Quantitative Aptitude

1. The average age of husband, wife and their child 3 years ago was 27 years and that of wife and
   the child 5 years ago was 20 years. The present age of the husband is:
   a) 35 years  b) 40 years  c) 50 years
d) Data inadequate  e) None of these

2. A rectangular court is 3.78 metres long and 5.25 metres wide is to be paved exactly with square
tiles, all of the same size. What is the largest size of the tile which could be used for the purpose?
   a) 14 cms  b) 21 cms  c) 42 cms
d) Data inadequate  e) None of these

3. Murugan, Prasanna and Arun invested Rs.8000, Rs.4000 and Rs.8000 respectively in a business.
   Arun left after six months. If after eight months, there was a gain of Rs.4005, then what will be
   the share of Prasanna?
   a) Rs.890  b) Rs.1335  c) Rs.1602
d) Rs.1780  e) None of these

4. In how many ways a committee, consisting of 5 men and 6 women can be formed from 8 men
   and 10 women?
   a) 266  b) 5040  c) 1176
d) 86400  e) None of these

5. In a lottery, there are 10 prizes and 25 blanks. A lottery is drawn at random. What is the
   probability of getting a prize?
   a) 1/10  b) 2/5  c) 2/7
d) 5/7  e) None of these

6. A man is 24 years older than his son. In two years, his age will be twice the age of his son. The
   present age of the son is
   a) 14 years  b) 18 years  c) 20 years
d) 22 years  e) None of these

7. A shopkeeper expects a gain of 22-1/2% on his cost price. If in a week, his sale was of Rs.392,
   what was his profit?
   a) Rs.18.20  b) Rs.70  c) Rs.72
d) Rs.88.25  e) None of these

8. The sum of n terms of the series $1 + (1 + 3) + (1 + 3 + 5) + \ldots$ is :
   a) $\frac{n(n+1)}{2}$  b) $n^2$  c) $\frac{n}{6}(n + 1)(2n + 1)$
d) Data inadequate  e) None of these

9. $0.081 \times 0.484 / 0.0064 \times 6.25$ is equal to
   a) 0.9  b) 0.99  c) 9
d) 99  e) None of these

10. A boy goes to his school from his house at a speed of 3 km./hr and return at a speed of 2 km./hr.
    If he takes 5 hours in going and coming, the distance between his house and school is
    a) 5 km  b) 5.5 km  c) 6 km
11. A can do a certain work in the same time in which B and C together can do it. If A and B together could do it in 10 days and C alone in 50 days, then B alone could do it in:
   a) 15 days  
   b) 20 days  
   c) 25 days  
   d) 30 days  
   e) None of these

12. If the circumradius of an isosceles triangle ABC is equal to AB (= AC), then angle A is equal to
   a) \( \frac{\pi}{2} \)  
   b) \( \frac{\pi}{3} \)  
   c) \( \frac{\pi}{6} \)  
   d) \( \frac{2\pi}{3} \)  
   e) None of these

13. If 10, 12 and ‘x’ are sides of an acute angled triangle, how many integer values of ‘x’ are possible?
   a) 7  
   b) 12  
   c) 9  
   d) 13  
   e) 11

14. A man can row upstream at 7 kmph and downstream at 10 kmph. Find man’s rate in still water and the rate of current?
   a) 6.5, 1.2 km/hr  
   b) 8.5, 1.5 km/hr  
   c) 1.5, 1.6 km/hr  
   d) 7.5, 1.8 km/hr  
   e) None of these

15. Of three numbers whose average is 60, the first is 1/4th of the sum of the other two. The first number is:
   a) 30  
   b) 60  
   c) 36  
   d) 24  
   e) 20

16. If the ratio of boys to girls in a class is B, and the ratio of girls to boys is G, then B + G is:
   a) equal to 1  
   b) greater than 1  
   c) less than 1  
   d) greater than or equal to 1  
   e) None of these

17. The annual income of A is 10% less than that of B whose income is 20% more than that of C. If the monthly income of C is Rs.200, find the total annual income of A, B and C together.
   a) Rs.7046  
   b) Rs.7772  
   c) Rs.6872  
   d) Rs.7872  
   e) None of these

18. The number of students in each section of a school is 24. After admitting new students, three new sections were started. Now, the total number of sections is 16 and there are 21 students in each section. The number of new students admitted is:
   a) 14  
   b) 24  
   c) 48  
   d) 114  
   e) None of these

19. David obtained 76, 65, 82, 67 and 85 marks (out of 100) in English, Mathematics, Physics, Chemistry and Biology. What are his average marks?
   a) 65  
   b) 69  
   c) 72  
   d) 76  
   e) None of these

20. On 6th March 2005 Monday falls. What was the day of the week on 6th March 2004?
   a) Sunday  
   b) Saturday  
   c) Tuesday  
   d) Wednesday  
   e) None of these
21. At what angle the hands of a clock are inclined at 15 minutes past 5?
   a) $58 \frac{1}{2}^\circ$  b) $64^\circ$  c) $67 \frac{1}{2}^\circ$
   d) $72 \frac{1}{2}^\circ$  e) None of these

22. Two pipes A and B can fill a tank in 20 and 30 minutes respectively. If both the pipes are used together, then how long will it take to fill the tank?
   a) 12 min  b) 15 min  c) 25 min
   d) 50 min  e) None of these

23. A lent Rs.5000 to B for 2 years and Rs.3000 to C for 4 years on simple interest at the same rate of interest and received Rs.2200 in all from both of them as interest. The rate of interest per annum is:
   a) 5%  b) 7%
   c) $7 \frac{1}{2}^\%$  d) 10%  e) None of these

24. An agent gets a commission of 2.5% on the sales of cloth. If on a certain day, he gets Rs.12.50 as commission, the cloth sold through him on that day is worth
   a) Rs.250  b) Rs.500
   c) Rs.750  d) Rs.1250  e) None of these

25. The cost of carpeting a room 18 m long with a carpet 75 cm wide at Rs.4.50 per metre is Rs.810. The breadth of the room is:
   a) 7 m  b) 7.5 m  c) 8 m
   d) 8.5 m  e) None of these

26. Which one of the following is the common factor of $(47^{43} + 43^{43})$ and $(47^{47} + 43^{47})$?
   a) $(47 \equiv 43)$  b) $(47 + 43)$
   c) $(47^{43} + 43^{43})$  d) Data inadequate  e) None of these

27. A student was asked to find the arithmetic mean of the numbers 3, 11, 7, 9, 15, 13, 8, 19, 17, 21, 14 and x. He found the mean to be 12. What should be the number in place of x?
   a) 3  b) 7  c) 17
   d) 31  e) None of these

28. Which of the following is a pair of co-primes?
   a) (16, 62)  b) (18, 25)
   c) (21, 35)  d) (23, 92)  e) None of these

29. A camel pursues an elephant and takes 5 leaps for every 7 leaps of the elephant, but 5 leaps of elephant are equal to 3 leaps of camel. What is the ratio of speeds of camel and elephant?
   a) 21 : 25  b) 24 : 23  c) 25 : 21
   d) 23 : 24  e) None of these

30. A, B and C jointly thought of engaging themselves in a business venture. It was agreed that A would invest Rs.6500 for 6 months, B, Rs.8400 for 5 months and C, Rs.10,000 for 3 months. A wants to be the working member for which, he was to receive 5% of the profits. The profit earned was Rs.7400. Calculate the share of B in the profit.
   a) Rs.1900  b) Rs.2660  c) Rs.2800
   d) Rs.2840  e) None of these
31. A number is doubled and 9 is added. If the resultant is trebled, it becomes 75. What is that number?
   a) 3.5  
   b) 6  
   c) 8  
   d) Can’t be determined  
   e) None of these

32. The ratio between the present ages of A and B is 5:3 respectively. The ratio between A’s age 4 years ago and B’s age 4 years hence is 1:1. What is the ratio between A’s age 4 years ago and B’s age 4 years ago?
   a) 1:3  
   b) 2:1  
   c) 3:1  
   d) 4:1  
   e) None of these

33. If Rs.2800 is 2/7 percent of the value of a house, the worth of the house (in Rs.) is:
   a) 800000  
   b) 980000  
   c) 1000000  
   d) 1200000  
   e) None of these

