

CHANDIGARH POLICE

POST: Constable Executive (IT)

Question Booklet & Answer Key

03.03.2024 (Sunday)

PAPER -I

1. The correct playing or singing time of the full version of the National Anthem of India is approximately:
A) 52 seconds. B) 54 seconds. C) 55 seconds. D) 57 seconds.
2. Where is Arichal Munai situated?
A) Kerala B) Maldives C) Sri Lanka D) Tamil Nadu
3. Set in the frame of a small Indian village, "To Kill a Tiger", of the fame of 2024 Academy Awards, had its world premiere at:
A) Toronto International Film Festival, 2022
B) International Film Festival of India, 2022
C) Cannes Film Festival, 2022
D) London Independent Film Festival
4. UPI was launched by:
A) IMPS in 2016 B) IMPS in 2018 C) NPCI in 2016 D) NPCI in 2018
5. As per the provision of which Article of Indian Constitution, the Lok Sabha is the 'Lower House' of the parliament?
A) Article 59 B) Article 69 C) Article 79 D) Article 89
6. From where did the Houthi movement emerge?
A) Burkina Faso B) Haiti C) Honduras D) Yemen
7. Between which period did the Maratha Military Landscapes of India develop?
A) between 15th and 17th centuries B) between 17th and 19th centuries
C) between 16th and 17th centuries D) between 18th and 19th centuries
8. Match List I (Mission) with List II (Person)
List I: i- Aditya L1, ii- Chandrayaan-3
List II: a- Muthayya Vanitha, b- Nigar Shaji, c- P Veeramuthuvel
A) i-a, ii-b B) i-b, ii-c C) i-b, ii-a D) i-a, ii-c
9. Match List I (Tournament) with List II (Place)
List I: i- Hockey5s Women World Cup, ii-2024 ISSF World Cup
List II: a-Cairo, b-Muscat, c-Singapore
A) i-a, ii-b B) i-b, ii-c C) i-b, ii-a D) i-a, ii-c
10. Starting with the earliest, arrange i-Harsh Vardhan Shringla, ii-Taranjit Singh Sandhu, iii- Navtej Sarna in the correct chronological order of their becoming Ambassador to USA
A) i, ii, iii B) ii, iii, i C) iii, i, ii D) i, iii, ii
11. The first scientist on whom Bharat Ratna conferred was?
A) B C Roy B) C N R Rao C) C V Raman D) C R Rao
12. For about how many years did Chandragupta Maurya rule?
A) 10 years B) 14 years C) 24 years D) 34 years
13. Who is usually credited for coining the term Artificial Intelligence (AI) ?
A) Arthur Samuel B) Gottfried Achenwal C) Isaac Asimov D) John McCarthy
14. Aimed at stopping its transmission at the sub-national level by 2027, for which disease a new treatment regimen has been decided recently?
A) Chicken pox B) Leprosy C) Rabies D) Tuberculosis
15. Where did Namibian Cheetah, Jwala, recently give birth to three cubs?
A) Kalesar National Park B) Kanha National park
C) Keoladeo National Park D) Kuno National Park
16. With the entry of which country did NATO become a 31-member organisation?
A) Finland B) Holland C) Iceland D) Ireland

