

14. If nC_r denotes the number of combinations of n things taken r at a time, then the expression ${}^nC_{r+1} + {}^nC_{r-1} + 2 \times {}^nC_r$ equals :
- (a) ${}^{n+2}C_r$ (b) ${}^{n+2}C_{r+1}$
 (c) ${}^{n+1}C_r$ (d) ${}^{n+1}C_{r+1}$
15. The number of integral terms in the expansion of $(\sqrt{3} + \sqrt[3]{5})^{256}$ is :
- (a) 32 (b) 33
 (c) 34 (d) 35
16. If x is positive, the first negative term in the expansion of $(1+x)^{27/5}$ is :
- (a) 7th term (b) 5th term
 (c) 8th term (d) 6th term
17. The sum of the series $\frac{1}{1 \cdot 2} - \frac{1}{2 \cdot 3} + \frac{1}{3 \cdot 4} - \dots$ upto ∞ is equal to :
- (a) $2 \log_e 2$ (b) $\log_e 2 - 1$
 (c) $\log_e 2$ (d) $\log_e \left(\frac{4}{e}\right)$
18. Let $f(x)$ be a polynomial function of second degree. If $f(1) = f(-1)$ and a, b, c are in AP, then $f'(a), f'(b)$ and $f'(c)$ are in :
- (a) AP
 (b) GP
 (c) HP
 (d) arithmetico-geometric progression
19. If x_1, x_2, x_3 and y_1, y_2, y_3 are both in GP with the same common ratio, then the points $(x_1, y_1), (x_2, y_2)$ and (x_3, y_3) :
- (a) lie on a straight line
 (b) lie on an ellipse
 (c) lie on a circle
 (d) are vertices of a triangle
20. The sum of the radii of inscribed and circumscribed circles for an n sided regular polygon of side a , is :
- (a) $a \cot \left(\frac{\pi}{n}\right)$ (b) $\frac{a}{2} \cot \left(\frac{\pi}{2n}\right)$
 (c) $a \cot \left(\frac{\pi}{2n}\right)$ (d) $\frac{a}{4} \cot \left(\frac{\pi}{2n}\right)$
21. If in a triangle ABC
- $$a \cos^2 \left(\frac{C}{2}\right) + c \cos^2 \left(\frac{A}{2}\right) = \frac{3b}{2},$$
- then the sides a, b and c :
- (a) are in AP (b) are in GP
 (c) are in HP (d) satisfy $a + b = c$
22. In a triangle ABC , medians AD and BE are drawn. If $AD = 4, \angle DAB = \frac{\pi}{6}$ and $\angle ABE = \frac{\pi}{3}$, then the area of the ΔABC is :
- (a) $8/3$ (b) $16/3$
 (c) $32/3$ (d) $64/3$
23. The trigonometric equation $\sin^{-1} x = 2 \sin^{-1} a$, has a solution for :
- (a) $\frac{1}{2} < |a| < \frac{1}{\sqrt{2}}$ (b) all real values of a
 (c) $|a| < \frac{1}{2}$ (d) $|a| \geq \frac{1}{\sqrt{2}}$
24. The upper $3/4$ th portion of a vertical pole subtends an angle $\tan^{-1} 3/5$ at a point in the horizontal plane through its foot and at a distance 40 m from the foot. A possible height of the vertical pole is :
- (a) 20 m (b) 40 m
 (c) 60 m (d) 80 m
25. The real number x when added to its inverse gives the minimum value of the sum at x equals to :
- (a) 2 (b) 1
 (c) -1 (d) -2
26. If $f: R \rightarrow R$ satisfies $f(x+y) = f(x) + f(y)$, for all $x, y \in R$ and $f(1) = 7$, then $\sum_{r=1}^n f(r)$ is :
- (a) $\frac{7n}{2}$ (b) $\frac{7(n+1)}{2}$
 (c) $7n(n+1)$ (d) $\frac{7n(n+1)}{2}$
27. If $f(x) = x^n$, then the value of $f(1) - \frac{f'(1)}{1!} + \frac{f''(1)}{2!} - \frac{f'''(1)}{3!} + \dots + \frac{(-1)^n f^n(1)}{n!}$ is :
- (a) 2^n (b) 2^{n-1}
 (c) 0 (d) 1
28. Domain of definition of the function $f(x) = \frac{3}{4-x^2} + \log_{10}(x^3 - x)$, is :
- (a) $(1, 2)$
 (b) $(-1, 0) \cup (1, 2)$
 (c) $(1, 2) \cup (2, \infty)$
 (d) $(-1, 0) \cup (1, 2) \cup (2, \infty)$
29. $\lim_{x \rightarrow \frac{\pi}{2}} \frac{\left[1 - \tan \left(\frac{x}{2}\right)\right] [1 - \sin x]}{\left[1 + \tan \left(\frac{x}{2}\right)\right] [\pi - 2x]^3}$ is :
- (a) $\frac{1}{8}$ (b) 0
 (c) $\frac{1}{32}$ (d) ∞
30. If $\lim_{x \rightarrow 0} \frac{\log(3+x) - \log(3-x)}{x} = k$, the value of k is :
- (a) 0 (b) $-1/3$
 (c) $2/3$ (d) $-2/3$