34. At what profit percent must an article be sold so that by selling at half that price, there may be a loss of 30%?
   a) 25%  
   b) 36%  
   c) 40%  
   d) 42%  
   e) None of these

35. In a bag, there are coins of 25p, 10p and 5p in the ratio of 1:2:3. If there are Rs.30 in all, how many 5p coins are there?
   a) 150  
   b) 50  
   c) 100  
   d) 200  
   e) None of these

36. In a business, A and C invested amounts in the ratio 2:1, whereas the ratio between amounts invested by A and B was 3:2. If Rs.157300 was their profit, how much amount did B receive?
   a) Rs.24200  
   b) Rs.36300  
   c) Rs.48400  
   d) Rs.72600  
   e) None of these

37. 30 labourers, working 7 hours a day can finish a piece of work in 18 days. If the labourers work 6 hours a day, then the number of labourers to finish the same piece of work in 30 days, will be:
   a) 15  
   b) 21  
   c) 22  
   d) 25  
   e) None of these

38. X can do a piece of work in 40 days. He works at it for 8 days and then Y finished it in 16 days. How long will they together take to complete the work?
   a) 13-1/3 days  
   b) 15 days  
   c) 20 days  
   d) 56 days  
   e) None of these

39. 12 buckets of water fill a tank when the capacity of each tank is 13.5 litres. How many buckets will be needed to fill the same tank, if the capacity of each bucket is 9 litres?
   a) 8  
   b) 15  
   c) 16  
   d) 18  
   e) None of these

40. A motorist covers a distance of 39 km in 45 minutes by moving at a speed of x kmph for the first 15 minutes, then moving at double the speed for the next 20 minutes and then again moving at his original speed for the rest of the journey. Then, x is equal to:
   a) 31.2  
   b) 36  
   c) 40  
   d) 52  
   e) None of these
Reasoning Ability

41. In a row of 40 children, R is 11\textsuperscript{th} from the right and there are 15 children between R and M. What is M’s position from the left and of the row?
   a) 14\textsuperscript{th} b) 15\textsuperscript{th} c) 13\textsuperscript{th} d) Can’t be determined e) None of these

42. In a certain code language ‘how many are there’ is written as ‘kana ta da’ and ‘many are welcome here’ is written as ‘na pa nika’. How is ‘how’ written in that code language?
   a) ta b) da c) ta or da d) Data inadequate e) None of these

43. If the positions of the 1\textsuperscript{st} and the 5\textsuperscript{th} digits of the number 83591427 are interchanged, similarly the positions of the 2\textsuperscript{nd} and the 6\textsuperscript{th} digits are interchanged and so on then which of the following will be the 2\textsuperscript{nd} digit from the right end after the rearrangement?
   a) 5 b) 3 c) 9 d) 2 e) None of these

44. How many such pairs of letters are there in the words ADJUSTING each of which has as many letters between them in the word as in the English alphabet?
   a) None b) One c) Two d) Three e) More than three

45. How many meaningful English words can be formed with the letters LBAE using each letter only once in each word?
   a) None b) One c) Two d) Three e) More than three

46. In a certain code BUILDER is written as JVCKSFE. How is SEALING written in that code?
   a) BTFKHOJ b) JOHKBFT c) TFBKHOJ d) BFTKJOH e) None of these

47. If ‘R’ denotes ‘÷’, ‘T’ denotes ‘⎯’, ‘M’ denotes ‘+’ and ‘W’ denotes ‘×’, then
   \[ 27 \ T \ 15 \ R \ 3 \ W \ 4 \ M \ 6 = ? \]
   a) 7 b) 13 c) \( \frac{23}{\text{None of these}} \)
   d) 1 e) None of these

48. In a certain code WAVE is written as ‘5%3*’ and WINS is written as ‘59@©’. How is SANE written in that code?
   a) ©9@* b) *%©@ c) © @%* d) ©%@* e) None of these

49. Which of the following is the middle digit of the 3\textsuperscript{rd} highest among the five three digit numbers given below?
   a) 6 b) 3 c) 7 d) 1 e) None of these
50. Among P, Q, R, S and T each having a different height, Q is shorter than only T and S is shorter than P and Q. Who among them is the shortest?
   a) R  b) S  c) P
   d) Data inadequate  e) None of these

Directions (Q. 51-55) Study the following arrangement carefully and answer the questions given below.
B M % R 3 J @ K © D F 6 9 W 4 * N E P 2 $ A Y 5 I Q Z # 7 U G

51. Which of the following is the 6th to the left of the 20th from the left end of the above arrangement?
   a) J  b) Q  c) W
   d) E  e) None of these

52. How many such consonants are there in the above arrangement, each of which is immediately preceded by a symbol and immediately followed by a number?
   a) None  b) One  c) Two
   d) Three  e) More than three

53. If all the symbols and all the vowels are dropped from the above arrangement, which of the following will be the 12th from the right end?
   a) 9  b) 6  c) P
   d) Y  e) None of these

54. How many such numbers are there in the above arrangement, each of which is immediately preceded by a letter but not immediately followed by a letter?
   a) None  b) One  c) Two
   d) Three  e) More than three

55. What should come in the place of question mark (?) in the following series based on the above arrangement?
   MRJ ©F9 *E2 ?
   a) YSI  b) YIQ  c) A5Q
   d) YIZ  e) None of these

Directions (Q. 56-60) In each of the questions below are given four statements followed by four conclusions numbered I, II, III and IV. 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.

56. Statements: Some pencils are windows.
   All windows are roads.
   Some roads are cups.
   All cups are chains.

Conclusions:  I. Some chains are pencils.
             II. Some cups are pencils.
             III. Some chains are windows.
             IV. Some roads are pencils.

   a) None follows
   b) Only II follows
   c) Only IV follows
   d) Only III and IV follow
57. **Statements:**
Some beds are mirrors.
   Some mirrors are dolls.
   Some dolls are cheques.
   Some cheques are pins.

**Conclusions:**
I. Some pins are dolls.
II. Some cheques are beds.
III. Some cheques are mirrors.
IV. Some dolls are beds.

a) None follows  
b) Only I follows  
c) Only II follows  
d) Only III follows  
e) Only IV follows

58. **Statements:**
All chocolates are holders.
   No holder is lamp.
   Some lamps are desks.
   All desks are pens.

**Conclusions:**
I. Some pens are holders.
II. Some desks are lamps.
III. No pen is holder.
IV. Some pens are chocolates.

a) Only I follows  
b) Only II follows  
c) Only III follows  
d) Only either I or III follows  
e) Only either I or III and II follow

59. **Statements:**
All glasses are rooms.
   Some rooms are planes.
   All planes are ducks.
   Some ducks are lanterns.

**Conclusions:**
I. Some lanterns are planes.
II. Some ducks are rooms.
III. Some rooms are glasses.
IV. Some ducks are glasses.

a) Only I and II follow  
b) Only II and III follow  
c) Only I, II and III follow  
d) All I, II, III and IV follow  
e) None of these

60. **Statement:**
Some chairs are tents.
   Some tents are jugs.
   All jugs are glasses.
   All glasses are pots.

**Conclusions:**
I. Some pots are tents.
II. Some pots are chairs.
III. Some glasses are chairs.
IV. Some glasses are tents.

a) Only I and II follow
b) Only II and III follow
c) Only I and III follow
d) Only I and IV follow
e) None of these

Directions (Q. 61-65) In each question below is given a group of letters followed by four combinations of digits/symbols numbered (a), (b), (c) and (d). You have to find out which of the combinations correctly represents the group of letters based on the following coding system and the conditions that follow and mark the number of that combination as your answer. If none of combinations correctly represents the group of letter, mark (e) i.e., ‘None of these’ as your answer.

<table>
<thead>
<tr>
<th>Letter</th>
<th>W</th>
<th>P</th>
<th>J</th>
<th>Q</th>
<th>E</th>
<th>T</th>
<th>I</th>
<th>A</th>
<th>U</th>
<th>F</th>
<th>D</th>
<th>B</th>
<th>V</th>
<th>M</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digit/Symbol code</td>
<td>5</td>
<td>6</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>@</td>
<td>4</td>
<td>©</td>
<td>8</td>
<td>%</td>
<td>*</td>
<td>7</td>
<td>#</td>
<td>$</td>
</tr>
</tbody>
</table>

Conditions:
(i) If the 1st letter is a consonant and the 4th letter is a vowel both are to be coded as the code for the vowel.
(ii) If the 2nd letter is a vowel and the last letter is a consonant both are to be coded as !.
(iii) If both the 1st and the last letters are consonants both their codes are to be interchanged.

