

Practice Set-6








Part—I General Intelligence

1. Arrange the following in a logical order.
 1. Open Text book
 2. Attend Assembly
 3. Catch Bus
 4. Wear Uniform
 5. Get into classroom

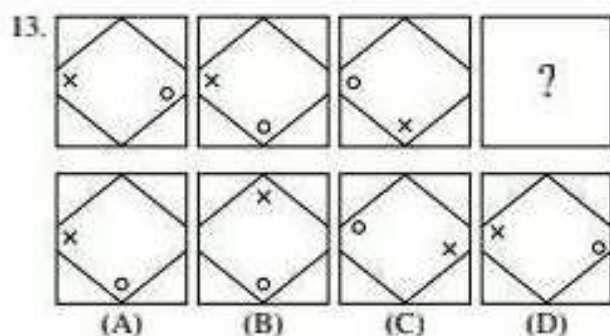
(A) 4, 2, 3, 5, 1 (B) 4, 3, 5, 1, 2
(C) 4, 3, 2, 5, 1 (D) 4, 3, 1, 5, 2
2. Arrange the following according to dictionary order—

1. Collect	2. Collinear
3. Collection	4. Column
5. Collapse	

(A) 5, 1, 3, 2, 4 (B) 5, 1, 2, 3, 4
(C) 5, 1, 4, 3, 2 (D) 5, 1, 2, 4, 3
3. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it ?
 c _ bba _ cab _ ac _ ab _ ac
 (A) babcc (B) bcacb
(C) acbcb (D) abcbc
- Directions—(Q. 4–9)** A series is given with one/two term missing. Choose the correct alternative from the given ones that will complete the series.
 4. XUROLI ? ?
 (A) HG (B) HE
(C) FC (D) GE
 5. ABCDE, BDAEC, DEBCA, ?
 (A) EACDB (B) ECADB
(C) EDCAB (D) ECDAB
 6. 31, 37, 49, 67, ?
 (A) 87 (B) 91
(C) 89 (D) 97
 7. 365, 364, 355, 330, 281, ?
 (A) 280
(B) 200
(C) 180
(D) 120
 8. 4, 5, 6, 9, 8, 13, 10, ?
 (A) 14 (B) 15
(C) 11 (D) 17
 9. NLO : RPS :: VTW : ?
 (A) XYY
(B) VTR
(C) TRP
(D) VUW
- Directions—(Q. 10–16)** A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series—
 10. 436, 382, 337, 238, ?
 (A) 167 (B) 159
(C) 138 (D) 148
 11.

			?
			
(A)	(B)	(C)	(D)
 12. 13, 40, 122, 369 ?
 (A) 1110 (B) 1111
(C) 1112 (D) 1113

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14. H J M Q ?

- (A) A (B) W
(C) S (D) V

15. 6, 10, 18, 34, ?

- (A) 46 (B) 56
(C) 66 (D) 76

16. N O A B O P B C P Q C D ? ? ? ?

- (A) Q R D E (B) R T E F
(C) Q S D E (D) Q R G I

Directions—Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

17. a _ aa bb _ _ ab _ b _

- (A) b a a a a (B) b a b a b
(C) b a a b a (D) b b a a a

Directions—(Q. 18–19) Which one of the given responses would be a meaningful order of the following words?

18. 1. Book 2. Words
3. Letters 4. Sentences
5. Chapter 6. Pages

- (A) 3 2 6 5 4 1
(B) 3 2 5 4 6 1
(C) 3 2 4 5 6 1
(D) 3 2 4 6 5 1

19. 1. Grand father
2. Great grand father
3. Grand son
4. Son
5. Father

- (A) 3 4 5 1 2
(B) 4 1 3 5 2
(C) 1 2 3 4 5
(D) 2 3 1 5 4

20. Raju ranks 10th from the top and Ravi ranks 21st from the bottom. If there are 3 students between them, how many students are there in the class?

- (A) 34 (B) 33
(C) 31 (D) 32

21. P is the father of T. T is the daughter of M. M is the daughter of K. What is P to K?

- (A) Father (B) Father-in-law
(C) Brother (D) Son-in-law

22. If 'PENCIL' is coded as ? @, = ; 7 and 'PAPER' is coded as ? 9 ? @ 5, how will you code 'CLIP'?

- (A) @ 7 ; ? (B) @ ? ; ?
(C) = 7 ? ; (D) = 7 ; ?

23. If J = 10, JASMINE = 71, then ESTIMATE = ?

- (A) 71 (B) 82
(C) 92 (D) 91

24. Seeta starts from a point, walks 2 km towards north, turns towards her right and walks 2 km, turns right again and walks. What is the direction she is facing now?

- (A) East (B) West
(C) South (D) North

25. A man walks 7 km towards north before taking left turn and walks further 5 km. Then he takes left turn and walks 15 km. Finally he takes left turn again and walks 5 km. How much distance is he away from the starting point?

- (A) 8 km (B) 12 km
(C) 15 km (D) 22 km

26. If '+' stands for division, '÷' stands for multiplication, × for addition; which one of the following equation is correct?

- (A) $10 \div 5 + 4 = 6$ (B) $10 - 4 + 2 = 6$
(C) $10 + 2 - 5 = 6$ (D) $10 + 2 \times 1 = 6$

27. Which word cannot be formed from the letters of the word 'CARDIOGRAM'?

- (A) AEROGRAM (B) RADIO
(C) DIAGRAM (D) CARGO

Directions—In question no. 28, from the given alternatives select the word which can be formed using the letters given in the word—

28. OPERATION

- (A) CAPTION
(B) ROTATION
(C) OPTION
(D) NATION

29. Of the six members of a panel sitting in a row E is to the left of B, but on the right of A. F is on the right of B but is on the left of G who is to the left of C. Find the members sitting right in the middle.

- (A) A E (B) B F
(C) G C (D) F G

Directions—(Q. 30–31) One/two statements are given followed by two conclusions and assumptions I and II. You have to consider the two statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions and assumptions, if any, follow from the given statements—

30. **Statement** : All hens are cocks. No cock is black.

- Conclusions** : I. All cocks are hens.
II. No hen is black.

- (A) Only conclusion I is valid
(B) Only conclusion II is valid
(C) Both the conclusions are valid
(D) Both the conclusions are invalid

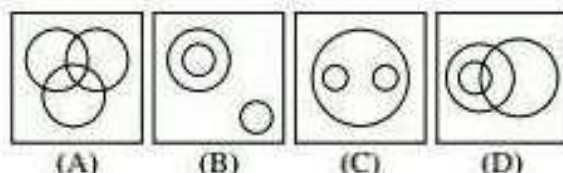
31. **Statement** : He is too industrious to be poor.

- Conclusions** : I. Very industrious people also can be poor.
II. Very lazy people can also be rich.

