\frac{3}{2}\mu mg$ (d) $\frac{5}{2}\mu mg$

13. A student measures the distance traversed in free fall of a body, initially at rest, in a given time. He uses this data to estimate g, the acceleration due to gravity. If the maximum percentage errors in measurement of the distance and the time are e_1 and e_2 respectively, the percentage error in the estimation of g is
(a) $e_2 - e_1$ (b) $e_1 + 2e_2$
(c) $e_1 + e_2$ (d) $e_1 - 2e_2$

14. Suppose C be the capacitance of a capacitor discharging through a resistor R. Suppose t_1 is the time taken for the energy stored in the capacitor to reduce to half its initial value and t_2 is taken for the charge to reduce to one-fourth its initial value. Then the ratio $\frac{t_1}{t_2}$ will be

(a) 2 (b) 1 (c) $\frac{1}{2}$ (d) $\frac{1}{4}$

15. Charges $+q$ and $-q$ are placed at points A and B respectively which are a distance $2L$ apart, C is the midpoint between A and B. The work done in moving a charge $+Q$ along the semicircle CRD is



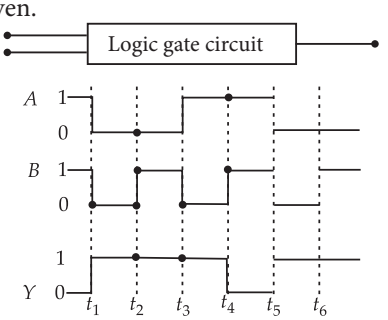
(a) $\frac{qQ}{2\pi\varepsilon_0 L}$ (b) $\frac{qQ}{6\pi\varepsilon_0 L}$

(c) $-\frac{qQ}{6\pi\varepsilon_0 L}$ (d) $\frac{qQ}{4\pi\varepsilon_0 L}$

16. A nucleus with mass number 220 initially at rest emits an α particle. If the Q value of the reaction is 5.5 MeV, the kinetic energy of the α particle is
(a) 4.4 MeV (b) 5.4 MeV
(c) 5.6 MeV (d) 6.5 MeV

17. A galvanometer has 30 divisions and a sensitivity 16 μA/div. It can be converted into a voltmeter to read 3 V by connecting resistance nearly
(a) 6 kΩ in series
(b) 6 kΩ in parallel
(c) 500 Ω in series
(d) 500 Ω in parallel

18. The following figure shows a logic gate circuit with two inputs A and B and the output Y. The voltage waveforms of A, B and Y are as given.



The logic gate is

(a) NOR gate (b) OR gate

(c) AND gate (d) NAND gate

19. The focal length of a plano convex lens is f and its refractive index is 1.5. It is kept over a plane glass plate with its curved surface touching the glass plate. The gap between the lens and the glass plate is filled with a liquid. As a result, the effective focal length of the combination becomes $2f$. Then the refractive index of the liquid is

(a) 1.5 (b) 2 (c) 1.25 (d) 1.33

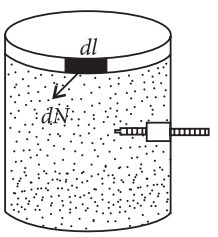
20. If the modulation index of an AM wave is changed from 0 to 1, the transmitted power is

(a) unchanged (b) doubled

(c) increased by 50% (d) zero

NUMERICAL VALUE TYPE

21. A cylindrical tube of radius r and length l, fitted with a cork is shown in figure.

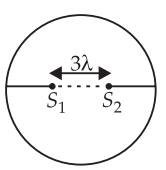


The coefficient of friction between the cork and the tube is μ. The tube contains an ideal gas at temperature T, and atmospheric pressure P_0. The tube is slowly heated, the cork pipe out when temperature is doubled. Assume uniform temperature throughout gas at any instant.

If the is normal force per unit length exerted by the cork on the periphery of tube is $\frac{P_0 A}{n\mu r}$ then the value of n is _____.

22. The amplitude of a damped oscillator becomes half in one minute. The amplitude after 3 minute will be $1/x$ times the original, where x is _____.

23. If two coherent sources are placed at a distance 3λ from each other, symmetric to the centre of the circle of radius R as shown in the figure ($R >> \lambda$), then number of bright fringes shown on the screen placed along the circumference is_____.



24. A string is stretched between fixed points separated by 75 cm. It is observed to have resonant frequencies of 420 Hz and 315 Hz. There are no other resonant frequencies between these two. Then, the lowest resonant frequency for this string is_____ Hz.