61. MBUVWE
   a) #*©#52
   b) 7*©#52
   c) #©*752
   d) #!©75!
   e) None of these

62. AJBMFU
   a) 49*48©
   b) #9*#8©
   c) 49*#8©
   d) ©9*#84
   e) None of these

63. AEIMVH
   a) 42@#7$
   b) 42@47$
   c) #2@47$
   d) 4!@#7!
   e) None of these

64. THAFIQ
   a) 3$48@3
   b) 1$48@3
   c) 1$48@1
   d) 3$48@1
   e) None of these

65. WMEIJU
   a) @#2@9©
   b) 5#2@9©
   c) #@259©
   d) 5#259©
   e) None of these

Directions (Q. 66-70) A word and number arrangement machine, when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of an input and rearrangement.

Input: 17 put show on 39 27 85 gold
Step I: show 17 put on 39 27 85 gold
Step II: show 85 17 put on 39 27 gold
Step III: show 85 put 17 on 39 27 gold
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Step IV: show 85 put 39 17 on 27 gold
Step V: show 85 put 39 on 17 27 gold
Step VI: show 85 put 39 on 27 17 gold
Step VII: show 85 put 39 on 27 gold 17

And step VII is the last step of the rearrangement of the above input.
As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the given input.

66. **Input:** glass full 15 37 water now 85 67
   Which of the following will be Step VI of the above input?
   a) water 85 now 67 full glass 15 37
   b) water 85 now 67 glass full 15 37
   c) water 85 now 67 glass full 15 37
   d) There will be no such step
   e) None of these

67. Step II of an input is: ultra 73 12 16 mail sort 39 kite
   Which of the following steps will be the last but one?
   a) VIII
   b) IX
   c) VII
   d) VI
   e) None of these

68. Step III of an input is: win 75 voice 15 39 store gap 26
   Which of the following is definitely the input?
   a) voice 15 win 75 39 store gap 26
   b) voice win 75 15 39 store gap 26
   c) 15 75 win voice store gap 26
   d) Can’t be determined
   e) None of these

69. Step II of an input is: tube 83 49 34 garden flower rat 56
   How many steps will be required to complete the rearrangement?
   a) Four
   b) Five
   c) Six
   d) Three
   e) None of these

70. Input: hunt for 94 37 good 29 48 book
   How many steps will be required to complete the rearrangement?
   a) Four
   b) Five
   c) Six
   d) Seven
   e) None of these

**Directions (Q. 71-75)** Study the following information carefully and answer the question given below.

A, B, C, D, E, F, G and H are sitting around a circle facing the centre. B is 2nd to the right of D who is 3rd to the right of F. C is 2nd to the left of A who is 2nd to the left of F. G is 3rd to the right of E.

71. In which of the following combinations is the 1st person sitting between the 2nd and the 3rd persons?
   a) GCD
   b) FGH
   c) EFH
   d) ABE
   e) None of these

72. Who is 3rd to the right of H?
   a) G
   b) D
   c) C
d) Data inadequate e) None of these

73. Who is to the immediate right of A?
   a) B b) E c) F
d) Data inadequate e) None of these

74. What is H’s position with respect to B?
   a) 5th to the right b) 3rd to the left c) 5th to the left
d) 3rd to the right e) 4th to the left

75. Who is to the immediate left of G?
   a) H b) F c) D
d) Data inadequate e) None of these

76. If ‘PARK’ is coded as ‘5394’, ‘SHIRT’ is coded as ‘17698’ and ‘PANDIT’ is coded as ‘532068’, how would you code ‘NISHAR’ in that code language?
   a) 266734 b) 231954 c) 201739
d) 261739 e) None of these

77. If ‘GERMAN’ is coded as 126534, ‘FOOD’ is called as 9770 and CORN is coded as 8T64, then what will be the code for ‘FRANCE’?
   a) 961063 b) 963482 c) 963428
d) 964382 e) None of these

Directions (Q. 78-80) Study the following statements A, B, C, D and E and then answer the questions that follow.

A. 1, 5, 9 means : ‘you better go’
B. 1, 6, 7 means : ‘better come here’
C. 5, 6, 7 means : ‘you come here’
D. 1, 5, 6 means : ‘better you here’
E. 3, 7, 9 means : ‘come and go’

78. Which of the following groups of minimum statements are necessary to find the code number of ‘better’?
   a) A and B b) D and E c) C and E
d) B and E e) None of these

79. Which numeral means ‘and’?
   a) 6 b) 9 c) 3
d) 7 e) None of these

80. Which numeral is used for ‘go’?
   a) 9 b) 5 c) 7
d) Can’t be determined e) None of these
Directions (Q. 81-90) Read the following passage carefully and answer the questions given below it.

A long time ago, on a big tree in the lap of the mountain, lived a bird named Sindhuka. It was a rather special bird because its droppings turned into gold as soon as they hit the ground.

One day, a hunter came to the tree in search of prey and he saw Sindhuka's droppings hit the ground and turn into gold. The hunter was struck with wonder. He though, "I have been hunting birds and small animals since I was a boy, but in all my 80 years, I have never seen such a miraculous creature. He decided that he had to catch the bird somehow. He climbed the tree and skillfully set a trap for the bird. The bird, quite unaware of the danger it was in, stayed on the tree and sang merrily. But it was soon caught in the hunter's trap. The hunter immediately seized it and shoved it into a cage.

The hunter took the bird home joyfully. But as he had time to think over his good fortune later, he suddenly realised, "If the king comes to know of this wonder, he will certainly take away the bird from me and he might even punish me for keeping such a rare treasure all to myself. So it would be safer and more honourable if I were to go to the king and present the unique bird to him," The next day, the hunter took the bird to the king and presented it to him in court with great reverence. The king was delighted to receive such an unusual and rare gift. He told his courtiers to keep the bird safe and feed it with the best bird food available.

The king's prime minister though, was reluctant to accept the bird. He said "O Rajah, how can you believe the word of a foolish hunter accept this bird? Has anyone in our kingdom ever seen abird dropping gold? The hunter must be either crazy or telling lies. I think it is best that you release the bird from the cage." After a little thought, the king felt that his prime minister's words were correct. So he ordered the bird to be released. But as soon as the door of the cage was thrown open, the bird flew out, perched itself on a nearby doorway and defecated. To everyone's surprise, the dropping immediately turned into gold. The king mourned his loss.

81. Which of the following is possible the most appropriate title for the story?
   a) The Skilled Hunter
   b) The King’s Prime Minister
   c) The King’s Defeat
   d) The Bird with the Gold Dropping
   e) The Trials and Tribulations of the Foolish Bird Sindhuka

82. Which of the following emotions made the hunter gift the bird to the king?
   a) Respect
   b) Joy
   c) Pride
   d) Fear
   e) Awe

83. Which of the following is true according to the story?
   a) Birds like Sindhuka were very common in the area near the mountain
   b) Sindhuka remained caged for the rest of its life
   c) Sindhuka was unaware of the trap laid by the hunter
   d) The King, when told to not accept the bird, did not listen to his Prime Minister
   e) All are true

84. Why was the king’s Prime Minister reluctant to accept the bird?
   a) He believed that the bird would die if caged
   b) He know about the hunter’s habit of lying
   c) He believed that the bird would bring bad luck to the king
d) His sources had informed him that the hunter was crazy

e) None of these

85. How did the hunter find Sindhuka?
   a) He had read stories about the bird and had set traps at various locations in the city
   b) He followed the bird’s droppings
   c) He was on the lookout for a prey when he chanced upon it
   d) People from the city had informed him about the bird’s whereabouts
   e) He was attracted by the bird’s calls

Directions (Q. 86-88) Choose the word which is most similar in meaning to the word/group of words printed in bold as used in the passage.

86. Rather
   a) Regular
   b) Quite
   c) Instead
   d) But
   e) Known

87. Release
   a) Free
   b) Vacate
   c) Vent
   d) Let expire
   e) Make public

88. Reverence
   a) Respect
   b) Detail
   c) Astonishment
   d) Hope
   e) Remembrance

Directions (Q. 89-90) Choose the word which is most opposite in meaning to the word printed in bold as used in the passage.