34. Where is Ancient House Museum, known for the legacy of Maharaja Duleep Singh, situated?
A) Norfolk County B) Middlesex County C) Surrey County D) Sussex County
35. India recently became the fourth-highest 'equity market' globally by replacing:
A) China B) Hong Kong C) Japan D) Singapore
36. Who undertakes The National Eligibility Entrance Test (UG)?
A) NATA B) NCT C) NEPT D) NTA
37. Which political party does Sheikh Hasina, the Prime Minister of Bangladesh, represent?
A) Awami League B) Bangladesh Nationalist Party
C) Jatiya Party D) Workers Party of Bangladesh
38. Under which Act the SIMI has been declared as an 'Unlawful Association'?
A) Unlawful Activities (Prevention) Act (UAPA) 1957
B) Unlawful Activities (Prevention) Act (UAPA) 1967
C) Unlawful Activities (Prevention) Act (UAPA) 1977
D) Unlawful Activities (Prevention) Act (UAPA) 1987
39. Match List I (Mission) with List II (Year of start)
List I: i-National Quantum Mission, ii- Mission LiFE
List II: a-2021, b- 2022, c-2023
A) i-a, ii-b B) i-b, ii-c C) i-c, ii-b D) i-c, ii-a
40. Match List I (Person) with List II (Field)
List I: i- Beno Zephine, ii-Kariman, iii- Hseih Su-wei
List II: a- Diplomat, b-Singing, c-Tennis
A) i-a, ii-b, iii-c B) i-b, ii-c, iii-a C) i-a, ii-c, iii-b D) i-b, ii-a, iii-c
41. Find the missing term of the series:
101, 103, 113, 120, ? 138
A) 115 B) 123 C) 132 D) None of these
42. Find the next term of the series
2, 20, 72, 176, 350, ?
A) 704 B) 692 C) 612 D) 454
43. In the following question find out the alternative which will replace the question mark (?):
Carbon : Diamond
Corundum : ?
A) Emerald B) Ruby C) Pukhraj D) Pearl
44. In a coding scheme, a word is coded as product of positions of its letters in English alphabet. However, for the purpose of calculating product, only unique letters are considered, for example, in word FELL, L would be considered only once, and code would be 360. Which of these words would have largest code?
A) ACACIA B) BASS C) SHY D) DADDY
45. A total of 83 persons are standing in a queue. Between Aman and Ajay, there are 34 persons standing. Which of these could be position of Aman so that it is possible to uniquely determine position of Ajay?
X : 12th from the front Y : 41st from behind Z : 59th from behind
A) Only X B) Both Y and Z C) Both X and Z D) Only Y

46. Below is given a pair of questions, which are required to be answered, and a triad of statements. Which group of statements is sufficient to answer both the questions?
 Statement 1 : P and U are sitting on left and right sides of T, respectively
 Statement 2 : P, Q, R, S, T and U are sitting around a round table with six chairs
 Statement 3 : Q is not sitting on the immediate left side of R
 Question 1 : Who is sitting opposite to Q?
 Question 2 : Who is sitting to the right of Q?
 A) Only statements 1 and 2 B) Only statements 2 and 3
 C) All three statements together D) Questions cannot be answered even with all statements

Directions (Q. 47 –49) Seven persons are sitting in a straight line. Four of them are facing south and remaining of them are facing north. They also like different colours black, white, green, yellow, brown, pink and red but not necessarily in the same order. Those seven people are also sitting in alphabetical order from left end. The person who likes green sits second to the left of P. Two persons sit between the one who likes green and the one who likes white. The immediate neighbours of the one, who likes white faces opposite directions (i.e. if one faces to north then the other faces to south vice versa). Q likes brown colour. The one who likes pink sits second to the right to Q. Only one person sits between R and the one, who likes yellow. The persons who like white and black are immediate neighbours. The one, who likes red sits third to the right of the person who likes pink. Q and R face opposite directions (i.e. if one faces north then the other faces south vice versa). The one who likes white faces south. The person who likes yellow faces north.

