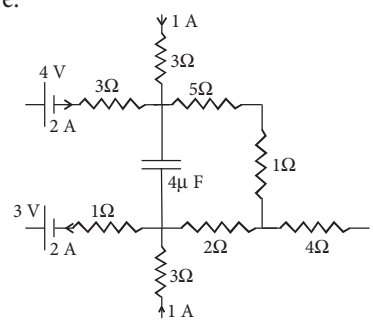
VERY SIMILAR
PRACTICE TEST 4

Time : 3 hrs. Max. Marks : 300

PHYSICS

1. A part of circuit in a steady state along with the currents flowing in the branches, the values of resistances etc., is shown in the figure.



Calculate the energy stored in the capacitor $C(4\ \mu F)$.

(a) 0.73 mJ (b) 0.7 mJ
(c) 0.8 mJ (d) 8.0 J

2. When two bar magnets have their like poles tied together, they make 12 oscillations per minute and when their unlike poles are tied together, they make 4 oscillations per minute. Find the ratio of their magnetic moments.

(a) $\frac{2}{3}$ (b) $\frac{3}{2}$ (c) $\frac{5}{4}$ (d) $\frac{4}{5}$

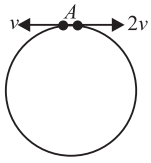
3. A ceiling fan rotates about its own axis with some angular velocity. When the fan is switched off, the angular velocity becomes $\left(\frac{1}{4}\right)^{th}$ of the original in time t and n revolution are made in that time. The number of revolutions made by the fan during the time internal between switch off and rest are (Angular retardation is uniform)

(a) $\frac{4n}{15}$ (b) $\frac{8n}{15}$ (c) $\frac{16n}{15}$ (d) $\frac{32n}{15}$

4. If the radius of the opening of a dropper is $r = 5 \times 10^{-4}$ m, density of liquid $\rho = 10^3$ kg m^{-3}, $g = 10$ m s^{-2} and surface tension $T = 0.11$ N m^{-1}, the radius of the drop when the drop detaches from the dropper is approximately

(a) 1.4×10^{-3} m (b) 3.3×10^{-3} m
(c) 2.0×10^{-3} m (d) 4.1×10^{-3} m

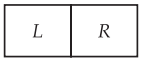
5. Two small particles of equal masses start moving in opposite directions from a point A in a horizontal circular orbit. Their tangential velocities are v and $2v$ respectively, as shown in the figure.



Between collisions, the particles move with constant speeds. After making how many elastic collisions, other than that at A, these two particles will again reach the point A?

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

6. The figure shows two identical copper blocks of mass 1.5 kg. When they were not in contact, block L was at temperature 60°C and block R was at temperature 20°C. But, when the blocks are bring in contact, they come to the equilibrium temperature 40°C. What is the net entropy change of the two block system during the irreversible process? (Specific heat of copper = 386 J/kg K)



(a) 2.4 J/K (b) 3.6 J/K
(c) 4.2 J/K (d) 5.2 J/K

7. There is a stream of neutrons with a kinetic energy of 0.0327 eV. If the half-life of neutrons is 700 s, what fraction of neutrons will decay before they travel a distance of 10 m?

(a) 4.6×10^{-5} (b) 3.9×10^{-6}
(c) 9.2×10^{-5} (d) 7.8×10^{-6}

8. A modulated signal $c_m(t)$ has the form $c_m(t) = 30 \sin 300\pi t + 10 (\cos 200\pi t - \cos 400\pi t)$. The carrier frequency υ_c, the modulating frequency (message frequency) υ_m, and the modulation index μ are respectively given by

(a) $\upsilon_c = 200$ Hz; $\upsilon_m = 50$ Hz; $\mu = 1/2$

(b) $\upsilon_c = 150$ Hz; $\upsilon_m = 50$ Hz; $\mu = 2/3$

(c) $\upsilon_c = 150$ Hz; $\upsilon_m = 30$ Hz; $\mu = 1/3$

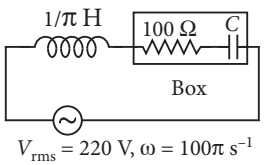
(d) $\upsilon_c = 200$ Hz; $\upsilon_m = 30$ Hz; $\mu = 1/2$

