VERY SIMILAR
PRACTICE TEST ①

PHYSICS

1. The moment of inertia of a uniform disc about an axis passing through its centre and perpendicular to its plane is 1 kg m^2. It is rotating with an angular velocity 100 rad s^{-1}. Another identical disc is gently placed on it so that their centres coincide. Now these two discs together continue to rotate about the same axis. Then the loss in kinetic energy in kilojoules is
   (a) 2.5   (b) 3.0   (c) 3.5   (d) 4.0

2. In the given figure, the equivalent capacitance between points A and B is
   (a) 1.5 C
   (b) 2 C
   (c) 3 C
   (d) 6 C
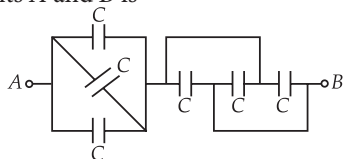
3. An ideal gas is taken through a cyclic thermodynamic process through four steps. The amount of heat involved in these steps are $Q_1 = 5960$ J, $Q_2 = -5585$ J, $Q_3 = -2980$ J and $Q_4 = 3645$ J respectively. The corresponding quantities of work involved are $W_1 = 2200$ J, $W_2 = -825$ J, $W_3 = -1100$ J and W_4 respectively. Find the value of W_4. What is the efficiency of the cycle ?
   (a) 3.33%   (b) 6.76%
   (c) 5.91%   (d) 10.83%

4. Three long, straight parallel wires, carrying current, are arranged as shown in figure. The force experienced by a 25 cm length of wire C is.
   (a) 10^{-3} N   (b) 2.5×10^{-3} N
   (c) zero   (d) 1.5×10^{-3} N
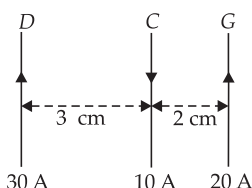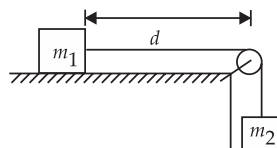
5. Of the following quantities which one has the dimensions different from the remaining three?
   (i) Energy density   (ii) Force per unit area
   (iii) Product of charge per unit volume and voltage
   (iv) Angular momentum per unit mass
   (a) (i)   (b) (ii)   (c) (iii)   (d) (iv)

6. A magnetic flux through a stationary loop with a resistance R varies during the time interval τ as $\phi = at(\tau - t)$. What is the amount of heat generated in the loop during that time ?
   (a) $\dfrac{a^2\tau^3}{4R}$ (b) $\dfrac{a^2\tau^3}{3R}$ (c) $\dfrac{a^2\tau^3}{6R}$ (d) $\dfrac{a^2\tau^3}{2R}$

7. A block of mass m_1 lies on a smooth horizontal table and is connected to another freely hanging block of mass m_2 by a light inextensible string passing over a smooth fixed pulley situated at the edge of the table as shown in the figure. Initially the system is at rest with m_1 at a distance d from the pulley. The time taken for m_1 to reach the pulley is
   (a) $\dfrac{m_2 g}{m_1 + m_2}$ (b) $\sqrt{\dfrac{2d(m_1 + m_2)}{m_2 g}}$
   (c) $\sqrt{\dfrac{2m_2 d}{(m_1 + m_2)g}}$ (d) $\dfrac{4d(m_1 + m_2)}{3gm_1}$

8. Two identical charged spheres suspended from a common point by two massless strings of length l are initially a distance $d(d << l)$ apart because of their mutual repulsion. The spheres begins to leak from both the spheres at a constant rate. As a result the charges approach each other with

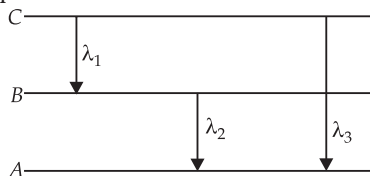a velocity v. Then as a function of distance x between them

(a) $v \propto x^{-1/2}$ (b) $v \propto x^{-1}$

(c) $v \propto x^{1/2}$ (d) $v \propto x$

9. A stone of mass 2 kg is projected upward with kinetic energy of 98 J. The height at which the kinetic energy of the stone becomes half its original value, is given by

