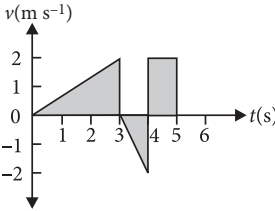# VERY SIMILAR PRACTICE TEST ⑨
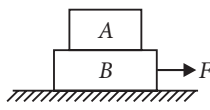
PHYSICS

1. The *PV* diagram of a cyclic process is shown, the work done by the gas during *ABCA* as shown in figure is

   (a) 20 J   (b) –20 J   (c) –10 J   (d) 10 J

2. An electric dipole consists of charges $\pm 2.0 \times 10^{-8}$ C separated by a distance of 2.0×10^{-3} m. It is placed near a long line charge of linear charge density 4.0×10^{-4} C m^{-1} as shown in the figure, such that the negative charge is at a distance of 2.0 cm from the line charge. The force acting on the dipole will be

   (a) 7.2 N towards the line charge
   (b) 6.6 N away from the line charge
   (c) 0.6 N away from the line charge
   (d) 0.6 N towards the line charge.

3. The velocity versus time graph of a body moving in a straight line is shown in figure. The displacement of the body in 5 s is

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

4. *n* batteries are connected to form a circuit as shown in the figure. The resistances denote the internal resistances of the batteries which are related to the emf's as $r_i = k\varepsilon_i$ where k is a constant with proper SI units. The solid dots represent the terminals of the batteries. Then
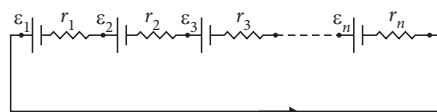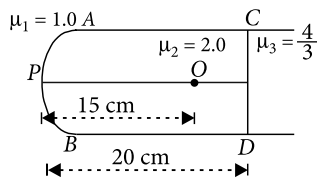

   (a) the current through the circuit is $\dfrac{n}{k}$.
   (b) the potential difference between the terminals of the ith battery is zero.
   (c) the current through the circuit is $\dfrac{n^2}{k}$.
   (d) the potential difference between the terminals of the ith battery is $\dfrac{\varepsilon}{k}$.

5. A body of mass 0.5 kg travels in a straight line with velocity $v = ax^{3/2}$ where $a = 5$ m$^{-1/2}$ s^{-1}. The work done by the net force during its displacement from $x = 0$ to $x = 2$ m is
   (a) 1.5 J   (b) 50 J   (c) 10 J   (d) 100 J

6. In figure, the coefficient of friction between the floor and the block *B* is 0.1. The coefficient of friction between the blocks *B* and *A* is 0.2. The mass of *A* is $m/2$ and that of *B* is *m*. What is the maximum horizontal force *F* can be applied to the block *B* so that two blocks move together?

   (a) 0.15mg (b) 0.05mg
   (c) 0.1mg (d) 0.45mg

7. A vertical circular coil of radius 0.1 m and having 10 turns carries a steady current. When the plane of the coil is normal to magnetic meridian, a neutral point is observed at the centre of the coil. If $B_H = 0.314 \times 10^{-4}$ T, then current in the coil is
   (a) 0.25 A   (b) 0.5 A   (c) 1 A   (d) 2 A

8. A straight horizontal conducting rod of length 50 cm and mass 50 g is suspended by two vertical wires at its ends. A current of 5.0 A is set up in the rod through the wires. What magnetic field should be set up normal to the conductor in order that the tension in the wires is zero? (Take $g = 10$ m s^{-2})
(a) 0.05 T (b) 0.1 T (c) 0.2 T (d) 0.5 T

9. A uniform disc of radius R lies in x-y plane with its centre at origin. Its moment of inertia about the axis $x = 2R$ and $y = 0$ is equal to the moment of inertia about the axis $y = d$ and $z = 0$, where d is equal to
(a) $\dfrac{4}{3}R$ 　　　　 (b) $\dfrac{\sqrt{17}}{2}R$