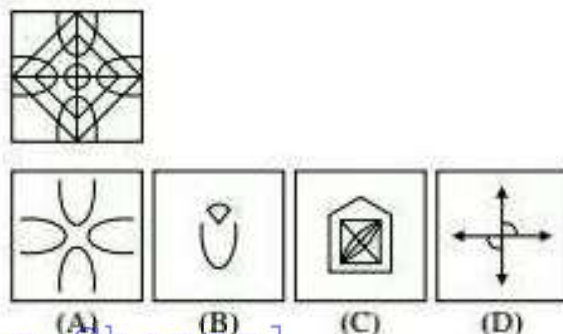
- (A) Only I is implicit
(B) Only II is implicit
(C) Both I and II are implicit
(D) Neither I nor II is implicit

32. Out of four figures which figure will best represent the relationship amongst the classes ?

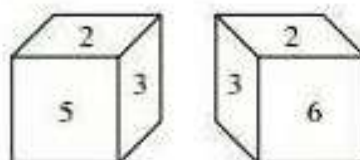
1. Sparrow
2. Birds
3. Mice



33. Which of the answer figure is **not** made up of only by the components of the key figure ?

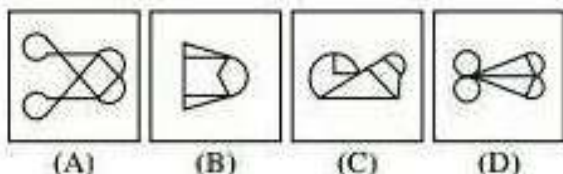
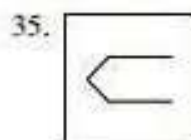


34. From the following two different appearances of a die find out the number which is opposite to '5'.

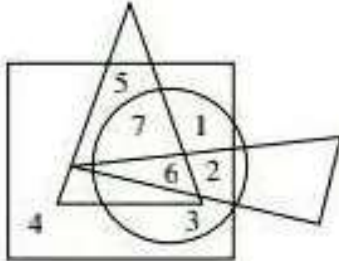


- (A) 2 (B) 3
(C) 4 (D) 6

Directions—From the given answer figures, select the one in which the question figure is hidden/embedded—

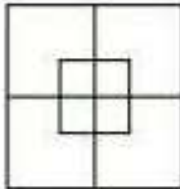


36. Which number is present only in one geometrical figure ?



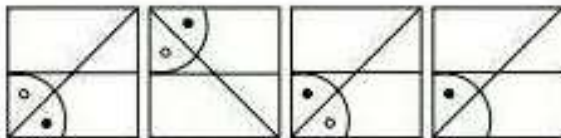
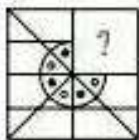
- (A) 3 (B) 2
(C) 5 (D) 4

37. How many squares are there in the given figure ?



- (A) 7 (B) 12
(C) 8 (D) 10

38. **Directions**—Which answer figure will complete the pattern in the question figure ?



- (A) (B) (C) (D)

Directions—(Q. 39 and 40) A series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.

39. A, E, I, ?, Q

- (A) O (B) M
(C) U (D) L

40. 510, 322, 404, ?

- (A) 422 (B) 371
(C) 629 (D) 819

41. If 4 cats can kill 4 rats in 4 minutes, how many minutes will it take 8 cats to kill 8 rats ?

- (A) 8 (B) 4
(C) 2 (D) 16

42. From the given alternative words, select the word which **cannot** be formed using the letters of the given word—

QUICKWITTED

- (A) QUID (B) QUICK
(C) QUIET (D) QUILT

43. If MUSTARD is written as 132119201184, how is PROFUSE written in that code ?

- (A) 16815621195
(B) 16181562195
(C) 16181521195
(D) 161815621195

44. If $53 \div 31 = 2$, $45 \div 27 = 1$, $69 \div 32 = 3$, then $97 \div 26 = ?$

- (A) 1 (B) 2
(C) 3 (D) 4

45. The 3 equations follow the same numerical operation. Find the missing number according to it—

$$178 = 817, 534 = 453, 294 = ?$$

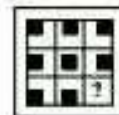
- (A) 429 (B) 492
(C) 924 (D) 942

46. An official meeting is attended by 130 department employees. Of them, 66 drink tea, 56 drink coffee and 63 drink juice, 27 can drink either tea or coffee, 25 can drink coffee or juice and 23 can drink juice and tea, 5 employees can drink any of the three. How many drink only tea ?

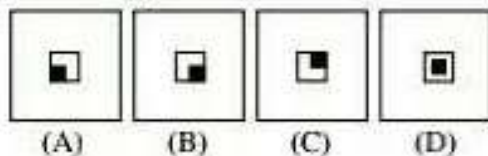
- (A) 21 (B) 22
(C) 18 (D) 20

- Directions**—(Q. 47 and 48) Which answer figure will complete the pattern in the question figure ?

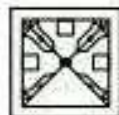
47. **Question Figure**



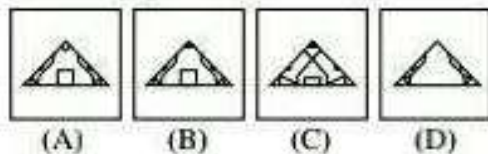
Answer Figures



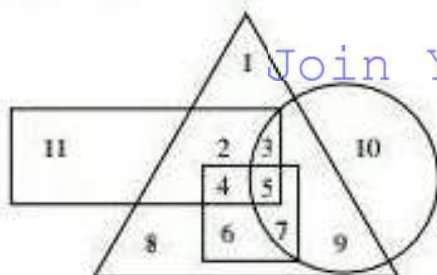
48. Question Figure



Answer Figures



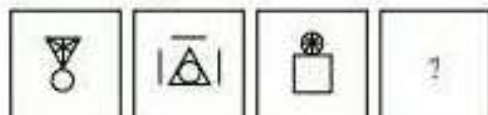
49. In the given diagram, Circle represents professional, Square represents dancers, Triangle represents musicians and Rectangle represents European. Different regions in the diagram are numbered 1 to 11.



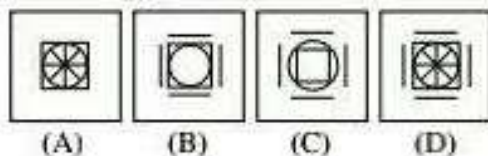
Who among the following is not a musician but an European ?

- (A) 10 (B) 9
(C) 11 (D) 8
50. Find the missing figure of the series from the given responses.