47. Who among the following persons faces north direction
 A) R B) S C) P D) Q
48. Which of the following colour does R like?
 A) green B) yellow C) pink D) black
49. If black is related to P and white is related to Q, then brown is related to whom?
 A) R B) S C) T D) O
50. For its 3 projects, an office invited tenders from 45 registered companies. For Project-1, 25 companies gave the tenders. For Project-2, 35 companies gave the tenders, and for Project-3, tenders were given by 30 companies. While 10 companies gave tenders for Project-1 and Project-2 only, 15 companies gave tenders for Project-3 only. If 05 companies gave tenders for all the three projects, then how many companies had given tenders for atleast two projects?
 A) 20 B) 25 C) 30 D) Data inadequate
51. Which of the following meaning of the arithmetical signs will yield the value 'zero' for the given expression? $200 \times 100 + 300 \times 200 - 10 \div 2 + 40$
 A) + means -, - means \times , \times means \div , \div means +
 B) + means -, - means \div , \times means +, \div means \times
 C) + means \times , - means -, \times means \div , \div means +
 D) + means \div , - means +, \times means -, \div means \times
52. The parents have m number of children. The average age of father, mother and m children is 20. The father is 48 years old, and the average age of mother and m children is 16. The number m (numerical value) is:
 A) 3 B) 6 C) 1 D) 2
53. At what time between 5 and 6 are the hands of a clock coincident?
 A) 22 minute past 5 B) 30 minute past 5 C) $22\frac{8}{11}$ minute past 5 D) $27\frac{3}{11}$ minute past 5
54. The Door of Aditya's house faces the East. From the back side of his house, he walks straight 50 meters, then turns to the right and walks 50 meters again. Finally, he turns towards left and stops after walking 25 meters. Now, find the shortest distance and the direction of Aditya from the starting point ?
 A) 90 meters approx North West B) 125 meters approx North West
 C) 90 meters approx South West D) None of these

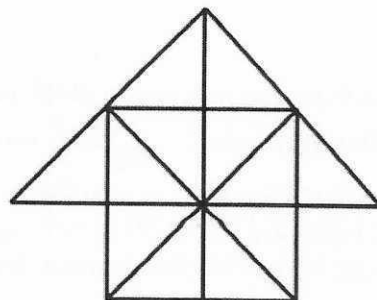
Directions (Q. 55 – 56) A, B, C, D, E, F are members of a family. They are engineer, stenographer, doctor, draftsman, lawyer and judge (not in order). A, the engineer is married to the lady stenographer. The judge is married to the lawyer. F, the draftsman is the son of B and brother of E. C, the lawyer is the daughter in law of D. E is the unmarried doctor. D is the grandmother of F. There are two married couples in the family.

55. What is the profession of D?
 A) Judge B) Stenographer C) Doctor D) Cannot be determined
56. Which of the following is / are a couple / couples?
 A) AD only B) BC only C) Both AD and BC D) Both AC and BD
57. Ninety one small cubes of same size are arranged in two cubes of sides 4cm and 3cm each. The bigger cube is coloured red on two opposite faces, white on two adjacent faces, and blue on the remaining faces while the smaller one is coloured white on two opposite faces, blue on two adjacent faces and red on the remaining faces. How many cubes are coloured blue on at least one face?
 A) 41 B) 43 C) 45 D) 47
58. One figure from the set of problem figures, marked as 1, 2, 3, 4, 5 is missing and this missing figure is represented by the sign '?'. Choose one figure from the set of answer figures marked as A), B), C), D) which completes the series of problem figures, based on a certain rule and replaces the sign '?'.

| Problem Fig. | | | | | Answer Fig. | | | |
|--------------|-------|-------|----|-------|-------------|-------|-------|-------|
| □ | ○ | = | ? | T | X | ○ | □ | X |
| = | X | T | ? | ○ | □ | X | X | = |
| ○ T X | T □ = | X ○ □ | ? | □ X = | ○ = T | T □ = | T = ○ | ○ □ T |
| 1) | 2) | 3) | 4) | 5) | A) | B) | C) | D) |

Directions (Q. 59 – 61) There are eight employees of a company and all of them are working on eight different designation of a bank viz. Chairman, CFO, GM, DGM, AGM, Manager, Junior manager, and Clerk. All the designations given are to be considered in a given order (as Chairman is considered as Senior most and Clerk is considered as the Junior most). Only two persons are senior to B. One designation lies between B and G. The number of persons junior to G is same as the number of persons senior to C. H is just senior to E, but junior to C. More than four designations lie between H and F. D is junior to A.