(c) $3R$ 　　　　 (d) $\dfrac{\sqrt{15}}{2}R$

10. A uniform magnetic field B exists in a direction perpendicular to the plane of a square frame made of copper wire. The wire has a diameter of 2 mm and a total length of 40 cm. The magnetic field changes with time at a steady rate $dB/dt = 0.02$ T s^{-1}. What will be the current induced in the frame?
(Resistivity of copper $= 1.7 \times 10^{-8}$ Ω m)
(a) 0.1 A (b) 0.2 A (c) 0.3 A (d) 0.4 A

11. The amplitude of the electric field in a parallel beam of light of intensity 2.0 W m^{-2} is
(a) 38.8 N C^{-1} 　　　 (b) 49.5 N C^{-1}
(c) 32.7 N C^{-1} 　　　 (d) 35.5 N C^{-1}

12. An arc lamp requires a direct current of 10 A at 80 V to function. If it is connected to a 220 V (r.m.s.), 50 Hz ac supply, the series inductor needed for it to work is close to
(a) 80 H 　　　　 (b) 0.08 H
(c) 0.044 H 　　　 (d) 0.065 H

13. A satellite is moving in a circular orbit at a certain height above the earth's surface. It takes 5.26×10^3 s to complete one revolution with a centripetal acceleration equal to 9.32 m s^{-2}. The height of the satellite orbit above the earth's surface is (Radius of earth $= 6.37 \times 10^6$ m)
(a) 70 km 　　　　 (b) 160 km
(c) 190 km 　　　 (d) 220 km

14. In a single slit diffraction pattern, the distance between the first minimum on the left and the first minimum on the right is 5 mm. The screen on which the diffraction pattern is displayed is at a distance of 80 cm from the slit. The wavelength is 6000 Å. The slit width (in mm) is about
(a) 0.576 (b) 0.348 (c) 0.192 (d) 0.096

15. A slab of a material of refractive index 2 is shown in figure has a curved surface APB of radius of curvature 10 cm and a plane surface CD. On the left of APB is air and on the right of CD is water with refractive indices as given in the figure. An object O is placed at a distance of 15 cm from the pole P as shown. The distance of the final image of O from P, as viewed from the left is

(a) 10 cm 　　　　 (b) 20 cm
(c) −30 cm 　　　 (d) −20 cm

16. In a common emitter configuration of a transistor, the voltage drop across a 500 Ω resistor in the collector circuit is 0.5 V when the collector supply voltage is 5 V. If the current gain in the common base mode is 0.96, the base current is
(a) $\dfrac{1}{20}$ μA 　　　 (b) $\dfrac{1}{5}$ μA

(c) $\dfrac{1}{20}$ mA 　　　 (d) $\dfrac{1}{24}$ mA

17. A pan pizza cools from 91°C to 79°C in 2 minutes, on a summer day, when the room temperature is 25°C. How long will the pan pizza takes to cool from 91°C to 79°C, on a winter day, when the room temperature is 5°C?
(a) $\dfrac{3}{2}$ minutes 　　 (b) 1 minutes

(c) $\dfrac{1}{2}$ minutes 　　 (d) $\dfrac{1}{4}$ minutes

18. The density of a solid ball is to be determined in an experiment. The diameter of the ball is measured with a screw gauge, whose pitch is 0.5 mm and there are 50 divisions on the circular scale. The reading on the main scale is 2.5 mm and that on the circular scale is 20 divisions. If the measured mass of the ball has a relative error of 2%, the relative percentage error in the density is
(a) 0.9% (b) 2.4% (c) 3.1% (d) 4.2%

19. Determine the period of small oscillations of a mathematical pendulum, that is a ball suspended by a thread $l = 20$ cm in length, if it is located in a liquid whose density is three times less than that of the ball. The resistance of the liquid is to be neglected.
   (a) 2.2 s (b) 1.1 s (c) 0.5 s (d) 3.1 s