Question Figures



Answer Figures

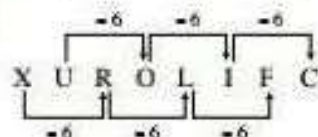


Answers with Explanations

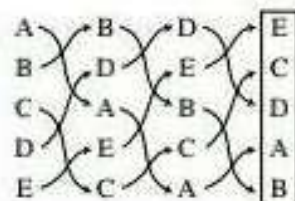
1. (C) 2. (A)

3. (C) $cab|bac|cab|bac|cab|bac|$

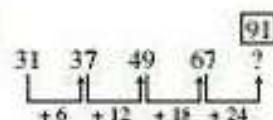
4. (C)



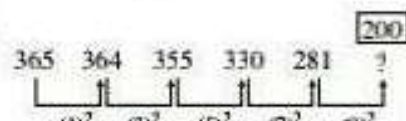
5. (D)



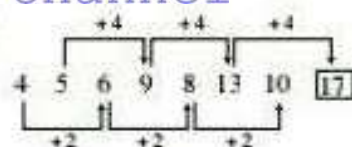
6. (B)



7. (B)



8. (D)



9. (A) As,

$$N \xrightarrow{+4} R$$

$$L \xrightarrow{+4} P$$

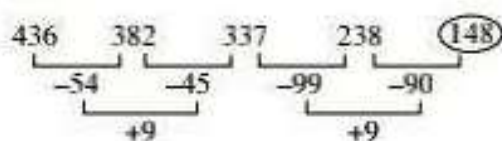
$$O \xrightarrow{+4} S$$

Similarly, $V \xrightarrow{+2} X$

$$T \xrightarrow{+2} W$$

$$W \xrightarrow{+2} Y$$

10. (D)



11. (A) In each subsequent figure one ∇ is increasing downward while in upper part one pair of ∇ is increasing.

12. (B)

$$\begin{array}{ccccccc}
 13 & & 40 & & 122 & & 369 & & (1111) \\
 & +27 & & +82 & & +247 & & +742 & \\
 & & +55 & & +165 & & +495 & & \\
 & & & \times 3 & & \times 3 & & &
 \end{array}$$

13. (C) From P.F. (1) to (2) the design \times remains at its place while \circ is shifting one side clockwise. From P.F. (2) to (3) \times shifts one side anticlockwise and \circ is shifting one side clockwise. Hence, from P.F. (3) to (4) \circ will remain at its place while \times will shift one side anticlockwise.

14. (D)

$$\begin{array}{ccccccc}
 H & & J & & M & & Q & & (V) \\
 & +2 & & +3 & & +4 & & +5 &
 \end{array}$$

15. (C)

$$\begin{array}{ccccccc}
 6 & & 10 & & 18 & & 34 & & (66) \\
 & +4 & & +8 & & +16 & & +32 &
 \end{array}$$

16. (A) NOAB, OPBC, PQCD, QRDE

17. (C) a b | a a b b | a a | a b b | a

18. (D) 19. (A)

20. (A) $9 + \bullet + \bullet + \bullet + \bullet + 20$
Raju Ravi

\therefore No. of students in the class
 $= 9 + 1 + 3 + 1 + 20$
 $= 34$

21. (D)

$$\begin{array}{ccccccc}
 & \text{Father} & & \text{Daughter} & & M & & K \\
 P & \leftarrow & & \leftarrow & & \leftarrow & & \leftarrow \\
 & & T & & & & \text{Daughter} &
 \end{array}$$

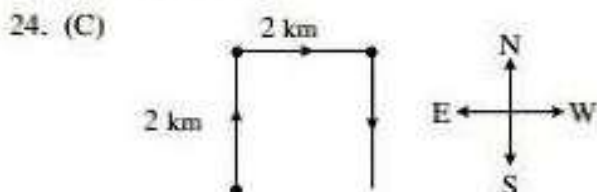
\therefore P is the son-in-law of K.

22. (D) PENCIL $\rightarrow ? @, = ; 7$ and PAPER $\rightarrow ? 9 ? @ 5$

\therefore CLIP $\rightarrow = 7 ; ?$

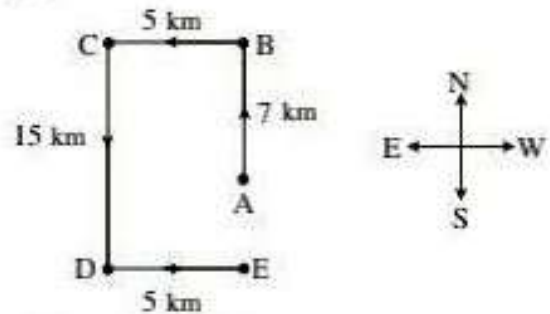
23. (C) JASMINE $\rightarrow 10 + 1 + 19 + 13 + 9 + 14 + 5 = 71$

\therefore ESTIMATE $\rightarrow 5 + 19 + 20 + 9 + 13 + 1 + 20 + 5 = 92$.



Now, she is facing towards South.

25. (A)



$AE = 15 - 7 = 8 \text{ km}$

26. (D) $10 + 2 \times 1 = 6$

$10 \div 2 + 1 = 6$

$\frac{10}{2} + 1 = 6$

$5 + 1 = 6$

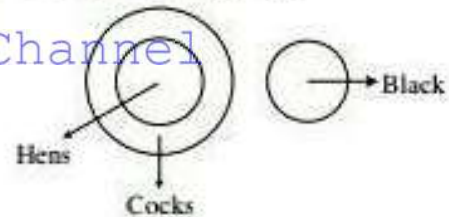
27. (A) In the given word 'CARDIOGRAM' there is no 'E'.

28. (C)

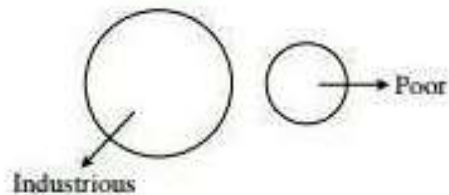
29. (B)

C G F B E A

30. (B)

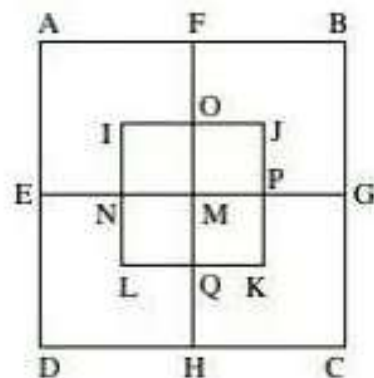


31. (D)



32. (B) 33. (C) 34. (D) 35. (A) 36. (D)

37. (D) The squares are :



1. IOMN 2. OJPM 3. PKQM
 4. MQLN 5. IJKL 6. AFME
 7. FBGM 8. CHMG 9. DEMH
 10. ABCD

38. (A)

39. (B) A E I ? = M Q
 +4 +4 +4 +4

40. (D) $510 \Rightarrow 5 + 1 + 0 = 6$,
 $322 \Rightarrow 3 + 2 + 2 = 7$,
 $404 \Rightarrow 4 + 0 + 4 = 8$,
 $819 \Rightarrow 8 + 1 + 9 = 18 \Rightarrow 1 + 8 = 9$.

41. (B) Time taken by the cats will be the same to kill rats.

42. (D) The word 'QUILT' has letter 'L' which is not in the given word.