59. Four of the following are alike in a certain way and hence they form a group. Which one of the following does not belong to that group?
 A) A-F B) B-A C) H-D D) G-A
60. How many designation gaps are between A and D?
 A) More than three B) Two C) Three D) One
61. How many persons are junior to H?
 A) One B) More than four C) Four D) Three
62. In the following question, count the number of triangles and squares in the given figure



- A) 26 triangles, 5 squares B) 28 triangles, 5 squares
 C) 26 triangles, 6 squares D) 28 triangles, 6 squares

Directions (Q. 63 – 64) Below are given some statements followed by some conclusions. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

63. **Statements:**

No market is home
 Only a few Home are Room
 Only a few Room is vance

Conclusions:

I. Some home are vance

II. Some market can never be Room

A) If only conclusion I follows

B) If neither conclusion I nor II follows

C) If either conclusion I or II follows

D) If only conclusion II follows

64. **Statements:**

Some lanes are poles
 All poles are skies
 Some skies are boxes
 No box is bottle

Conclusions:

I. Some bottles are lanes

II. Some poles are lanes

III. No bottle is lane

A) Only I follows

B) Only II follows

C) Only III follows

D) Only either I or III follows

65. Atleast 2 boys out of A, B, C and D and atleast 2 girls out of P, Q, R and S have to be chosen to form a group of 5 members. Neither A nor C can go with Q; Neither P nor S can go with B; Q and R cannot be together. Which of the following is an acceptable group?

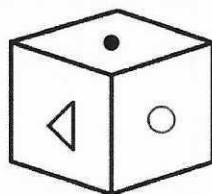
A) ARCQP

B) PSRQD

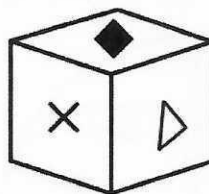
C) PSBAD

D) PSRAD

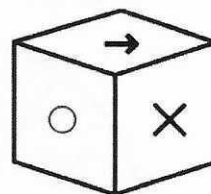
66. A cube has six different symbols drawn over its six faces the symbols are dot, circle, triangle, square, cross and arrow. Three different positions of the cube are shown in figures X, Y, Z.



(X)



(Y)



(Z)

Which symbol occurs at the bottom of fig (Y)?

A) Arrow

B) Triangle

C) Circle

D) Dot

67. How many pairs of letters are there in the word 'PERSUADE' each of which have as many letters between them in the word as they have between them in the English alphabet?

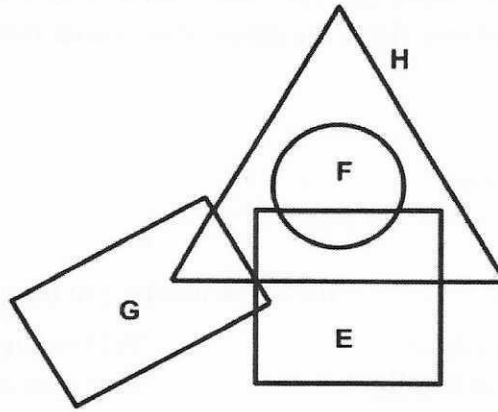
A) One

B) Two

C) Three

D) More than four

68. The Triangle stands for Hindi-speaking people, circle for French-speaking, Square for English-speaking and rectangle for German-speaking people.

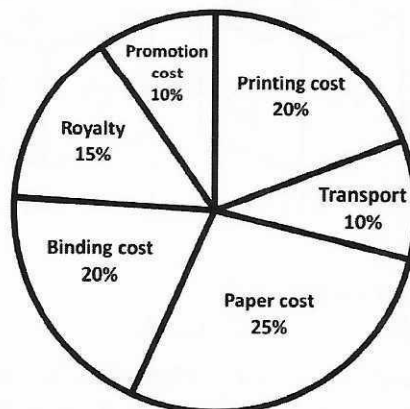


In the Diagram, which one of the following statements is true?

