

-
- d) $\frac{11}{12}$ e) None of these
- 12) If four balls are picked at random, what is the probability that two of them are green and two are blue?
a) $\frac{3}{5}$ b) $\frac{1}{2}$ c) $\frac{1}{18}$
d) $\frac{1}{70}$ e) $\frac{11}{12}$
- 13) In how many different ways can the letters of the word INDIGO be arranged?
a) 1680 b) 360 c) 2520
d) 840 e) 1260
- 14) 8 men can complete a piece of work in 12 days. 4 women can complete the same piece of work in 48 days and 10 children can complete that piece of work in 24 days. In how many days can 10 men, 4 women and 10 children together complete the work?
a) 12 days b) 15 days c) 6 days
d) 8 days e) None of these
- 15) If the digits of a two-digit number are interchanged, the number so obtained is greater than the original number by 27. If the sum of the two digits of the number is 11, what is the original number?
a) 47 b) 38 c) 74
d) 83 e) None of these
- 16) A boat takes 8 hours to cover a distance while travelling upstream. Whereas while travelling downstream, it takes 6 hours. If the speed of the stream is 4 kmph, what is the speed of the boat in still water?
a) 16 kmph b) 18 kmph c) 28 kmph
d) Cannot be determined e) None of these
- 17) If the numerator of a fraction is increased by 250% and the denominator by 400% the resultant fraction is $\frac{7}{19}$. What is the original fraction?
a) $\frac{9}{5}$ b) $\frac{5}{9}$ c) $\frac{10}{19}$
d) $\frac{5}{7}$ e) None of these
- 18) A, B, C and D are four consecutive even numbers and their average is 65. What is the product of A and D?
a) 4092 b) 4352 c) 4216
d) 3968 e) None of these
- 19) A sum of Rs.1634 is divided among A, B and C such that A receives 25% more than B and B receives 25% less than C. What is A's share in the amount?
a) Rs.456 b) Rs.494 c) Rs.570
d) Rs.628 e) None of these
- 20) The average of four positive integers is 72.5. The highest integer is 117 and the lowest integer is 15. The difference between the remaining two integers is 12. Which is the higher of the two remaining integers?
a) 76 b) 84 c) 74
d) Cannot be determined e) None of these
- 21) The difference between the simple interest and the compound interest obtained on a principal amount at 5% p.a. after 2 years is Rs.35. What is the principal amount?
-

- a) Rs.12000 b) Rs.14000 c) Rs.16000
d) Rs.13000 e) None of these
- 22) A circle and a rectangle have the same perimeter. The sides of the rectangle are 14 cm and 30 cm. What is the area of the circle?
a) 312 cm^2 b) 1218 cm^2 c) 456 cm^2
d) Cannot be determined e) None of these
- 23) In how many ways can a committee consisting of 5 men and 6 women be formed from 8 men and 12 women?
a) 744 b) 612 c) 778
d) 628 e) None of these
- 24) In a test consisting of 80 question carrying one mark each, Shilpi answered 65% of the first 40 question correctly. What percent of the other 40 questions does she need to answer correctly to score 75% on the entire test?
a) 40% b) 75% c) 60%
d) 85% e) None of these
- 25) After giving a discount of 30% on marked price a shopkeeper gets a profit of 40% on cost price. What percent of the cost price is the marked price?
a) 25% b) 44% c) 50%
d) 56% e) None of these
- 26) A dishonest dealer sells the goods at 10% loss on the cost price but uses 25% less weight. What is the percentage profit or loss?
a) 25% profit b) 20% loss c) 22% loss
d) 20% profit e) 24% profit
- 27) On Rs.3000 invested at a simple rate of interest 4% per annum, Rs.600 is obtained as dinterest in a certain number of years. In order to earn Rs.2000 as interest on Rs.5000 in the same number of years, what should be the rate of simple interest?
a) 7% b) 8% c) 6%
d) 5% e) None of these
- 28) Divide Rs.5500 between A and B so that A's share at the end of 3 years may equal B's share at the end of 5 years, compound interest being at 20%.
a) A-3000, B-2500 b) A-2600, B-2900 c) A-2000, B-3500
d) A-2400, B-3100 e) A-2500, B-3000
- 29) A can do a piece of work in 8 days and B can do it in 5 days. They work together for 2 days and then A leaves the work. How long will now B take to finish it?
a) $1 \frac{3}{4}$ days b) $1 \frac{2}{5}$ days c) $1 \frac{3}{7}$ days
d) $1 \frac{4}{9}$ days e) $1 \frac{5}{7}$ days
- 30) A man travels 420 km in 5 hours partly by train and partly be car. Had he travelled all the way by train he would have saved $\frac{3}{4}$ of the time he was in car and would have arrived at his destination 2 hours early. Find the distance he travelled by car.
a) 89.72 km b) 90.69 km c) 93.34 km
d) 96.71 km e) 98.54 km

37. Four of the following five form a group based on the days that they are staged. Which one of the does not belong to that group?
 a) EC b) **FD** c) CA
 d) AF e) BD
38. Which play is staged immediate before the day play E is staged?
 a) B b) A c) F
 d) D e) **There is no such play staged**
39. If play D was staged on Monday, which of the following plays would definitely be staged on Saturday (all the other conditions given above remain the same)?
 a) B b) A c) **E**
 d) E or B e) Can't be determined
40. Which play is staged on Thursday?
 a) B b) E c) D
 d) **F** e) Can't be determined

Directions (Q. 41-46) Study the following information to answer the given questions.