25. An ideal choke draws a current of 8 A when connected to an AC supply of 100 V, 50 Hz. A pure resistor draws a current of 10 A when connected to the same source. The ideal choke and the resistor are connected in series and then connected to the AC source of 150 V, 40 Hz. The current in the circuit _____ A.

CHEMISTRY

26. An oxide A_xO_y has molecular weight 288 u. Atomic weights of A and O respectively are 12 and 16. The formula of the compound, if A is 50% by weight is

(a) A_3O_5 (b) A_5O_3

(c) $A_{12}O_9$ (d) A_9O_{12}

27. 3-Octyne is synthesized by adding a bromoalkane in a mixture of sodium amide and an alkyne. The bromoalkane and alkyne are respectively

(a) $BrCH_2CH_2CH_2CH_2CH_3$ and $CH_3CH_2C \equiv CH$

(b) $BrCH_2CH_2CH_3$ and $CH_3CH_2CH_2C \equiv CH$

(c) $BrCH_2CH_2CH_2CH_2CH_3$ and $CH_3C \equiv CH$

(d) $BrCH_2CH_2CH_2CH_3$ and $CH_3CH_2C \equiv CH$

28. Molar conductivity of 0.025 mol L^{-1} methanoic acid is 46.1 S cm^2 mol^{-1}. The degree of dissociation and dissociation constant will be (Given : $\lambda^\circ_{H^+} = 349.6$ S cm^2 mol^{-1} and $\lambda^\circ_{HCOO^-} = 54.6$ S cm^2 mol^{-1})

(a) 11.4%, 3.67×10^{-4} (b) 22.8%, 1.83×10^{-4}

(c) 52.2%, 4.25×10^{-4} (d) 1.14%, 3.67×10^{-6}

29. $Mg \xrightarrow[\text{Heat}]{\text{Air}} X + Y \xrightarrow[\text{Colourless gas}]{H_2O} Z$

$Z \xrightarrow{H_2O} \text{Solution} \xrightarrow[\text{Blue coloured solution}]{CuSO_4} (A)$

Substances X, Y, Z and A are respectively

(a) Mg_3N_2, MgO, NH_3, $CuSO_4 \cdot 5H_2O$

(b) $Mg(NO_3)_2$, MgO, H_2, $CuSO_4 \cdot 5H_2O$

(c) MgO, Mg_3N_2, NH_3, $[Cu(NH_3)_4]SO_4$

(d) $Mg(NO_3)_2$, MgO_2, H_2O_2, $CuSO_4 \cdot 5H_2O$

30. The statements that are true of silicates among the following are

1. Each silicon atom has four Si — O bonds arranged tetrahedrally.
2. Because of the availability of *d*-orbitals in Si, water molecules can coordinate with Si and bring about hydrolysis readily.
3. Si — O bonds are strong; hence silica is inert having high melting point.
4. Each oxygen atom in SiO_2 is shared by 4 silicon atoms in the tetrahedra.

(a) 1, 2, 4 (b) 1, 3, 4
(c) 1, 3 (d) 1, 2, 3, 4

31. The CMC of a given soap in water is 10^{-3} mol litre^{-1}. A 10^{-4} mol litre^{-1} solution of this soap in water is a

(a) lyophilic sol (b) lyophobic sol
(c) true solution (d) none of these.

32. Which of the following statements is false?

(a) The lower the concentration of D.O., the more polluted is the water sample.
(b) The tolerable limit of lead in drinking water is 50 ppb.
(c) Water is considered pure if it has BOD less than 5 ppm.
(d) In COD determination, the pollutants resistant to microbial oxidation are not oxidised by oxidising agents like $K_2Cr_2O_7$.

33. Which of the following statements is not true?

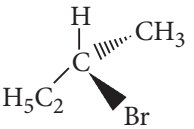
(a) In vulcanisation the rubber becomes harder and stronger.
(b) Natural rubber has '*trans*' configuration at every double bond.
(c) Buna-S is a copolymer of 1,3-butadiene and styrene.
(d) Natural rubber is 1,4-polymer of isoprene.

34. Match the lists I and II and pick the correct matching from the codes given below.

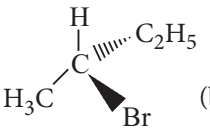
List I	**List II**
(A) $[Ag(CN)_2]^-$	1. Square planar and 1.73 B.M.
(B) $[Cu(CN)_4]^{3-}$	2. Linear and zero
(C) $[Cu(CN)_6]^{4-}$	3. Octahedral and zero
(D) $[Cu(NH_3)_4]^{2+}$	4. Tetrahedral and zero
(E) $[Fe(CN)_6]^{4-}$	5. Octahedral and 1.73 B.M.