43. (D) As, M U S T A R D

↓ ↓ ↓ ↓ ↓ ↓
 13 21 19 20 1 18 4

Same as, P R O F U S E

↓ ↓ ↓ ↓ ↓ ↓
 16 18 15 21 19 5

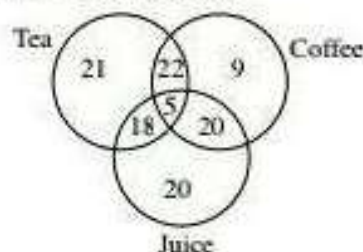
44. (B) $53 + 31 \Rightarrow 8 + 4 = 2$,
 $45 + 27 \Rightarrow 9 + 9 = 1$,
 $69 + 32 \Rightarrow 15 + 5 = 3$

Similarly, $97 + 26 \Rightarrow 16 + 8 = 2$

45. (A)

$178 \Rightarrow 817$: $534 \Rightarrow 453$: $294 \Rightarrow 429$

46. (A) From venn diagram,



47. (B) 48. (B) 49. (C)

50. (C) In first figure to second figure, the lower element appears in the middle of the upper element and the lines present in the upper design are appear outside the whole design.

Figure third and fourth follow the same process.

Part—II English Language

Directions—(Q. 1–12) Read the following passage carefully and answer the questions given below it. Certain words are printed in **bold** to help you to locate them while answering some of the questions.

Once upon a time, there were three brothers. They were all very clever and one day decided to make a fortune by using their powers of reasoning and logic. As they walked to the nearest city to look for work, they saw some footprints on the mud road. As they stood looking at the marks, a merchant came rushing towards them. "Did you see anyone go by this road?" he asked in **panic**. The first brother looked **closely** at the prints and said, "Yes, a large camel." The second said, the camel could see with only one eye. The third, who had been looking further down the road, said, "the camel was carrying a woman and a child on its back."

Now the merchant was furious and shouted, "You have kidnapped my wife and child. Come with me to the king." The brothers could not get him to reason out and the four men ended up in the king's court. Hmm, the king said, after he had heard the entire story. "If you three claim to be so clever, let me set a task for you. I will place before you a wooden box which will be locked. You will have to tell me what it contains without looking inside."

The three brothers agreed, and soon the king's men placed before them a stout wooden box, **firmly** shut. The first brother said immediately, "It has something round inside." The second said, "It is a pomegranate." "An unripe pomegranate," added the third. The box was opened and indeed, inside there was an unripe pomegranate.

The king now asked them for an explanation. The first man said, "When your servant was bringing the box, I heard something rolling inside. That meant there was a round object in it." The second man said, "I saw your servant coming from the pomegranate orchard, so I knew he had placed a pomegranate in the box. And this is not the season for pomegranates, so it had to be an unripe one, commented the last brother."

The king had now witnessed the brother's powers of observation and was curious to know how they had discovered about the merchant's wife and child being on the camel's back. The footprints we saw were large ones, so I deduced it was a big camel that had passed that way,' said the first brother. The camel had grazed on only one side of the road, 'said the second, 'so I knew it was one-eyed.'

"And I saw the footprints of a woman and a child where the camel had sat down to rest," said the third "which meant they were on the camel's back." The king, now convinced of their cleverness, appointed the three brothers as ministers in his court.

1. How did the second brother arrive at the conclusion that the camel could see with only one-eye ?

- (1) He saw the camel pass by.
- (2) He took a guess.
- (3) The grass on only one side of the road was eaten.

- (A) Only (1)
- (B) Only (2)
- (C) Only (3)
- (D) Only (2) and (3)
- (E) Only (1) and (3)

2. Why did the merchant take the three brothers to the king's court ?

- (A) They confessed to having kidnapped his wife and child
- (B) He found them acting very strange
- (C) He thought they were responsible for his missing wife and child
- (D) He found their observations hilarious and wanted them to narrate them to the king
- (E) The king had heard about the clever brothers and was on the lookout for them

3. Why did the three brothers come to the city ?

- (A) They had an appointment with the king
- (B) They were in search of the merchant's wife and child
- (C) They wanted to earn a living in the king's court
- (D) They were in search of work wherein they could put their skills to use
- (E) They came in search of their lost camel

4. Which of the following statements is **false** according to the passage ?

- (A) One of the brothers saw the king's servant come out from the pomegranate orchard
- (B) One of the brothers saw the camel carrying a lady along with a child on its back
- (C) The three brothers were appointed as ministers in the king's court
- (D) The king was convinced with the brothers' story after listening to their logic
- (E) The merchant doubted the brother and so took them to the king

5. Why did the king challenge the three brothers with a task ?

- (A) He wanted to see if they would pass the test in order to be ministers in his court
- (B) He wanted to show them off to his ministers
- (C) He wanted to put their reasoning skills to the test
- (D) He wanted the merchant to witness their cleverness
- (E) None of these

6. Which of the following word is most **opposite** to the word **panic** printed in bold in the above story ?

- (A) Calm
- (B) Fright
- (C) Hesitation
- (D) Anxious
- (E) Worried

7. What task did the king give to the three brothers on their arrival to the court ?

- (1) He asked them to reveal the contents of a wooden box that he placed before them
- (2) The task of handling the day affairs of the state
- (3) He asked them to explain the secret of their reasoning abilities
- (A) Only (1)
- (B) Only (2)
- (C) Only (3)
- (D) Only (1) and (2)
- (E) None of these

8. Which of the following sentence/s is true of the brothers ?

- (1) They were fortune tellers
 (2) They were responsible for kidnapping the merchant's wife and child
 (3) They used logic in order to determine the contents of the wooden box
 (A) Only (1) (B) Only (2) and (3)
 (C) Only (2) (D) Only (3)
 (E) All (1), (2) and (3)

9. The king appointed the three as ministers to his court because—

- (A) The minister in his court were not as intelligent
 (B) He was in awe of their upbringing
 (C) They were in search of a job
 (D) They were ill-treated by the merchant
 (E) He was assured of their cleverness

Directions—(Q. 10–12) Choose the word which is most nearly the **SAME** in meaning as the word printed in **bold** as used in the passage.

10. **Firmly**

- (A) Unevenly (B) Drastically
 (C) Tightly (D) Steadily
 (E) Gracefully

11. **Deduced**

- (A) Predicted (B) Presented
 (C) Inferred (D) Confirmed
 (E) Targeted

12. **Closely**

- (A) Openly (B) Watchfully
 (C) Personally (D) Slyly
 (E) Carefully

Directions—(Q. 13–17) Read each sentence to find out whether there is any grammatical error in it. The error, if any, will be in one part of the sentence. The letter of that part is the answer. If there is no error, the answer is (E) *i.e.*, 'No Error'. (Ignore the errors of punctuation, if any)

13. My friend lives / at a beautiful house / not
 (A) (B)
 more than / five minutes from the beach.
 (C) (D)

No Error
 (E)

14. If you breaks the law, / you must be prepared /

(A) (B)
 to suffer / the consequences. No Error
 (C) (D) (E)

15. I requested my friend / to come / and shopping /

(A) (B) (C)
 with me. No Error
 (D) (E)

16. The passage is / more difficult / that I am

(A) (B) (C)
 unable / to comprehend it. No Error
 (D) (E)

17. Janet is determined / to be success / in

(A) (B)
 whatever field / she chooses. No Error
 (C) (D) (E)

Directions—(Q. 18–22) Which of the phrases (A), (B), (C) and (D) given below each sentence should replace the phrase printed in **bold** in the sentence to make it grammatically correct? If the sentence is correct as it is given and no correction is required, mark (E) as the answer.

