

ENGLISH LANGUAGE

Directions (1-5) : Rearrange the given six sentences/group of sentences A, B, C, D, E and F in a proper sequence so as to form a meaningful paragraph and then answer the given questions.

- A. Anansi was just about to eat them when he noticed smoke in the distance. He learnt from the cassava that the smoke was from the town of rice.
- B. "Rice is much better than cassava!" Saying this Anansi promptly journeyed to the town of rice. When he reached there he noticed smoke in the distance. So he left the rice village and headed for the smoke, greedily thinking that he'd get something better.
- C. Alas, when he reached there he found it was his own village and he had no food for the villagers or himself. Greed had got him nowhere.
- D. He left his village to find food for his people and himself. After walking miles and miles he saw smoke from a distant village.
- E. Anansi, the spider was very unhappy. There was a drought and all his people were starving.
- F. When he reached, the only food he found was cassava. The cassava asked Anansi, "Would you like us roasted, fried or boiled?" Anansi told them that he did not have a particular choice and so they roasted themselves.

1. Which of the following should be the SIXTH (LAST) sentence after the rearrangement ?
- (1) A
 - (2) B
 - (3) C
 - (4) E
 - (5) F

Solution : 3

2. Which of the following should be the FIRST sentence after the rearrangement ?
- (1) A
 - (2) B
 - (3) D
 - (4) E
 - (5) F

Solution : 4

3. Which of the following should be the FIFTH sentence after the rearrangement ?
- (1) A

- (2) B
- (3) C
- (4) E
- (5) F

Solution : 2

4. Which of the following should be the SECOND sentence after the rearrangement ?

- (1) A
- (2) C
- (3) D
- (4) E
- (5) F

Solution : 3

5. Which of the following should be the THIRD sentence after the rearrangement ?

- (1) A
- (2) C
- (3) D
- (4) E
- (5) F

Solution : 5

Directions (6-10) : Read each of the following sentences to find out whether there is any grammatical error in it. The error, if any, will be in one part of the sentence. Select the part with the error as your answer. If there is no error, select 'No error' as your answer. (Ignore the errors of punctuation, if any)

6. It seems like that I(1)/ am the most(2)/ beautiful girl on(3)/ this planet.(4) No error(5)

Solution : 1

7. Whoever covers the longer distance(1)/ and returns home before sunset(2)/ will get wealth in proportionate to(3)/ the distance they cover.(4) No error(5)

Solution : 4

8. Shyam realised(1)/ his mistake and (2)/ recognised the importance(3)/ of practicality in life.(4) No error(5)

Solution : 5

9. Two little boys were(1)/ playing together,(2)/ when one them saw/(3) a nut on the ground.(4) No error(5)

Solution : 3

10. Nick's father was(1)/ a hardworking man(2)/ and hardly spend any time(3)/ with his son.(4) No error(5)

Solution : 3

Directions (11-15) : In each of these questions, sentence with four bold words is given. One from four words given in the bold may be either wrongly spelt or inappropriate in the context of the sentence. Find out the word which is wrongly spelt or inappropriate. If any, that word will be your answer. If all the words given in the bold are correctly spelt and also appropriate in the context of the sentence, then All correct' is your answer.

11. Soon farmers will be able(1)/ to sell their produce to whoever they want to instead(2)/ of only to wholesale(3)/ tradars.(4)/ All correct(5)

Solution : 4

12. 'La Nina' is a weather phenomenon which(1)/ is asociated(2)/ with abundant(3)/ rainfall in India say experts.(4)/ All correct(5)

Solution : 2

13. With the aim(1)/ of achieving xero(2)/ accidnets,(3)/ the Indian Railways has sought funds to upgrade(4)/ tracks and signalling systems. All correct(5)

Solution : 2

14. It is better(1)/ to go slow(2)/ on labour reforms and hold(3)/ discussions with all parties(4)/ concerned with the matter. All correct(5)

Solution : 5

15. Payments bank can collectt(1)/ deposits and offer(2)/ different payment solutions to customers but are not allowed(3)/ to lend.(4)/ All correct(5)

Solution : 1

Directions (16-25) : Read the passage carefully and answer the questions given below it. Certain words/phrases have been given in bold to help you locate them while answering some of the questions.

Long time ago, in a forest, there lived a young antelope. He was fond of the fruits of a particular tree. In a village bordering the forest, there lived a hunter who captured and killed antelopes for various reasons. He used to set traps for animals under fruit-bearing trees. When the animal came to eat the fruit, it would be caught in the trap. He would then take it away and kill it for its meat. One day, while visiting the forest in search of game, the hunter happened to see the antelope under its favourite tree, eating fruit. He was delighted. 'What a big, plump antelope!' he thought. 'I must catch him. I will get a lot of money from selling his meat.' Thereafter, for many days, the hunter kept track of

the antelope's movements. He realised that the antelope was remarkably vigilant and fleet footed animal that it would be virtually impossible for him to track him down. However, he had a weakness for that particular tree. The crafty concluded that he could use this weakness to capture him.

Early one morning, the hunter entered the forest with some logs of wood. He climbed the tree and put up a machan (platform used by hunters) on one of its branches by tying the logs together. Having set his trap at the foot of the tree, he then took up position on the machan and waited for the antelope. He strewed a lot of iy ,ovef mrui bts eo rn2thoeig6round beneath the 11.004.3, tree to conceal the trap and lure the antelope. Soon, the antelope came strolling along. He was very hungry and was eagerly looking forward to his usual breakfast of delicious ripe fruits. On the tree-top, the hunter, having sighted him, sat with bated breath, willing him to come closer and step into his trap. However, the antelope was no fool. As he neared the tree he stopped short. The number of fruits lying under the tree seemed considerably more than usual. Surely, something was amiss, decided the antelope. He paused just out of reach of the tree and carefully began examining the ground. Now, he saw what distinctly looked like a human footprint. Without going closer, he looked suspiciously at the tree. The hunter was well hidden in its thick foliage, nevertheless the antelope, on close scrutiny, was now sure that his suspicions had not been unfounded. He could see a corner of the machan peeping out of the leaves. Meanwhile the hunter was getting desperate. Suddenly, he had a brainwave. Let me try throwing some fruit at him,' he thought. So the hunter plucked some choice fruits and hurled them in the direction of the antelope. Alas, instead of luring him closer, it only confirmed his fears! Raising his voice, he spoke in the direction of the tree - "Listen, my dear tree, until now you have always dropped your fruits on the earth. Today, you have started throwing them at me! This is the most unlikely action of yours and I'm not sure I like the change! Since you have changed your habits, I too will change mine. I will get my fruits from a different tree from now on-one that still acts like a tree!' The hunter realised that the antelope had outsmarted him with his cleverness. Parting the leaves to reveal himself, he I grabbed his javelin and flung it wildly at the antelope. But the clever antelope was well prepared for any such action on his part. Giving a saucy chuckle, he leapt nimbly out of the harm's way.