31. If $f^n(a)$, $g^n(a)$ exist and are not equal for some n . Further if $f(a) = g(a) = k$ and $\lim_{x \rightarrow a} \frac{f(a)g(x) - f(x)g(a)}{g(x) - f(x)} = 4$,

then the value of k is equal to :

- (a) 4 (b) 2
(c) 1 (d) 0

32. The function $f(x) = \log(x + \sqrt{x^2 + 1})$, is :

- (a) an even function
(b) an odd function
(c) a periodic function
(d) neither an even nor an odd function

33. If $f(x) = \begin{cases} xe^{-\left[\frac{1}{|x|} + \frac{1}{x}\right]}, & x \neq 0 \\ 0, & x = 0 \end{cases}$ then $f(x)$ is :

- (a) continuous as well as differentiable for all x
(b) continuous for all x but not differentiable at $x = 0$
(c) neither differentiable nor continuous at $x = 0$
(d) discontinuous everywhere

34. If the function $f(x) = 2x^3 - 9ax^2 + 12a^2x + 1$, where $a > 0$, attains its maximum and minimum at p and q respectively such that $p^2 = q$, then a equals :

- (a) 3 (b) 1
(c) 2 (d) 1/2

35. If $f(y) = e^y$, $g(y) = y$; $y > 0$

and $F(t) = \int_0^t f(t-y)g(y)dy$, then :

- (a) $F(t) = 1 - e^{-t}(1+t)$
(b) $F(t) = e^t - (1+t)$
(c) $F(t) = te^t$
(d) $F(t) = te^{-t}$

36. If $f(a+b-x) = f(x)$, then $\int_a^b x f(x) dx$ is

equal to :

- (a) $\frac{a+b}{2} \int_a^b f(b-x) dx$
(b) $\frac{a+b}{2} \int_a^b f(x) dx$
(c) $\frac{b-a}{2} \int_a^b f(x) dx$
(d) $\frac{a+b}{2} \int_a^b f(a+b+x) dx$

37. The value of $\lim_{x \rightarrow 0} \frac{\int_0^{x^2} \sec^2 t dt}{x \sin x}$ is :

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

38. The value of the integral $I = \int_0^1 x(1-x)^n dx$ is :

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

39. $\lim_{n \rightarrow \infty} \frac{1 + 2^4 + 3^4 + \dots + n^4}{n^5}$

$$= \lim_{n \rightarrow \infty} \frac{1 + 2^3 + 3^3 + \dots + n^3}{n^5} \text{ is :}$$

- (a) 1/30 (b) 0
(c) 1/4 (d) 1/5

40. Let $\frac{d}{dx} F(x) = \left(\frac{e^{\sin x}}{x}\right)$, $x > 0$.

$$\text{If } \int_1^4 \frac{3}{x} e^{\sin x^3} dx = F(k) - F(1),$$

then one of the possible values of k , is :

- (a) 15 (b) 16
(c) 63 (d) 64

41. The area of the region bounded by the curves $y = |x-1|$ and $y = 3-|x|$ is :

- (a) 2 sq unit (b) 3 sq unit
(c) 4 sq unit (d) 6 sq unit

42. Let $f(x)$ be a function satisfying $f'(x) = f(x)$ with $f(0) = 1$ and $g(x)$ be a function that satisfies $f(x) + g(x) = x^2$. Then the value of the integral $\int_0^1 f(x)g(x) dx$, is :