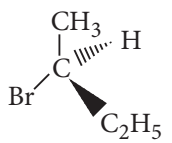
(a) A - 2, B - 4, C - 5, D - 1, E - 3
(b) A - 5, B - 4, C - 1, D - 3, E - 2
(c) A - 1, B - 3, C - 4, D - 2, E - 5
(d) A - 4, B - 5, C - 2, D - 1, E - 3

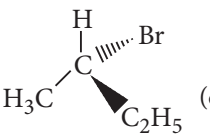
35. Which of the following structures is enantiomeric with the molecule (I) given below :

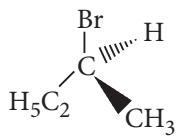


(I)

(a) 

(b) 

(c) 

(d) 

36. In which of the following, the order is not in accordance with the property mentioned?

(a) Li < Na < K < Rb – Atomic radius
(b) F > N > O > C – Ionisation enthalpy
(c) Si < P < S < Cl – Electronegativity
(d) F < Cl < Br < I – Electronegativity

37. An alkene gives two moles of HCHO, one mole of CO_2 and one mole of CH_3COCHO on ozonolysis. What is its structure?

(a) $CH_2{=}C{=}CH{-}CH_2{-}CH_3$

(b) $CH_2{=}CH{-}\underset{\displaystyle CH_3}{\underset{|}{C}}H{-}CH{=}CH_2$

(c) $CH_2{=}C{=}\underset{\displaystyle CH_3}{\underset{|}{C}}{-}CH_3$

(d) $CH_2{=}\underset{\displaystyle CH_3}{\underset{|}{C}}{=}CH{=}CH_2$

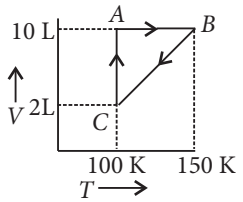
38. At 1400 K, $K_c = 2.5 \times 10^{-3}$ for the reaction :

$CH_{4(g)} + 2H_2S_{(g)} \rightleftharpoons CS_{2(g)} + 4H_{2(g)}$

A 10 L reaction vessel at 1400 K contains 2.0 mol of CH_4, 3.0 mol of CS_2, 3.0 mol of H_2 and 4.0 mol of H_2S. In which direction does the reaction proceed to reach equilibrium?

(a) Forward
(b) Backward
(c) May be forward or backward
(d) Reaction is in equilibrium

39. Consider the given diagram for 1 mole of a gas:

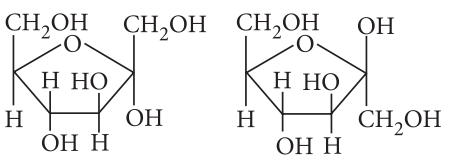


The process $A \rightarrow B$ represents
(a) isobaric change
(b) isothermal change
(c) adiabatic change (d) isochoric change.

40. The decreasing order of boiling points of the following hydrides is
(a) $H_2O > SbH_3 > AsH_3 > PH_3 > NH_3$
(b) $H_2O > NH_3 > SbH_3 > AsH_3 > PH_3$
(c) $H_2O > SbH_3 > NH_3 > AsH_3 > PH_3$
(d) $H_2O > PH_3 > AsH_3 > SbH_3 > NH_3$

41. Pick out the wrong statement(s).
(i) Vapour pressure of a liquid is the measure of the strength of intermolecular attractive forces.
(ii) Surface tension of a liquid acts perpendicular to the surface of the liquid.
(iii) Vapour pressure of all liquids is same at their freezing points.
(iv) Liquids with stronger intermolecular attractive forces are more viscous than those with weaker intermolecular force.
(a) (ii), (iii) and (iv) (b) (ii) and (iii)
(c) (i), (ii) and (iii) (d) (iii) only

42. Five-membered ring structures of fructose are given below. Mark the incorrect statement.



(a) The five-membered ring structures are named as furanose structures.
(b) The cyclic structures represent two anomers of fructose.
(c) Five-membered ring structures are named as pyranose structures.
(d) These are also called Haworth structures.

43. Match the List I with List II for singly ionized helium atom if total energy of electron in first orbit in H-atom is –13.6 eV atom^{-1} and select the correct answer using the code given below the lists.