89. Reluctant
   a) True
   b) Clever
   c) Averse
   d) Hesitant
   e) Keen

90. Skilfully
   a) Angrily
   b) Haphazardly
   c) Highly
   d) Cheaply
   e) Deftly

Directions (Q. 91-95): Rearrange the following six sentences (A), (B), (C), (D), (E) and (F) in the proper sequence to form a meaningful paragraph and then answer the questions given below.

A. The researchers in these companies claim that they could do better by allowing their employees to doze off at work place.
B. The dreams, while at work, are thus helpful to solve crucial problems.
C. Would you believe that some UK based companies are arranging for bed at the work place?
D. The reason, they claim, could be that dreams produce creative solutions.
E. We only hope that these crucial problems in UK are different from those of ours.
F. But it is true and is considered as a step to improve quality of their products.

91. Which of the following should be the First sentence after rearrangement?
   a) A
   b) B
   c) C
   d) D
   e) None of these
92. Which of the following should be the Third sentence after rearrangement?
   a) A  b) B  c) C  
   d) D  e) None of these

93. Which of the following should be the Fourth sentence after rearrangement?
   a) A  b) B  c) C  
   d) D  e) None of these

94. Which of the following should be the Fifth sentence after rearrangement?
   a) A  b) B  c) C  
   d) D  e) None of these

95. Which of the following should be the Sixth sentence after rearrangement?
   a) A  b) B  c) C  
   d) E  e) None of these

Directions (Q. 96-100) Read this sentence to find out whether there is any grammatical mistake/error in it. The error, if any, will be in one part of the sentence. Mark the part with the error as your answer. If there is no error, mark ‘No error’ as your answer. (Ignore the errors of punctuation if any).

96. Attributing rise in inflation partly for withholding of food stocks by traders/the minister said that/he was committed/to easing this supply side bottleneck.
   a) Attributing rise in inflation partly for withholding of food stocks by traders
   b) The minister said that
   c) He was committed
   d) To easing this supply side bottleneck.
   e) No error

97. India’s largest utility vehicle and tractor maker/is again in the race to acquire/for stake in Swedish company/which is a premium car maker.
   a) India’s largest utility vehicle and tractor maker
   b) Is again in the race to acquire
   c) For stake in Swedish company
   d) Which a premium car maker
   e) No error

98. With sale of branded or premium petrol becoming almost nil/due to high duties,/a government appointed panel has recommended/slashing excise duty to make them at par with regular fuel.
   a) With sale of branded or premium petrol becoming almost nil
   b) Due to high duties
   c) A government appointed panel has recommended
   d) Slashing excise duty to make them at par with regular fuel
   e) No error

99. Keeping in mind/that power cuts are on different days in different areas/the change in the factory law would enable individual factories within an area/to determining their own weekly holidays.
   a) Keeping in mind
   b) That power cuts are on different days in different areas
   c) The change in the factory law would enable individual factories within an area
   d) To determining their own weekly holidays
100. Police officers have refused on identify the bystander/who is the only eyewitness to the crime./but have said that the investigating team would explore/if he could be a witness in the case.

a) Police officers have refused on identify the bystander
b) Who is the only eyewitness to the crime
c) But have said that the investigating team would explore
d) If he could be a witness in the case
e) No error

Directions (Q. 101-105): Below the four words are given. One of these four words may be wrongly spelt. Find out the word which is wrongly spelt, if there is any. The number of that word is your answer. If all the words are correctly spelt mark All correct as the answer.

101. Below the four words are given. One of these four words may be wrongly spelt. Find out the word which is wrongly spelt, if there is any. The number of that word is your answer. If all the words are correctly spelt mark All correct as the answer.

a) Adventure
b) Demonstration
c) Environment
d) Innocent
e) All Correct

102. Below the four words are given. One of these four words may be wrongly spelt. Find out the word which is wrongly spelt, if there is any. The number of that word is your answer. If all the words are correctly spelt mark All correct as the answer.

a) Limitation
b) Dependable
c) Miniature
d) Qualitative
e) All Correct

103. Below the four words are given. One of these four words may be wrongly spelt. Find out the word which is wrongly spelt, if there is any. The number of that word is your answer. If all the words are correctly spelt mark All correct as the answer.

a) Lucrative
b) Ancestral
c) Performance
d) Incidentally
e) All Correct

104. Below the four words are given. One of these four words may be wrongly spelt. Find out the word which is wrongly spelt, if there is any. The number of that word is your answer. If all the words are correctly spelt mark All correct as the answer.

a) Futility
b) Separation
c) Embarrassment
d) Positively
e) All Correct

105. Below the four words are given. One of these four words may be wrongly spelt. Find out the word which is wrongly spelt, if there is any. The number of that word is your answer. If all the words are correctly spelt mark All correct as the answer.

a) Tournament
b) Enhancement
c) Amazingly
d) Continuation
e) All Correct

Directions (Q. 106-110): Rearrange the following six sentences (A), (B), (C), (D) and (E) in the proper sequence to form a meaningful paragraph and then answer the questions given below.

A. Therefore, it is important to source a large part of economic growth in agriculture, in rural non-agricultural activities and in productive expansion of the informal sector which all have high employment elasticities, as well as in an export strategy based on labour intensive exports.
B. It is important because it creates more resources and has the potential of creating more space for the involvement of the poor.
C. If the growth is sourced upon those sectors of the economy or those activities that have a natural tendency to involve the poor in their expansion, such growth helps poverty eradication.
D. Economic growth is important.
E. But this involvement depends on the sources of growth and the nature of growth.

106. Which of the following should be the First sentence after rearrangement?
   a) A  b) B  c) C  d) D  e) E

107. Which of the following should be the Second sentence after rearrangement?
   a) E  b) D  c) C  d) B  e) A

108. Which of the following should be the Third sentence after rearrangement?
   a) A  b) B  c) C  d) D  e) E

109. Which of the following should be the Fourth sentence after rearrangement?
   a) E  b) D  c) C  d) B  e) A

110. Which of the following should be the Fifth sentence after rearrangement?
   a) A  b) B  c) C  d) D  e) E

Directions (Q. 111-120) 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 have been suggested, one of which fills the blank appropriately. Find out the appropriate word in each case.

Traditional bank architecture is based on bank branches. These branches ensure the physical (111) of a customer’s savings. A customer may go there to deposit and withdraw money, (112) loans and (113) in other financial transactions. In the past two decades banking architecture has changed – the Automated Teller Machine (ATM) has been a big (114) and credit and debit cards have created new financial spaces. (115) the bank branch has remained the bedrock of banking system – after all a person needs a bank account in a branch before he can operate a debit or ATM card. This may be about to change as technocrats now (116) cell phones as the new architecture of virtual banks. This has the potential to make branches (117). Cell phone banking looks especially relevant for India since it can penetrate the countryside cheaply and (118). The World over cell phones are spreading at a (119) rate and in India alone new cell phone connections are growing at the rate of six million a month a rate of customer (120) that no bank can dream of.

111. a) confidentiality  b) guarantee  c) knowledge
d) security  e) presence

112. a) disburse  b) sanction  c) negotiate
d) advance  e) credit

113. a) enable  b) engage  c) pursue
d) interact  e) operate
114. a) luxury  
   b) innovation  
   c) drawback  
   d) hurdle  
   e) consequence  

115. a) Yet  
   b) Until  
   c) Despite  
   d) Although  
   e) Even  

116. a) engineer  
   b) assess  
   c) view  
   d) realize  
   e) display  

117. a) retreat  
   b) expired  
   c) essential  
   d) obsolete  
   e) extant  

118. a) indiscriminately  
   b) effectively  
   c) moderately  
   d) occasionally  
   e) compulsorily  

119. a) competitive  
   b) projected  
   c) phenomenal  
   d) gradual  
   e) proportionate  

120. a) satisfaction  
   b) relationship  
   c) discount  
   d) base  
   e) expansion  

General Awareness  

121. Which party became largest political party in all over the World  
   a) Congress by crossing the members of 20 Crore  
   b) Bharatiya Janata Party by crossing the member figures of 8.8 Crore  
   c) Samajwadi Party by crossing the members of 15 Crore  
   d) Aam Aadmi Party by crossing the members of 25 Crore  
   e) None of these  