- A) There are some people who speak all four languages.
 B) Some German speaking people can speak either Hindi or English.
 C) Some English speaking People can speak all the languages.
 D) All Hindi speaking people speak French but not German
69. Statements: $L = P \leq W < V \leq K \geq Q$; $B < L$; $K = M$
 Conclusion: **I.** $L \geq Q$ **II.** $W = M$
 A) Only conclusion I is true B) Only conclusion II is true
 C) Either conclusion I or II is true D) Neither conclusion I nor II is true
70. In the following question, select the missing number (?) from the given responses:

| | | |
|----|----|----|
| 4 | 10 | 22 |
| 8 | 5 | 14 |
| 10 | 3 | ? |

- A) 13 B) 14 C) 11 D) 12
71. The following pie-chart shows the percentage distribution of the expenditure incurred in publishing a book. Study the pie chart and answer the question based on it:



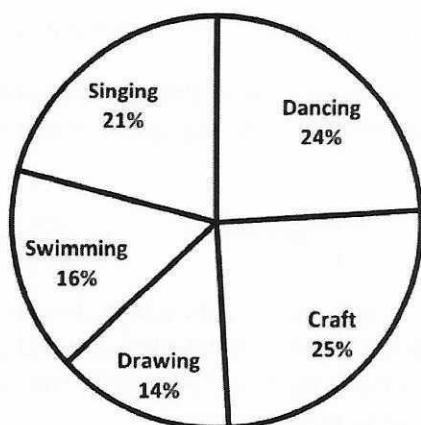
What is the central angle of the sector to the expenditure incurred on Royalty:

- A) 15° B) 24° C) 54° D) 48°

72. Study the pie-charts carefully and answer the question given below:

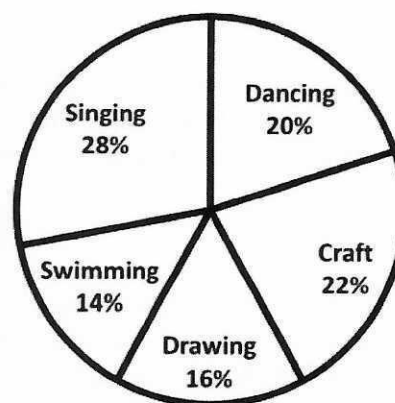
Percentage of students enrolled in different Activities in a school

$N = 3000$



Percentage break-up of girls enrolled in these activities out of the total students

$N_1 = 1750$



What is the respective ratio of number of girls enrolled in swimming to the number of boys enrolled in swimming:

- A) 47 : 49 B) 23 : 29 C) 29 : 23 D) 49 : 47
73. In a series of 10 observations, the algebraic sum of deviations from 15 is -7 . Thus the mean is:
A) 14.3 B) 8 C) -0.7 D) 22
74. If an observation in the data set is negative, then its geometric mean is :
A) positive B) negative C) zero D) indeterminate
75. In a batch of 13 students 4 have failed. The marks of the successful candidates were 41, 57, 38, 61, 36, 35, 71, 50 and 40. Find the median marks:
A) 40 B) 50 C) 41 D) 38
76. The probability of guessing correctly at least 4 of the 6 answers on a true false examination is :
A) $12/32$ B) $8/32$ C) $10/32$ D) $11/32$
77. In a class, the average weight of 12 students and the class teacher is 17kg. If the age of the class teacher is not taken into consideration, then the average decreases by 2kg. Find out the weight of the class teacher.
A) 57 B) 68 C) 41 D) 71
78. The expenses on rice, wheat and oil of a family are in the ratio of 12 : 17 : 3. The prices of these articles are increased by 20%, 30% and 50%, respectively. Find the total percentage increase in the expenses of the family.
A) $14\frac{1}{8}\%$ B) $7\frac{1}{8}\%$ C) $56\frac{1}{8}\%$ D) $28\frac{1}{8}\%$
79. Two vessels P and Q contain wine and water in the ratios of 5 : 2 and 8 : 5, respectively. Find the ratio in which these mixtures are to be mixed to get a new mixture containing wine and water in the ratio of 9 : 4.
A) 2 : 7 B) 7 : 2 C) 7 : 3 D) 3 : 7
80. A, B and C together start a business. B invests $1/6$ of the total capital while investments of A and C are equal. If the annual profit on this investment is ₹ 33600, find the difference between the profits of B and C.
A) ₹ 8400 B) ₹ 7200 C) ₹ 6000 D) ₹ 9600
81. If 12 engines consume 30 metric tonnes of coal when each is running 18 hour a day, how much coal will be required for 16 engines, each running 24 hour a day, it being given that 6 engines of former type consume as much as 8 engines of latter type?
A) 10 tonnes B) 5 tonnes C) 25 tonnes D) 40 tonnes