Nine friends L, M, N, O, P, Q, R, S and T are sitting around a circle facing the centre. T sits 5th to the right of R. N is not an immediate neighbour of either R or T. M sits between S and P. N sits 4th to the left of P. O sits 2nd to the right of Q. S is not an immediate neighbour of T.

41. Who is 2nd to the right of M?
 a) **R** b) T c) L
 d) Can't be determined e) None of these
42. If all the nine friends are made to sit alphabetically in the clockwise direction starting from L, positions of how many will remain unchanged (excluding L)?
 a) None b) One c) **Two**
 d) Three e) Four
43. Four of the following five are alike in a certain way based on their seating positions in the above arrangement and so form a group. Which is the one that does not belong to the group?
 a) LP b) SP c) **TS**
 d) LN e) QO
44. Which of the following is O's position with respect to M in the anti-clockwise direction starting from M?
 a) 4th to the left
 b) **5th to the right**
 c) 3rd to the right
 d) 5th to the left
 e) None of these
45. If S:Q then N:?
 a) R b) O c) **L**
 d) T e) None of these
46. Who is to the immediate left of T?
 a) O b) Q c) **L**
 d) Can't be determined e) None of these

Directions (Q. 47-50) These questions are based on six statements. For each question two conclusions numbered I and II are given. 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 and definitely follows from the given statements disregarding commonly known facts.

Give answer

- a) If only conclusion I follows
- b) If only conclusion II follows
- c) If either conclusion I or conclusion II follows
- d) If neither conclusion I nor conclusion II follows
- e) If both conclusions I and II follow

Statements:

- Some necklaces are bangles.
- All bangles are ornaments.
- Some ornaments are treasures.
- No treasure is picture.
- All colours are pictures.
- Some pictures are necklaces.

47. Conclusions:

- I. All treasures if they are also bangles they are also necessarily ornaments.
- II. All necklaces if they are also colours they are also necessarily pictures.

48. Conclusions:

- I. All ornaments which are necklaces are necessarily bangles.
- II. No colour is treasure.

49. Conclusions:

- I. Some colours are necklaces.
- II. Some ornaments are necklaces.

50. Conclusions:

- I. Some treasures are not bangles.
- II. Some treasures that are bangles are also necklaces.

Directions (Q. 51-55) Study the following information to answer the given questions.

Seven friends T, U, V, W, X, Y and Z are sitting in a straight line facing North. W sits 5th to the right of T. W does not sit at any of extreme ends. Two people sit between Z and X. Y sits 3rd to the left of U. Y sits exactly in the middle. Z is not an immediate neighbour of Y.

51. What is Z's position with respect to W?

- a) 2nd to the left
- b) 3rd to the right
- c) **4th to the left**
- d) 3rd to the left
- e) 4th to the right

52. Who is 2nd to the right of T?

- a) Y
- b) X
- c) U
- d) V
- e) None of these

53. Four of the following five are alike in a certain way based on their seating positions in the above line and so form a group. Which is the one that does not belong to the group?

-
- a) UW b) XV c) ZT
d) YV e) WX

54. If all the seven friends are made to sit alphabetically from right to left, positions of how many will remain unchanged?

- a) None b) One c) Two
d) Three e) Four

55. Who sit at the extreme ends of the line?

- a) XZ b) VX c) YZ
d) XT e) TU

Directions (Q. 56-60) Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and give answer

- a) If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question
b) If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question
c) If the data either in statement I alone or in statement II alone are sufficient to answer the question
d) If the data even in both statements I and II together are not sufficient to answer the question
e) If the data in both statements I and II together are necessary to answer the questions

56. Is S, T's aunt?

- Statements: I. K is the father of two children P and T.
 II. T is S's niece.

57. Who among S, T, U and V is the tallest?

- Statements: I. U is shorter than only T.
 II. V is taller than only S.

58. Out of three friends L, M and N each one likes chocolates, ice-cream or chips (not necessarily in the same order) who out of the three, likes chips?

- Statements: I. L does not like chocolates.
 II. N likes ice-cream.

59. What is today's date (not taking into account the month and the year)?

- Statements: I. Exactly four weeks ago, the date was 24th.
 II. The previous month was one of the longest months in terms of number of days.

60. How will 'WATCH' be coded in the code language?

- Statements: I. In that code language, 'PERIL' is coded as 'QFQJM'.
 II. In that code language, 'FOSTERS' is coded as 'GPTSFST'.