16. As mentioned in the story, which of the following can be said about the hunter ?

- (1) He was a very good cook.
- (2) He was not as smart as the antelope.
- (3) He was growing old.
- (4) He had never missed any of his prey.
- (5) He was humane.

Solution : 2

17. Which of the following is most nearly the same in meaning as the word 'AMISS' as used in the story ?

- (1) Perfect

- (2) Forgotten
- (3) Obvious
- (4) Assumed
- (5) Fishy

Solution : 2

18. Which of the following statements is true in the context of the story ?

- (1) The hunter captured antelopes only for their skin.
- (2) The hunter came to know about the antelope through his friends.
- (3) The hunter learnt his lesson eventually and never killed any antelope.
- (4) The hunter and the antelope lived in the same village.
- (5) None of the given statements is true.

Solution : 5

19. Which of the following is most nearly the opposite in meaning as the word 'VIGILANT' as used in the story ?

- (1) High
- (2) Loyal
- (3) Rigid
- (4) Inattentive
- (5) Alert

Solution : 4

20. As mentioned in the story, the antelope told the tree that he would not have its fruits anymore as.....

- A. he had sensed danger as everything around the tree appeared different than usual.
- B. he felt insulted by the tree.
- C. he started liking fruits from the adjacent tree as they were more juicy.

- (1) Only A
- (2) Both A and B
- (3) Only B
- (4) Both A and C
- (5) Only C

Solution : 1

21. As mentioned in the story, the hunter prepared a machan on the tree to.....

- A. live peacefully
- B. keep a watch on the entire forest.
- C. catch his prey.

- (1) Only A
- (2) Only C
- (3) Only B

- (4) Both A and C
- (5) None of the given options

Solution : 2

22. Which of the following could be a suitable title to the story ?

- (1) The Hunter Who Loved Fruits
- (2) The Lazy Hunter
- (3) The Clever Antelope
- (4) The Hunter and His Love for Wild Animals
- (5) Antelopes- An Endangered Species

Solution : 3

23. Which of the following is most nearly the opposite in meaning as the word 'PLUMP' as used in the story ?

- (1) Hefty
- (2) Chirpy
- (3) Long
- (4) Boring
- (5) Lean

Solution : 5

24. Which of the following correctly explains the meaning of the phrase, 'bated breath' as used in the story ?

- (1) Turned blue
- (2) Without breathing at all
- (3) Waited anxiously
- (4) Bad breath
- (5) Unconscious

Solution : 3

25. Which of the following is most nearly the same in meaning as the word 'LURE' as used in the story ?

- (1) Lie
- (2) Beat
- (3) Fight
- (4) Attract
- (5) Hit

Solution : 4

Directions (26-30) : In the following passage, some of the words have been left out. Read the passage carefully and choose the correct answer to each question out of the five alternatives and fill in the blanks.

There lived an old tiger in a forest. It was becoming ..(26)... for him to catch a prey. The Tiger thought, "I no longer have the strength and speed of a youth. ...(27)... I find some trick, I will starve to death." On thinking hard, the tiger came upon a plan. He began shouting loudly, 'I am very old. I have turned into a vegetarian. I have become a saint and will not eat animals anymore.'

These words spread like ...(28)... in the jungle. Innocent animals came to pay respect to the tiger thinking that the tiger had changed into a saint. In turn, the tiger pounced on the animals when they came to his cave.

One day, a witty fox heard the words of the tiger. The fox began to wonder, "Can a tiger become a saint?" So stealthily, the fox approached the tiger's cave. He carefully examined the footprints of animals. He found that all the footprints were going towards the cave but none were ...(29)... from the cave. He quickly alerted all animals in the forest. "The Tiger is a cheat. Don't go to the cave." No animal ever ...(30)... the cave again and the tiger died of starvation.

26. (1) simple
(2) toughly
(3) thin
(4) difficult
(5) stricter

Solution : 4

27. (1) Unless
(2) If
(3) Although
(4) Before
(5) Till

Solution : 1

28. (1) fast
(2) wildfire
(3) plane
(4) epidemic
(5) that

Solution : 2

29. (1) entering
(2) returning
(3) left
(4) escaped
(5) seen

Solution : 2

30. (1) bothered
(2) dealt
(3) ventured
(4) visited
(5) approach
Solution : 4

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NUMERICAL ABILITY

1. The average monthly income of P and Q is Rs. 7,050/-. The average monthly income of Q and R is Rs.7,700/- and that of P and R is Rs.8,250/-. What is the monthly income of P ?

- (1) Rs. 7,200/-
- (2) Rs. 7,800/-
- (3) Rs. 7,400/-
- (4) Rs. 8,000/-
- (5) Rs. 7,600/-

Solution : 5

$$(5) ; P + Q = 7050 \times 2$$

$$P + Q = 14100 \quad \dots(i)$$

$$Q + R = 7700 \times 2$$

$$Q + R = 15400 \quad \dots(ii)$$

$$P + R = 8250 \times 2$$

$$P + R = 16500 \quad \dots(iii)$$

By adding equations (i), (ii) and (iii),

$$2(P + Q + R) = 46000$$

$$P + Q + R = 23000 \quad \dots(iv)$$

Subtracting equation (ii) from equation (iv),

$$P = ₹ 7,600/-$$

2. The side of a square is equal to height of a triangle. If the area of the triangle is 294 m² and the respective ratio of its height and base is 3 : 4, what is the perimeter of the square (in m) ?