20. A message signal of frequency 10 kHz and peak value of 10 volts is used to modulate a carrier of frequency 1 MHz and peak voltage 20 volts. The modulation index and side bands produced are
   (a) 0.4 and 1200 kHz, 990 kHz
   (b) 0.5 and 1010 kHz, 990 kHz
   (c) 0.2 and 1010 kHz, 1000 kHz
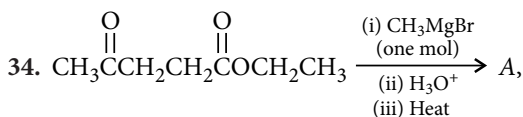   (d) 0.5 and 1500 kHz, 1000 Hz

NUMERICAL VALUE TYPE

21. A particle is projected at an angle of 60° above the horizontal with a speed of 10 m s^{-1}. After some time, the direction of its velocity makes an angle of 30° above the horizontal. The speed of the particle at this instant is $\dfrac{2n}{\sqrt{3}}$ m s^{-1}. The value of n is _____.

22. A bus is moving with a velocity of 5 m s^{-1} towards a huge wall. The driver sounds a horn of frequency 165 Hz. If the speed of sound in air in 335 m s^{-1}, the number of beats per second heard by the passengers in the bus would be _____.

23. The ground state energy of hydrogen atom is –13.6 eV. The photon emitted during the transition of electron from $n = 3$ to $n = 1$ state, is incident on a photosensitive material of unknown work function. The photoelectrons are emitted from the materials with a maximum kinetic energy of 9 eV. The threshold wavelength of the material used is _____ Å.

24. There is a stream of neutrons with a kinetic energy of 0.0327 eV. If the half life period of neutrons is 700 s, the fraction of neutrons decay before they travel a distance of 5 m is $x \times 10^{-8}$. The value of x is _____.

25. Two bodies are in equilibrium when suspended in water from the arms of a balance. The mass of one body is 36 g and its density is 9 g cm^{-3}. If the mass of the other is 48 g, its density is _____ g cm^{-3}.
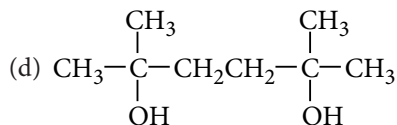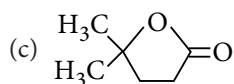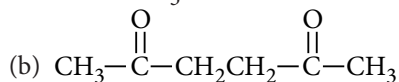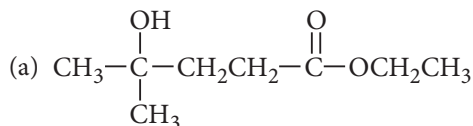
CHEMISTRY

26. *o*-Chlorotoluene can undergo
   (i) electrophilic aromatic substitution
   (ii) nucleophilic aromatic substitution
   (iii) nucleophilic aliphatic substitution
   (iv) free radical substitution
   (a) only (i)   (b) (i) and (iv)
   (c) (i), (ii) and (iv)   (d) all the four.

27. Consider the following sets of quantum numbers :

	n	l	m	s
(i)	3	0	0	+1/2
(ii)	2	2	1	+1/2
(iii)	4	3	–2	–1/2
(iv)	1	0	–1	–1/2
(v)	3	2	3	+1/2

   Which of the following sets of quantum number is not possible?
   (a) (i), (ii), (iii) and (iv)
   (b) (ii), (iv) and (v)
   (c) (i) and (iii)   (d) (ii), (iii) and (iv)

28. In the volumetric estimation of Fe(II) with $Cr_2O_7^{2-}$ in acidic medium, $K_3[Fe(CN)_6]$ is used as an external indicator. The end point will be reached when the solution of iron salt
   (a) starts giving blue colour with indicator
   (b) ceases to give blue colour with indicator
   (c) starts giving red colour with indicator
   (d) ceases to give red colour with indicator.