- (a) $e - \frac{e^2}{2} - \frac{5}{2}$ (b) $e + \frac{e^2}{2} - \frac{3}{2}$
(c) $e - \frac{e^2}{2} - \frac{3}{2}$ (d) $e + \frac{e^2}{2} + \frac{5}{2}$

43. The degree and order of the differential equation of the family of all parabolas whose axis is x -axis, are respectively :

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

44. The solution of the differential equation

$$(1+y^2) + (x - e^{\tan^{-1} y}) \frac{dy}{dx} = 0, \text{ is :}$$

- (a) $(x-2) = ke^{-\tan^{-1} y}$
(b) $2x e^{\tan^{-1} y} = e^{2 \tan^{-1} y} + k$
(c) $xe^{\tan^{-1} y} = \tan^{-1} y + k$
(d) $xe^{2 \tan^{-1} y} = e^{\tan^{-1} y} + k$

45. If the equation of the locus of a point equidistant from the points (a_1, b_1) and (a_2, b_2) is $(a_1 - a_2)x + (b_1 - b_2)y + c = 0$, then the value of ' C ' is :

- (a) $\frac{1}{2}(a_2^2 + b_2^2 - a_1^2 - b_1^2)$
(b) $a_1^2 - a_2^2 + b_1^2 - b_2^2$

$$(c) \frac{1}{2}(a_1^2 + a_2^2 + b_1^2 + b_2^2)$$

$$(d) \sqrt{a_1^2 + b_1^2 - a_2^2 - b_2^2}$$

46. Locus of centroid of the triangle whose vertices are $(a \cos t, a \sin t)$, $(b \sin t, -b \cos t)$ and $(1, 0)$, where t is a parameter, is :

$$(a) (3x - 1)^2 + (3y)^2 = a^2 - b^2$$

$$(b) (3x - 1)^2 + (3y)^2 = a^2 + b^2$$

$$(c) (3x + 1)^2 + (3y)^2 = a^2 + b^2$$

$$(d) (3x + 1)^2 + (3y)^2 = a^2 - b^2$$

47. If the pair of straight lines $x^2 - 2pxy - y^2 = 0$ and $x^2 - 2qxy - y^2 = 0$ be such that each pair bisects the angle between the other pair, then :

$$(a) p = q$$

$$(b) p = -q$$

$$(c) pq = 1$$

$$(d) pq = -1$$

48. A square of side a lies above the x -axis and has one vertex at the origin. The side passing through the origin makes an angle α ($0 < \alpha < \frac{\pi}{4}$) with the positive direction of

x -axis. The equation of its diagonal not passing through the origin is :

$$(a) y(\cos \alpha - \sin \alpha) - x(\sin \alpha - \cos \alpha) = a$$

$$(b) y(\cos \alpha + \sin \alpha) + x(\sin \alpha - \cos \alpha) = a$$

$$(c) y(\cos \alpha + \sin \alpha) + x(\sin \alpha + \cos \alpha) = a$$

$$(d) y(\cos \alpha + \sin \alpha) + x(\cos \alpha - \sin \alpha) = a$$

49. If the two circles $(x - 1)^2 + (y - 3)^2 = r^2$ and $x^2 + y^2 - 8x + 2y + 8 = 0$ intersect in two distinct points, then :

$$(a) 2 < r < 8$$

$$(b) r < 2$$

$$(c) r = 2$$

$$(d) r > 2$$

50. The lines $2x - 3y = 5$ and $3x - 4y = 7$ are diameters of a circle having area as 154 sq unit. Then the equation of the circle is :

$$(a) x^2 + y^2 + 2x - 2y = 62$$

$$(b) x^2 + y^2 + 2x - 2y = 47$$

$$(c) x^2 + y^2 - 2x + 2y = 47$$

$$(d) x^2 + y^2 - 2x + 2y = 62$$

51. The normal at the point $(bt_1^2, 2bt_1)$ on a parabola meets the parabola again in the point $(bt_2^2, 2bt_2)$, then :