61. **Effect:** The temple at the religious site wears a deserted look will with the number of devotees trickling down.

Which of the following can be a possible cause of the above effect?

- a) **A structural engineer had visited the temple a monthback and had declared the structure unsafe.**
b) The temple is facing a drastic depletion of its funds which had accumulated over the years due to offerings made by devotees
c) The local corporation decided to donate a huge amount of money to the temple for its renovations
-

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- d) The village housing the religious site has qualified priests to perform religious ceremonies
 - e) A famous actor recently visited the temple and paid his respects to the deity

62. **Statement:** The income tax authorities carried out raids at three different business houses in the city last week.

Which of the following can be a possible effect of the above statement?

- a) The three business houses are regular defaulters in payment of their income tax
- b) The income tax department had received a tip off about the illegal activities going on in the three business houses
- c) The government decided to look into the matter and has appointed an inquiry committee
- d) **Other business houses took immediate action to clear off all their income tax dues. In order to avoid a raid on their establishments**
- e) The authorities intend to conduct raids in several other business houses in the vicinity

63. **Effect:** As a step to regulate private hospitals, the state health department is framing rules to ensure all such hospitals are registered with it.

Which of the following can be a possible cause of the above statement?

- a) The department realised that private hospitals charge much less for treatment as compared to government hospitals
- b) Government run hospitals do not maintain the same standards as private hospitals
- c) The department realised that several hospitals were rejecting cases stating lack of infrastructure
- d) Apart from the number of doctors, nurses and beds, the kind of procedure a hospital can carry out based on its infrastructure will also be registered and detailed
- e) **Private hospitals not registering with the department shall be forced to do so and will have to pay hefty penalties**

64. **Statement:** The constable has been recommended for a suitable reward by his superior in recognition of his sincere duty and busting of several gangs of criminals actively involved in the loot and incidents of pick-picketing.

Which of the following can be assumption implicit in the above statement?

- a) The superior is certain that the recommendation would be denied
- b) The number of criminals apprehended by this particular constable was exceptionally high
- c) The constable desires to be momentarily compensated for his efforts
- d) The superior wants to set an example for his other juniors by recommending the reward
- e) **Rewards recognising the sincerity and accomplishments of policemen are given**

65. **Statement:** The college has finally received accreditation and has gained the status of a deemed university.

Which of the following can be a possible effect of the above statement?

- a) The principal of the college will now have to be a retired government official
- b) Number of students seeking admission to this college in the next academic year would drop significantly
- c) The college will charge lesser fees from all its students despite not getting a grant from the government
- d) The college will reduce the number of courses that it runs by a significant margin
- e) **The reputation of the college amongst the students population in general has improved**

Directions (Q. 66-70) Study the following information to answer the given questions.

Seven friends – T, U, V, W, X, Y and Z are students of a school studying in different standards – VI, VII and VIII. Not less than two and not more than three students study in each

standard. Each of them likes to play a different sport in his spare time, viz., Carrom, Badminton, Chess, Scrabble, Cards, Table Tennis and Basketball, but not necessarily in the same order.

X does not study in standard VI and likes Table Tennis. The one who likes Chess studies in standard VIII. U studies in standard VII only with Y. V likes Carrom and studies in the same standard as W and T. No one studying in standard VI likes Badminton or Cards. W does not like Basketball and U does not like Cards.

66. Which sport does U like?
a) Table Tennis b) **Badminton** c) Basketball
d) Carrom e) Can't be determined
67. Who likes to play Scrabble?
a) **W** b) U c) T
d) Z e) None of these
68. Which of the following represents the students studying in standard VIII?
a) X, Y b) Z, T c) **X, Z**
d) U, Y e) None of these
69. Which of the following combinations student-standard-sport is correct?
a) W-VIII-Scrabble
b) U-VI-Badminton
c) T-VI-Cards
d) **Z-VIII-Chess**
e) None of these
70. Which sport does Y like?
a) Scrabble
b) **Cards**
c) Badminton
d) Chess
e) Can't be determined

English Language

Directions (Q. 71-80) Read the following passage carefully and answer the questions given below it.

The King of Kanchi set off to conquer Kamat. He was victorious in battle. The elephants were laden with sandalwood, ivory gold and precious stones, taken from the conquered kingdom of Kamat. They would be a part of the victory parade for his subjects. On his way back home he stopped at a temple, finished his prayers to the goddess and turned to leave. Around his neck, was a garland of scarlet hibiscus and as was the custom for all, his forehead was anointed with red sandal paste. His Minister and the court jester were his only companions. At one spot, in a mango grove by the wayside, they **spied** some children play. The King said, "Let me go and see what they are playing."

The children had lined up two rows of clay dolls and were playing warriors and battles. The king asked, "Who is fighting with whom?" They said, "Kamat is at battle with Kanchi." The king asked, "who is winning and who is the loser?" The children puffed their chests up and said, "Kamat will win and Kanchi will lose." The Minister **froze** in disbelief, the King was furious and the jester burst into laughter.