- (1) 108
- (2) 96
- (3) 84
- (4) 72
- (5) 60

Solution : 3

(3) ; Let the height of the triangle = $3x$

Base of the triangle = $4x$

$$\text{Area of the triangle} = \frac{1}{2} \times 3x \times 4x$$

$$294 = 3x \times 2x$$

$$\Rightarrow 49 = x^2$$

$$\Rightarrow x = 7$$

Height of the triangle = $3 \times 7 = 21$ m

Side of a square = Height of the triangle = 21 m

\therefore Perimeter of square = $4 \times 21 = 84$ m

3. The interest earned when a sum of Rs. 1,200/- was invested for 4 years in scheme A (offering simple interest at the rate of 20% p.a.) was Rs. 1,460/- less than the amount received when Rs. x was invested for 2 years in scheme B (offering compound interest compounded annually at the rate of 10% p.a.). What was x ?

(1) Rs. 4,000/-

(2) Rs. 2,500/-

(3) Rs. 1,500/-

(4) Rs.3,000/-

(5) Rs.2,000/-

Solution : 5

(5) ; According to question,

$$x \left[1 + \frac{10}{100} \right]^2 - \frac{1200 \times 20 \times 4}{100} = 1460$$

$$\Rightarrow x \left[\frac{11}{10} \right]^2 - 960 = 1460$$

$$\Rightarrow \frac{121x}{100} = 2420$$

$$\Rightarrow x = ₹ 2,000/-$$

4. The sum of allowances received by Riddhi and Siddhi together was Rs. 3,800/-. Riddhi and Siddhi both paid $\frac{2}{8}$ th of their respective allowances as their tuition fees. If the tuition fees paid by Siddhi was more than that paid by Riddhi, by Rs. 80/-, how much was Riddhi's allowances ?

(1) Rs. 1,800/-

(2) Rs. 1,740/-

(3) Rs. 1,640/-

- (4) Rs. 1,840/-
(5) None of these

Solution : 2

(2) ; Let Riddhi's allowances = ₹x

Siddhi's allowances = ₹ (3800 - x)

According to question,

$$(3800 - x) \times \frac{2}{8} - x \times \frac{2}{8} = 80$$

$$\Rightarrow \frac{2}{8} [3800 - x - x] = 80$$

$$\Rightarrow 3800 - 2x = 320$$

$$\Rightarrow 2x = 3480$$

$$\Rightarrow x = ₹1,740/-$$

5. Train A, 220m long, can cross a platform 340 m long in 32 sec. If the respective ratio of speed of trains A and B is 7 : 9 and the length of train B is 270 m, how much time (in sec) would train B take to cross an electric pole ?

- (1) 18
(2) 12
(3) 20
(4) 22
(5) 14

Solution : 2

$$(2) ; \text{Speed of train A} = \frac{(340 + 220)}{32} = \frac{560}{32}$$

$$= 17.5 \text{ m/sec}$$

$$\text{Speed of train B} = 17.5 \times \frac{9}{7} = 22.5 \text{ m/sec}$$

Time taken by train B to cross an electric pole

$$= \frac{270}{22.5}$$

$$= 12 \text{ sec}$$

Directions (6-10) : Refer to the table and answer the following questions.

Number of Horror Novels published by 5 companies during 5 months

Month
Company

Month	Company				
	A	B	C	D	E
January	69	69	81	91	78
February	47	87	100	128	100
March	39	31	124	48	122
April	75	98	99	75	88
May	101	110	80	80	72

6. What is the respective ratio between total number of horror novels published by company A in January and April together and total number of horror novels published by company C in February and March together ?

- (1) 11 : 14
- (2) 9 : 16
- (3) 7 : 12
- (4) 9 : 14
- (5) 8 : 15

Solution : 4

$$\begin{aligned} \text{(4) ; Required ratio} &= (69 + 75) : (100 + 124) \\ &= 144 : 224 \\ &= 9 : 14 \end{aligned}$$

7. Number of horror novels published by company E in January is what percent less than the number of horror novels published by company D in February

- (1) $42\frac{3}{8}\%$
- (2) $40\frac{5}{8}\%$
- (3) $36\frac{3}{4}\%$
- (4) $38\frac{5}{8}\%$
- (5) $39\frac{1}{16}\%$

Solution : 5

$$\begin{aligned} \text{(5) ; Required percentage} &= \frac{128 - 78}{128} \times 100 \\ &= \frac{50}{128} \times 100 = 39\frac{1}{16}\% \end{aligned}$$

8. What is the difference between total number of horror novels published by company A in February and March together and that by company C in January and April together ?
- (1) 98
 - (2) 88
 - (3) 92
 - (4) 94
 - (5) 84

Solution : 4

$$(4) ; \text{ Required difference} = (81 + 99) - (47 + 39) \\ = 180 - 86 = 94$$

9. What is the average number of horror novels published by companies B, D and E in March ?
- (1) 69
 - (2) 65
 - (3) 67
 - (4) 63
 - (5) 71

Solution : 3

$$(3) ; \text{ Required average} = \frac{31 + 48 + 122}{3} = \frac{201}{3} = 67$$

10. Number of horror novels published by companies B and D increased by 10% and 5% respectively from May to June. What is the total number of horror novels published by companies B and D together in June ?
- (1) 211
 - (2) 213
 - (3) 205
 - (4) 197
 - (5) 209

Solution : 3

$$(3) ; \text{ Required number of Horror novels published by} \\ \text{companies B and D together in June} \\ = 110 \times \frac{110}{100} + 80 \times \frac{105}{100} \\ = 121 + 84 = 205$$

Directions (11-20) : What approximate value will come in place of question mark (?) in the given questions ? (You are not expected to calculate the exact value.)

11. $10^? - 162 \times 1 \frac{1}{3} = 28^2$

- (1) 3
- (2) 1
- (3) 5
- (4) 2
- (5) 4

Solution : 1

$$(1) ; 10^? - 162 \times 1 \frac{1}{3} = 28^2$$

$$\Rightarrow 10^? - 162 \times \frac{4}{3} = 784$$

$$\Rightarrow 10^? = 784 + 216$$

$$\Rightarrow 10^? = 1000$$

$$\Rightarrow 10^? = (10)^3$$

$$\Rightarrow ? = 3$$

12. $(29.55 + 95.45) \times ? = 150$

- (1) 0.18
- (2) 1.2
- (3) 1.4
- (4) 1.6
- (5) 2

Solution : 2

$$(2) ; (29.55 + 95.45) \times ? = 150$$

$$\Rightarrow 125.00 \times ? = 150$$

$$\Rightarrow ? = \frac{150}{125} = 1.2$$

13. $\sqrt{?} \div 5 = 220 - 6^3$

- (1) 484
- (2) 500
- (3) 400
- (4) 676
- (5) 625

Solution : 3

$$\begin{aligned} (3) ; \quad & \sqrt{?} + 5 = 220 - 6^3 \\ \Rightarrow & \frac{\sqrt{?}}{5} = 220 - 216 \\ \Rightarrow & \sqrt{?} = 4 \times 5 = 20 \\ & ? = 400 \end{aligned}$$