(a) 5 m   (b) 2.5 m   (c) 1.5 m   (d) 0.5 m

10. In a series LCR circuit, different physical quantities vary with frequency υ. Which of the following curves represent correct frequency variation of the corresponding quantity?
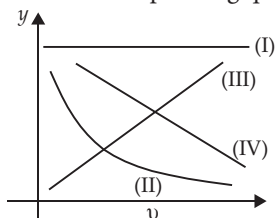
(a) Curve I for R and curve III for X_L

(b) Curve II for current I

(c) Curve III for X_L and curve IV for R

(d) Curve IV for X_C

11. The wavelengths and frequencies of photons in transitions 1, 2, and 3 for hydrogen like atom are $\lambda_1, \lambda_2, \lambda_3$; υ_1, υ_2 and υ_3 respectively. Then

(a) $\upsilon_3 = \upsilon_1 - \upsilon_2$ (b) $\lambda_3 = \lambda_1 + \lambda_2$

(c) $\lambda_3 = \dfrac{\lambda_1 \lambda_2}{\lambda_1 + \lambda_2}$ (d) $\upsilon_3 = \dfrac{\upsilon_1 \upsilon_2}{\upsilon_1 + \upsilon_2}$

12. A lift is tied with thick iron wire and its mass is 1000 kg. The minimum diameter of the wire if the maximum acceleration of the lift is 1.2 m s^{-2} and the maximum safe stress is 1.4×10^8 N m^{-2}, is (Take $g = 9.8$ m s^{-2})

(a) 0.00141 m   (b) 0.00282 m

(c) 0.005 m   (d) 0.01 m

13. Resolving power of reflecting type telescope increases with

(a) decrease in wavelength of incident light

(b) increase in wavelength of incident light

(c) increase in diameter of objective mirror

(d) both (a) and (c).

14. The surface energy of a liquid drop is u. It is splitted into 1000 equal droplets. Then its surface energy becomes

(a) u (b) $10u$

(c) $100u$ (d) $1000u$

15. 2 kg of ice at $-20°C$ is mixed with 5 kg of water at 20°C in an insulating vessel having a negligible heat capacity. Calculate the final mass of water remaining in the container.

(Given : Specific heat capacities of water and ice are 1 cal g^{-1} °C^{-1} and 0.5 cal g^{-1} °C^{-1} respectively. Latent heat of fusion of ice = 80 cal g^{-1})

(a) 7 kg   (b) 6 kg

(c) 4 kg   (d) 2 kg

16. To get an output $Y = 1$ from circuit of figure, the inputs must be
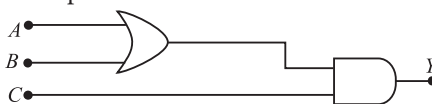
|	A	B	C
(a)	0	1	0
(b)	0	0	1
(c)	1	0	0
(d)	1	0	1

17. The escape velocity for a planet is v_e. A tunnel is dug along a diameter of the planet and a small body is dropped into it at the surface. When the body reaches the centre of the planet, its speed will be

(a) v_e (b) $\dfrac{v_e}{\sqrt{2}}$ (c) $\dfrac{v_e}{2}$ (d) zero

18. In a plane electromagnetic wave, the electric field oscillates sinusoidally at a frequency of 2×10^{10} Hz and amplitude 54 V m^{-1}.

(a) The amplitude of oscillating magnetic field will be 18×10^{-7} Wb m^{-2}.

(b) The amplitude of oscillating magnetic field will be 18×10^{-8} Wb m^{-2}.

(c) The wavelength of electromagnetic wave is 1.5 m.

(d) The wavelength of electromagnetic wave is 1.5 cm.

19. A uniform rod of mass m and length l_0 is pivoted at one end and is hanging in the vertical direction. The period of small angular oscillations of the rod (if displaced slightly from its position) is
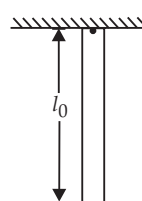
(a) $3\pi\sqrt{\dfrac{2l_0}{3g}}$ 　　(b) $4\pi\sqrt{\dfrac{l_0}{g}}$

(c) $2\pi\sqrt{\dfrac{l_0}{3g}}$ 　　(d) $2\pi\sqrt{\dfrac{2l_0}{3g}}$

20. Two radioactive nuclei P and Q, in a given sample decay into a stable nucleus R. At time $t = 0$, number of P species are $4N_0$ and that of Q are N_0. Half-life of P (for conversion to R) is 1 minute where as that of Q is 2 minutes. Initially no nuclei of R present in the sample. When number of nuclei of P and Q are equal, the number of nuclei of R present in the sample would be