The King was soon joined by his troops and the children were still **immersed in** their game. The King commanded, "Cane them hard." The children's parents came running from the nearby village and said, "They are naïve, it was just a game, please grant them **pardon.**" The King called his commander and ordered, "Teach these children and the village a lesson so that they never forget the king of Kanchi." He went back to his camp.

That evening the commander stood before the King. He bowed low in shame and said, "Your Majesty, with the exception of hyenas and vultures, all lie silent in the village." The Minister said, "His Majesty's honour has been saved." The priest said, "The goddess has blessed our King." The jester said, "Your highness, please grant me **leave** to go now." The King asked, "But why?" The jester said, "I cannot kill, I cannot maim, I can only laugh at God's gift of life." Trembling in the face of the King's anger he bravely continued, "If I stay in your Majesty's court, I shall become like you and I shall forget how to laugh."

71. Why were the elephants carrying loads of gold and other valuables?
- This was what the king had looted from Kamat to distribute among his soldiers as a reward
 - This was the King's offering to the deity out of gratitude for making him victorious
 - It was what the King had plundered from Kamat to display to the people of his kingdom as a sign of victory**
 - So that the people of the kingdom of Kamat acknowledged him as their new ruler
72. Why did the King anoint his head with red sandal paste?
- As a mark of celebration to show he had been victorious
 - It was the usual practice for all devotees at the temple**
 - To show other devotees that he was king
 - To priest requested him to do so
73. Which of the following cannot be said about the jester?
- He was not a loyal subject of the king.
 - He was afraid of the king's temper.
 - He did not support the king's war against Karnat.
- A and C
 - Only A**
 - A and B
 - All of these
 - None of these
74. What excuse was given for the children's behaviour?
- They were disobedient to their parent's wishes
 - They were unaware of the true facts of the battle**
 - They were upset that their army had lost
 - They were in the habit of lying
75. Why did the jester laugh at the children's reply to the king?
- They correctly predicted the outcome of the battle.
 - Their reply was cheeky because they knew he was the king.
 - He wanted to show that their reply was a joke to save them from being punished by the king.
- Only A
 - A and B
 - Only C
 - B and C
 - None of these**
76. Which of the following is true in the context of the passage?
- The king stopped at the temple to see what else could be plundered
 - The people of the village to which the children belonged developed great respect for the king
 - The commander was ashamed at having obeyed the king's orders to cane the children**
 - The jester was unhappy that the king had defeated the army of Karnat
 - The children had shown disrespect to the goddess by playing so close to the temple

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77. Why did the jester resign from his post?
- a) He felt that the king was too influenced by the Minister
 - b) To show that he disapproved of the king's action of punishing the children
 - c) He did not want to accompany the king on his war campaign
 - d) He was no longer able to make the king laugh
 - e) **None of these**
78. Which of the following describes the Minister?
- A. He was jealous of the jester.
 - B. He was the king's most valuable advisor.
 - C. He did not have a good sense of humour.
- a) Only A b) **Only C** c) A and C
d) A and B e) None of these
79. Which of the following was/were the outcome/s of the soldiers beating the children?
- A. The animals began to howl and wanted to attack the soldiers.
 - B. The children's parents went to the king to beg for mercy.
 - C. The priest offered prayers to the goddess of the temple.
- a) Only A b) **Only B** c) A and B
d) All of these e) None of these
80. Why was the king angry with the children?
- a) Because the game they were playing was dangerous
 - b) They had lied to him
 - c) They did not recognize him as king
 - d) **They had unknowingly insulted him**
 - e) They were rude to him

Directions (Q. 81-85) Which of the phrases (1), (2), (3) and (4) given below each sentence should replace the word/phrase printed in bold in the sentence to make it grammatically correct? If the sentence is correct as it is given and no correction is required, mark (5) as the answer.

81. The poor Brahmin led a **hand to mouthful existence** and could use any job which paid him a little.
- a) handful to mouthful existence
 - b) **hand to mouth existence**
 - c) handing for mouthful existing
 - d) hand and mouth exist
 - e) No correction required
82. In order to **earning decent living** we need to have a good job which pays a substantial amount of money.
- a) earned decency life
 - b) earning decency live
 - c) **earn a decent living**
 - d) earned decently life
 - e) No correction required
83. We went to the famous restaurant to eat and were **served piped hot** food.
- a) served piping hotter
 - b) serving pipe hot
 - c) **served piping hot**
 - d) serve pipe hotten
 - e) No correction required

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84. Akshay considered Suresh a complete **pain in the neck** as he kept asking baseless questions.
- a) paining in the neck
 - b) painless neck
 - c) painful necks
 - d) pain in necking
 - e) **No correction required**
85. I **jump through hoop** to finish this project in time but was not rewarded adequately.
- a) **jumped through hoops**
 - b) jumping for hooping
 - c) jumped on hoop
 - d) jumping from hoop
 - e) No correction required

Directions (Q. 86-90) Each question below has two blanks, each blank indicating that something has been omitted. Choose the set of words for each blank which best fits the meaning of the sentence as a whole.