14. 140% of 80 + ? - 23 = 100

- (1) 17
- (2) 15
- (3) 13
- (4) 19
- (5) 11

Solution : 5

$$\begin{aligned} (5) ; \quad & 140 \text{ of } 80 + ? - 23 = 100 \\ \Rightarrow & \frac{140}{100} \times 80 + ? = 123 \\ \Rightarrow & 112 + ? = 123 \\ \Rightarrow & ? = 11 \end{aligned}$$

15. $\frac{1}{5} + \frac{2}{15} + ? + \frac{1}{6} = 1 \frac{1}{6}$

- (1) 3/5
- (2) 2/5
- (3) 1
- (4) 5/6
- (5) 2/3

Solution : 5

$$\begin{aligned} (5) ; \quad & \frac{1}{5} + \frac{2}{15} + ? + \frac{1}{6} = 1 \frac{1}{6} \\ \Rightarrow & \frac{3+2}{15} + ? + \frac{1}{6} = \frac{7}{6} \\ \Rightarrow & \frac{5}{15} + ? = \frac{7}{6} - \frac{1}{6} \\ \Rightarrow & ? = \frac{6}{6} - \frac{1}{3} \\ \Rightarrow & ? = 1 - \frac{1}{3} = \frac{2}{3} \end{aligned}$$

16. $2 \times 4.5 + 12 \times 1.5 = ?$

- (1) 24
- (2) 21
- (3) 27
- (4) 12
- (5) 17

Solution : 3

(3) ; $2 \times 4.5 + 12 \times 1.5 = ?$

$\Rightarrow 9 + 18 = ?$

$\Rightarrow 27 = ?$

17. $\sqrt{\frac{2.76 \times 3}{2.3 \times 2.5}} = ?$

- (1) 2.4
- (2) 1.4
- (3) 0.9
- (4) 1.2
- (5) 0.8

Solution : 4

(4) ; $\sqrt{\frac{2.76 \times 3}{2.3 \times 2.5}} = ?$

$\Rightarrow \sqrt{\frac{276 \times 3}{23 \times 25}} = ?$

$\Rightarrow \sqrt{\frac{12 \times 3}{25}} = ?$

$\Rightarrow \sqrt{\frac{36}{25}} = ?$

$\Rightarrow ? = \frac{6}{5} = 1.2$

18. $4\frac{1}{3} + 4\frac{1}{5} \times 2\frac{7}{9} = ?$

- (1) 16
- (2) $19\frac{1}{5}$
- (3) $18\frac{1}{3}$

(4) $15 \frac{2}{3}$

(5) $12 \frac{2}{3}$

Solution : 1

$$(1) ; 4\frac{1}{3} + 4\frac{1}{5} \times 2\frac{7}{9} = ?$$

$$\Rightarrow \frac{13}{3} + \frac{21}{5} \times \frac{25}{9} = ?$$

$$\Rightarrow \frac{13}{3} + \frac{35}{3} = ?$$

$$\Rightarrow \frac{48}{3} = ?$$

$$\Rightarrow 16 = ?$$

19. 70% of 20% of 240 = ?

(1) 34.2

(2) 32.6

(3) 33.2

(4) 36.4

(5) 33.6

Solution : 5

$$(5) ; 70\% \text{ of } 20\% \text{ of } 240 = ?$$

$$\Rightarrow \frac{70}{100} \times \frac{20}{100} \times 240 = ?$$

$$\Rightarrow 33.6 = ?$$

20. 120% of $\left(11\frac{1}{6} + \frac{5}{6}\right) = ? = 26 (66)$

(1) 11.2

(2) 9.4

(3) 21.4

(4) 9.6

(5) 11.6

Solution : 5

$$\begin{aligned}
 (5) ; 120\% \text{ of } \left(11\frac{1}{6} + \frac{5}{6} \right) + ? &= 26 \\
 \Rightarrow \frac{120}{100} \times \left(\frac{67}{6} + \frac{5}{6} \right) + ? &= 26 \\
 \Rightarrow \frac{6}{5} \times \left(\frac{72}{6} \right) + ? &= 26 \\
 \Rightarrow \frac{72}{5} + ? &= 26 \\
 \Rightarrow ? &= 26 - \frac{72}{5} \\
 \Rightarrow ? &= \frac{58}{5} = 11.6
 \end{aligned}$$

Directions (21-25) : What will come in place of question mark (?) in the given number series ?

21. 8 ? 16 48 192 960

- (1) 16
- (2) 10
- (3) 12
- (4) 14
- (5) 8

Solution : 5

$$\begin{array}{cccccc}
 (5) ; & 8 & & 8 & & 16 & & 48 & & 192 & & 960 \\
 & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow \\
 & \times 1 & & \times 2 & & \times 3 & & \times 4 & & \times 5 & &
 \end{array}$$

22. 16.8 16.85 16.75 16.9 16.7 ?

- (1) 17.5
- (2) 17.25
- (3) 16.95
- (4) 16.25
- (5) 18.85

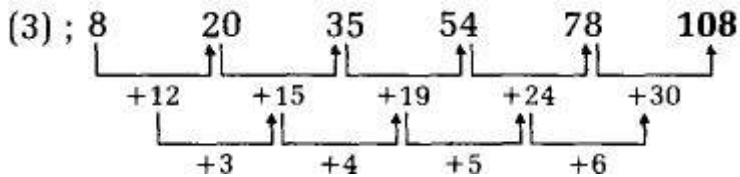
Solution : 3

$$\begin{array}{cccccc}
 (3) ; & 16.8 & & 16.85 & & 16.75 & & 16.9 & & 16.7 & & 16.95 \\
 & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow \\
 & +0.05 & & -0.1 & & +0.15 & & -0.2 & & +0.25 & &
 \end{array}$$

23. 8 20 35 54 78 ?