82. Rashmi can do a piece of work in 16 days. Ravina can do the same work in $12\frac{4}{5}$ days while Gitika can do it in 32 days. All of them started to work together but Rashmi leaves after 4 days. Ravina leaves the job 3 days before the completion of the work. How long would the work last?
 A) 9 days B) 6 days C) 18 days D) 5 days
83. Two guns were fired from the same place at an interval of 26 min. A person in a train approaching the place hears the 2nd report 25 min after the 1st. Find the speed of the train, supposing that sound travels at 660m per second.
 A) $\frac{2376}{25}$ km/hr. B) $\frac{2376}{26}$ km/hr. C) $\frac{1188}{25}$ km/hr. D) $\frac{1188}{26}$ km/hr.
84. At his usual rowing speed, Kapil can travel 12 miles downstream in a certain river in 6 hr less than he takes to travel the same distance upstream. But, if he could double his usual rowing speed for his 24 mile round trip, the downstream 12 mile would then take only 1 hr less than the upstream 12 miles. What is the speed of the current in mile/hr.
 A) $2\frac{2}{3}$ mile/hr. B) $3\frac{2}{3}$ mile/hr. C) $5\frac{2}{3}$ mile/hr. D) $7\frac{2}{3}$ mile/hr.
85. A dishonest dealer sells his goods at 10% loss on cost price and uses 30% less weight. What is his profit or loss percent?
 A) $28\frac{4}{7}$ % Loss B) $28\frac{3}{7}$ % Gain C) $28\frac{3}{7}$ % Loss D) $28\frac{4}{7}$ % Gain
86. What rate percent does Shantanu get for his money when in discounting a bill due 30 months hence he deducts 30% of the amount of the bill?
 A) $17\frac{2}{7}$ % B) $17\frac{3}{7}$ % C) $17\frac{5}{7}$ % D) $17\frac{1}{7}$ %
87. Ramesh lent out of 40% of a certain sum at the annual rate of 15%, he lent 50% of the remaining at the annual rate of 10% and the rest amount was lent out at 18% per annum. Find the annual rate on whole sum.
 A) 13.4 % B) 14.33 % C) 14.4 % D) 13.33 %
88. At what rate of compound interest per annum will a sum of ₹ 2400 becomes ₹ 2696.64 in 2 year?
 A) 6 % B) 8 % C) 7 % D) 9 %
89. The perimeter and Area of a right angled triangle are 126 & 630 respectively. The sides of the triangle are:
 A) 45, 28, 53 or 28, 45, 53 B) 40, 34, 52 or 34, 40, 52
 C) 48, 24, 54 or 24, 48, 54 D) Data Inadequate

90. Consider the following probability distribution

| | | | |
|------|-----|-----|-----|
| X | 1 | 2 | 3 |
| P(X) | 0.3 | 0.3 | 0.4 |

Var (X) will be

- A) 5.1 B) 2.1 C) 0.69 D) 0.59
91. When all the observations are multiplied by K, variance is doubled. What is the value of K:
 A) $\frac{1}{\sqrt{2}}$ B) $\sqrt{2}$ C) $\frac{1}{2}$ D) None of the above
92. In what ratio of line $x - y - 2 = 0$ divides the line segment joining (3, -1) and (8, 9)?
 A) 2 : 3 B) 2 : 1 C) 1 : 3 D) 1 : 2