86. Adding to a growing body of research ____ cutting back on sweetened beverages it is now found that drinking ____ sugary drinks may help lower blood pressure.
- a) for, all
 - b) sustaining, increased
 - c) against, lesser
 - d) behind, more
 - e) **supporting, fewer**
87. The blame game for the air tragedy is already in full ____ with the authorities involved making attempts to ____ for themselves.
- a) sway, defend
 - b) view, try
 - c) fledged, protect
 - d) **swing, cover**
 - e) roll, hide
88. The actress, wearing a dark gray suit and open necked shirt, sat ____ the proceedings looking nervous throughout, occasionally frowning as her lawyer ____ with the judge.
- a) **through, spoke**
 - b) on, argued
 - c) for, addressed
 - d) with, discussed
 - e) along, lectured
89. It was an excellent social evening with people from all ____ of life getting a chance to let their hair ____.
- a) areas, drop
 - b) realms, flow
 - c) arena, undone
 - d) **walks, down**
 - e) types, loose
90. There can be no denying the fact that in sports, star coaches have the ____ to get something extra out of their ____.
- a) apprehension, work

- b) **ability, teams**
- c) fear, member
- d) capability, house
- e) desirous, players

Directions (Q. 91-100) In the following passage there are blanks, each of which has been numbered. These numbers are printed below the passage and against each, five words/phrases are suggested, one of which fits the blank appropriately. Find out the appropriate word/phrase in each case.

There is a considerable amount of research about the factors that make a company innovate. So is it possible to create an environment (91) to innovation? This is a particularly pertinent (92) for India today. Massive problems in health, education etc. (93) be solved using a conventional approach but (94) creative and innovative solutions that can ensure radical change and. (95) There are several factors in India's. (96) Few countries have the rich diversity that India or its large, young population (97). While these (98) innovation policy interventions certain additional steps are also required. These include (99) investment in research and development by (100) the government.

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|---------------------------------------|--|---------------------|
| 91. a) incentive
d) stimuli | b) facilitated
e) conductive | c) impetus |
| 92. a) doubt
d) objective | b) question
e) controversy | c) inference |
| 93. a) should
d) cannot | b) never
e) possibly | c) must |
| 94. a) need
d) necessary | b) consider
e) apply | c) requires |
| 95. a) increase
d) quantity | b) chaos
e) advantages | c) growth |
| 96. a) favour
d) challenges | b) leverage
e) praises | c) esteem |
| 97. a) endows
d) blessed | b) prevails
e) enjoys | c) occurs |
| 98. a) promotes
d) aid | b) endure
e) jeopardise | c) cater |
| 99. a) restricting
d) acute | b) inspiring
e) utilising | c) increased |
| 100. a) combining
d) both | b) participating
e) besides | c) also |

Answers:

1. The series is $3 \times 2 + 3 = 9$, $9 \times 3 - 4 = 23$, $23 \times 4 + 5 = 97$, $97 \times 5 - 6 = 479$, $479 \times 6 + 7 = 2881$, $2881 \times 7 - 8 = 20159$
Hence, there should be 97 in place of 99.

2. The series is $1 \times 2 + 1 = 3, 3 \times 2 + 0 = 6, 6 \times 2 - 1 = 11, 11 \times 2 - 2 = 20, 20 \times 2 - 3 = 37, 37 \times 2 - 4 = 70$
Hence, there should be 37 in place of 39
3. The series is $50 + 1^2 = 51, 51 - 2^2 = 47, 47 + 3^2 = 56, 56 - 4^2 = 40, 40 + 5^2 = 65, 65 - 6^2 = 29$.
Hence, there should be 40 in place of 42.
4. The series is $2 \times 2 + 7 = 11, 11 \times 3 - 6 = 27, 27 \times 4 + 5 = 113, 113 \times 5 - 4 = 561, 561 \times 6 + 3 = 3369, 3369 \times 7 - 2 = 23581$
Hence, there should be 11 in place of 13.
5. The series is $\times \frac{1}{2} + \frac{1}{2}, 1 + 1, \times 1 \frac{1}{2} + 1 \frac{1}{2} \dots$
Hence, there should be 5 in place of 6.
6. ? $32.630 = 27 \times 164 + 3379 = 4428 + 3379$
Or, ? $\approx 8167 + 33 = 8200$
7. ? $= \frac{134 \times 3894}{100} + \frac{38.94 \times 134}{100} \approx \frac{134 \times 3900}{100} + \frac{39 \times 134}{100}$
 $= 5226 + 52 = 5278 \approx 5280$
8. $(8471 \times 1.65\%) - (9326 \times 0.61)$
 $= 85 \times 1.6 - 93 \times 0.6 = 136 - 55.8$
 $\approx 80.2 \approx 80$
9. ? $= \frac{14198}{1547} \approx 9.17 \approx 9$
10. ? $= \frac{63.5 \times 8924.19}{100} + \frac{22 \times 5324.42}{100}$
 $= 63.5 \times 89 + 22 \times 53$
 $\approx 5651 + 1166 = 6817$
11. Total number of balls = $3 + 2 + 5 = 10$
So, $n(S) = {}^{10}C_3$
Now, $P(\text{at least one red}) = 1 - P(\text{no red})$
 $= 1 - \frac{{}^5C_3}{{}^{10}C_3}$
 $= 1 - \frac{10}{120} = \frac{11}{12}$
12. Picked P (2 green + 2 blue)
 \therefore required probability
 $= \frac{{}^2C_2 \times {}^3C_2}{{}^{10}C_4}$
 $= \frac{1 \times 3}{210} = \frac{1}{70}$
13. Total number of letters in the word INDIGO is 6. However 'I' occurs twice.
 \therefore required number of ways = $\frac{6!}{2!} = 360$
14. Work done by (8×12) men
 $= (4 \times 48)$ women = (10×24) children
i.e. 1 man = 2 women = 2.5 children
 \therefore required number of days = $\frac{10 \times 24}{10 \times 2.5 + 4 \times 2.5 - 2 + 10} = \frac{10 \times 24}{40} = 6$ days