$$(a) t_2 = -t_1 - \frac{2}{t_1} \quad (b) t_2 = -t_1 + \frac{2}{t_1}$$

$$(c) t_2 = t_1 - \frac{2}{t_1} \quad (d) t_2 = t_1 + \frac{2}{t_1}$$

52. The foci of the ellipse $\frac{x^2}{16} + \frac{y^2}{b^2} = 1$ and the hyperbola $\frac{x^2}{144} - \frac{y^2}{81} = \frac{1}{25}$ coincide. Then the value of b^2 is :

$$(a) 1$$

$$(b) 5$$

$$(c) 7$$

$$(d) 9$$

53. A tetrahedron has vertices at $O(0, 0, 0)$, $A(1, 2, 1)$, $B(2, 1, 3)$ and $C(-1, 1, 2)$. Then the angle between the faces OAB and ABC will be :

$$(a) \cos^{-1}\left(\frac{19}{35}\right)$$

$$(b) \cos^{-1}\left(\frac{17}{31}\right)$$

$$(c) 30^\circ$$

$$(d) 90^\circ$$

54. The radius of the circle in which the sphere $x^2 + y^2 + z^2 + 2x - 2y - 4z - 19 = 0$ is cut by the plane $x + 2y + 2z + 7 = 0$ is :

$$(a) 1$$

$$(b) 2$$

$$(c) 3$$

$$(d) 4$$

55. The lines $\frac{x-2}{1} = \frac{y-3}{1} = \frac{z-4}{-k}$ and

$$\frac{x-1}{k} = \frac{y-4}{2} = \frac{z-5}{1}$$
 are coplanar if :

$$(a) k = 0 \text{ or } -1$$

$$(b) k = 1 \text{ or } -1$$

$$(c) k = 0 \text{ or } -3$$

$$(d) k = 3 \text{ or } -3$$

56. The two lines $x = ay + b$, $z = cy + d$ and $x = a'y + b'$, $z = c'y + d'$ will be perpendicular, if and only if :

$$(a) aa' + bb' + cc' + 1 = 0$$

$$(b) aa' + bb' + cc' = 0$$

$$(c) (a + a')(b + b') + (c + c') = 0$$

$$(d) aa' + cc' + 1 = 0$$

57. The shortest distance from the plane $12x + 4y + 3z = 327$ to the sphere $x^2 + y^2 + z^2 + 4x - 2y - 6z = 155$ is :

$$(a) 26$$

$$(b) 11 \frac{4}{13}$$

$$(c) 13$$

$$(d) 39$$

58. Two systems of rectangular axes have the same origin. If a plane cuts them at distances a, b, c and a', b', c' from the origin, then :

$$(a) \frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2} + \frac{1}{a'^2} + \frac{1}{b'^2} + \frac{1}{c'^2} = 0$$

$$(b) \frac{1}{a^2} + \frac{1}{b^2} - \frac{1}{c^2} + \frac{1}{a'^2} + \frac{1}{b'^2} - \frac{1}{c'^2} = 0$$

$$(c) \frac{1}{a^2} - \frac{1}{b^2} - \frac{1}{c^2} + \frac{1}{a'^2} - \frac{1}{b'^2} - \frac{1}{c'^2} = 0$$

$$(d) \frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2} - \frac{1}{a'^2} - \frac{1}{b'^2} - \frac{1}{c'^2} = 0$$

59. \vec{a} , \vec{b} , \vec{c} are three vectors, such that $\vec{a} + \vec{b} + \vec{c} = \vec{0}$, $|\vec{a}| = 1$, $|\vec{b}| = 2$, $|\vec{c}| = 3$, then $\vec{a} \cdot \vec{b} + \vec{b} \cdot \vec{c} + \vec{c} \cdot \vec{a}$ is equal to :

(a) 0 (b) -7
(c) 7 (d) 1

60. If \vec{u} , \vec{v} and \vec{w} are three non-coplanar vectors, then $(\vec{u} + \vec{v} - \vec{w}) \cdot [(\vec{u} - \vec{v}) \times (\vec{v} - \vec{w})]$ equals :

(a) 0 (b) $\vec{u} \cdot \vec{v} \times \vec{w}$
(c) $\vec{u} \cdot \vec{w} \times \vec{v}$ (d) $3\vec{u} \cdot \vec{v} \times \vec{w}$

61. Consider points A, B, C and D with position vectors $7\hat{i} - 4\hat{j} + 7\hat{k}$, $\hat{i} - 6\hat{j} + 10\hat{k}$,

$-\hat{i} - 3\hat{j} + 4\hat{k}$ and $5\hat{i} - \hat{j} + 5\hat{k}$ respectively.