93. Two cyclists start biking. The second cyclist travels at 10 miles per hour and starts 3 hours after the first cyclist who is travelling at 6 miles per hour. How much time will pass before the second cyclist catches up with the first from the time the second cyclist started biking?
 A) 2 hours B) $4\frac{1}{2}$ hours C) $5\frac{3}{4}$ hours D) $7\frac{1}{2}$ hours
94. If cube roots of unity are $1, \omega, \omega^2$ then roots of the equation $(x-1)^3 + 8 = 0$ are
 A) $-1, 1 + 2\omega, 1 + 2\omega^2$ B) $-1, 1 - 2\omega, 1 - 2\omega^2$
 C) $-1, -1, -1$ D) $-1, -1 + 2\omega, -1 - 2\omega^2$
95. Which of the following is an AP?
 A) $-1, 3, -5, 7, \dots$ B) $\sqrt{2}, \sqrt{8}, \sqrt{18}, \sqrt{32}, \dots$
 C) $-2, 2, -2, 2, -2, \dots$ D) none of these
96. The limit of the sequence $\left(1 + \frac{1}{n}\right)^{n+1}$ is:
 A) 1 B) 0 C) e D) None of these
97. Let $f: \mathbb{R} \rightarrow \mathbb{R}$ given by $f(x) = [x]$; the greatest integer less than or equal to x . Then
 A) The set of points at which f is not continuous is countable
 B) The set of points at which f is not continuous is \mathbb{R} .
 C) f is strictly decreasing
 D) f is strictly increasing
98. Value of the integral $\int_{-2}^2 x\sqrt{x+2} dx$
 A) $\frac{16}{15}$ B) 0 C) $\frac{32}{15}$ D) None of these
99. Coefficient of x^7 in $(1 + 3x - 2x^3)^{10}$ is equal to
 A) 62640 B) 26240 C) 64620 D) None of these
100. Angle between the planes $\vec{r} \cdot (2\hat{i} - \hat{j} + \hat{k}) = 6$ and $\vec{r} \cdot (\hat{i} + \hat{j} + 2\hat{k}) = 5$ is
 A) $\frac{\pi}{2}$ B) $\frac{\pi}{3}$ C) $\frac{\pi}{4}$ D) None of these

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03.03.2024, Answer Key : Paper -I

| Q.No. | Ans | Q.No. | Ans | Q.No. | Ans | Q.No. | Ans |
|--------------|------------|--------------|------------|--------------|------------|--------------|------------|
| 1 | A | 26 | B | 51 | B | 76 | D |
| 2 | D | 27 | D | 52 | B | 77 | C |
| 3 | A | 28 | C | 53 | D | 78 | D |
| 4 | C | 29 | B | 54 | A | 79 | B |
| 5 | C | 30 | C | 55 | B | 80 | A |
| 6 | D | 31 | C | 56 | C | 81 | D |
| 7 | B | 32 | D | 57 | B | 82 | A |
| 8 | B | 33 | C | 58 | A | 83 | A |
| 9 | C | 34 | A | 59 | D | 84 | A |
| 10 | C | 35 | B | 60 | C | 85 | D |
| 11 | C | 36 | D | 61 | A | 86 | D |
| 12 | C | 37 | A | 62 | C | 87 | C |
| 13 | D | 38 | B | 63 | B | 88 | A |
| 14 | B | 39 | C | 64 | B | 89 | A |
| 15 | D | 40 | A | 65 | D | 90 | C |
| 16 | A | 41 | A | 66 | C | 91 | B |
| 17 | A | 42 | C | 67 | D | 92 | A |
| 18 | A | 43 | B | 68 | B | 93 | B |
| 19 | A | 44 | C | 69 | D | 94 | B |
| 20 | B | 45 | C | 70 | C | 95 | B |
| 21 | B | 46 | D | 71 | C | 96 | C |
| 22 | D | 47 | D | 72 | D | 97 | A |
| 23 | D | 48 | A | 73 | A | 98 | C |
| 24 | B | 49 | B | 74 | D | 99 | A |
| 25 | C | 50 | B | 75 | D | 100 | B |