15. We have,

$$\text{Difference of two digits} = \frac{27}{9} = 3$$

$$\text{Sum of two digits} = 11$$

$$\text{The two digits are } \frac{11+3}{2} \text{ and } \frac{11-3}{2}$$

i.e. 7 and 4. Thus, the number will be either 74 or 47. But the number will be 47 because $47 < 74$

16. Let the speed of the boat in still water be x kmph.

$$\text{Then, } (x + 4) \times 6 = (x - 4) \times 8$$

$$\text{Or, } 6x + 24 = 8x - 32$$

$$\text{Or, } x = 28 \text{ kmph}$$

17. Let the fraction be $\frac{x}{y}$

$$\text{Then, } \frac{\frac{350x}{100}}{\frac{500y}{100}} = \frac{7}{19}$$

$$\text{Or, } \frac{7x}{10y} = \frac{7}{19}$$

$$\text{Or, } \frac{x}{y} = \frac{10}{19}$$

18. Average = $\frac{x + x + 2 + x + 4 + (x + 6)}{4} = 65$

$$\text{Or, } x = 62 \text{ and } x + 6 = 68$$

$$\therefore \text{product of A and D} = 62 \times 68 = 4216$$

19. Here, $A : B = 125 : 100 = 5 : 4$

$$B : C = 75 : 100 = 3 : 4$$

$$\text{Now, } A : B : C = 15 : 12 : 16$$

$$\text{Hence, A's share} = \frac{15}{(15 + 12 + 16)} \times 1634 = \text{Rs. } 570$$

20. Let the remaining integers be x and $x + 12$

$$\text{Then, } 117 + x + (x + 12) + 15 = 72.5 \times 4$$

$$\text{Or, } 2x = 146$$

$$\therefore x = 73$$

$$\therefore \text{required number} = x + 12 = 73 + 12 = 85$$

21. Difference = sum $\left[\frac{7}{100}\right]^2$

$$\text{Or, } 35 = \text{sum} \left[\frac{5}{100}\right]^2$$

$$\therefore \text{sum} = 35 \times 400 = \text{Rs. } 14000$$

22. Perimeter of rectangle = $2(\text{length} + \text{breadth}) = 2(14 + 30) = 88 \text{ cm}^2$

$$\text{Now, perimeter of the circle} = 2\pi r$$

$$\text{Or, } 2\pi r = 88$$

$$\therefore r = \frac{44}{\pi}$$

$$\text{Area of the circle} = \pi r^2$$

$$= \pi \times \frac{44}{\pi} \times \frac{44}{\pi} = \frac{44 \times 44}{\pi} = \frac{44 \times 44}{22} \times 7 = 616 \text{ cm}^2$$

23. Required number of ways = ${}^8C_5 \times {}^{12}C_6 = 51744$

24. Required % = $\frac{60}{40} \times \frac{40 \times \frac{65}{100}}{100} \times 100 = \frac{34}{40} \times 100 = 85\%$

25. Let the CP be Rs.100.

Then, SP = Rs.140

$$\therefore \text{Marked price} = 140 \times \frac{100}{70} = \text{Rs.}200$$

$$\text{So, required percentage} = \frac{200}{100} \times 100 = 200\%$$

$$26. \text{Percentage loss or gain} = \frac{\text{percentage error in weight} \times \text{percentage loss}}{100 \times \text{percentage error in weight}} \times 100$$

$$= \frac{25}{100} \times \frac{10}{25} \times 100\% = \frac{15}{75} \times 100\% = 20\%$$