18. Since the car **had broke down**, we had to take a bus.

(A) To break down
 (B) Was broken down
 (C) Broke down
 (D) Break down
 (E) No correction required

19. **There was too many** people trying to leave the city.

(A) There were too much
 (B) It was too many
 (C) There were too many
 (D) There was more
 (E) No correction required

20. **Their all** hard work had been of no use.

(A) All their (B) Of all their
 (C) Their all of (D) Their much
 (E) No correction required

21. My mother is one of the few people **to whom I look up to**.

(A) I look up to
(B) That I look up
(C) To who I look up
(D) To which I look up to
(E) No correction required

22. My friend felt good **about win** the prize.

(A) With winning (B) On being won
(C) At winning (D) About winning
(E) No correction required

Directions—(Q. 23–27) In each question below, four words printed in **bold** are given. These are lettered (A), (B), (C) and (D). One of these words printed in **bold** may either be **wrongly spelt** or **inappropriate** in the context of the sentence. Find out the word that is inappropriate or wrongly spelt, if any. The letter of that word is your answer. If all the words printed in **bold** are correctly spelt and appropriate in the context of the sentence then mark (E) i.e. 'All correct' as your answer.

23. **Over the succeeding weeks** things went

(A) (B) (C)
from bad to **worse**. All correct
(D) (E)

24. My **friend deserved to succeed** for he **worked**

(A) (B) (C) (D)
hard. All correct
(E)

25. Abdul, **quiet pale** with **fright** rushed into the

(A) (B) (C)
room. All correct
(D) (E)

26. The doctor **advised** me to **switch** over to a

(A) (B)
healthier diet. All correct
(C) (D) (E)

27. My **parents** were poor **though** they were of

(A) (B)
nobel birth. All correct
(C) (D) (E)

Directions—(Q. 28–32) Rearrange the following five sentences (1), (2), (3), (4) and (5) in the proper sequence to form a meaningful paragraph; then answer the questions given below them.

- The victor flew up to the roof of the barn and began to crow, "I have won. I have won!"
- Finally one of them was beaten and he went and hid himself in the corner of the hen-house.
- The rooster that had been defeated suddenly found himself to be the unchallenged master of the farmyard.
- Two roosters were fighting for supremacy in the farmyard.
- Just then an eagle swooped down and carried him away.

28. Which of the following should be the **FOURTH** sentence after the rearrangement?

(A) 1 (B) 2
(C) 3 (D) 4
(E) 5

29. Which of the following should be the **FIRST** sentence after the rearrangement?

(A) 5 (B) 4
(C) 3 (D) 2
(E) 1

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

(A) 1 (B) 2
(C) 3 (D) 4
(E) 5

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

(A) 1 (B) 2
(C) 3 (D) 4
(E) 5

32. Which of the following should be the **FIFTH** sentence after the rearrangement?

(A) 5 (B) 4
(C) 3 (D) 2
(E) 1

Directions—(Q. 33–40) 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 are suggested, one of which fits the blank appropriately. Find out the appropriate word in each case.

Birbal was in Persia at the invitation of the king of that country. During his stay parties were given in his honour. On the eve of his ...**(33)**... for home, a nobleman ...**(34)**... him how he would compare the king of Persia to his own king. "Your king is a full moon," said Birbal. "Whereas mine could be ...**(35)**... of as the quarter moon." The Persians were very happy. But when Birbal got home he found that Emperor Akbar was furious with him. "How ...**(36)**... you belittle your own king?" demanded Akbar. "You are a traitor!".

"No, Your Majesty," said Birbal. "I did not belittle you. The full moon ...**(37)**... and disappears whereas the quarter moon grows with strength. What I, in fact, ...**(38)**... to the world is that your power is ...**(39)**... from day to day whereas that of the king of Persia is about to go into decline." Akbar smiled in satisfaction and welcomed Birbal back ...**(40)**... a warm embrace.

33. (A) departure (B) exit
(C) arrival (D) depart
(E) leave
34. (A) made (B) question
(C) asked (D) commented
(E) said
35. (A) wished (B) thought
(C) pass (D) celebrated
(E) imagined
36. (A) will (B) willing
(C) must (D) could
(E) should
37. (A) reduce (B) vanish
(C) appear (D) decrease
(E) diminishes
38. (A) promised (B) announce
(C) proclaimed (D) show
(E) restored
39. (A) new (B) increase
(C) sure (D) fixed
(E) growing

40. (A) showing (B) by
(C) with (D) giving
(E) granting

Directions—(Q. 41–45) In the following questions, some parts of the sentences have errors and some are correct. Find out which part of a sentence has an error and indicate the correct alternative corresponding to the appropriate letter (A), (B), (C). If a sentence is free from error, corresponding to letter (D).

41. The new dish / that I ordered / is tasting good.
(A) (B) (C)
No error
(D)
42. Increasing racism and hate crimes/ casted a
(A) (B)
shadow / over elections. No error
(C) (D)
43. I have got your letter yesterday / and felt
(A)
happy to learn / of your recovery. No error
(B) (C) (D)
44. Sam is working / in a bank in Chennai / for
(A) (B)
for the past five years No error
(C) (D)
45. People living in low-lying areas / find it
(A)
difficult / to cope up with the floods. No error
(B) (C) (D)

Directions—(Q. 46–50) In the questions, sentences are given with blanks to be filled with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by choosing the appropriate alternatives.

46. His words were hardly with that screaming and shouting in the market.
(A) legible (B) eligible
(C) intelligible (D) None of these
47. He was angry to speak to me.
(A) so (B) too
(C) that (D) such

48. I wish I a pen.
 (A) were (B) am
 (C) was (D) be
49. Look after your health you should repent later on.
 (A) as (B) because
 (C) till (D) lest
50. Every year million of tourists the Anna Centenary Library in Chennai.
 (A) visiting (B) visit
 (C) are visiting (D) visited

Answers with Explanations

1. (C) 2. (C) 3. (D) 4. (B) 5. (C)
 6. (A) 7. (A) 8. (D) 9. (E) 10. (C)
 11. (C) 12. (B) 13. (E)
 14. (A) Change 'breaks' to 'break'.
 15. (C) Change 'shopping' to 'shop'.
 16. (B) Change 'more' to 'so'.
 17. (B) Change 'success' to 'successful'.
 18. (C) 19. (C) 20. (A) 21. (E) 22. (C)
 23. (C) Correct spelling is 'weeks'.
 24. (C)
 25. (A) Correct spelling is 'quite'.
 26. (D) Correct spelling is 'diet'.
 27. (C) Correct spelling is 'noble'.
 28. (E) 29. (B) 30. (B) 31. (A) 32. (C)
 33. (A) 34. (C) 35. (B) 36. (D) 37. (E)
 38. (C) 39. (E) 40. (C)
 41. (C) Change 'is' to 'was'.
 42. (D)
 43. (A) Change 'have got' to 'got'.
 44. (A) Change 'is' to 'has been'.
 45. (C) Delete 'up'. It is redundant.
 46. (D) 47. (B) 48. (A) 49. (D) 50. (B)