29. Generally, the first ionization energy increases along a period but there are some exceptions. One which is not an exception is
   (a) N and O   (b) Na and Mg
   (c) Mg and Al   (d) Be and B

30. When a piece of copper wire is immersed in a solution of aqueous silver nitrate, the solution becomes blue. This is a consequence of
   (a) oxidation of silver
   (b) oxidation of copper
   (c) formation of a copper complex
   (d) reduction of copper.

31. Which of the statements about solutions of electrolytes is not correct?
   (a) Conductivity of solution depends upon size of ions.
   (b) Conductivity depends upon viscosity of solution.
   (c) Conductivity does not depend upon solvation of ions present in solution.
   (d) Conductivity of solution increases with temperature.

32. 0.765 g of an acid gives 0.535 g of CO_2 and 0.138 g of H_2O. Then the ratio of the percentage of carbon and hydrogen is
(a) 19 : 2 (b) 18 : 11 (c) 20 : 17 (d) 1 : 7

33. A white crystalline solid (A) on boiling with caustic soda solution gave a gas (B) which when passed through an alkaline solution of potassium mercuric iodide gave a brown ppt. The substance (A) on heating gave a gas (C) which rekindled a glowing splinter but did not give brown fumes with nitric oxide. The gases (B), (C) and the substance (A) respectively are
(a) H_2S, NO_2, $NaCl$
(b) NH_3, N_2O, NH_4NO_3
(c) HCl, NO, NH_4Cl
(d) CO_2, SO_2, Na_2SO_3

34.

$$CH_3\overset{O}{\overset{||}{C}}CH_2CH_2\overset{O}{\overset{||}{C}}OCH_2CH_3 \xrightarrow[\substack{\text{(ii) } H_3O^+ \\ \text{(iii) Heat}}]{\substack{\text{(i) } CH_3MgBr \\ \text{(one mol)}}} A,$$

A formed in this reaction is

(a) $CH_3-\underset{\underset{CH_3}{|}}{\overset{\overset{OH}{|}}{C}}-CH_2CH_2-\overset{O}{\overset{||}{C}}-OCH_2CH_3$

(b) $CH_3-\overset{O}{\overset{||}{C}}-CH_2CH_2-\overset{O}{\overset{||}{C}}-CH_3$

(c)

(d) $CH_3-\underset{\underset{OH}{|}}{\overset{\overset{CH_3}{|}}{C}}-CH_2CH_2-\underset{\underset{OH}{|}}{\overset{\overset{CH_3}{|}}{C}}-CH_3$

35. The polymer melmac is obtained by
(a) addition polymerisation of melamine and formaldehyde
(b) condensation polymerisation of melamine and formaldehyde
(c) coordination polymerisation of melamine
(d) free-radical polymerisation of tetra-fluoroethylene.

36. Select the correct statement from the following.
(a) A mixture of ideal gases is cooled up to liquid helium temperature (4.22 K) to form ideal solution

(b) Ideal gas can be liquefied on applying pressure and lowering temperature.
(c) Kinetic energy of a gas is zero at 0°C.
(d) Ideal gas on subjecting to Joule-Thomson effect does not show cooling on account of absence of molecular forces of attraction.

37. Which of the following options does not represent concentration of semi-molal aqueous solution of NaOH having $d_{solution} = 1.02$ g/mL?
(a) Molarity $= \dfrac{1}{2}$ M (b) $x_{NaOH} = \dfrac{9}{1009}$
(c) % $w/w = 10\%$ (d) % $w/v = 2\%$

38. The equilibrium, $P_{4(g)} + 6Cl_{2(g)} \rightleftharpoons 4PCl_{3(g)}$ is attained by mixing equal moles of P_4 and Cl_2 in an evacuated vessel. Then at equilibrium
(a) $[Cl_2] > [PCl_3]$ (b) $[Cl_2] > [P_4]$
(c) $[P_4] > [Cl_2]$ (d) $[PCl_3] > [P_4]$

**39.** Match the List I with List II and select the correct answer using the code given below the lists :

| List I	List II
P. Clark's method	1. $Na_6P_6O_{18}$
Q. Calgon's method	2. $NaAlSiO_4$
R. Ion- exchange method	3. RSO_3H
S. Synthetic resins method	4. $Ca(OH)_2$

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

40. Which among the following detergents is non-ionic in character?
(a) Sodium lauryl sulphate
(b) Pentaerythrityl stearate
(c) Cetyltrimethylammonium chloride
(d) Sodium *n*-dodecylbenzenesulphonate

41. The correct order of increasing basic nature of the following bases is

I.