The positive sign indicates that there is a profit of 20%

$$27. \text{Time} = \frac{600 \times 100}{3000 \times 4} = 5 \text{ years}$$

$$\therefore \text{Rate} = \frac{2000 \times 100}{5 \times 5000} = 8\%$$

28. Suppose that share of A = Rs.x

Share of B = Rs. (5500 - x)

According to the question,

$$x \left(1 + \frac{20}{100}\right)^3 = (5500 - x) \left(1 + \frac{20}{100}\right)^2$$

$$\text{Or, } x \times \frac{6}{5} \times \frac{6}{5} \times \frac{6}{5} = (5500 - x) \times \frac{6 \times 6}{5 \times 5}$$

$$\text{Or, } \frac{6x}{5} = 5500 - x$$

$$\text{Or, } 11x = 5 \times 5500$$

$$\therefore x = 500 \times 5 = \text{Rs.}2500$$

Share of A = Rs.2500

Share of B = 5500 - 2500 = Rs.3000

$$29. \text{Work done by A in 1 day} = \frac{1}{8}$$

$$\text{Work done by B in 1 day} = \frac{1}{5}$$

$$\text{Work done in 2 days when A and B work together} = \left[\frac{1}{8} + \frac{1}{5}\right] \times 2 = \frac{13}{20}$$

$$\therefore \text{remaining work} = 1 - \frac{13}{20} = \frac{7}{20}$$

$$\therefore \text{remaining work will be done by B in } \frac{\frac{7}{20}}{\frac{1}{5}} = \frac{7}{20} \times 5 = \frac{7}{4} \text{ days} = 1 \frac{3}{4} \text{ days}$$

$$30. \frac{3}{4} \text{ of total time in car} = 2 \text{ hours}$$

$$\therefore \text{total time in car} = \frac{2 \times 4}{3} = \frac{8}{3} \text{ hours}$$

$$\text{Total time spent in train} = \left[5 - \frac{8}{3}\right] = \frac{7}{3} \text{ hours}$$

$$\text{If 420 km is covered by train, the distance covered} = \frac{420}{3} \times \frac{7}{3} = 326.66 \text{ km}$$

$$\therefore \text{Distance covered by car} = (420 - 326.66) = 93.34 \text{ km}$$

$$31. \text{Total candidates appeared from all six institutes in 2012} = 1923 + 2085 + 1894 + 1762 + 1532 + 1574 = 10770$$

$$\text{Total candidates qualified from all six institutes in 2012} = 243 + 255 + 264 + 197 + 210 + 223 = 1392$$

$$\therefore \text{required \%} = \frac{1392}{10770} \times 100 = 13\%$$

32. The number of candidates qualified from D over the given years

$$= \frac{175 + 182 + 120 + 248 + 190 + 197 + 205}{7}$$

$$= \frac{1313}{7} = 188.14 \approx 188$$

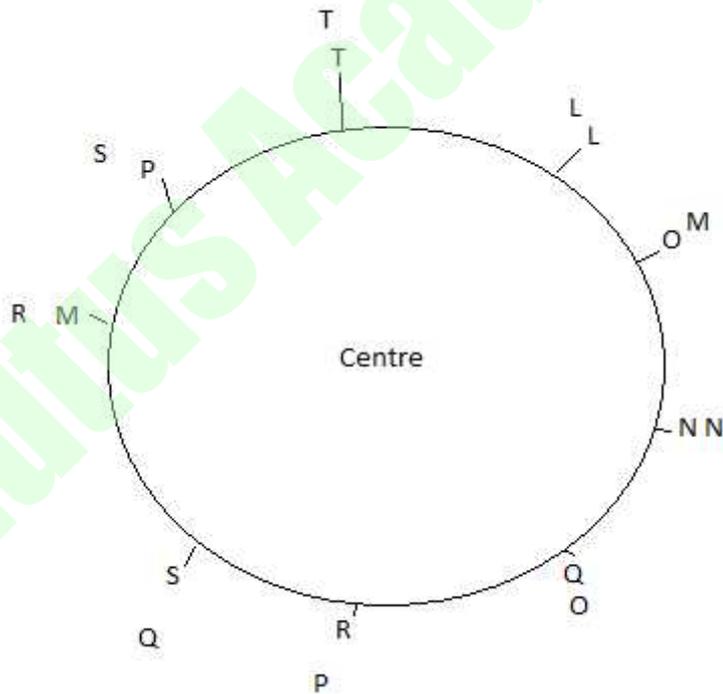
33. Percentage of candidates qualified over appeared is the highest in Institute D in 2010 = $\frac{248}{1748} \times 100 = 14.19\%$

34. Percentage of candidates qualified w.r.t. appeared from Institute B is the lowest in 2010 = $\frac{145}{1898} \times 100 = 7.63\%$