Part—III Quantative Aptitude

1. Two trains of equal length are running on parallel lines in the same direction at 46 km/hr and 36 km/hr. The faster train passes,

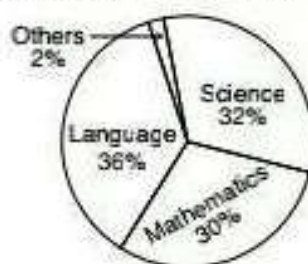
the slower train in 36 sec. The length of each train is—

- (A) 50 m (B) 80 m
 (C) 72 m (D) 82 m
2. A parallelepiped whose sides are in ratio 2 : 4 : 8 have the same as a cube. The ratio of their surface area is—
 (A) 4 : 3 (B) 8 : 5
 (C) 7 : 6 (D) 7 : 5
3. The parallel sides of a trapezium are in a ratio 2 : 3 and their shortest distance is 12 cm. If the area of the trapezium is 480 sq. cm, the longer of the parallel sides is of length—
 (A) 36 cm (B) 42 cm
 (C) 48 cm (D) 56 cm

4. If $2x + y = 6$ and $x = 2$ are two linear equations, then graph of two equations meet at a point—

- (A) (0, 2) (B) (2, 2)
 (C) (1, 2) (D) (2, 0)

Directions—(Q. 5 to 7) The following pie-chart shows the number of students who failed in different subjects in an examination. Examine the chart and answer the questions 5 to the total number of students who have failed is 500.



5. Total number of students who did not qualify in Mathematics or Language or Science, is—
 (A) 490 (B) 480
 (C) 470 (D) 460
6. The number of students failed in Science is less than the number of students failed in all other subjects by—
 (A) 140 (B) 180
 (C) 160 (D) 170

7. Number of students who failed in Mathematics is less than the students who did not qualify in language is—
 (A) 40 (B) 30
 (C) 50 (D) 20
8. Profit after selling an article for ₹ 425 is the same as loss after selling it for ₹ 355. The cost of the article is—
 (A) ₹ 385 (B) ₹ 390
 (C) ₹ 395 (D) ₹ 400
9. If each edge of a cube is increased by 50%, the percentage increase in its surface area is—
 (A) 125% (B) 150%
 (C) 75% (D) 100%
10. The area (in sq unit) of the triangle formed in the first quadrant by the line $3x + 4y = 12$ is—
 (A) 4 (B) 8
 (C) 12 (D) 6
11. The perimeter of an isosceles right angled triangle is $2p$ cm. Its area is—
 (A) $(2 + \sqrt{2}) p^2$ sq cm
 (B) $(3 + 2\sqrt{2}) p$ sq cm
 (C) $(3 - 2\sqrt{2}) p^2$ sq cm
 (D) $(2 - \sqrt{2}) p$ sq cm
12. The length of a train and a platform is equal. The train at the speed of 90 km/hr crosses the platform in 1 minute. What is the length of platform?
 (A) 750 m (B) 690 m
 (C) 760 m (D) 810 m
13. A man covered a certain distance of one side by cycle and other side by scooter in 2 hours 20 minutes. If he had covered the total distance by cycle then time consumed was 3 hours 30 minutes. In what time he can cover the total distance by scooter?
 (A) 1 hr 15 minute (B) 1 hr 10 minute
 (C) 1 hr 40 minute (D) 2 hrs 5 minute
14. Find the true discount on a bill for ₹ 1270 due in 7 months hence at 10% per annum?
 (A) ₹ 1050 (B) ₹ 1100
 (C) ₹ 1120 (D) ₹ 1200
15. A and B jointly invest ₹ 2100 and ₹ 3100 respectively in a firm. A is an active partner and he gets 25% of the profit separately. If their business yields them total ₹ 1040 as profit, what will be the gain of each of them?
 (A) ₹ 415, ₹ 625
 (B) ₹ 575, ₹ 465
 (C) ₹ 515, ₹ 525
 (D) ₹ 560, ₹ 480
16. The circumference of two concentric circle are 176 m and 132 m. What is the difference between their radii?
 (A) 8 m (B) 9 m
 (C) 11 m (D) 7 m
17. A rectangular field is 90 m \times 50 m. Inside the field there is path of width 5 m bordering the field. What is the area of the path?
 (A) 1450 sq m (B) 1100 sq m
 (C) 1000 sq m (D) 1300 sq m
18. Value of k for which $(x - 2)$ is a factor of $(x^2 - kx + 2)$ is—
 (A) 2 (B) 3
 (C) 4 (D) 5
19. If $x - \frac{1}{x} = 3$. The value of $x^2 - \frac{1}{x^2}$ is—
 (A) 2 (B) 12
 (C) 10 (D) 11
20. Diameter of a roller is 2.4 m and it is 1.68 long. If it takes 1000 complete revolutions once over to level a field, the area of the field is—
 (A) 12672 sq m (B) 12671 sq m
 (C) 12762 sq m (D) 11768 sq m
21. If each edge of a cube is increased by 10% then by how much per cent will be the surface area of this cube be increased?
 (A) 21% (B) 18%
 (C) 15% (D) 20%
22. The value of $\cos 105^\circ + \sin 105^\circ$ is—
 (A) 0 (B) $(\sqrt{3}/2)$
 (C) $1/\sqrt{2}$ (D) $(\sqrt{3} + 1)/2$

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7. Number of students who failed in Mathematics is less than the students who did not qualify in language is—
 (A) 40 (B) 30
 (C) 50 (D) 20
8. Profit after selling an article for ₹ 425 is the same as loss after selling it for ₹ 355. The cost of the article is—
 (A) ₹ 385 (B) ₹ 390
 (C) ₹ 395 (D) ₹ 400
9. If each edge of a cube is increased by 50%, the percentage increase in its surface area is—
 (A) 125% (B) 150%
 (C) 75% (D) 100%
10. The area (in sq unit) of the triangle formed in the first quadrant by the line $3x + 4y = 12$ is—
 (A) 4 (B) 8
 (C) 12 (D) 6
11. The perimeter of an isosceles right angled triangle is $2p$ cm. Its area is—
 (A) $(2 + \sqrt{2}) p^2$ sq cm
 (B) $(3 + 2\sqrt{2}) p$ sq cm
 (C) $(3 - 2\sqrt{2}) p^2$ sq cm
 (D) $(2 - \sqrt{2}) p$ sq cm
12. The length of a train and a platform is equal. The train at the speed of 90 km/hr crosses the platform in 1 minute. What is the length of platform?
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 (C) ₹ 515, ₹ 525
 (D) ₹ 560, ₹ 480
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 (A) 8 m (B) 9 m
 (C) 11 m (D) 7 m
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18. Value of k for which $(x - 2)$ is a factor of $(x^2 - kx + 2)$ is—
 (A) 2 (B) 3
 (C) 4 (D) 5
19. If $x - \frac{1}{x} = 3$. The value of $x^2 - \frac{1}{x^2}$ is—
 (A) 2 (B) 12
 (C) 10 (D) 11
20. Diameter of a roller is 2.4 m and it is 1.68 long. If it takes 1000 complete revolutions once over to level a field, the area of the field is—
 (A) 12672 sq m (B) 12671 sq m
 (C) 12762 sq m (D) 11768 sq m
21. If each edge of a cube is increased by 10% then by how much per cent will be the surface area of this cube be increased?
 (A) 21% (B) 18%
 (C) 15% (D) 20%
22. The value of $\cos 105^\circ + \sin 105^\circ$ is—
 (A) 0 (B) $(\sqrt{3}/2)$
 (C) $1/\sqrt{2}$ (D) $(\sqrt{3} + 1)/2$