- (1) 114
- (2) 169
- (3) 108
- (4) 123
- (5) 136

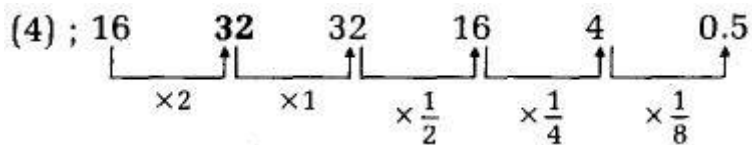
Solution : 3



24. 16 ? 32 16 4 0.5

- (1) 28
- (2) 20
- (3) 24
- (4) 32
- (5) 18

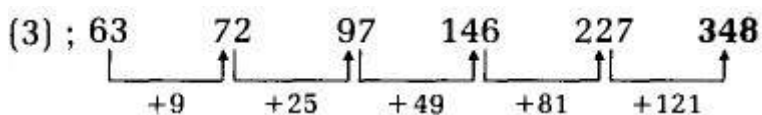
Solution : 4



25. 63 72 97 146 227 ?

- (1) 263
- (2) 466
- (3) 348
- (4) 329
- (5) 384

Solution : 3



26. Jar A has 'x' ml mixture of milk and water, of which 40% is water. Jar B also has mixture of milk and water, of which 20% is water. The quantity of mixture in Jar B is twice that of Jar A. If the content of Jar B is emptied into Jar A completely and the resultant quantity

of milk in Jar A is 198 ml, what is the value of 'x' ?

- (1) 45
- (2) 90
- (3) 85
- (4) 95
- (5) 65

Solution : 2

(2) ; In Jar A,

$$\text{Quantity of water} = \frac{x \times 40}{100} = \frac{2x}{5}$$

$$\text{Quantity of milk} = x - \frac{2x}{5} = \frac{3x}{5}$$

In Jar B,

$$\text{Quantity of water} = \frac{2x \times 20}{100} = \frac{2x}{5}$$

$$\text{Quantity of milk} = 2x - \frac{2x}{5} = \frac{8x}{5}$$

According to question,

$$\frac{3x}{5} + \frac{8x}{5} = 198$$

$$11x = 198 \times 5$$

$$x = 90 \text{ ml}$$

27. A and B start a business together with an investment of Rs. 3,000/-and Rs. 6,000/- respectively. At the end of six months from the start of the business, B withdrew half of his investment. If at the end of the year, B's share from the total profit earned was Rs. 3,750/-, what was the total profit earned ?

- (1) Rs. 5,750/-
- (2) Rs. 6,250/-
- (3) Rs. 6,500/-
- (4) Rs. 6,400
- (5) None of these

Solution : 2

(2) ; The ratio of amount invested by A and B

$$= 12 \times 3000 : 6 \times 6000 + 6 \times 3000$$

$$= 12 \times 3 : 6 \times 6 + 6 \times 3$$

$$= 12 \times 3 : 6 \times 9 = 2 : 3$$

$$\therefore \text{Total profit} = \frac{3750 \times (2 + 3)}{3} = ₹ 6,250/-$$

28. In a village, 64% of the total population are literates. The respective ratio of literate male and female is 3 : 1 and the respective ratio of illiterate male and female is 5 : 4. What is the respective ratio of literate male and illiterate male in the village ?

- (1) 12 : 5
- (2) 9 : 4
- (3) 8 : 5
- (4) 11 : 5
- (5) 13 : 7

Solution : 1

(1) ; Let total population of village = 100

Number of literate people = 64

Number of illiterate people = 36

Number of literate males = $64 \times \frac{3}{4} = 48$

Number of illiterate males = $36 \times \frac{5}{9} = 20$

∴ Required ratio = 48 : 20 = 12 : 5

29. A certain sum P when invested for four years at the rate of 10% p.a. simple interest, amounts to 22,960/-. What will be the interest earned when (P + 600) is invested in the same rate of simple interest p.a. for four years ?

- (1) 6,400/-
- (2) 6,800/-
- (3) 6,500/-
- (4) 6,600/-
- (5) 6,900/-

Solution : 2

(2) ; According to question,

$$\frac{P \times 10 \times 4}{100} + P = 22960$$

$$\frac{2P}{5} + P = 22960$$

$$7P = 22960 \times 5$$

$$P = ₹ 16,400/-$$

Ind condition,

$$\frac{(P + 600) \times 4 \times 10}{100} = \frac{(16400 + 600) \times 2}{5}$$

$$= \frac{17000}{5} \times 2 = ₹ 6,800/-$$

30. When one-sixth of a number x , is added to 117, it becomes equal to y^2 . If one-fifth of y is equal to 2.2, what is the value of x ?

- (1) 24
- (2) 22
- (3) 28
- (4) 30
- (5) 32

Solution : 1

(1) ; First condition,

$$\frac{x}{6} + 117 = y^2 \quad \dots(i)$$

Second condition,

$$\frac{y}{5} = 2.2$$

$$y = 11$$

From equation (i),

$$\frac{x}{6} + 117 = (11)^2$$

$$\frac{x}{6} = 121 - 117$$

$$x = 4 \times 6$$

$$x = 24$$

31. A, B and C can independently finish a piece of work in 18 days, 'x' days and 27 days respectively. A and C started working together and after 6 days B replaced both of them. If B could finish the remaining work in 16 days, what is the value of 'x' ?

- (1) 32
- (2) 36
- (3) 34
- (4) 40
- (5) None of these

Solution : 2

$$(2) ; (A + C)'s 1 day's work = \frac{1}{18} + \frac{1}{27} = \frac{3+2}{54}$$

$$= \frac{5}{54}$$

$$(A + C)'s 6 day's work = \frac{5 \times 6}{54} = \frac{5}{9}$$

$$\text{Remaining work} = 1 - \frac{5}{9} = \frac{4}{9}$$

According to question,

$$\frac{16}{x} = \frac{4}{9}$$

$$x = 36 \text{ days}$$

32. The floor of a square hall is tiled completely with forty-nine square shaped tiles. If the side of each tile measures 2 m, what was the perimeter of the hall ? (in m)