122. Who appointed as Crown Prince of Saudi Arabia  
   a) Mohammad Bin Abdullah  
   b) Abdullah Abdullah  
   c) Mohammad Bin Khalifa  
   d) Salman Syed Khan  
   e) Mohammed bin Nayef  

123. Who became 4th Indian Shooter qualify for Rio Olympics 2016  
   a) Abhinav Bindra  
   b) Apurvi Chandela  
   c) Gagan Narang  
   d) Jitu Rai  
   e) None of these  

124. Who is the Prime Minister of Qatar?  
   a) Mohammed Bin Nayef  
   b) Ali Akbar Raza  
   c) Mansoor Raza
d) Abdullah bin Naseer bin Khalifa Al Thani  
e) None of these

125. ‘PropTiger.com’ acquired which famous site  
   a) bigbazaar.com  
   b) facebook  
   c) google  
   d) makaan.com  
   e) None of these

126. Who became President of Federation Internationale de Football Association (FIFA)  
   a) Nandan Nilekani  
   b) Ban Ki Moon  
   c) Lalit Modi  
   d) Sepp Blatter  
   e) None of these

127. Who is the Governor of State of Odisha?  
   a) Shiv Raj Patil  
   b) Dr. S.C. Jamir  
   c) Sheila Dixit  
   d) Ram Naik  
   e) None of these

128. Prannoy Roy awarded with RedInk Lifetime Achievement Award, he is the Executive Co-Chairman of which famous TV News Channel  
   a) ABP News  
   b) Aaj Tak  
   c) Zee News  
   d) NDTV  
   e) None of these

129. World No Tobacco Day observed on which date?  
   a) 31st May  
   b) 01st May  
   c) 05th June  
   d) 15th April  
   e) None of these

130. Who is the President of China  
   a) Li Keqiang  
   b) Lou Jiwei  
   c) Xi Jinping  
   d) Chang Wanquan  
   e) None of these

131. Which Indian State Government launched the scheme ‘Niramaya’  
   a) Punjab  
   b) Haryana  
   c) Himachal Pradesh  
   d) Jammu & Kashmir
132. Name the web portal launched by Government of India recently for exchange information on missing and found children
   a) Niramaya
   b) KisanVikasPatra
   c) KhoyaPaya
   d) Healthy India
   e) None of these

133. Who was MalliMastanBabu who found dead in Andes Mountains
   a) Famous singer of Pakistan
   b) Cricketer of Bangladesh
   c) Mountaineer of India
   d) Painter of India
   e) None of these

134. World Press Freedom Day 2015 observed globally under which theme
   a) Let’s the Journalism Drive
   b) Basic Necessity: Freedom
   c) Day of Freedom
   d) Non Violence AgainstPress
   e) Let Journalism Thrive

135. What is the full form of AIFF
   a) All India Fishermen Federation
   b) All India Fathers Federation
   c) All India Figures Federation
   d) All India Forensic Federation
   e) All India Football Federation

136. According to the report of Global Resilience Index 2015, What is India’s rank
   a) 91<sup>st</sup>
   b) 11<sup>th</sup>
   c) 1<sup>st</sup>
   d) 119<sup>th</sup>
   e) None of these

137. Baleshwar Ram died recently, who was he
   a) Former President of India
   b) Former Member of Parliament of 7<sup>th</sup>LokSabha
   c) Former Member of Parliament of 11<sup>th</sup>LokSabha
   d) Former Governor of Maharashtra
   e) None of these

138. Who won Men’s Singles title French Open 2015
   a) Roger Federer
   b) StanislasWawrinka
   c) Andy Murray
   d) James Anderson
   e) None of these
139. Who appointed as Chairman of Indian Premier League Governing Council
   a) Lalit Modi
   b) Rajeev Shukla
   c) Sharad Pawar
   d) Ajit Pawar
   e) None of these

140. Which famous Bollywood actor sentenced with 5 years jail in hit and run case
   a) Shah Rukh Khan
   b) Aamir Khan
   c) Salman Khan
   d) Saif Ali Khan
   e) None of these

141. Who appointed as Central Vigilance Commissioner
   a) K.V. Chowdary
   b) H.L. Dattu
   c) R.K. Dhawan
   d) Chander Mohan
   e) None of these

142. The first woman in space was
   a) Mother Teresa
   b) Kalpana Chawla
   c) Vijay Lakshmi Pandit
   d) Elizabeth II
   e) Valentina Tereshkova

143. Who awarded with Freedom of Expression Courage Award 2015
   a) Harimohan Das Gupta
   b) Yousuf Raza Gilani
   c) Charlie Hedbo
   d) Forbes
   e) None of these

144. Which bank launched the scheme namely ‘PayZapp’ recently
   a) HDFC Bank Ltd.
   b) ICICI Bank Ltd.
   c) Kotak Mahindra Bank Ltd.
   d) State Bank of India
   e) None of these

145. Who is the President of JK Group
   a) Bharat Hari Singhania
   b) Bharti Mittal
   c) Sunanda Kochhar
   d) Kripesh Miglani
   e) None of these

146. Who is the Author of the book namely ‘Delhi to Islamabad’
a) Milkha Singh
b) Mohammad Hamid Ansari
c) AtalBihari Vajpayee
d) Prof. Sham Sunder Rao
e) Prof. Bhim Singh

147. What is the regional language of the State of Kerala
   a) Dogri
   b) Urdu
   c) Hindi
   d) Kannada
   e) Malayalam

148. Which Indian city named as National Earth Hour Capital for the year 2015
   a) Surat, Gujarat
   b) Shillong, Meghalaya
   c) Thane, Maharashtra
   d) Shimla, Himachal Pradesh
   e) None of these

149. Which gas used in manufacture of vanaspati from vegetable oil
   a) Hydrogen
   b) Nitrogen
   c) Carbon Dioxide
   d) Oxygen
   e) None of these

150. Who became 1st wicket keeper of England to score a century in his debut match
   a) Jos Buttler
   b) Jonny Bairstow
   c) Matt Prior
   d) Tim Ambrose
   e) None of these

151. The idea of machine independent programming languages, which led to the development of COBL, was popularised by
   a) Dennis Ritchie
   b) Grace Hopper
   c) John Burden
   d) Steve Jobs
   e) None of these

152. Banking Ombudsman is appointed by
   a) Government of India
   b) State governments
   c) RBI
   d) ECGC
   e) None of these
153. A banknote which has become dirty due to usage and includes a two-piece note pasted together wherein both the pieces presented belong to the same note, and form the entire note, is termed as
a) Soiled banknote
b) Mutilated banknote
c) Imperfect banknote
d) Counterfeit banknote
e) None of these

154. Indian currency notes upto which of the following denominations are legal tender in Nepal and Bhutan?
a) Up to Rs.50
b) Up to Rs.100
c) Up to Rs.500
d) Up to Rs.1000
e) None of these

155. The abbreviation ASBA stands for 
 a) Applications Supported by Blocked Account
 b) Applications Supported by Bank Account
 c) Applications Sustained by Blocked Amount
 d) Applications supported by Blocked Amount
 e) None of these

156. Despite accepting deposits and giving loans, the operation of which of the following entities do not come under the purview of the Reserve bank of India as of now?
a) Regional Rural Banks
b) Cooperative Credit Societies
c) Payment Banks
d) Non-Banking Finance Companies
e) None of these

157. Which of the following banks raised about Rs.200 Crore of Tier II capital and another Rs.225 through perpetual Bonds a few months back?
a) ICICI Bank Ltd.
b) IDBI Bank
c) Bank of India
d) Bank of Maharashtra
e) None of these

158. After maturity of plan B if the amount along with interest is reinvested in plan A. What will be the maturity amount after a period of 24 months?
a) Rs.27,500
b) Rs.27,850
c) Rs.28,500
d) Rs.28,750
e) None of these

159. We, every now and then read in the newspapers that some banks are earning good profits while some are not doing so well. The major part of the bank's profit generally comes from which of the following activities?
a) Providing banking services like opening accounts, providing safe deposit vaults etc.
b) Remittance facilities collecting cheques etc.
c) Interest on loans, the investment which banks make, by using money of the depositors
d) Only A
e) None of these

160. A country can make its exports to foreign countries cheaper with which of the following methods?
    a) Reducing their domestic prices
    b) Reducing the foreign exchange rate on its money
    c) Putting a ban on import of foreign goods
    d) Only A
    e) None of these