II.

III.

IV. V.
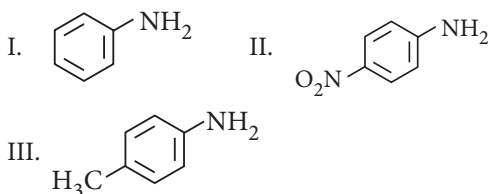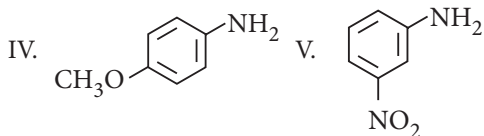
(a) II < V < I < III < IV
(b) V < II < I < III < IV
(c) II < V < I < IV < III
(d) V < II < I < IV < III

42. Consider the acidity of the carboxylic acids :
   (i) PhCOOH
   (ii) o-NO$_2$C$_6$H$_4$COOH
   (iii) p-NO$_2$C$_6$H$_4$COOH
   (iv) m-NO$_2$C$_6$H$_4$COOH
   Which of the following order is correct?
   (a) i > ii > iii > iv   (b) ii > iv > iii > i
   (c) ii > iv > i > iii   (d) ii > iii > iv > i

43. During electrolysis of sodium chloride in Castner-Kellner cell, the products obtained at the cathode and anode are respectively
   (a) Na, O$_2$ (b) H$_2$, O$_2$
   (c) Na-Hg, Cl$_2$ (d) Cl$_2$, Na-Hg

44. The correct order of magnetic moments (spin only values in B.M.) among is
   (a) $[MnCl_4]^{2-} > [CoCl_4]^{2-} > [Fe(CN)_6]^{4-}$
   (b) $[MnCl_4]^{2-} > [Fe(CN)_6]^{4-} > [CoCl_4]^{2-}$
   (c) $[Fe(CN)_6]^{4-} > [MnCl_4]^{2-} > [CoCl_4]^{2-}$
   (d) $[Fe(CN)_6]^{4-} > [CoCl_4]^{2-} > [MnCl_4]^{2-}$.

45. Decreasing order of reactivity in Williamson's synthesis of the following :
   I.   Me$_3$CCH$_2$Br   II. CH$_3$CH$_2$CH$_2$Br
   III. CH$_2$=CHCH$_2$Cl IV. CH$_3$CH$_2$CH$_2$Cl
   (a) III > II > IV > I   (b) I > II > IV > III
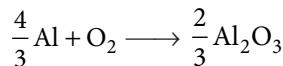   (c) II > III > IV > I   (d) I > III > II > IV

46. Fructose is subjected to bond cleavages by HIO$_4$. The number of HCHO unit(s) formed per unit of fructose is _____.

47. At a certain temperature and pressure, a 500 mL flask contains 25 moles of nitrogen gas. A different flask at the same temperature and pressure contains 100 mL of helium gas. The moles of helium present in the second flask is _____ .

48. Number of compounds out of the following which will react with HNO$_2$ by formation of C—N bond is _____ .
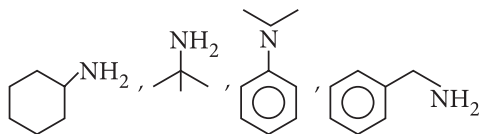
49. ΔG for the reaction,
   $$\frac{4}{3}Al + O_2 \longrightarrow \frac{2}{3}Al_2O_3$$
   is – 772 kJ mol^{-1}.
   The minimum EMF in volts required to carry out an electrolysis of Al$_2$O$_3$ is _____ .