Then ABCD is a :

(a) square
(b) rhombus
(c) rectangle
(d) parallelogram but not a rhombus

62. The vectors $\vec{AB} = 3\hat{i} + 4\hat{k}$, and

$\vec{AC} = 5\hat{i} - 2\hat{j} + 4\hat{k}$ are the sides of a triangle ABC. The length of the median through A is :

(a) $\sqrt{18}$ (b) $\sqrt{72}$
(c) $\sqrt{33}$ (d) $\sqrt{288}$

63. A particle acted on by constant forces $4\hat{i} + \hat{j} - 3\hat{k}$ and $3\hat{i} + \hat{j} - \hat{k}$ is displaced from the point $\hat{i} + 2\hat{j} + 3\hat{k}$ to the point $5\hat{i} + 4\hat{j} + \hat{k}$. The total work done by the forces is :

(a) 20 unit (b) 30 unit
(c) 40 unit (d) 50 unit

64. Let $\vec{u} = \hat{i} + \hat{j}$, $\vec{v} = \hat{i} - \hat{j}$ and $\vec{w} = \hat{i} + 2\hat{j} + 3\hat{k}$.

If \hat{n} is a unit vector such that $\vec{u} \cdot \hat{n} = 0$ and

$\vec{v} \cdot \hat{n} = 0$, then $|\vec{w} \cdot \hat{n}|$ is equal to :

(a) 0 (b) 1
(c) 2 (d) 3

65. The median of a set of 9 distinct observations is 20.5. If each of the largest 4 observations of the set is increased by 2, then the median of the new set :

(a) is increased by 2
(b) is decreased by 2
(c) is two times the original median
(d) remains the same as that of the original set

66. In an experiment with 15 observations on x , the following results were available

$$\sum x^2 = 2830, \sum x = 170.$$

One observation that was 20, was found to be wrong and was replaced by the correct value 30. Then the corrected variance is :

(a) 78.00 (b) 188.66
(c) 177.33 (d) 8.33

67. Five horses are in a race. Mr. A selects two of the horses at random and bets on them. The probability that Mr. A selected the winning horse, is :

(a) $\frac{4}{5}$ (b) $\frac{3}{5}$
(c) $\frac{1}{5}$ (d) $\frac{2}{5}$

68. Events A, B, C are mutually exclusive events such that $P(A) = \frac{3x+1}{3}$, $P(B) = \frac{1-x}{4}$ and

$P(C) = \frac{1-2x}{2}$. The set of possible values of x

are in the interval :

(a) $\left[\frac{1}{3}, \frac{1}{2}\right]$ (b) $\left[\frac{1}{3}, \frac{2}{3}\right]$
(c) $\left[\frac{1}{3}, \frac{13}{3}\right]$ (d) $[0, 1]$

69. The mean and variance of a random variable X having a binomial distribution are 4 and 2 respectively, then $P(X = 1)$ is :

(a) $\frac{1}{32}$ (b) $\frac{1}{16}$
(c) $\frac{1}{8}$ (d) $\frac{1}{4}$

70. The resultant of forces \vec{P} and \vec{Q} is \vec{R} . If \vec{Q} is

doubled, then \vec{R} is doubled. If the direction of

\vec{Q} is reversed, then \vec{R} is again doubled, then

$P^2 : Q^2 : R^2$ is :

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

71. Let R_1 and R_2 respectively be the maximum ranges up and down an inclined plane and R be the maximum range on the horizontal plane. Then R_1, R, R_2 are in :

(a) arithmetico-geometric progression (AGP)
(b) AP
(c) GP
(d) HP

72. A couple is of moment \vec{G} and the force forming

the couple is \vec{P} . If \vec{P} is turned through a right angle, the moment of the couple thus formed is