Computer Knowledge

161. C’ in CPU denotes …
    a) Central    b) Common    c) Convenient
    d) Computer   e) None of these

162. Which of the following uses a handheld operating system?
    a) supercomputer    b) personal computer    c) Laptop
    d) PDA    e) None of these

163. To display the contents of a folder in Windows Explorer you should ______
    a) click on it    b) collapse it    c) name it
    d) give it a password    e) None of these

164. The CPU comprises of Control, Memory and _____ units
    a) Microprocessor    b) Arithmetic/Logic    c) Output
    d) ROM    e) None of these

165. _____ is the most important/powerful computer in a typical network
    a) Desktop    b) Network client    c) Network server
    d) Network station    e) None of these

166. A(n) ______ appearing on a web page opens another document when clicked
    a) anchor    b) URL    c) hyperlink
    d) reference    e) None of these

167. Which of the following refers to the rectangular area for displaying information and running programs?
    a) Desktop    b) Dialog box    c) Menu
    d) Window    e) None of these

168. ______ is a windows utility program that locates and eliminates unnecessary fragments and rearranges files and unused disk space to optimize operations
    a) Backup    b) Disk cleanup    c) Disk defragmenter
    d) Restore    e) None of these
169. Which of the following refers to too much electricity and may cause a voltage surge?
   a) Anomaly  b) Shock  c) Spike  
   d) Virus  e) None of these

170. The software that is used to create text-based documents are referred to as ______
   a) DBMS  b) Suites  c) Spreadsheets  
   d) Word processors  e) None of these

171. _______ devices convert human understandable data and programs into a form that the
      computer can process.
   a) Printing  b) Output  c) Solid state  
   d) Input  e) None of these

172. Allows users to upload files to an online site so they can be viewed and edited from
      another location
   a) General purpose applications  
   b) Microsoft Outlook  
   c) Web-hosted technology  
   d) Office live  
   e) None of these

173. What feature adjusts the top and bottom margins so that the text is centered vertically on
      the printed page?
   a) Vertical justifying  
   b) Vertical adjusting  
   c) Dual centering  
   d) Horizontal centering  
   e) None of these

174. Which of these is not a means of personal communication on the internet?
   a) Chat  b) Instant messaging  c) Instantones  
   d) Electronic mail  e) None of these

175. What is the overall term for creating editing, formatting, storing, retrieving and printing a
      text document?
   a) Word processing  b) Spreadsheet design  c) Web design  
   d) Database management  e) None of these

176. Fourth generation mobile technology provides enhanced capabilities allowing the transfer
      of both _____ data, including full-motion video, high-speed internet access, and video
      conferencing.
   a) video data and information  
   b) voice and non-voice  
   c) music and video  
   d) video and audio  
   e) None of these

177. _______ is a form of denial of service attack in which a hostile client repeatedly sends
      SYN packets to every port on the server using fake IP addresses.
   a) Cybergaming crime  
   b) Memory shaving
c) Syn flooding  
d) Software piracy  
e) None of these

178. Which of these is a point and draw device?  
   a) Mouse  
b) Scanner  
c) Printer  
d) CD-ROM  
e) None of these

179. A set of rules for telling the computer what operations to perform is called  
   a) procedural language  
b) structures  
c) natural language  
d) programming language  
e) None of these

180. A detailed written description of the programming cycle and the program, along with the tests results and a printout of the program is called  
   a) documentation  
b) output  
c) reporting  
d) spec sheets  
e) None of these

181. Forms that are used to organize business data into rows and columns are called  
   a) transaction sheets  
b) registers  
c) business forms  
d) spread sheets  
e) None of these

182. In Powerpoint, the header and footer button can be found on the insert tab in what group?  
   a) Illustrations group  
b) Object group  
c) Text group  
d) Tables group  
e) None of these

183. A(n) ______ is a set of programs designed to manage the resources of a computer, including starting the computer, managing programs, managing memory and coordinating tasks between input and output devices.  
   a) application suite  
b) compiler  
c) input/output system  
d) operating system  
e) None of these

184. A typical slide in a slide presentation would not include  
   a) photo images charts, and graphs  
b) graphs and clip art  
c) clip art and audio clips  
d) full motion video  
e) None of these
185. The PC productivity tool that manipulates data organized in rows and columns is called a
   a) spreadsheet
   b) word processing document
   c) presentation mechanism
   d) database record manager
   e) None of these

186. In the absence of parentheses, the order of operation is
   a) exponentiation, addition of subtraction, multiplication of division
   b) addition or subtraction, multiplication or division, exponentiation
   c) multiplication or division, exponentiation, addition or subtraction
   d) exponentiation, multiplication or division, addition of subtraction
   e) None of these

187. To find the Paste Special option, you use the clipboard group on the ______ tab of
   power point
   a) Design
   b) Slide show
   c) Page layout
   d) Home
   e) None of these

188. A(n) _____ program is one that is ready to run and does not need to be altered in any
   way.
   a) Interpreter
   b) High level
   c) Compiler
   d) Executable
   e) None of these

189. Usually downloaded into folders that hold temporary internet files, _____ are written to
   your computer's hard disk by some of the websites you visit.
   a) anonymous files
   b) behaviour files
   c) banner ads
   d) cookies
   e) None of these

190. What is the easiest way to change the phrase, revenues, profits, gross margin, to read
   revenues, profits, and gross margin?
   a) Use the insert mode, position the cursor before the g in the gross, then type the word and
      followed by a space
   b) Use the insert mode, position the cursor after the g in gross, then type the word and followed
      by a space
   c) Use the overtype mode, position the cursor before the g in gross, then type the word and
      followed by a space
   d) None of these

191. A program either talk or music, that is made available in digital format for automatic
    download over the internet is called a
    a) Wiki
    b) Broadcast
    c) Vodcast
    d) Blog
    e) None of these

192. Which power point view displays each slide of the presentation as a thumbnail and is
    useful for rearranging slides?
    a) Slide sorter
    b) Slide show
    c) Slide master
d) Notes page e) None of these

193. Different components on the motherboard of a PC unit are linked together by sets of parallel electrical conducting lines. What are these lines called?
   a) Conductors b) Buses c) Connectors
d) Consecutives e) None of these

194. What is the name given to those applications that combine text, sound, graphics, motion video, and/or animation?
   a) Motionware b) Anigraphics c) Videoscapes
d) Multimedia e) None of these

195. A USB communication device that supports data encryption for secure wireless communication for notebook users is called a
   a) USB wireless network adapter b) wireless switch
c) wireless hub d) router
e) None of these

196. A(n) ____ language reflects the way people think mathematically.
   a) cross-platform programming b) 3GL business programming
c) event driven programming d) functional
e) None of these

197. When entering text within a document, the Enter key is normally pressed at the end of every
   a) Line b) Sentence c) Paragraph
d) Word e) None of these

198. When a real time telephone call between people is made over the Internet using computers, it is called
   a) a chat session b) an e-mail
c) an instant message d) internet telephony
e) None of these

199. Which of the following is the first step in sizing a window?
   a) Point to the title bar b) Pull down the view menu to display the toolbar
c) Point to any corner or border d) Pull down the view menu and change to large icons
e) None of these

200. Which of the following software could assist someone who cannot use their hands for computer input?
   a) Video conferencing
b) Speech recognition  
c) Audio digitizer  
d) Synthesizer  
e) None of these

Solutions:

1. Sum of the present ages of husband, wife and child = (27 x 3 + 3 x 3) years = 90 years.  
   Sum of the present ages of wife and child = (20 x 2 + 5 x 2) years = 50 years.  
   Husband's present age = (90 - 50) years = 40 years.