50. The radius of atom having at. wt. 30 forming cubic unit cell of edge length 400 pm is _____ .
   (d = 3.115 g cm^{-3})

51. Let $f(x) = \log_e x + \log_x e$, then the domain of the function $\dfrac{1}{\sqrt{|f(x)| - f(x)}}$ is
   (a) $(0, 1)$ (b) $(1, \infty)$
   (c) $(1, e)$ (d) $(-\infty, \infty)$

52. Matrix $A = \begin{bmatrix} x & 3 & 2 \\ 1 & y & 4 \\ 2 & 2 & z \end{bmatrix}$, if $xyz = 60$ and
   $8x + 4y + 3z = 20$, then $A\,(adj\,A)$ is equal to
   (a) $\begin{bmatrix} 64 & 0 & 0 \\ 0 & 64 & 0 \\ 0 & 0 & 64 \end{bmatrix}$ (b) $\begin{bmatrix} 88 & 0 & 0 \\ 0 & 88 & 0 \\ 0 & 0 & 88 \end{bmatrix}$
   (c) $\begin{bmatrix} 68 & 0 & 0 \\ 0 & 68 & 0 \\ 0 & 0 & 68 \end{bmatrix}$ (d) $\begin{bmatrix} 34 & 0 & 0 \\ 0 & 34 & 0 \\ 0 & 0 & 34 \end{bmatrix}$

53. $\displaystyle\int_{1}^{e^{\frac{17}{2}}} \frac{\pi\cos(\pi\log x)}{x}dx =$
   (a) 0   (b) –1   (c) 2   (d) 1

54. The mean and median of 100 items are 50 and 52 respectively. The value of largest item is 100. It was later found that it is 110 and not 100. The true mean and median are
   (a) 50.10, 51.5   (b) 50.10, 52
   (c) 50, 51.5   (d) none of these

55. $\displaystyle\lim_{x\to\infty}\left(\frac{x^2+5x+3}{x^2+x+3}\right)^x =$
   (a) e^4 (b) e^3 (c) e^2 (d) e

56. If $3p^2 = 5p + 2$ and $3q^2 = 5q + 2$ where $p \neq q$, then the equation whose roots are $3p - 2q$ and $3q - 2p$ is

(a) $3x^2 - 5x - 100 = 0$
(b) $5x^2 + 3x + 100 = 0$
(c) $3x^2 - 5x + 100 = 0$
(d) $5x^2 - 3x - 100 = 0$

57. If m_1 and m_2 are the slopes of the pair of lines $x^2(\tan^2\theta + \cos^2\theta) - 2xy\tan\theta + y^2\sin^2\theta = 0$, then $|m_1 - m_2|$ is
(a) 1   (b) 2   (c) 1/2   (d) 3

58. If $\dfrac{dy}{dx} = xy + 2x + 3y + 6$, then $y(-1) - e^2 y(-3) =$
(a) $e^2 - 1$
(b) $e^2 + 1$
(c) $2(e^2 - 1)$
(d) $-2(e^2 - 1)$

59. If $(1+x)^n = C_0 + C_1 x + C_2 x^2 + ... + C_n x^n$,

then $\dfrac{C_1}{C_0} + \dfrac{2C_2}{C_1} + \dfrac{3C_3}{C_2} + ... + \dfrac{nC_n}{C_{n-1}} =$

(a) $\dfrac{n(n-1)}{2}$

(b) $\dfrac{n(n+2)}{2}$

(c) $\dfrac{n(n+1)}{2}$

(d) $\dfrac{(n-1)(n-2)}{2}$

60. The value of k such that $\dfrac{x-4}{1} = \dfrac{y-2}{1} = \dfrac{z-k}{2}$ lies in the plane $2x - 4y + z = 7$, is
(a) 7
(b) -7
(c) no real value
(d) 4