9. Three very large plates of same area are kept parallel and close to each other. They are considered as ideal black surfaces and have very high thermal conductivity. The first and third plates are maintained at temperatures $2T$ and $3T$ respectively. The temperature of the middle (*i.e.* second) plate under steady state condition is

(a) $\left(\frac{65}{2}\right)^{1/4} T$ (b) $\left(\frac{97}{4}\right)^{1/4} T$

(c) $\left(\frac{97}{2}\right)^{1/4} T$ (d) $(97)^{1/4} T$

10. For the circuit as shown in figure, if the value of rms current is 2.2 A, the power factor of the box is



(a) $\frac{1}{\sqrt{2}}$ (b) 1 (c) $\frac{\sqrt{3}}{2}$ (d) $\frac{1}{2}$

11. In a photoemissive cell, with exciting wavelength λ, the fastest electron has speed v. If the exciting wavelength is changed to $3\lambda/4$, the speed of the fastest emitted electron will be

(a) less than $v\left(\frac{4}{3}\right)^{1/2}$ (b) $v\left(\frac{4}{3}\right)^{1/2}$

(c) $v\left(\frac{3}{4}\right)^{1/2}$

(d) greater than $v\left(\frac{4}{3}\right)^{1/2}$

12. A projectile is fired vertically upward from the surface of earth with a velocity of kv_e, where v_e is the escape velocity and $k < 1$. Neglecting air resistance, the maximum height to which it will rise, measured from the centre of the earth, is (R = radius of earth)

(a) $\frac{R}{1-k^2}$ (b) $\frac{R}{k^2}$ (c) $\frac{1-k^2}{R}$ (d) $\frac{k^2}{R}$

13. The magnetic flux ϕ through a stationary loop of wire having a resistance R varies with time as $\phi = at^2 + bt$ (a and b are positive constants). The average emf and the total charge flowing in the loop in the time interval $t = 0$ to $t = \tau$ respectively are

(a) $a\tau + b, \frac{a\tau^2 + b\tau}{R}$ (b) $a\tau + b, \frac{a\tau^2 + b\tau}{2R}$

(c) $\frac{a\tau + b}{2}, \frac{a\tau^2 + b\tau}{R}$

(d) $2(a\tau + b), \frac{a\tau^2 + b\tau}{2R}$

14. The expression of the trajectory of a projectile is given as $y = px - qx^2$, where y and x are respectively the vertical and horizontal displacements, and p and q are constants. The time of flight of the projectile is

(a) $\frac{p^2}{4q}$ (b) $\frac{p^2}{2q}$ (c) $\sqrt{\frac{2p}{qg}}$ (d) $p\sqrt{\frac{2}{qg}}$

15. Two full turns of the circular scale of a screw gauge cover a distance of 1 mm on its main scale. The total number of divisions on the circular scale is 50. Further, it is found that the screw gauge has a zero error of – 0.03 mm. While measuring the diameter of a thin wire, a student notes the main scale reading of 3 mm and the number of circular scale divisions in line with the main scale as 35. The diameter of the wire is

(a) 3.32 mm (b) 3.73 mm

(c) 3.67 mm (d) 3.38 mm

16. A pipe of length 85 cm is closed from one end. Find the number of possible natural oscillations of air column in the pipe whose frequencies lie below 1250 Hz. The velocity of sound in air is 340 m s^{-1}.

(a) 4 (b) 12 (c) 8 (d) 6

17. A large solid sphere with uniformly distributed positive charge has a smooth narrow tunnel through its centre. A small particle with negative charge, initially at rest far from the sphere, approaches it along the line of the tunnel, reaches its surface with a speed v, and passes through the tunnel. Its speed at the centre of the sphere will be

(a) 0 (b) v (c) $\sqrt{2}v$ (d) $\sqrt{1.5}v$

18. Suppose an electron is attracted towards the origin by a force k/r, where k is a constant

and r is the distance of the electron from the origin. By applying Bohr model to this system, the radius of n^{th} orbit of the electron is found to be r_n and the kinetic energy of the electron is found to be T_n. Then which of the following is true?