	List I	List II
P.	*P.E.* of electron in ground state	1. –54.4 eV atom^{-1}
Q.	*K.E.* of electron in ground state	2. +13.6 eV atom^{-1}
R.	Total energy of in ground state	3. –108.8 eV atom^{-1}
S.	Ionization energy of He^+ in lowest excited state	4. +54.4 eV atom^{-1}

(a) P - 1, Q - 2, R - 3, S - 4
(b) P - 4, Q - 1, R - 2, S - 3
(c) P - 4, Q - 2, R - 1, S - 3
(d) P - 3, Q - 4, R - 1, S - 2

44. In acidic medium, $KMnO_4$ oxidises $FeSO_4$ solution. Which of the following statements is correct?
(a) 10 mL of 1 N $KMnO_4$ solution oxidises 10 mL of 5 N $FeSO_4$ solution.
(b) 10 mL of 1 M $KMnO_4$ solution oxidises 10 mL of 5 M $FeSO_4$ solution.
(c) 10 mL of 1 M $KMnO_4$ solution oxidises 10 mL of 1 M $FeSO_4$ solution.
(d) 10 mL of 1 N $KMnO_4$ solution oxidises 10 mL of 0.1 M $FeSO_4$ solution.

45. If an impurity in a metal has a greater affinity for oxygen and is more easily oxidised than the metal, then the purification of metal may be carried out by
(a) poling (b) zone refining
(c) electrolytic refining (d) cupellation

NUMERICAL VALUE TYPE

46. Out of the following, the total number of antihistamine drugs is_____.
Dimetapp, Phenelzine, Alitame, Equanil, Novestrol, Morphine, Seldane, Bithionol.

47. The total number of molecules that do not follow octet rule among the following is_____.
CO, PCl_5, PCl_3, $AlCl_3$, SF_6, BF_3, NH_3

48. Among the following, the number of underlined elements having +6 oxidation state is_____.
$\underline{P}O_4^{3-}$, $H_2\underline{S}_2O_8$, $H_2\underline{S}O_5$, $\underline{O}F_2$, $\underline{Cr}_2O_7^{2-}$, $\underline{Cr}O_5$

49. Liebermann's nitroso reaction is given by $x°$ amines only. The value of x is_____.

50. The composition of a sample of wustite is $Fe_{0.93}O_{1.00}$. The percentage of the ion present in the form of Fe (III) is_____.

MATHEMATICS

51. The domain of the function $f(x)=\frac{1}{\sqrt{|x|-x}}$ is

(a) $(-\infty, 0)$ (b) $(-\infty,\infty) - \{0\}$
(c) $(-\infty, \infty)$ (d) $(0, \infty)$

52. If A and B are square matrices of the same order such that $(A + B)(A - B) = A^2 - B^2$, then $(ABA^{-1})^2 =$

(a) A^2B^2 (b) A^2 (c) B^2 (d) I

53. If $k\int_0^1 x.f(3x)dx=\int_0^3 t\cdot f(t)dt$, then the value of k is

(a) 9 (b) 3 (c) $\frac{1}{9}$ (d) $\frac{1}{3}$

54. The function $f(x)=\frac{x}{1+|x|}$ is differentiable in

(a) R (b) $R - \{0\}$
(c) $[0, \infty)$ (d) $(0, \infty)$

55. The ratio between the sum of n terms of two A.P.'s is $3n + 8 : 7n + 15$. Then the ratio between their 12^{th} terms respectively is

(a) 5 : 7 (b) 7 : 16
(c) 12 : 11 (d) none of these

56. The distance of the point (4, 2, 5) from the line $\frac{x-1}{6}=\frac{y+2}{3}=\frac{z+1}{2}$ is

(a) 3 (b) 4 (c) 5 (d) 2

57. The coefficient of $1/x$ in the expansion of $(1+x)^n\left(1+\frac{1}{x}\right)^n$ is

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

(c) $\frac{2n!}{(2n-1)!(2n+1)!}$ (d) none of these

58. The number of real values of k, such that the lines $x - 2y + 3 = 0$, $kx + 3y + 1 = 0$ and $4x - ky + 2 = 0$ are concurrent, is

(a) 0 (b) 1
(c) 2 (d) infinite

59. If a variate assumes the values 0, 1, 2, ..., n with frequencies ${}^nC_0, {}^nC_1, {}^nC_2,..., {}^nC_n$ then mean square deviation about the value $x = 0$ is