2. Largest size of the tile.  
   HCF of 378 cm and 525 cm = 21 cms.

3. Murugan : Prasanna : Arun = (8000 x 6) : (4000 x 8) : (8000 x 8)  
   = 48 : 32 : 64  
   = 3 : 2 : 4  
   Kamal’s share = Rs.4005 x \( \dfrac{2}{9} \)  
   = Rs.890

4. Required number of ways  
   = \( ^{8}C_3 \times ^{10}C_6 \)  
   = \( ^{8}C_3 \times ^{10}C_4 \)  
   = \( \dfrac{8!}{3! \times 5!} \times \dfrac{10!}{4! \times 6!} \)  
   = 11760

5. P (getting a prize) = \( \dfrac{10}{10+25} \) = \( \dfrac{10}{35} \) = \( \dfrac{2}{7} \)

6. Let the son’s present age be x years.  
   Then, man’s present age = (x + 24) years  
   = (x + 24) + 2 = x (x + 2)  
   = x + 26 = 2x + 4  
   = 22 years

7. C.P.  
   = Rs.[\( \dfrac{100}{12250} \times 392 \)]  
   = Rs.[\( \dfrac{100}{1225} \times 392 \)]  
   = Rs.320  
   Therefore, profit = Rs.(392 - 320)  
   = Rs.72

8. \[ 1 + 4 + 9 + 16 + \ldots + n^2 = 1^2 + 2^2 + 3^2 + 4^2 + \ldots + n^2 = \dfrac{n(n+1)(2n+1)}{6} \]

9. Sum of decimal places in the numerator and denominator under the radical sign being the same, we remove the decimal.  
   Given exp.  
   = \( \dfrac{81 \times 484}{64 \times 625} \)  
   = \( 9 \times \dfrac{22}{8} \times 25 \)
10. Average speed = \[2 \times 3 \times \frac{2}{3} + 2\] km./hr.
\[= \frac{12}{5}\] km./hr.
Distance travelled = \[\frac{12}{5} \times 5\] km.
\[= 12\text{ km.}\]
Distance between house and school = \[\frac{12}{2}\] km
\[= 6\text{ km.}\]

11. \((A + B)'s\text{ 1 day's work}\) = \[\frac{1}{10}\]
\(C'\text{'s 1 day's work}\) = \[\frac{1}{50}\]
\((A + B + C)'s\text{ 1 day's work}\) = \[\frac{1}{10} + \frac{1}{50}\] = \[\frac{6}{50}\] = \[\frac{3}{25}\] \[\text{…….. (i)}\]
\(A'\text{'s 1 day's work}\) = \[(B + C)'s\text{ 1 day's work} \text{…….. (ii)}\]
From (i) and (ii), we get \[2 \times (A'\text{'s 1 day's work}) = \frac{3}{25}\]
\(A'\text{'s day's work}\) = \[\frac{3}{50}\]
\(B'\text{'s 1 day's work}\) = \[\frac{1}{10} \times \frac{3}{50} = \frac{2}{50} = \frac{1}{25}\]
So, B alone could do the work in 25 days.

12. \(\sin B = \frac{b}{2R}\)
\[= \frac{AC}{2R}\]
\[= \frac{R}{2R} \text{ [Given AB = AC = R]}\]
\[= \frac{1}{2}\]
\(B = \frac{\pi}{6}\) or \(\frac{5\pi}{6}\)
But, when \(B = \frac{5\pi}{6}, C = \frac{5\pi}{6}\) \[\text{[AB = AC ⇒ B = C]}\]
⇒ \(B + C > \pi\)
So, \(B = \frac{5\pi}{6}\) not possible
\[\therefore B = \frac{\pi}{6}\]
\(C = \frac{\pi}{6}\) \[\text{[AB = AC ⇒ B = C]}\]
\(A = \pi \in \left[\frac{\pi}{6} + \frac{\pi}{6}\right]\)
\(A = \frac{2\pi}{3}\)

13. For any triangle sum of any two sides must be greater than the third side.
The sides are 10, 12 and ‘x’.
From Rule 2, x can take the following values : 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 – A total of 19 values.
When \(x = 3\) or \(x = 4\) or \(x = 5\) or \(x = 6\), the triangle is an OBTUSE angled triangle.
The smallest value of x that satisfies both conditions is 7. \((10^2 + 7^2 > 12^2)\)
The highest value of \(x\) that satisfies both conditions is 15. \((10^2 + 12^2 + 15^2)\)
When \(x = 16\) or \(x = 17\) or \(x = 18\) or \(x = 19\) or \(x = 20\) or \(x = 21\), the triangle is an OBTUSE angled triangle.
14. Rate in still water \[ \frac{1}{2} (10 + 7) \text{ km./hr.} \]
\[ = 8.5 \text{ km./hr.} \]
Rate of current \[ \frac{1}{2} (10 - 7) \text{ km./hr.} \]
\[ = 1.5 \text{ km./hr.} \]

15. Sum of 3 numbers = 60 × 3 = 180
1st is \( \frac{1}{4+1} \) th sum of other two numbers,
So, 1st is \( \frac{1}{5} \) th sum of 3 numbers = \( \frac{180}{5} = 36 \)

16. Assume \( \frac{\text{boys}}{\text{girls}} = \frac{2}{3} = B \), then \( \frac{\text{girl}}{\text{boys}} = \frac{3}{2} = G \)
\[ B + G = \frac{2}{3} + \frac{3}{2} = \frac{13}{6} = 1 \]

17. Monthly income of C = Rs.200
Income of B = 1.2 × 200 = Rs.240
Income of A = 0.9 × 240 = Rs.216
A + B + C = 656
Annual income = 12 × 656 = 7872

18. Original number of sections = 16 – 3 = 13
Original number of students = 24 × 13 = 312
Present number of students = 21 × 16 = 336
Number of new students admitted = 336 – 312 = 24

19. Average = \( \frac{76+65+82+67+85}{5} = \frac{375}{5} = 75 \)

20. The year 2004 is a leap year. So, it has 2 odd days.
So, the day on 6th March 2005 will be 2 days beyond the day on 6th March 2004.
But 6th March 2005 is Monday
So, 6th March 2004 is Saturday.

21. Angle traced by hour hand in \( \frac{21}{4} \) hours = \( \frac{360}{12} \times \frac{21}{4} \)° = 157 \( \frac{1}{2} \)°
Angle traced by minute hand in 15 min. = \( \frac{360}{12} \times 15 \)° = 90°
So, required angle = \( [157 \frac{1}{2}]° \) – 90° = 67 \( \frac{1}{2} \)°

22. Part filled by A in 1 min. \[ = \frac{1}{20} \]
Part filled by B in 1 min. \[ = \frac{1}{30} \]
Part filled by (A + B) in 1 min. \[ = \frac{1}{20} + \frac{1}{30} \]
\[ = \frac{1}{12} \]
Both the pipes can fill the tank in 12 minutes.

23. Let the rate be R% p.a.

Then, \[\frac{5000 \times R \times 2}{100} + \frac{3000 \times R \times 4}{100} = 2200\]

\[100R + 120R = 2200\]

\[R = \frac{2200}{220} = 10\]

So, rate = 10%

24. Let the total sale be Rs. x

Then, 2.5% of x = 12.50

\[\frac{25}{100} \times \frac{1}{100} \times x = \frac{125}{10} \times \frac{100 \times 10}{25} = 500\]

25. Length of the carpet = \(\frac{\text{total cost}}{\text{Rate/m}}\) = \(\frac{8100}{45}\) m = 180 m.

Area of the room = Area of the carpet = \(180 \times \frac{75}{100}\) m² = 135 m²

So, breadth of the room = \(\frac{135}{18}\) m = 7.5 m

26. When n is odd, \((x^n + a^n)\) is always divisible by \((x + a)\)

So, each one of \(47^{43} + 43^{43}\) and \(47^{47} + 43^{43}\) is divisible by \(47 + 43\)

27. Clearly, we have \((3+11+7+9+15+13+8+19+17+21+14+x/12)\)

Number in place x is

137 + x = 144

x = 144 - 137

x = 7

28. HCF of 18 and 25 is 1. So, they are co-primes.

29. Ratio of speed of camel and elephant = \(\frac{5}{3} : \frac{7}{5}\) = \(\frac{5}{3} \times 15 : \frac{7}{5} \times 15\)

= 25 : 21

30. For managing, A received = 5% of Rs. 7400 = Rs. 370.

Balance = Rs. (7400 - 370) = Rs. 7030.