(a) $T_n \propto \frac{1}{n^2}$

(b) T_n is independent of n; $r_n \propto n$

(c) $T_n \propto \frac{1}{n}$; $r_n \propto n$

(d) $T_n \propto \frac{1}{n}$ and $r_n \propto n^2$

19. Let there be a spherically symmetric charge distribution with charge density varying as $\rho(r) = \rho_0\left(\frac{5}{4} - \frac{r}{R}\right)$ for $r \le R$, and $\rho(r) = 0$ for $r > R$, where r is the distance from the origin. The electric field at a distance r ($r < R$) from the origin is given by

(a) $\frac{\rho_0 r}{3\varepsilon_0}\left(\frac{5}{4} - \frac{r}{R}\right)$ (b) $\frac{4\pi\rho_0 r}{3\varepsilon_0}\left(\frac{5}{3} - \frac{r}{R}\right)$

(c) $\frac{\rho_0 r}{4\varepsilon_0}\left(\frac{5}{3} - \frac{r}{R}\right)$ (d) $\frac{4\rho_0 r}{3\varepsilon_0}\left(\frac{5}{4} - \frac{r}{R}\right)$

20. A block of mass m is placed on a surface with a vertical cross section given by $y = \frac{x^3}{6}$. If the coefficient of friction is 0.5, the maximum height above the ground at which the block can be placed without slipping is

(a) $\frac{1}{2}$ m (b) $\frac{1}{6}$ m (c) $\frac{2}{3}$ m (d) $\frac{1}{3}$ m

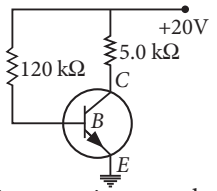
NUMERICAL VALUE TYPE

21. A proton of mass $m = 1.67 \times 10^{-27}$ kg moves uniformly in a space where there are uniform, mutually perpendicular electric and magnetic fields with $E_z = 4.5 \times 10^4$ V m^{-1} and $B_x = 40$ mT at an angle $\phi = 60°$ with the x-axis in the xy-plane. The pitch of the trajectory after the electric field is switched off is _____ m.

22. A ball falls from height h. After 1 second, another ball falls freely from a point 20 m below the point from where the first ball falls. If both of them reach the ground at the same time, then value of h is _____m.

23. A body undergoes no change in volume. Poisson's ratio is _____ .

24. In the given circuit, the value of β is 200. When I_C = 2.5 mA, then V_{BC} will be _____ V.



25. In Young's double slit experiment, the y-coordinates of central maxima and tenth maxima are 2 cm and 5 cm respectively. When the apparatus is immersed in a liquid of refractive index 1.5, will be _____ cm.

CHEMISTRY

26. Which among the following is a tetrabasic acid?
(a) Orthophosphorous acid
(b) Orthophosphoric acid
(c) Hypophosphorous acid
(d) Pyrophosphoric acid

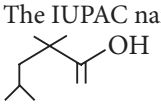
27. Match the entries of List I with appropriate entries of List II and select the correct answer using the codes given below the lists.

	List I (Pollutants)	List II (Effects)
(P)	Oxides of sulphur	1. Global warming
(Q)	Nitrogen dioxide	2. 'Blue baby' syndrome
(R)	Carbon dioxide	3. Respiratory diseases
(S)	Nitrates in drinking water	4. Red haze in traffic and congested areas

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

28. How does H_2O_2 differ from O_3 in its chemical action?
(a) In oxidising PbS to $PbSO_4$
(b) In liberating I_2 from KI
(c) In decolourising acidified $KMnO_4$
(d) In oxidising $K_4[Fe(CN)_6]$ to $K_3[Fe(CN)_6]$

29. The IUPAC name of the given compound is



(a) 2,4,4-trimethylhex-5-ene-5-ol
(b) 3,3,4,4-tetramethylbut-1-en-2-ol
(c) 3,3,5-trimethylhex-1-en-2-ol
(d) none of the above.

30. M is the molecular mass of $KMnO_4$. The equivalent mass of $KMnO_4$ when it is converted into K_2MnO_4 is
(a) M (b) $M/3$ (c) $M/5$ (d) $M/7$

31. The heat of formation of $CH_3OCH_{3(g)}$ is [Given : $B.E._{H-H}$ = 103 kcal, $B.E._{C-H}$ = 87 kcal $B.E._{C-O}$ = 70 kcal, $B.E._{O=O}$ = 177 kcal; Heat of vaporisation of 1 gram atom of carbon = 125 kcal.]