(a) $2N_0$ 　(b) $3N_0$ 　(c) $\dfrac{9N_0}{2}$ 　(d) $\dfrac{5N_0}{2}$

NUMERICAL VALUE TYPE

21. A particle is projected from a horizontal plane with velocity of $5\sqrt{2}$ m s^{-1} at an angle. If at highest point its velocity is found to be 5 m s^{-1}. Then its range _____ m.
(Take $g = 10$ m s^{-2})

22. In the given circuit diagram, the current passing through wire CD is _____ A.
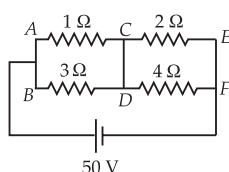
23. For a certain organ pipe, three successive resonance frequencies are observed at 425, 595 and 765 Hz respectively. Taking the speed of sound in air to be 340 m s^{-1}, the length of the pipe will be _____ m.

24. A fish at a depth of 12 cm in water is viewed by an observer on the bank of a lake. The image of fish is raised by height _____ cm.

(Refractive index of lake water $= \dfrac{4}{3}$)

25. If the ratio of the de Broglie wavelength of a proton and an α-particle of same kinetic energy is $x : 1$, then the value of x is _____.

CHEMISTRY

26. Among the following complexes the one which shows zero crystal field stabilization energy (CFSE) is
(a) $[Mn(H_2O)_6]^{3+}$ 　(b) $[Fe(H_2O)_6]^{3+}$
(c) $[Co(H_2O)_6]^{2+}$ 　(d) $[Co(H_2O)_6]^{3+}$

27. Li occupies higher position in the electrochemical series of metals as compared to Cu since
(a) the standard reduction potential Li$^+$/Li is lower than that of Cu^{2+}/Cu
(b) the standard reduction potential of Cu^{2+}/Cu is lower than that of Li$^+$/Li
(c) the standard oxidation potential of Li/Li$^+$ is lower than that of Cu/Cu^{2+}
(d) Li is smaller in size as compared to Cu.

28. Which of the following colloids cannot be easily coagulated?
(a) Multimolecular colloids
(b) Irreversible colloids
(c) Lyophobic colloids
(d) Macromolecular colloids

29. Which of the following represents the correct order of increasing first ionization enthalpy for Ca, Ba, S, Se and Ar?
(a) Ca < Ba < S < Se < Ar
(b) Ca < S < Ba < Se < Ar
(c) S < Se < Ca < Ba < Ar
(d) Ba < Ca < Se < S < Ar

30. Hydrogen peroxide on treatment with an acid solution of titanium salt gives
(a) yellow colour 　　(b) red colour
(c) blue colour 　　(d) white colour.

31. If the rate of reaction is $r = k[X]^{1/3}[Y]^{2/3}$, what is the unit of rate constant?
(a) mol$^{1/3}$ L$^{-2/3}$ time^{-1} (b) mol$^{2/3}$ L$^{1/3}$ time^{-1}
(c) mol$^{1/6}$ L$^{-1/6}$ time^{-1} (d) mol^0 L^0 time^{-1}

32. Arrange the carbanions,
$(CH_3)_3\bar{C}$, $\bar{C}Cl_3$, $(CH_3)_2\bar{C}H$, $C_6H_5\bar{C}H_2$
in order of their decreasing stability.
(a) $C_6H_5\bar{C}H_2 > \bar{C}Cl_3 > (CH_3)_3\bar{C} > (CH_3)_2\bar{C}H$
(b) $(CH_3)_2\bar{C}H > \bar{C}Cl_3 > C_6H_5\bar{C}H_2 > (CH_3)_3\bar{C}$
(c) $\bar{C}Cl_3 > C_6H_5\bar{C}H_2 > (CH_3)_2\bar{C}H > (CH_3)_3\bar{C}$
(d) $(CH_3)_3\bar{C} > (CH_3)_2\bar{C}H > C_6H_5\bar{C}H_2 > \bar{C}Cl_3$

33. Which of the following compounds is the major product when o-chlorotoluene reacts with sodamide in presence of ammonia?
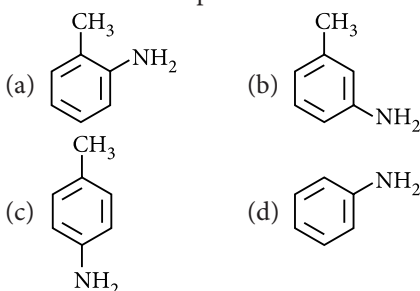
34. Which of the following statements about DNA is not correct?
(a) It has a double helix structure.
(b) It undergoes replication.
(c) The two strands in a DNA molecule are exactly similar.
(d) It contains the pentose sugar, 2-deoxyribose.