- (1) 112
- (2) 96
- (3) 72
- (4) 56
- (5) 60

Solution : 4

$$(4) ; \text{Area of square shaped tile} = 2 \times 2 = 4 \text{ m}^2$$

$$\text{Area of floor} = 4 \times 49 = 196 \text{ m}^2$$

$$\text{Side of floor} = \sqrt{196} = 14 \text{ m}$$

$$\therefore \text{Perimeter of the hall} = 4 \times 14 = 56 \text{ m}$$

33. The present age of a father is equal to the sum of his son's and wife's present ages. The respective ratio between the present ages of his wife and son is 8 : 1 and the difference between his wife's and son's present ages is 28 years, what will be father's age after 4 years ? (in years)

- (1) 36
- (2) 38
- (3) 40
- (4) 44
- (5) 48

Solution : 3

(3) ; Let the present age of wife = $8x$

Present age of son = x

According to question,

$$8x - x = 28$$

$$\Rightarrow 7x = 28$$

$$\Rightarrow x = 4 \text{ years}$$

The present age of father = $8x + x = 9x$

$$= 9 \times 4 = 36 \text{ years}$$

\therefore Father's age after 4 years = $36 + 4$

$$= 40 \text{ years}$$

34. A shopkeeper sold first unit of an article to Aria at 20% discount and the second unit of the same article at 40% discount. If the shopkeeper earned an overall profit of 5%, the marked price of the article was what percent of the cost price of the article ?

- (1) 200
- (2) 150
- (3) 125
- (4) 160
- (5) 120

Solution : 2

(2) ; Let the cost price of the article = ₹ x

Marked price of the article = ₹ 100/-

According to question,

$$100 \times \frac{80}{100} + 100 \times \frac{60}{100} = 2x \times \frac{105}{100}$$

$$100 \times 140 = 2x \times 105$$

$$x = \frac{200}{3}$$

$$\therefore \text{Required percentage} = \frac{100 \times 3}{200} \times 100$$

$$= 150\%$$

35. The time taken by a boat to travel 'x' km upstream is twice the time taken by the same boat to travel 'x' km downstream. If speed of the boat in still water is 12 km/h, what is the speed of current ?

(in km/h)

- (1) 3
- (2) 4
- (3) 3.5
- (4) 4.5
- (5) None of these

Solution : 2

(2) ; Let the speed of current = y km/h

Downstream speed of boat = $(12 + y)$ km/h

Upstream speed of boat = $(12 - y)$ km/h

According to question,

$$\frac{x}{12 - y} = 2 \left[\frac{x}{12 + y} \right]$$

$$12 + y = 24 - 2y$$

$$3y = 12$$

$$y = 4 \text{ km/h}$$

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REASONING

Directions (1-5) : These questions are based on the five three digit numbers given below :

346 815 428 271 732

1. If '1' is added to the first digit of every number and '1' is subtracted from the third digit of every number, in how many numbers thus formed will the difference between first and third digits be more than 5 ?

- (1) Two
- (2) None
- (3) Four
- (4) Three
- (5) One

Solution : 5

(5) ; 346 \Rightarrow 445
815 \Rightarrow 914
428 \Rightarrow 527
271 \Rightarrow 370
732 \Rightarrow 831

2. If all the numbers are arranged in ascending order from left to right, which of the following will be resultant if first and third digits of the number which is second from the right are multiplied ?

- (1) 18
- (2) 14
- (3) 40
- (4) 24
- (5) 32

Solution : 2

(2) ; Ascending order of the numbers

271 < 346 < 428 < 732 < 815

Second from the right = 732

\therefore Required resultant = $7 \times 2 = 14$

3. If '2' is added to the second digit of every even number and '1' is subtracted from the first digit of every odd number, in how many numbers will a digit appear twice ?

- (1) Three

- (2) Two
- (3) Four
- (4) One
- (5) None

Solution : 1

$$\begin{aligned}(1) ; 346 &\Rightarrow \mathbf{366} \\ 815 &\Rightarrow 715 \\ 428 &\Rightarrow \mathbf{448} \\ 271 &\Rightarrow \mathbf{171} \\ 732 &\Rightarrow 752\end{aligned}$$

4. If in each number all the digits are arranged in descending order within the number, how many numbers thus formed will be odd numbers ?

- (1) One
- (2) Four
- (3) None
- (4) Three
- (5) Two

Solution : 4

$$\begin{aligned}(4) ; 346 &\Rightarrow \mathbf{643} \\ 815 &\Rightarrow \mathbf{851} \\ 428 &\Rightarrow 842 \\ 271 &\Rightarrow \mathbf{721} \\ 732 &\Rightarrow 732\end{aligned}$$

5. The positions of the first and the third digits of each of the numbers are interchanged. What will be the resultant if first digit of the highest number thus formed is divided by the third digit of the lowest number thus formed ?

- (1) 2
- (2) 1.5
- (3) 3
- (4) 4
- (5) 3.5

Solution : 4

(4) ; 346 \Rightarrow 643
 815 \Rightarrow 518
 428 \Rightarrow 824
 271 \Rightarrow 172
 732 \Rightarrow 237
 Highest number = 824
 Its first digit = 8
 Lowest number = 172
 Its third digit = 2
 \therefore Required resultant = $\frac{8}{2}$
 = 4

Directions (6-8) : Study the following information and answer the questions.

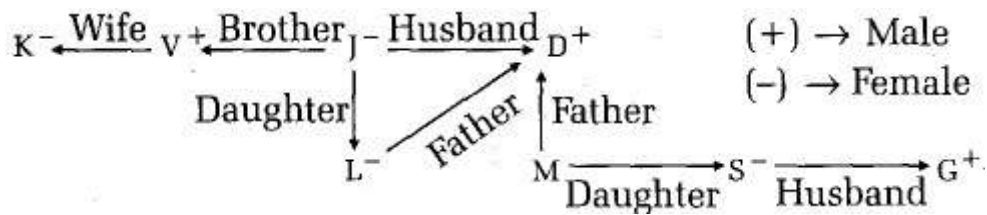
K is the wife of V. V is the brother of J. L is the only daughter of J. D is the father of M and L. S is the only daughter of M.

6. How is D related to V ?

- (1) Nephew
- (2) Brother
- (3) Brother-in-law
- (4) Son
- (5) Father-in-law

Solution : 3

Q. no . 6 - 8



7. If S is married to G, how is G related to M ?

- (1) Daughter
- (2) Son
- (3) Nephew
- (4) Niece
- (5) Son-in-law

Solution : 5

8. How is K related to L ?

- (1) Aunt
- (2) Niece
- (3) Mother-in-law
- (4) Mother
- (5) Sister

Solution : 1

Directions (9-13) : Study the following information and answer the questions.