61. If $m\tan(\theta - 30°) = n\tan(\theta + 120°)$ then $\dfrac{m+n}{m-n} =$
(a) $2\cos2\theta$
(b) $\cos2\theta$
(c) $2\sin2\theta$
(d) $\sin2\theta$

62. The greatest value of $f(x) = (x+1)^{1/3} - (x-1)^{1/3}$ on $[0, 1]$ is
(a) 1
(b) 2
(c) 3
(d) 1/3

63. If A, B and C are $n \times n$ matrices and $\det(A) = 2$, $\det(B) = 3$ and $\det(C) = 5$, then the value of the $\det(A^2 BC^{-1})$ is equal to
(a) $\dfrac{6}{5}$
(b) $\dfrac{12}{5}$
(c) $\dfrac{18}{5}$
(d) $\dfrac{24}{5}$

64. The sum to infinity of the series
$1 + \dfrac{2}{3} + \dfrac{6}{3^2} + \dfrac{10}{3^3} + \dfrac{14}{3^4} + ...$ is
(a) 2   (b) 3   (c) 4   (d) 6

65. A circle which passes through the point $(1, 1)$ and cuts orthogonally the two circles $x^2 + y^2 - 8x - 2y + 16 = 0$ and $x^2 + y^2 - 4x - 4y + 1 = 0$.

If its centre is (a, b), then $a + b =$
(a) 0   (b) -1 (c) $\dfrac{1}{2}$ (d) $-\dfrac{1}{2}$

66. The negation of $p \to (\sim p \vee q)$ is
(a) $p \vee (p \vee \sim q)$
(b) $p \to \sim (p \vee q)$
(c) $p \to q$
(d) $p \wedge \sim q$

67. From a set of 40 cards numbered 1 to 40, 5 cards drawn at random and arranged in ascending order of magnitude $x_1 < x_2 < x_3 < x_4 < x_5$. The probability that $x_3 = 24$ is

(a) $\dfrac{{}^{16}C_2}{{}^{40}C_5}$

(b) $\dfrac{{}^{23}C_2}{{}^{40}C_5}$

(c) $\dfrac{{}^{16}C_2 \times {}^{23}C_2}{{}^{40}C_5}$

(d) none of these

68. The value of $\displaystyle\int_{-2}^{3} |1 - x^2| \, dx$ is

(a) $\dfrac{7}{3}$ (b) $\dfrac{14}{3}$ (c) $\dfrac{28}{3}$ (d) $\dfrac{1}{3}$

69. Let $f(x) = \begin{cases} g(x) \cdot \cos\frac{1}{x}, & \text{if } x \neq 0 \\ 0, & \text{if } x = 0 \end{cases}$ where

$g(x)$ is an even function differentiable at $x = 0$, passing through the origin. Then $f'(0)$
(a) is equal to 1
(b) is equal to 0
(c) is equal to 2
(d) does not exist

70. $\tan9° - \tan27° - \tan63° + \tan81° =$
(a) 1/2   (b) 2   (c) 4   (d) 8

NUMERICAL VALUE TYPE

71. Six identical coins are arranged in a row. The total number of ways in which the number of heads is equal to the number of tails is

72. If $|\vec{a}| = 5$, $|\vec{b}| = 6$ and $\vec{a} \cdot \vec{b} = -25$, then $\sqrt{11}\,|\vec{a} \times \vec{b}|$ is equal to

73. If $a + 2b + 3c = 12$, $a, b, c \in R^+$, then maximum possible value of $ab^2 c^3$ is

74. If the lines $\dfrac{x-2}{1} = \dfrac{y-9}{2} = \dfrac{z-13}{3}$,

$\dfrac{x-a}{1} = \dfrac{y-1}{-2} = \dfrac{z+2}{3}$ are coplanar, then $|a|$ is

75. If $\left|\dfrac{z-25}{z-1}\right| = 5$, find the value of $|z|$.

- 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.	_____