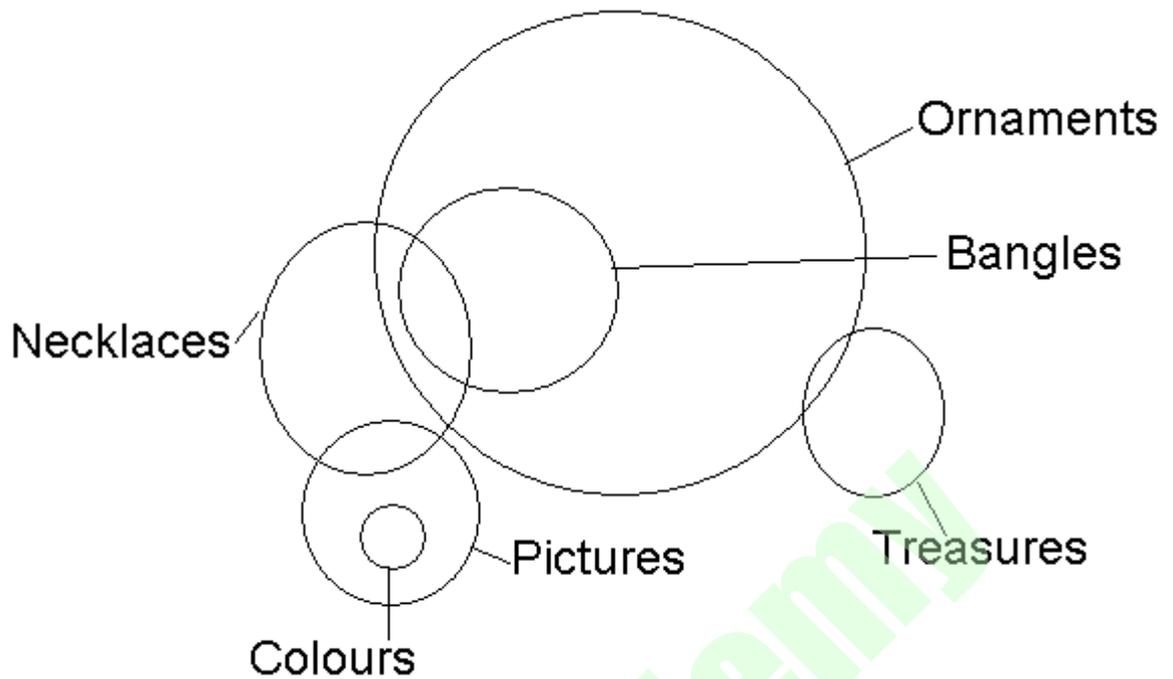
35. Number of candidates qualified from Institute C in 2008 and 2009 = $182 + 208 = 390$
 Number of candidates appeared from Institute F in 2009 and 2010 = $1748 + 1654 = 3402$
 \therefore required % = $\frac{390}{3402} \times 100 \approx 11.46\%$

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
E	C	A	F	B	D

- 36. Option C
- 37. Option B
- 38. Option E
- 39. Option C
- 40. Option D



- 41. Option A
- 42. Option C
- 43. Option C
- 44. Option B
- 45. Option C
- 46. Option C



47. Option E
 48. Option B
 49. Option B
 50. Option A
 51. Option C
 52. Option D
 53. Option B
 54. Option A
 55. Option E
 56. Option D
 57. Option A

- I. $T > U > (S/V)$
 II. $(T/U) > V > S$

Data in statement I alone are sufficient to answer the question.

58. Option E

L – Chips from I
 M – Chocolates
 N – Ice-Cream from II

So, from both statements, we can find who likes chips or chocolates or ice-cream.

59. Option E

According to II, longest months in terms of number of days = 31 days
 From statement I $24^{\text{th}} + 7 = 31$
 Now three weeks $7 \times 3 = 21^{\text{st}}$

60. Option C

61. Option A

The main cause for number of devotees tricking down at the religious site because of a structural engineer had visited the temple a month back and had declared the structure unsafe.

62. Option D

Income tax authorities carried out raids due to non-payment of tax or illegal money so as an effect business houses took immediate action to clear off all their income tax dues in order to avoid raid.

63. Option E

The rule is going to frame for compulsory registration else charging fine.

64. Option E

Reward is giving for recognition and fulfilling task as well as sincerity.

65. Option E

Accreditation improves reputation of the college

X	Table Tennis	VIII
Z	Chess	VIII
U	Badminton	VII
Y	Cards	VII
V	Carrom	VI
W	Scrabble	VI
T	Basket Ball	VI

66. Option B

67. Option A

68. Option C

69. Option D

70. Option B

71. Option C

72. Option B

73. Option B

74. Option B

75. Option E

76. Option C

77. Option E

78. Option B

79. Option B

80. Option D

81. Option B

82. Option C

83. Option C

84. Option E

85. Option A

86. Option E

87. Option D

88. Option A

89. Option B

90. Option B

91. Option E

92. Option B

93. Option D

94. Option A

95. Option C

96. Option A

97. Option E

98. Option D

99. Option C

100. Option D