35. Photoelectric effect is the phenomenon in which
(a) photons come out the metal when hit by a beam of electrons
(b) photons come out of the nucleus of an atom under the action of an electric field
(c) electrons come out of metal with a constant velocity which depends on frequency and intensity of incident light
(d) electrons come out of metal with different velocities not greater than a certain value which depends upon frequency of incident light and not on intensity.

36. Consider the following statements :
I. Cationic polymerisation occurs in monomers with electron donating substituents.
II. Anionic polymerisation occurs in monomers with electron withdrawing substituents.
III. Head-to-head chain growth polymerisation occurs in polystyrene.
The correct statements are
(a) I and II   (b) I and III
(c) II and III   (d) I, II and III

37. The correct IUPAC name of the compound

 is
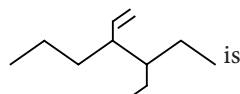
(a) 3-(1-ethylpropyl)hex-1-ene
(b) 4-ethyl-3-propylhex-1-ene
(c) 3-ethyl-4-ethenylheptane
(d) 3-ethyl-4-propylhex-5-ene.

38. In a face-centred cubic arrangement of A and B atoms in which A atoms are at the corners of the unit cell and B atoms are at the face centres, one of the A atoms is missing from one corner in unit cell. The simplest formula of the compound is
(a) A_7B_3 (b) AB_3
(c) A_7B_{24} (d) $A_{8/7}B_3$

39. Borax is used as a buffer since
(a) its aqueous solution contains equal amount of weak acid and its salt

(b) it is easily available
(c) its aqueous solution contains equal amount of strong acid and its salt
(d) none of these.

40. An organic aromatic compound having molecular formula C_7H_8O does not give characteristic colour with neutral $FeCl_3$ but bubbles of hydrogen gas are formed when it is treated with metallic sodium. The compound is
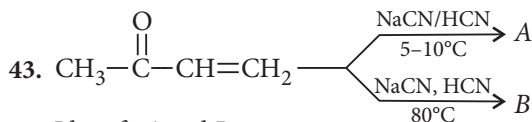
(a)   (b)

(c)   (d)
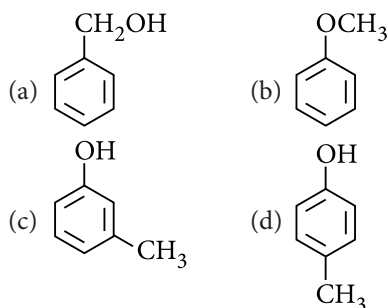
41. Which of the following is not an example of green chemistry?
(a) Catalytic dehydrogenation of the diethanol amine without using cyanide and formaldehyde.
(b) Replacement of CFCs by CO_2 as blowing agent in the manufacture of polystyrene foam sheets.
(c) Reacting methylamine and phosgene to produce methyl isocyanate.
(d) Replacement of organotins by 'sea-nine' as anti fouling compound in sea marines.

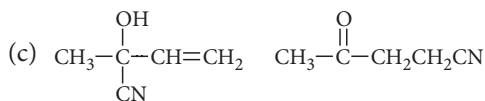**42.** The decreasing order of basic character of K_2O, BaO, CaO and MgO is
(a) $K_2O > BaO > CaO > MgO$
(b) $K_2O > CaO > BaO > MgO$
(c) $MgO > BaO > CaO > K_2O$
(d) $MgO > CaO > BaO > K_2O$

43.

Identify A and B.

(c)
$$CH_3-\underset{\underset{CN}{|}}{\overset{\overset{OH}{|}}{C}}-CH=CH_2 \quad CH_3-\overset{\overset{O}{||}}{C}-CH_2CH_2CN$$

(d) None of these.

44. A mixture of 1.57 moles of N_2, 1.92 moles of H_2 and 8.13 moles of NH_3 is introduced into a 20 L reaction vessel at 500 K. At this temperature, the equilibrium constant, K_c for the reaction, $N_{2(g)} + 3H_{2(g)} \rightleftharpoons 2NH_{3(g)}$ is 1.7×10^2.
Select the correct statement.
(a) The reaction is at equilibrium.
(b) The reaction goes in the direction of reactants.
(c) The reaction goes in the direction of product.
(d) None of these.