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23. The value of $\sin\left(67\frac{1}{2}^\circ\right) \sin\left(22\frac{1}{2}^\circ\right)$ is—

- (A) $-2\sqrt{2}$ (B) $2\sqrt{2}$
(C) $1/2\sqrt{2}$ (D) $-1/2\sqrt{2}$

24. $\sqrt[3]{x^6} + \sqrt[3]{x^{12}} \times x^{-3} \times \sqrt[3]{x^6}$ is equivalent to—

- (A) $2x$ (B) 1
(C) $\frac{1}{3x^2}$ (D) $\frac{1}{x}$

25. Which of the following is false for two congruent triangles ?

- (A) Corresponding angles are equal
(B) Two sides and included angles are equal
(C) Corresponding sides are equal
(D) Two angles and one side are equal

Directions—(Q. 26–45) What will come in place of the question-mark (?) in the following questions ?

26. $\sqrt{23409} = ?$

- (A) 157 (B) 163
(C) 165 (D) 153
(E) None of these

27. $\sqrt[3]{6859} = ? - 4$

- (A) 26 (B) 25
(C) 23 (D) 22
(E) None of these

28. $86 \times 5.6 \times 0.3 = ?$

- (A) 144.48 (B) 149.34
(C) 145.26 (D) 146.76
(E) None of these

29. $3.44 + 5.22 + 7.23 + 5.24 = ?$

- (A) 23.34 (B) 21.13
(C) 25.57 (D) 20.05
(E) None of these

30. $45698 - 23367 + 43237 = ?$

- (A) 65568 (B) 65586
(C) 65569 (D) 65589
(E) None of these

31. $42\% \text{ of } ? + 18\% \text{ of } 400 = 219$

- (A) 370 (B) 360
(C) 350 (D) 340
(E) None of these

32. $4096 \times (16)^3 + 16 = (4)^3 \times 64$

- (A) 8 (B) 6
(C) 7 (D) 10
(E) None of these

33. $18 \times 15 \times ? = 6210$

- (A) 21 (B) 23
(C) 27 (D) 25
(E) None of these

34. $32.97 + 45.33 + 17.24 = ?$

- (A) 95.54 (B) 98.33
(C) 91.62 (D) 93.84
(E) None of these

35. $45 \times 253 - 782 = ?$

- (A) 10602 (B) 10605
(C) 10607 (D) 10603
(E) None of these

36. $\frac{12}{19} \times \frac{76}{81} \times \frac{3}{8} = ?$

- (A) $\frac{4}{9}$ (B) $\frac{2}{7}$
(C) $\frac{4}{7}$ (D) $\frac{2}{9}$
(E) None of these

37. $\sqrt{450 + 890 + 685} = ?$

- (A) 43 (B) 45
(C) 55 (D) 53
(E) None of these

38. $23578 + 33872 + 17193 - 52559 = ?$

- (A) 22088 (B) 22086
(C) 22082 (D) 22084
(E) None of these

39. $\sqrt{225} + \sqrt{2304} = ? - (12)^2$

- (A) 205 (B) 207
(C) 206 (D) 208
(E) None of these

40. $892 \cdot 33 + 212 \cdot 87 + 456 \cdot 99 = ?$

- (A) 1568.23 (B) 1566.99
(C) 1564.73 (D) 1561.19
(E) None of these

41. $\frac{3}{8} + \frac{7}{8} - \frac{5}{12} = ?$

- (A) $\frac{3}{5}$ (B) $\frac{7}{6}$
(C) $\frac{5}{6}$ (D) $\frac{5}{7}$
(E) None of these

42. $36 \times \frac{7}{12} = ?$

- (A) 23 (B) 25
(C) 21 (D) 27
(E) None of these

43. $8888 \div 8 + 2332 \div 2 = ?$

- (A) 2727 (B) 2772
(C) 2777 (D) 2722
(E) None of these

44. $(15)^2 + (12)^2 - (18)^2 = ?$

- (A) 42 (B) 43
(C) 48 (D) 49
(E) None of these

45. $\frac{3}{4}$ th of 46% of 400 - 12 = ?

- (A) 126 (B) 128
(C) 124 (D) 122
(E) None of these

Directions—(Q. 46–50) What approximate value should come in place of the question-mark (?) in the following questions ?

(Note : You are not expected to calculate the exact value)

46. $0.501 \times 10.011 \times 52.83 = ?$

- (A) 205 (B) 225
(C) 245 (D) 285
(E) 265

47. $2534 \div 23 = ?$

- (A) 10 (B) 210
(C) 150 (D) 60
(E) 110

48. $\sqrt{4590} = ?$

- (A) 38 (B) 18
(C) 68 (D) 84
(E) 98

49. $16.002 \times 14.897 \times 20.334 = ?$

- (A) 4100 (B) 4300
(C) 4500 (D) 4800
(E) 5100

50. $4005.33 \div 19.89 \times 1.9 = ?$

- (A) 470 (B) 300
(C) 400 (D) 370
(E) 500

Answers with Explanations

1. (A) Let length of each train = x m

Then, total length

$$= \text{Relative speed} \times \text{time}$$

$$x + x = (46 - 36) \times \frac{5}{18} \times 36$$

$$2x = 10 \times 5 \times 2$$

$$x = 50 \text{ m}$$

2. (C) Let the sides of parallelepiped are $2x$, $4x$ and $8x$. Then,

Volume of cube

$$= \text{volume of parallelepiped}$$

$$a^3 = 2x \times 4x \times 8x$$

$$a = 4x$$

Required ratio

$$= \frac{\text{Surface area of parallelepiped}}{\text{Surface area of cube}}$$

$$= \frac{2(2x \times 4x + 4x \times 8x + 8x \times 2x)}{6 \times (4x)^2}$$

$$= \frac{7}{6}$$

3. (C) Area of trapezium

$$= \frac{1}{2} \times (\text{sum of parallel side}) \times \text{distance}$$

$$480 = \frac{1}{2} \times (2x + 3x) \times 12$$

$$x = 16 \text{ cm}$$

∴ Longer of the parallel side

$$= 3x$$

$$= 3 \times 16$$

$$= 48 \text{ cm}$$

4. (B) Put $x = 2$,

In equation $2x + y = 6$

Then, $2 \times 2 + y = 6$

$$\Rightarrow y = 2$$

Hence, the graph of two equation meet at a point (2, 2).