(a) $\frac{n(n-1)}{2}$ (b) $\frac{n^2(n-1)}{4}$

(c) $\frac{n(n+1)}{4}$ (d) $\frac{n(n+1)}{2}$

60. If $\cos\alpha=\frac{2\cos\beta-1}{2-\cos\beta}, (0<\alpha<\pi, 0<\beta<\pi)$, then $\tan\frac{\alpha}{2}\cot\frac{\beta}{2}$ is equal to

(a) 1 (b) $\sqrt{2}$
(c) $\sqrt{3}$ (d) none of these

61. $\lim_{x\to 0}\left(\frac{\ln(1+x)^{1+x}}{x^2}-\frac{1}{x}\right)=$

(a) 0 (b) 1 (c) 2 (d) 1/2

62. Given $z=(1+i\sqrt{3})^{100}$, then $\frac{2\,\mathrm{Re}(z)}{\sqrt{3}\,\mathrm{Im}(z)}$ equals

(a) 2^{100} (b) 2^{50} (c) 2/3 (d) 3/2

63. $\int e^x\left(\mathrm{cosec}^{-1}x+\frac{-1}{x\sqrt{x^2-1}}\right)dx$ is equal to

(a) $e^x \mathrm{cosec}^{-1}x + C$ (b) $e^x \sin^{-1}x + C$
(c) $e^x \sec^{-1}x + C$ (d) $e^x \cos^{-1}x + C$

64. If a, b, c are positive integers, then the determinant

$$\Delta=\begin{vmatrix} a^2+x & ab & ac \\ ab & b^2+x & bc \\ ac & bc & c^2+x \end{vmatrix}$$ is divisible by

(a) x^3 (b) x^2
(c) $(a^2 + b^2 + c^2)$ (d) None of these

65. "If Ram secures 100 marks in math then he will get a mobile". The converse is

(a) If Ram get a mobile then he will not secures 100 marks.
(b) If Ram not get a mobile then he will secures 100 marks.
(c) If Ram will get a mobile then he secures 100 marks in Math.
(d) None of these

66. The solution of the differential equation $ydx + (x + x^2y)dy = 0$ is

(a) $\frac{1}{xy}+\log|y|=c$

(b) $-\frac{1}{xy}+\log|y|=c$

(c) $\frac{1}{xy}+2\log|y|=c$ (d) $\log|y| = cx$

67. If the tangent drawn at a point $(t^2, 2t)$ on the parabola $y^2 = 4x$ is same as normal drawn at $(\sqrt{5}\cos\alpha, 2\sin\alpha)$ on the ellipse $\frac{x^2}{5}+\frac{y^2}{4}=1$, then which of the following is not true ?

(a) $t=\pm\frac{1}{\sqrt{5}}$ (b) $\alpha=-\tan^{-1}2$

(c) $\alpha=\tan^{-1}2$ (d) none of these

68. The least value of the function $f(x) = ax + b/x$, $a > 0$, $b > 0$, $x > 0$ is

(a) $\sqrt{ab}$ (b) $2\sqrt{\frac{a}{b}}$

(c) $2\sqrt{\frac{b}{a}}$ (d) $2\sqrt{ab}$

69. The probability that $\sin^{-1}(\sin x) + \cos^{-1}(\cos y)$ is an integer $x, y \in \{1, 2, 3, 4\}$, is

(a) $\frac{1}{16}$ (b) $\frac{3}{16}$

(c) $\frac{15}{16}$ (d) none of these.

70. The number of numbers that can be formed with the help of the digits 1, 2, 3, 4, 3, 2, 1 so that odd digits always occupy odd places, is

(a) 24 (b) 18 (c) 12 (d) 30

NUMERICAL VALUE TYPE

71. If the lengths of the sides of a right angled triangle ABC right angled at C are in A.P., find $5(\sin A + \sin B)$.

72. Let a, b, c be the three roots of the equation $x^3 + x^2 - 333x - 1002 = 0$. If $P = a^3 + b^3 + c^3$, then the value of $\frac{P}{2006} =$

73. If $|\vec{a}\times\vec{b}|=5$ and $|\vec{a}\cdot\vec{b}|=3$, then $|\vec{a}|^2\,|\vec{b}|^2$ is equal to

74. If the lines $\frac{x-1}{2}=\frac{y+1}{3}=\frac{z-1}{4}$ and $\frac{x-3}{1}=\frac{y-k}{2}=\frac{z}{1}$ intersect, then the value of k is

75. If $\sin\theta + \sin^2\theta + \sin^3\theta = 1$, then the value of $\cos^6\theta - 4\cos^4\theta + 8\cos^2\theta$ must be

Practice Test-7

- Use Blue/Black ball point pen only for marking responses.
- Mark only one choice for each question as indicated.