45. The equivalent conductances of two strong electrolytes at infinite dilution in H_2O (where ions move freely through a solution) at 25°C are given below:
$\Lambda^\circ_{CH_3COONa} = 91.0$ S cm²/equiv.
$\Lambda^\circ_{HCl} = 426.2$ S cm²/equiv.
What additional information/quantity one needs to calculate Λ° of an aqueous solution of acetic acid?
(a) Λ° of chloroacetic acid ($ClCH_2COOH$)
(b) Λ° of NaCl
(c) Λ° of CH_3COOK
(d) the limiting equivalent conductance of H^+ ($\lambda^\circ_{H^+}$).

46. Amount of of potassium dichromate in grams required to oxidise 20.0 g of Fe^{2+} in $FeSO_4$ to Fe^{3+} if the reaction is carried out in an acidic medium is ____.
(Molar masses of $K_2Cr_2O_7$ and $FeSO_4$ are 294 and 152 respectively.)

47. The vapour density of a metal sulphate is 90 and its oxide contains 60 per cent metal. The atomic weight of metal is ____.

48. The mass of a non-volatile solute (in g) which should be dissolved in 114 g octane to reduce its vapour pressure to 80% is ____.
(Given : Molar mass of solute 40 g mol⁻¹)

49. An open vessel contains 200 mg of air at 17°C. The weight percent of air that would be expelled if the vessel is heated to 117°C is ____.

50. The standard heat of formation of $CH_{4(g)}$, $CO_{2(g)}$ and $H_2O_{(g)}$ are −76.2, −394.8 and −241.6 kJ mol⁻¹ respectively. The amount of heat evolved (in kJ) by burning 1 m³ of methane measured at NTP is $x \times 10^4$. The value of x is ____.

51. Let n be a fixed positive integer. Define a relation R in the set Z of integers by aRb if and only if $a - b$ divides n. The relation R is
(a) reflexive
(b) symmetric
(c) transitive
(d) an equivalence relation

52. The value of a for which the system of equations $a^3x + (a+1)^3y + (a+2)^3z = 0$, $ax + (a+1)y + (a+2)z = 0$, $x + y + z = 0$, has a non zero solution is
(a) −1
(b) 0
(c) 1
(d) None of these

53. The function $f(x) = 5 + 36x + 3x^2 - 2x^3$ is decreasing in the interval
(a) $(-2, 3)$
(b) $(2, -3)$
(c) $(-2, -3)$
(d) $(2, 3)$

54. The last digit in the expansion of 7^{300} is
(a) 7
(b) 9
(c) 1
(d) 3

55. $\int_0^1 \frac{d}{dx}\left[\sin^{-1}\left(\frac{2x}{1+x^2}\right)\right] dx$ is equal to
(a) 0
(b) π
(c) $\pi/2$
(d) $\pi/4$

56. The value of p for which the function
$$f(x) = \begin{cases} \dfrac{(4^x - 1)^3}{\sin\dfrac{x}{p}\log\left[1 + \dfrac{x^2}{3}\right]}, & x \neq 0 \\ 12(\log 4)^3, & x = 0 \end{cases}$$
may be continuous at $x = 0$, is
(a) 1
(b) 2
(c) 3
(d) 4

57. Points $(3, 3)$, $(h, 0)$, $(0, k)$ are collinear and $a/h + b/k = 1/3$. Then
(a) $a = 3, b = 2$
(b) $a = 3, b = 3$
(c) $a = 1, b = 1$
(d) $a = 2, b = 2$

58. If $iz^3 + z^2 - z + i = 0$, then $|z|$ is equal to
(a) 0
(b) 1
(c) 2
(d) None of these

59. $\dfrac{1 + \sin A - \cos A}{1 + \sin A + \cos A} =$
(a) $\sin\dfrac{A}{2}$
(b) $\cos\dfrac{A}{2}$
(c) $\tan\dfrac{A}{2}$
(d) $\cot\dfrac{A}{2}$

60. The four arithmetic means between 3 and 23 are
(a) 5, 9, 11, 13
(b) 7, 11, 15, 19
(c) 5, 11, 15, 22
(d) 7, 15, 19, 21