Seven people, namely K, L, M, N, o, P and Q have seven different meetings on the seven different days of the same week starting from Monday and ending on Sunday, not necessarily in the same order.

L has a meeting on Thursday. Only two people have a meeting between L and o. Only three people have a meeting between o and N. As many people have a meeting between N and P as between P and o. Q has a meeting immediately before M. Q does not have a meeting on Saturday.

9. Which of the following is not true about K ?

- (1) K has a meeting immediately after P.
- (2) All the given statements are true.
- (3) Only one person has a meeting after K.
- (4) K has a meeting on one of the days after o.
- (5) Only three people have a meeting between K and M.

Solution : 4

Q. no . 9 – 13

Day	Person
Monday	Q
Tuesday	M
Wednesday	N
Thursday	L
Friday	P
Saturday	K
Sunday	O

10. How many people have meeting(s) between the days on which Q and L have their meetings ?

- (1) More than three

- (2) Two
- (3) Three
- (4) None
- (5) One

Solution : 2

11. Who amongst the following has a meeting immediately after the one who has a meeting on Tuesday ?

- (1) Q
- (2) K
- (3) M
- (4) O
- (5) N

Solution : 5

12. On which of the following days does M have a meeting ?

- (1) Saturday
- (2) Wednesday
- (3) Friday
- (4) Tuesday
- (5) Sunday

Solution : 4

13. Four of the following five are alike in a certain way and thus form a group as per the given arrangement. Which of the following does not belong to that group ?

- (1) P-Saturday
- (2) O-Friday
- (3) Q-Wednesday
- (4) N-Monday
- (5) L-Tuesday

Solution : 1

Directions (14-18) : In these questions, relationship between different elements is shown in the statements. The statements are followed by conclusions. Study the conclusions based on the given statements and select the appropriate answer.

Give answer :

- (1) If both conclusions I and II are true
- (2) If only conclusion I is true

- (3) If neither conclusion I nor II is true
- (4) If only conclusion II is true
- (5) If either conclusion I or conclusion II is true

14. Statements :

$$P > L \leq T = Q ; Z < L \geq V$$

Conclusions :

I. $Q \geq V$

II. $Z < P$

Solution : 1

$$(1) ; P > L \leq T = Q$$

$$Z < L \geq V$$

$$V \leq L \leq T = Q$$

$$Z < L < P$$

Conclusions : I. $Q \geq V \rightarrow$ True

II. $Z < P \rightarrow$ True

15. Statement :

$$T < H \geq A < N \leq C$$

Conclusions :

I. $C > A$

II. $N > T$

Solution : 2

$$(2) ; T < H \geq A < N \leq C$$

Conclusions : I. $C > A \rightarrow$ True

II. $N > T \rightarrow$ False

16. Statement :

$$R = Q \geq E \leq S > T$$

Conclusions :

I. $R > S$

II. $Q \geq T$

Solution : 3

$$(3) ; R = Q \geq E \leq S > T$$

Conclusions : I. $R > S \rightarrow$ False

II. $Q \geq T \rightarrow$ False

17. Statements :

$$C = O \leq V = L \leq R ; S \geq R$$

Conclusions :

I. $S > C$

II. $S = C$

Solution : 5

$$(5) ; C = O \leq V = L \leq R$$

$$S \geq R$$

$$C = O \leq V = L \leq R \leq S$$

Conclusions : I. $S > C$ } Either conclusion I
II. $S = C$ } or II is true

18. Statements :

$$E < N = C \geq L > S$$

Conclusions :

I. $L < E$

II. $S < N$

Solution : 4

$$(4) ; E < N = C \geq L > S$$

Conclusions : I. $L < E \rightarrow$ False

II. $S < N \rightarrow$ True

Directions (19-24) : Study the following information carefully and answer the given questions.

B, C, D, E, F, G, H and I are sitting around a circular table facing the centre but not necessarily in the same order.

- Only one person sits between D and E B sits to the immediate right of E
- Only three people sit between F and H.
- C sits to the immediate left of G.
- G is not an immediate neighbour of E.
- E sits second to the left of C.

19. Who amongst the following sits to the immediate left of E?

(1) B

(2) I

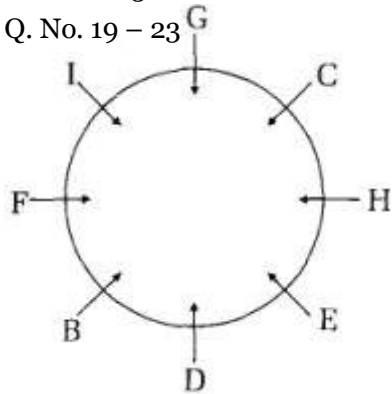
(3) D

(4) G

(5) H

Solution : 3

Q. No. 19 - 23



20. What is the position of B with respect to G ?

- (1) Third to the right
- (2) Fourth to the left
- (3) Second to the right
- (4) Second to the left
- (5) Third to the left

Solution : 1

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

- (1) EFG
- (2) DIC
- (3) CEF
- (4) GEB
- (5) HBI

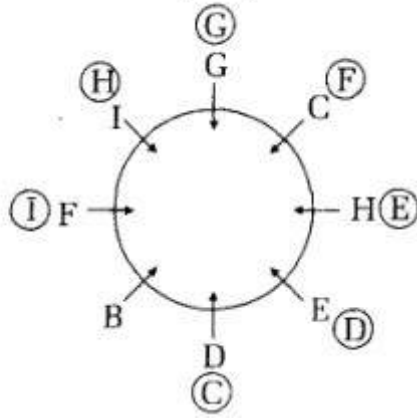
Solution : 3

22. If all the persons are made to sit in alphabetical order in anti- clockwise direction, starting from B, the positions of how many, excluding B, would remain unchanged ?

- (1) Four
- (2) Two
- (3) One
- (4) Three
- (5) None

Solution : 3

(3) ; Anti-Clockwise



23. Which amongst the following statements is true regarding I, as per the given arrangement ?

- (1) D sits second to the right of I.
- (2) I is an immediate neighbour of both G and F.
- (3) Only two. people sit between I and C.
- (4) Only four people sit between I and E.
- (5) All statements are true.