Correct marking ● ⓑ ⓒ ⓓ

Wrong marking ⊗ ✓ ◐ ◉

1.	ⓐ	ⓑ	ⓒ	ⓓ	26.	ⓐ	ⓑ	ⓒ	ⓓ	51.	ⓐ	ⓑ	ⓒ	ⓓ
2.	ⓐ	ⓑ	ⓒ	ⓓ	27.	ⓐ	ⓑ	ⓒ	ⓓ	52.	ⓐ	ⓑ	ⓒ	ⓓ
3.	ⓐ	ⓑ	ⓒ	ⓓ	28.	ⓐ	ⓑ	ⓒ	ⓓ	53.	ⓐ	ⓑ	ⓒ	ⓓ
4.	ⓐ	ⓑ	ⓒ	ⓓ	29.	ⓐ	ⓑ	ⓒ	ⓓ	54.	ⓐ	ⓑ	ⓒ	ⓓ
5.	ⓐ	ⓑ	ⓒ	ⓓ	30.	ⓐ	ⓑ	ⓒ	ⓓ	55.	ⓐ	ⓑ	ⓒ	ⓓ
6.	ⓐ	ⓑ	ⓒ	ⓓ	31.	ⓐ	ⓑ	ⓒ	ⓓ	56.	ⓐ	ⓑ	ⓒ	ⓓ
7.	ⓐ	ⓑ	ⓒ	ⓓ	32.	ⓐ	ⓑ	ⓒ	ⓓ	57.	ⓐ	ⓑ	ⓒ	ⓓ
8.	ⓐ	ⓑ	ⓒ	ⓓ	33.	ⓐ	ⓑ	ⓒ	ⓓ	58.	ⓐ	ⓑ	ⓒ	ⓓ
9.	ⓐ	ⓑ	ⓒ	ⓓ	34.	ⓐ	ⓑ	ⓒ	ⓓ	59.	ⓐ	ⓑ	ⓒ	ⓓ
10.	ⓐ	ⓑ	ⓒ	ⓓ	35.	ⓐ	ⓑ	ⓒ	ⓓ	60.	ⓐ	ⓑ	ⓒ	ⓓ
11.	ⓐ	ⓑ	ⓒ	ⓓ	36.	ⓐ	ⓑ	ⓒ	ⓓ	61.	ⓐ	ⓑ	ⓒ	ⓓ
12.	ⓐ	ⓑ	ⓒ	ⓓ	37.	ⓐ	ⓑ	ⓒ	ⓓ	62.	ⓐ	ⓑ	ⓒ	ⓓ
13.	ⓐ	ⓑ	ⓒ	ⓓ	38.	ⓐ	ⓑ	ⓒ	ⓓ	63.	ⓐ	ⓑ	ⓒ	ⓓ
14.	ⓐ	ⓑ	ⓒ	ⓓ	39.	ⓐ	ⓑ	ⓒ	ⓓ	64.	ⓐ	ⓑ	ⓒ	ⓓ
15.	ⓐ	ⓑ	ⓒ	ⓓ	40.	ⓐ	ⓑ	ⓒ	ⓓ	65.	ⓐ	ⓑ	ⓒ	ⓓ
16.	ⓐ	ⓑ	ⓒ	ⓓ	41.	ⓐ	ⓑ	ⓒ	ⓓ	66.	ⓐ	ⓑ	ⓒ	ⓓ
17.	ⓐ	ⓑ	ⓒ	ⓓ	42.	ⓐ	ⓑ	ⓒ	ⓓ	67.	ⓐ	ⓑ	ⓒ	ⓓ
18.	ⓐ	ⓑ	ⓒ	ⓓ	43.	ⓐ	ⓑ	ⓒ	ⓓ	68.	ⓐ	ⓑ	ⓒ	ⓓ
19.	ⓐ	ⓑ	ⓒ	ⓓ	44.	ⓐ	ⓑ	ⓒ	ⓓ	69.	ⓐ	ⓑ	ⓒ	ⓓ
20.	ⓐ	ⓑ	ⓒ	ⓓ	45.	ⓐ	ⓑ	ⓒ	ⓓ	70.	ⓐ	ⓑ	ⓒ	ⓓ
21.					46.					71.				
22.					47.					72.				
23.					48.					73.				
24.					49.					74.				
25.					50.					75.				