61. $\lim\limits_{n \to \infty} \dfrac{(1+2+3+...+n)(1^3+2^3+3^3+...+n^3)}{(1^2+2^2+3^2+...+n^2)^2} =$
(a) $\dfrac{3}{8}$
(b) $\dfrac{5}{8}$
(c) $\dfrac{7}{8}$
(d) $\dfrac{9}{8}$

62. If the planes $x = cy + bz$, $y = az + cx$, $z = bx + ay$ pass through a line, then $a^2 + b^2 + c^2 + 2abc$ is
(a) 0
(b) 1
(c) 2
(d) 3

63. The solution of the differential equation $\dfrac{dy}{dx} = \dfrac{1+y^2}{1+x^2}$ is
(a) $y = \tan^{-1}x + c$
(b) $x = \tan^{-1}y + c$
(c) $\tan(xy) = c$
(d) $y - x = c(1 + xy)$

64. In a class of 100 students there are 70 boys whose average marks in a subject are 75. If the average marks of the complete class is 72, then what is the average of the girls?
(a) 73
(b) 65
(c) 68
(d) 74

65. The negation of the proposition:
"If a quadrilateral is a square, then it is a rhombus" is
(a) If a quadrilateral is a square, then it is a rhombus.
(b) If a quadrilateral is a square, then it is not a rhombus.
(c) A quadrilateral is a square and it is not a rhombus.
(d) A quadrilateral is not a square and it is a rhombus.

66. A purse contains 4 copper and 3 silver coins, and a second purse contains 6 copper and 2 silver coins. A coin is taken out from any purse, the probability that it is a copper coin is
(a) 3/7
(b) 4/7
(c) 3/4
(d) 37/56

67. The area bounded by the parabola $y = 4x^2$, $y = \dfrac{x^2}{9}$ and the line $y = 2$ is
(a) $\dfrac{5\sqrt{2}}{3}$ sq. units
(b) $\dfrac{10\sqrt{2}}{3}$ sq. units
(c) $\dfrac{15\sqrt{2}}{3}$ sq. units
(d) $\dfrac{20\sqrt{2}}{3}$ sq. units

68. If the circles $(x - 1)^2 + (y - 3)^2 = r^2$ and $x^2 + y^2 - 8x + 2y + 8 = 0$ intersect in two distinct points, then
(a) $2 < r < 8$
(b) $r = 2$
(c) $r < 2$
(d) $r > 2$

69. Let α and β be the roots of equation $x^2 - (a - 2)x - a - 1 = 0$, then $\alpha^2 + \beta^2$ assumes the least value if
(a) $a = 0$
(b) $a = 1$
(c) $a = -1$
(d) $a = 2$

70. If $\tan\theta = \dfrac{x\sin\phi}{1-x\cos\phi}$ and $\tan\phi = \dfrac{y\sin\theta}{1-y\cos\theta}$, then $\dfrac{x}{y} =$
(a) $\dfrac{\sin\phi}{\sin\theta}$
(b) $\dfrac{\sin\theta}{\sin\phi}$
(c) $\dfrac{\sin\phi}{1-\cos\theta}$
(d) $\dfrac{\sin\theta}{1-\cos\phi}$

NUMERICAL VALUE TYPE

71. If the adjoint of a 3×3 matrix P is $\begin{bmatrix} 1 & 2 & 1 \\ 4 & 1 & 1 \\ 4 & 7 & 3 \end{bmatrix}$, then the sum of squares of possible values of determinant of P is _____.

72. The number of polynomials of the form $x^3 + ax^2 + bx + c$ which are divisible by $x^2 + 1$ where $a, b, c \in \{1, 2, 3, ..., 10\}$ is K, then $10K$ is _____.

73. If the sum to infinity of a decreasing G.P. with the common ratio x is k such that $|x| < 1$; $x \neq 0$. The ratio of the fourth term to the second term is 1/16 and the ratio of third term to the square of the second term is 1/9. Find the value of k.

74. The plane $2x - 2y + z = 3$ is rotated about the line where it cuts the xy plane by an acute angle α. If the new position of plane contains the point (3, 1, 1), then $\cos\alpha$ equal to _____.

75. If the points with position vectors $10\hat{i} + 3\hat{j}, 12\hat{i} - 5\hat{j}$ and $\lambda\hat{i} + 11\hat{j}$ are collinear, then $\dfrac{3}{2}\lambda$ is equal to _____.

- 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.	_____