Ratio of their investments = \(6500 \times 6 : 8400 \times 5 : 10000 \times 3\)

= 39000 : 42000 : 30000

= 13 : 14 : 10

B’s share = Rs. \[\frac{14}{37} \times 7030\] = Rs.2660

31. Let the number be x

Then, 3 \((2x + 9) = 75\)

2x + 9 = 25

2x = 16

x = 8

32. Let the present ages of A and B be 5x and 3x years respectively.
\[ \frac{5x-4}{3x+4} = \frac{1}{1} \]
\[ 5x - 4 = 3x + 4 \]
\[ 2x = 8 \]
\[ x = 4 \]
Required ratio \(5x + 4 : 3x - 4 = 24 : 8 = 3 : 1\)

33. Let the worth of the house be Rs. \(x\)
   Then, \(2\%\) of \(x = 2800\)
   \[ \frac{2}{100} \times x = 2800 \]
   \[ x = \frac{2800 \times 100}{2} = 980000 \]

34. Let S.P. = Rs. \(x\)
   New S.P. = Rs. \(\frac{x}{2}\)
   Loss = 30%
   \[ C.P. = \frac{100}{70} \times \frac{x}{2} = Rs. \frac{5x}{7} \]
   Profit = Rs. \(x - \frac{5x}{7}\) = Rs. \(\frac{2x}{7}\)
   Profit % = \[ \frac{\frac{2x}{7}}{\frac{5x}{7}} \times 100\% = 40\% \]

35. Let the number of 25p, 10p and 5p coins be \(x\), \(2x\) and \(3x\) respectively.
   Then, sum of their values = Rs. \(\frac{25x}{100} + \frac{10x}{100} + \frac{5x}{100} = Rs. \frac{60x}{100} \)
   \[ \frac{60x}{100} = 30 \]
   \[ x = \frac{30 \times 100}{60} = 50 \]
   Hence, the number of 5p coins = 3 \(\times 50 = 150\)

36. \(A : B = 3 : 2\)
   \(B : A = 2 : 3 = 4 : 6\) and \(A : C = 2 : 1 = 6 : 3\)
   \(B : A : C = 4 : 6 : 3\) or \(A : B : C = 6 : 4 : 3\)
   B’s share = Rs. \(157300 \times \frac{4}{13} = Rs. 48400\)

37. Let the required number of labourers be \(x\).
   Working hours/day = 6 : 7
   Days = 30 : 18
   \[ 6 \times 30 \times x = 7 \times 18 \times 30 \]
   \[ 6x = 126 \]
   \[ x = 21 \]

38. Work done by X in 8 days = \(\frac{1}{40} \times 8 = \frac{1}{5}\)
   Remaining work = \(1 - \frac{1}{5} = \frac{4}{5}\)
   Now, \(\frac{4}{5}\) work is done by Y in 16 days
   Whole work will be done by Y in \(16 \times \frac{5}{4} = 20\) days
   X’s 1 day’s work = \(\frac{1}{40}\)
Y’s 1 day’s work = \( \frac{1}{20} \)
X + Y’s 1 day’s work = \( \frac{1}{40} + \frac{1}{20} = \frac{3}{40} \)
Hence, X and Y will together complete the work in \( \frac{40}{3} \) = 13-1/3 days

39. Capacity of the tank = 12 \times 13.5 = 162 \text{ litres}
   Capacity of each bucket = 9 litres
   Number of buckets needed = \( \frac{162}{9} \) = 18

40. \( x \times \frac{16}{60} + 2x \times \frac{20}{60} + x \times \frac{10}{60} = 39 \)
   \( \frac{x}{4} + \frac{2x}{3} + \frac{x}{6} = 39 \)

41. Option A
42. Option C

How many are there \( \rightarrow \text{kana ta da} \) \( \text{(i)} \)
Many are welcome here \( \rightarrow \text{na pi nika} \) \( \text{(ii)} \)
From equations (i) and (ii), many \( \rightarrow \text{naka} \)
how \( \rightarrow \text{ta or da} \)

43. Option A
   Given number = 8 \text{ 3 5 9 1 4 2 7}
   According to question, after rearrangement, new number =
   1 \text{ 4 2 7 8 3 5 9}
   2^{nd} digit from right = 5

44. Option D
   A D J U S T I N G
   So, the pairs are AI and GI

45. Option B
46. Option E
47. Option B
   Given arrangement = 27 T 15 R 3 W 4 M 6
   According to question, letters converted into mathematical symbols
   = 27 \( \text{□} \) 15 \( \div \) 3 \times 4 + 6 = 27 \( \text{□} \) 5 \times 4 + 6
   = 27 \( \text{□} \) 20 + 6 = 33 \( \text{□} \) 20 = 13

48. Option D
   W A V E \text{ and } W I N S
   5 \% 3 * 5 9 @ ☞
   Similarly, S A N E
   ☞ \% @ *

49. Option E
   3^{rd} highest number = 647
   Middle digit = 4

50. Option D
According to height T > (P, Q) > (S, R)
So from question, it is not clear that which one is shorter S or R. So the given data is insufficient.

51. Option C
   20 \( \div \) 6 = 14\( ^{th} \) from left = W

52. Option B
   Symbol Consonant Number
   % R 3

53. Option D
   After eliminating all vowels and symbols the arrangement will be
   BMR3JKDF69W4NP2Y5QZ7G  12\( ^{th} \) from right end = y

54. Option D
   Letters Number Number/Symbol
   F 6 9, W 4 *, P 2 $

55. Option D
56. Option C

Conclusions:
I. False
II. False
III. False
IV. True

Only IV follows

57. Option A
Conclusions:
I. False
II. False
III. False
IV. False

None follows

58. Option E

59. Option B
Conclusions:
I. False
II. True
III. True
IV. False
Only II and III follow

60. Option D

Conclusions:
I. True
II. False
III. False
IV. True
Only I and IV follows

61. Option E
62. Option C

| # | * | © | 7 | 5 | 2 |

63. Option D

According to condition (ii)

| A | E | I | M | V | H |
| 4 | ! | @ | # | 7 | ! |

64. Option D

According to condition (iii)

| T | H | A | F | I | Q |
| 1 | $ | 4 | 8 | @ | 3 |

65. Option A

According to condition (i)

| W | M | E | I | J | U |
| @ | # | 2 | @ | 9 | © |

66. Option D

Input: glass full 15 37 water now 85 67
Step I: water glass full 15 37 now 85 67
Step II: water 85 glass full 15 37 now 67
Step III: water 85 now glass full 15 37 67
Step IV: water 85 now 67 glass full 15 37
Step V: water 85 now 67 glass 37 full 15
Step V is the last step and step VI is not possible.

67. Option D

Step II: ultra 73 12 16 mail sort 39 kite
Step III: ultra 73 sort 12 16 mail 39 kite
Step IV: ultra 73 sort 39 12 16 mail kite
Step V: ultra 73 sort 39 mail 12 16 kite
Step VI: ultra 73 sort 39 mail 16 12 kite
Step VII: ultra 73 sort 39 mail 16 kite 12
So last step is VII and last but one step is step VI.

68. Option D

69. Option A

Step II: tube 83 49 34 garden flower rat 56
Step III: tube 83 rat 49 34 garden flower 56
Step IV: tube 83 rat 56 49 34 garden flower
Step V: tube 83 rate 56 garden 49 34 flower
Hence four steps will be required to complete the rearrangement.

70. Option B

Input: hunt for 94 37 good 29 48 book
Step I: hunt 94 for 37 good 29 48 book
Step II: hunt 94 good for 37 29 48 book
Step III: hunt 94 good 48 for 37 29 book
Step IV: hunt 94 good 48 for 37 29 book
Step V: hunt 94 good 48 for 37 book 29
Hence five steps will be required to complete the arrangement.

71. Option D
72. Option C
73. Option B
74. Option E
75. Option A
76. Option D

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77. Option B

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A. 1 5 9 you better go
B. 1 6 z better come here
C. 5 6 7 you come here
D. 1 5 6 better you here
E. 3 z 9 come and go

78. Option A
From statements A and B,
1 = better

79. Option C
From statements A and E,
9 = go
From statements B and E
7 = come
and = 3

80. Option A
   From equations (i) and (v),
   Go = 9

81. Option D
82. Option D
83. Option C
84. Option E
85. Option C
86. Option B
87. Option A
88. Option A
89. Option E
90. Option E
91. Option C
92. Option A
93. Option D
94. Option B
95. Option D
96. Option A
97. Option B
98. Option A
99. Option E
100. Option A
101. Option D
102. Option A
103. Option C
104. Option B
105. Option E
106. Option D
107. Option C
108. Option E
109. Option D
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111. Option D
112. Option B
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</tr>
</tbody>
</table>