(a) –14.5 kcal (b) – 15.4 kcal
(c) + 14.5 kcal (d) + 15.4 kcal

32. Which of the following involves both calcination and carbon reduction processes to obtain metal from its ore?

(a) Zinc from zinc carbonate
(b) Calcium from calcium carbonate
(c) Copper from copper sulphide
(d) None of these

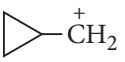
33. A solid '*X*' on heating gives CO_2 and a residue. The residue with H_2O form '*Y*'. On passing an excess of CO_2 through '*Y*' in H_2O, a clear solution of '*Z*' is obtained. On boiling '*Z*', '*X*' is reformed. '*X*' is

(a) $Ca(HCO_3)_2$ (b) $CaCO_3$
(c) Na_2CO_3 (d) K_2CO_3

34. A solution of a metal ion when treated with KI gives a red precipitate which dissolves in excess of KI to give a colourless solution. Moreover, the solution of metal ion on treatment with a solution of cobalt(II) thiocyanate gives rise to deep blue crystalline precipitate. The metal ion is

(a) Pb^{2+} (b) Hg^{2+} (c) Cu^{2+} (d) Co^{2+}

35. Which of the following is not stabilised by hyperconjugation?

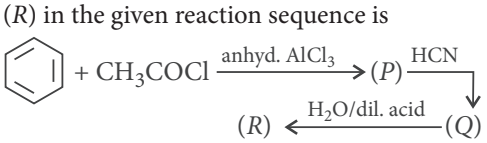
(a) $CH_3-\overset{+}{C}H_2$ (b) 

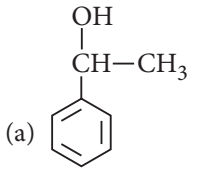
(c)  (d) 

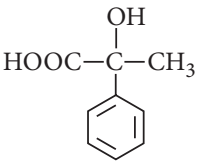
36. An organic compound '*A*' having molecular formula C_2H_3N on reduction gave another compound '*B*'. Upon treatment with nitrous acid, '*B*' gave ethyl alcohol. On warming with chloroform and alcoholic KOH, it formed an offensive smelling compound '*C*'. The compound '*C*' is

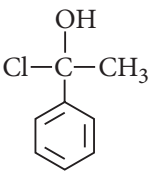
(a) $CH_3CH_2NH_2$ (b) $CH_3CH_2N \rightleftharpoons C$
(c) $CH_3C \equiv N$ (d) CH_3CH_2OH

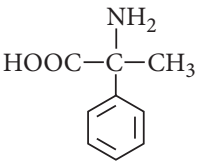
37. (*R*) in the given reaction sequence is



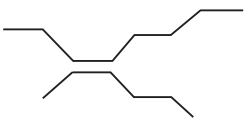
(a) 

(b) 

(c) 

(d) 

38. The correct IUPAC name of the following alkene is



(a) *Z*-3-methyl-4-propyl-3-octene
(b) *E*-3-methyl-4-propyl-3-octene
(c) *E*-4-butyl-3-methyl-3-heptene
(d) *E*-2-ethyl-3-propyl-2-heptene.

39. Which one of the following statements is not true?

(a) For first order reaction, straight line graph of log $(a - x)$ versus t is obtained for which slope = $-k/2.303$.
(b) A plot of log k *vs* $1/T$ gives a straight line graph for which slope = $-E_a/2.303R$.
(c) For third order reaction, the product of $t_{1/2}$ and initial concentration a is constant.
(d) Units of k for the first order reaction are independent of concentration units.

40. Which of the following has highest molar conductivity?

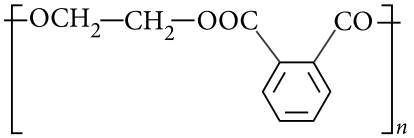
(a) Diamminedichloroplatinum(II)
(b) Tetraamminedichlorocobalt(III) chloride
(c) Potassium hexacyanoferrate(II)
(d) Pentacarbonyliron(0)

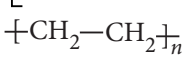
41. Match the species in column I with the shapes in column II and select the correct option.