\vec{H} . If instead, the forces \vec{P} is turned through an angle α , then the moment of couple becomes :

(a) $\vec{G} \sin \alpha - \vec{H} \cos \alpha$

(b) $\vec{H} \cos \alpha + \vec{G} \sin \alpha$

(c) $\vec{G} \cos \alpha + \vec{H} \sin \alpha$

(d) $\vec{H} \sin \alpha - \vec{G} \cos \alpha$

73. Two particles start simultaneously from the same point and move along two straight lines,

one with uniform velocity \vec{u} and the other from rest with uniform acceleration \vec{f} . Let α be the angle between their directions of motion. The relative velocity of the second particle w.r.t. the first is least after a time :

(a) $\frac{u \sin \alpha}{f}$ (b) $\frac{f \cos \alpha}{u}$

(c) $u \sin \alpha$ (d) $\frac{u \cos \alpha}{f}$

74. Two stones are projected from the top of a cliff h metres high, with the same speed u so as to hit the ground at the same spot. If one of the stones is projected horizontally and the other is projected at an angle θ to the horizontal, then $\tan \theta$ equals :

(a) $\sqrt{\frac{2u}{gh}}$ (b) $2g \sqrt{\frac{u}{h}}$

(c) $2h \sqrt{\frac{u}{g}}$ (d) $u \sqrt{\frac{2}{gh}}$

75. A body travels a distance s in t seconds. It starts from rest and ends at rest. In the first part of the journey, it moves with constant acceleration f and in the second part with constant retardation r . The value of t is given by :

(a) $2s \left(\frac{1}{f} + \frac{1}{r} \right)$ (b) $\frac{2s}{\frac{1}{f} + \frac{1}{r}}$

(c) $\sqrt{2s(f+r)}$ (d) $\sqrt{2s \left(\frac{1}{f} + \frac{1}{r} \right)}$

ANSWERS

➡ PHYSICS AND CHEMISTRY

1. (b)	2. (a)	3. (b)	4. (a)	5. (d)	6. (a)	7. (a)	8. (d)
9. (c)	10. (b)	11. (a)	12. (c)	13. (c)	14. (d)	15. (c)	16. (a)
17. (a)	18. (c)	19. (c)	20. (b)	21. (c)	22. (d)	23. (d)	24. (b)
25. (d)	26. (a)	27. (d)	28. (c)	29. (c)	30. (b)	31. (d)	32. (a)
33. (d)	34. (c)	35. (c)	36. (a)	37. (c)	38. (d)	39. (a)	40. (d)
41. (c)	42. (a)	43. (d)	44. (a)	45. (b)	46. (a)	47. (a)	48. (b)
49. (b)	50. (c)	51. (c)	52. (d)	53. (b)	54. (d)	55. (c)	56. (b)
57. (b)	58. (a)	59. (c)	60. (a)	61. (d)	62. (b)	63. (c)	64. (a)
65. (a)	66. (b)	67. (a)	68. (d)	69. (b)	70. (c)	71. (c)	72. (a)
73. (b)	74. (d)	75. (d)	76. (b)	77. (a)	78. (b)	79. (a)	80. (b)
81. (b)	82. (c)	83. (d)	84. (d)	85. (b)	86. (c)	87. (a)	88. (b)
89. (d)	90. (b)	91. (c)	92. (c)	93. (c)	94. (b)	95. (c)	96. (b)
97. (b)	98. (c)	99. (b)	100. (c)	101. (a)	102. (b)	103. (c)	104. (a)
105. (d)	106. (a)	107. (d)	108. (d)	109. (c)	110. (b)	111. (a)	112. (c)
113. (d)	114. (b)	115. (b)	116. (c)	117. (a)	118. (c)	119. (a)	120. (b)
121. (b)	122. (a)	123. (d)	124. (b)	125. (b)	126. (b)	127. (a)	128. (d)
129. (c)	130. (a)	131. (b)	132. (b)	133. (c)	134. (c)	135. (d)	136. (b)
137. (a)	138. (d)	139. (a)	140. (c)	141. (a)	142. (b)	143. (c)	144. (a)
145. (a)	146. (d)	147. (d)	148. (c)	149. (d)	150. (c)		

➡ MATHEMATICS

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

(*) No option is correct in question paper.