Solution : 2

24. If two is added to the first three digits and three is subtracted from the last three digits in the number 657489, how many digits in the number thus formed will be multiples of 3 ?

- (1) One
- (2) None
- (3) Two
- (4) More than three
- (5) Three

Solution : 3

$$\begin{array}{cccccc}
 (3) : & 6 & 5 & 7 & 4 & 8 & 9 \\
 & +2 & +2 & +2 & -3 & -3 & -3 \\
 & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\
 & 8 & 7 & 9 & 1 & 5 & 6
 \end{array}$$

25. Among five friends- J, K, L, M and N each having a different number of pencils. K has more pencils than N but less than L. M has more pencils than L. J neither has the most nor the least number of pencils. Who amongst the following has the lowest number of pencils ?

- (1) Cannot be determined
- (2) M

- (3) N
- (4) L
- (5) K

Solution : 3

$$\begin{array}{l} (3) ; L > K > N \\ M > L \\ M > L > K > N \\ \quad \uparrow \quad \uparrow \\ \quad \quad J \end{array}$$

26. In a certain code, if 'they shouted loud' is written as '4 1 5' and 'loud music heard' is coded as '7 6 1', then what is the code for 'music' in the given code language ?
- (1) Either '4' or '6'
 - (2) 5
 - (3) 1
 - (4) Either '6' or '7'
 - (5) 4

Solution : 4

$$\begin{array}{l} (4) ; \text{they shouted } \mathbf{loud} \rightarrow 4 \ 1 \ 5 \\ \quad \quad \mathbf{loud} \text{ music heard} \rightarrow 7 \ 6 \ 1 \end{array}$$

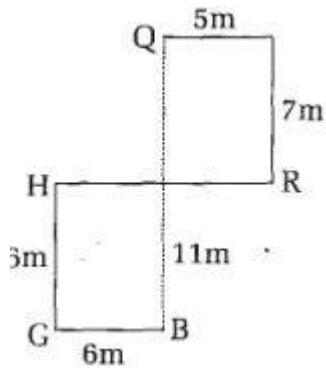
Directions (27-33) : Study the given information carefully to answer the given questions.

Syne who is standing at point H, walks 11m towards east and reaches point R. She then takes a left turn and walks 7m. She takes a left turn, walks 5m and reaches point Q. Point G is 6m to the south of point H. Point B is 6m to the east of point G.

27. How far and in which direction is point Q with respect to point B ?
- (1) 13 m towards north
 - (2) 9 m towards north
 - (3) 10 m towards south
 - (4) 11 m towards south
 - (5) 12 m towards east

Solution : 1

Q. No. 27 – 28



28. In which direction is point G with respect to point R ?

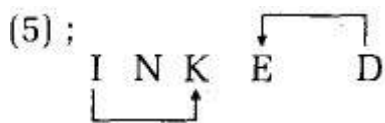
- (1) South-west
- (2) North-west
- (3) East
- (4) West
- (5) South-east

Solution : 5

29. How many such pairs of letters are there in the word 'INKED' each of which has as many letters between them in the word (in both forward and backward directions) as they have between them in the English alphabetical series?

- (1) None
- (2) More than three
- (3) Three
- (4) One
- (5) Two

Solution : 5



Directions (30-34) : Study the following arrangement carefully and answer the questions.

D L J # 3 P + A W Z R E 8 G 2 N S = T 6 & Y 9 @ X 4 H U 5 ^ 7 B

30. In a certain code, based on the given arrangement, 'HER' is coded as '^ RG' and 'SUN' is coded as '6HT'. How will 'PAT' be coded following the same coding pattern ?

- (1) J+Y
- (2) WR=
- (3) +3Y
- (4) JWN

(5) W+Y

Solution : 5

(5) ; As,

H	E	R	S	U	N
+3↓	-1↓	+3↓	+3↓	-1↓	+3↓
^	R	G	6	H	T

Similarly,

P	A	T
+3↓	-1↓	+3↓
W	+	Y

31. How many such letters are there in the given arrangement, each of which is immediately preceded by a symbol and also immediately followed by an even number ?

- (1) More than three
- (2) None
- (3) One
- (4) Two
- (5) Three

Solution :3

32. Four of the following five are alike in a certain way based on their positions in the given arrangement and hence form a group. Which one does not belong to that group ?

- (1) R8Z
- (2) Y@&
- (3) 57U
- (4) 3+#
- (5) GS2

Solution : 5

(5) ;

R	$\xrightarrow{+2}$	8	$\xrightarrow{-3}$	Z
Y	$\xrightarrow{+2}$	@	$\xrightarrow{-3}$	&
5	$\xrightarrow{+2}$	7	$\xrightarrow{-3}$	U
3	$\xrightarrow{+2}$	+	$\xrightarrow{-3}$	#
G	$\xrightarrow{+3}$	S	$\xrightarrow{-2}$	2

33. If all the symbols are deleted from the given arrangement then which of the following will be ninth element from the right end ?

- (1) Y

- (2) R
- (3) E
- (4) 6
- (5) 9

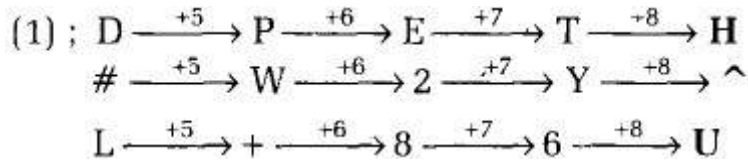
Solution : 1

34. Which one of the following will come next in the given sequence ?

D#L PW+ E28 TY6 ?

- (1) H ^ U
- (2) H^4
- (3) 45U
- (4) H@4
- (5) X57

Solution : 1

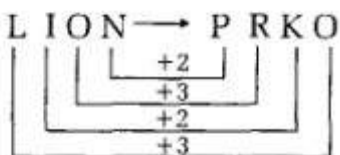
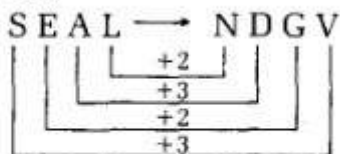


35. In a certain code language, 'SEAL' is coded as 'NDGV' and 'LION' is coded as 'PRKO'. In the same code language, 'HOLD' will be coded as :

- (1) FOQK
- (2) ENRK
- (3) EOQR
- (4) OMSJ
- (5) FORL

Solution : 1

(1) ; As,



Similarly,