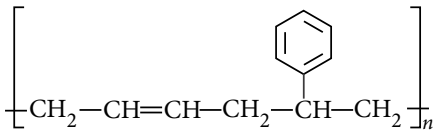
Column I	**Column II**
(A) H_3O^+	(i) Linear
(B) HC≡CH	(ii) Angular
(C) ClO_2^-	(iii) Tetrahedral
(D) NH_4^+	(iv) Pyramidal

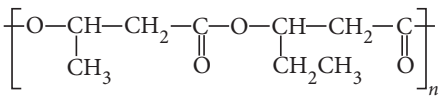
(a) A-(i), B-(ii), C-(iv), D-(iii)
(b) A-(iv), B-(i), C-(ii), D-(iii)
(c) A-(i), B-(ii), C-(iii), D-(iv)
(d) A-(iv), B-(ii), C-(i), D-(iii)

42. In which of the following polymers ethylene glycol is one of the monomer units?

(a) 

(b) 

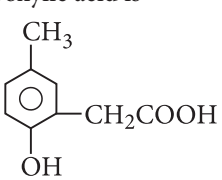
(c) 

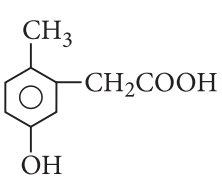
(d) 

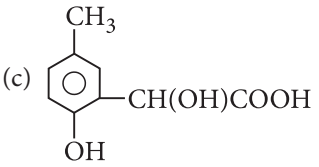
43. At temperature of 298 K the emf of the following electrochemical cell
$Ag_{(s)}|Ag^{+}(0.1\ M)||Zn^{2+}(0.1\ M)|Zn_{(s)}$
will be (given $E°_{cell} = -1.562$ V)
(a) –1.532 V (b) –1.503 V
(c) 1.532 V (d) –3.06 V

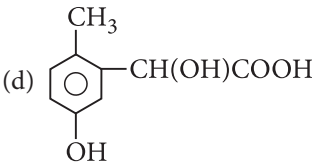
44. The pK_a of acetylsalicylic acid (aspirin) is 3.5. The pH of gastric juice in human stomach is about 2-3 and the pH in the small intestine is about 8. Aspirin will be
(a) unionised in the small intestine and in the stomach
(b) completely ionised in the small intestine and in the stomach
(c) ionised in the stomach and almost unionised in the small intestine
(d) ionised in the small intestine and almost unionised in the stomach.

45. *p*-Cresol reacts with chloroform in alkaline medium to give a compound '*A*' which adds hydrogen cyanide to form the compound '*B*'. Compound '*B*' on acidic hydrolysis gives chiral carboxylic acid. The structure of the carboxylic acid is

(a) 

(b) 

(c) 

(d) 

NUMERICAL VALUE TYPE

46. The unit cells present in a cube-shaped ideal crystal of NaCl of mass 1 g are $x \times 10^{21}$. The value of x is ____.

47. 0.008 g of starch is required to prevent coagulation of 10 mL of gold sol when 1 mL of 10% NaCl solution is present. The gold number of starch sol is ____.

48. A hydrocarbon (*X*) having molecular weight 70 gives a single monochloride but three dichlorides on chlorination in the presence of ultraviolet light. The number of C-atoms in hydrocarbon (*X*) is ____.

49. In the disproportionation reaction,
$3HClO_3 \longrightarrow HClO_4 + Cl_2 + 2O_2 + H_2O$
the equivalent mass of the oxidising agent is ____.
(Molar mass of $HClO_3$ = 84.45)

50. A diatomic molecule has a dipole moment of 1.2 D. If the bond distance is 1.0 Å, 1/x of an electronic charge exists on each atom. The value of x is ____.

MATHEMATICS

51. Domain of the function $f(x) = \sin^{-1}(2x^2 + 3x + 1)$ is :
(a) $(-1, 1)$ (b) $(-\infty, \infty)$
(c) $\left[-\frac{3}{2}, 0\right]$ (d) $\left(-\infty, -\frac{1}{2}\right) \cup (2, \infty)$

52. If $A = \begin{bmatrix} \cos\theta & -\sin\theta \\ \sin\theta & \cos\theta \end{bmatrix}$, A^{-1} is given by
(a) $-A$ (b) A^T (c) $-A^T$ (d) A

53. $\int_0^{\pi} e^{\sin^2 x} \cos^3 x\, dx$
(a) 0 (b) –1 (c) 1 (d) π

54. If $\lim_{x\to\infty}\left(\frac{x^2-1}{x+1}-ax-b\right)=2$, then $a-b=$

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

55. The line passing through the points (5, 1, a) and (3, b, 1) crosses the yz-plane at the point $\left(0,\frac{17}{2},\frac{-13}{2}\right)$. Then

(a) $a=8, b=2$ (b) $a=2, b=8$

(c) $a=4, b=6$ (d) $a=6, b=4$ **56.** The first 3 terms in the expansion of $(1+ax)^n$, $(n\neq 0)$ are 1, $6x$ and $16x^2$. Then the value of a and n are respectively (b) 3 and 2

(c) 2/3 and 9 (d) 3/2 and 6

57. $\sin36°\sin72°\sin108°\sin144°=$

(a) 1/4 (b) 1/16 (c) 3/4 (d) 5/16

58. The function $f(x)=\frac{x}{1+x^2}$ decreases in the interval

(a) $(-\infty,-1]\cup[1,\infty)$ (b) $(-1,1)$

(c) $(-\infty,\infty)$ (d) none of these

59. A pair of fair dice is thrown independently three times. The probability of getting a score of exactly 9 twice is

(a) 8/729 (b) 8/243 (c) 1/729 (d) 8/9

60. If the product of the roots of the equation $x^2-2\sqrt{2}\,kx+2e^{2\log k}-1=0$ is 31, then the roots of the equation are real for $k=$

(a) -4 (b) 1 (c) 4 (d) 0

61. The length of the latus rectum of the hyperbola $16x^2-25y^2+400=0$ is

(a) $\frac{32}{5}$ (b) $\frac{16}{5}$ (c) $\frac{25}{4}$ (d) $\frac{25}{2}$

62. Let $I=\int_{-2}^{2}(x-[x])dx$, where $[x]$ represents the greatest integer in x not greater than x. Then the value of I is

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

63. The number of ways in which four letters of the word 'MATHEMATICS' can be arranged is given by

(a) 136 (b) 192 (c) 1680 (d) 2454

64. The foot of the perpendicular from the point (2, 4) upon $x+y=4$ is

(a) (1, 3) (b) (3, –1) (c) (2, 2) (d) (4, 0)

65. The value of $\tan20°+2\tan50°-\tan70°$ is equal to

(a) 1 (b) 0

(c) $\tan50°$ (d) None of these

66. If a, b, c are in A.P., then $\frac{(a-c)^2}{(b^2-ac)}=$

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

67. If p : The earth is round, q : 3 + 4 = 7, then $(\sim p)\vee(\sim q)$ is (a) It is not that the earth is round or 3 + 4 = 7 (b) The earth is round and 3 + 4 = 7 (c) It is not that the earth is round or it is not that 3 + 4 = 7

(d) The earth is round or 3 + 4 = 7 **68.** The mean deviation from the mean of the data 3, 10, 10, 4, 7, 10, 5 is

(a) 2 (b) 2.57 (c) 3 (d) 3.75

69. The solution of the differential equation $e^{\frac{dy}{dx}}=x+1$, when $y(0)=3$, is

(a) $y=x\log x-x+2$

(b) $y=(x+1)\log|x+1|-x+3$

(c) $y=(x+1)\log|x+1|+x+3$

(d) $y=x\log x+x+3$

70. The function $f: R-\{0\}\to R$, $f(x)=\frac{1}{x}-\frac{2}{e^{2x}-1}$ can be made continuous at $x=0$ by defining $f(0)$ as

(a) 2 (b) –1 (c) 0 (d) 1

NUMERICAL VALUE TYPE

71. If $(\sqrt{5}+\sqrt{3}\,i)^{33}=2^{49}z$, then modulus of the complex number z is equal to _____.

72. The value of $\begin{vmatrix}1 & a & bc\\ 1 & b & ca\\ 1 & c & ab\end{vmatrix}-\begin{vmatrix}1 & a & a^2\\ 1 & b & b^2\\ 1 & c & c\end{vmatrix}$ is _____.

73. The distance of the point $\hat{i}+2\hat{j}+3\hat{k}$ from the plane $\vec{r}\cdot(\hat{i}+\hat{j}+\hat{k})=5$ measured parallel to the vector $2\hat{i}+3\hat{j}-6\hat{k}$ is _____.

74. $\vec{a}\cdot[(\vec{b}+\vec{c})\times(\vec{a}+\vec{b}+\vec{c})]$ equals _____.

75. The smallest natural number $m>90$ for which $n=\underbrace{111.....1}_{m\text{ times}}$ is not a prime number is _____.

Practice Test-4

- 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.				