5. (A) Total number of student who did not qualify in Math or Language or Science

$$= (30 + 36 + 32)\% \text{ of } 500$$

$$= \frac{98}{100} \times 500$$

$$= 490$$

6. (B) The number of student failed in Science

$$= \frac{32}{100} \times 500 = 160$$

and the number of students failed in all other subject

$$= \frac{68}{100} \times 500 = 340$$

Hence, required number of student

$$= 340 - 160$$

$$= 180$$

7. (B) Number of students who failed in Mathematics is less than the students who did not qualify in Language

$$= \frac{36}{100} \times 500 - \frac{30}{100} \times 500$$

$$= 180 - 150$$

$$= 30$$

8. (B) Cost Price of Article = x

Then, $425 - x = x - 355$

$$2x = 780$$

$$\Rightarrow x = ₹ 390$$

9. (A) % increase in its surface area

$$= 2 \times 50 + \frac{50 \times 50}{100}$$

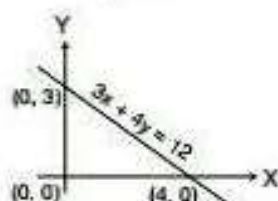
$$= 125\%$$

10. (D) On y-axis :

Put $x = 0$ in given equation

$$3 \times 0 + 4y = 12$$

$$\Rightarrow y = 3$$



On x-axis : Put $y = 0$,

$$3x + 4 \times 0 = 12$$

$$x = 4$$

Hence, area of the triangle

$$= \frac{1}{2} \times 4 \times 3$$

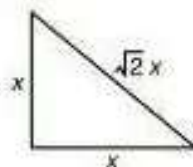
$$= 6 \text{ sq unit}$$

11. (C)

$$\text{Perimeter} = 2p$$

$$x + x + \sqrt{2}x = 2p$$

$$x(2 + \sqrt{2}) = 2p$$



$$x = \frac{2p}{2 + \sqrt{2}} \times \frac{2 - \sqrt{2}}{2 - \sqrt{2}}$$

$$x = \frac{2(2 - \sqrt{2})p}{2}$$

$$= (2 - \sqrt{2})p$$

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

$$= \frac{1}{2} \times x^2$$

$$= \frac{(2 - \sqrt{2})^2}{2} p^2$$

$$= \frac{(4 + 2 - 4\sqrt{2})}{2} p^2$$

$$= (3 - 2\sqrt{2}) p^2 \text{ sq cm}$$

12. (A) Let length of platform or train = x mTotal distance = Speed \times time

$$2x = 90 \times \frac{5}{18} \times 60$$

(\because 1 minute = 60 sec)

$$x = 750 \text{ m}$$

13. (B) Let distance = D kmSpeed of cycle = x km/hrand speed of scooter = y km/hr

According to question—

$$\frac{D}{x} + \frac{D}{y} = 2 + \frac{20}{60} = \frac{7}{3} \quad \dots(1)$$

$$\frac{2D}{x} = 3 + \frac{30}{60} = \frac{7}{2} \quad \dots(2)$$

Equation (1) is multiply by (2), so

$$\frac{2D}{x} + \frac{2D}{y} = \frac{14}{3}$$

$$\Rightarrow \frac{7}{2} + \frac{2D}{y} = \frac{14}{3}$$

$$\frac{2D}{y} = \frac{14}{3} - \frac{7}{2} = \frac{7}{6}$$

= 1 hr 10 min.

14. (★) True discount

$$= \frac{1270 \times 10 \times \frac{7}{12}}{100 + 10 \times \frac{7}{12}}$$

$$= \frac{7 \times \frac{1270}{12}}{120 + \frac{7}{12}}$$

$$= \frac{1270 \times 7}{127}$$

$$= 10 \times 7 = ₹ 70$$

 \therefore Required amount after discount

$$= ₹ (1270 - 70) = ₹ 1200$$

15. (B) A : B = 2100 : 3100

$$= 21 : 31$$

A gets profit separately

$$= \frac{25}{100} \times 1040 = 260$$

Hence, Net profit = 1040 - 260

$$= 780$$

$$\text{Profit of A} = \frac{21}{52} \times 780$$

$$= 315$$

So, total profit of A = 315 + 260

$$= ₹ 575$$

$$\text{Profit of B} = \frac{31}{52} \times 780$$

$$= ₹ 465$$

16. (D) Let their radius are r_1 and r_2 .

$$2\pi r_1 - 2\pi r_2 = 176 - 132$$

$$2 \times \frac{22}{7} (r_1 - r_2) = 44$$

$$r_1 - r_2 = 7 \text{ m}$$

17. (D) Area of path

$$= 90 \times 50 - 80 \times 40$$

$$= 4500 - 3200$$

$$= 1300 \text{ m}^2$$

18. (B) If $(x - 2)$ is a factor of $(x^2 - kx + 2)$. Then, its becomes zero.So, put $x = 2$,

$$4 - k \times 2 + 2 = 0$$

$$2k = 6$$

$$\Rightarrow k = 3$$

$$19. (*) \quad x - \frac{1}{x} = 3 \quad \dots(1)$$

Taking square both sides,

$$x^2 + \frac{1}{x^2} - 2x \times \frac{1}{x} = 9$$

$$x^2 + \frac{1}{x^2} = 11$$

Adding 2 on both side—

$$x^2 + \frac{1}{x^2} + 2 = 11 + 2$$

$$\left(x + \frac{1}{x}\right)^2 = 13$$

$$x + \frac{1}{x} = \sqrt{13} \quad \dots(2)$$

$$\begin{aligned}
 x^2 - \frac{1}{x^2} &= \left(x - \frac{1}{x}\right) \left(x + \frac{1}{x}\right) \\
 &= 3 \times \sqrt{13} \\
 &\quad [\text{from eq. (1) and (2)}] \\
 &= 3\sqrt{13}
 \end{aligned}$$

20. (A) Area of field

$$\begin{aligned}
 &= 2\pi rh \times \text{No. of revolutions} \\
 &= 2 \times \frac{22}{7} \times \frac{2.4}{2} \times 1.68 \times 1000 \\
 &= 12672 \text{ m}^2
 \end{aligned}$$

21. (A) % increase in surface area

$$\begin{aligned}
 &= 10 + 10 + \frac{10 \times 10}{100} \\
 &= 21\%
 \end{aligned}$$

22. (C) $\cos(105^\circ) + \sin 105^\circ$

$$\begin{aligned}
 &= \cos(60 + 45^\circ) + \sin(60 + 45^\circ) \\
 &= \frac{1}{2} \times \frac{1}{\sqrt{2}} - \frac{\sqrt{3}}{2} \times \frac{1}{\sqrt{2}} + \frac{\sqrt{3}}{2} \times \frac{1}{\sqrt{2}} \\
 &\quad + \frac{1}{2} \times \frac{1}{\sqrt{2}} = \frac{1}{\sqrt{2}}
 \end{aligned}$$

23. (D) $\sin\left(67\frac{1}{2}^\circ\right) \cdot \sin\left(22\frac{1}{2}^\circ\right)$

$$\begin{aligned}
 &= \frac{2}{2} \sin\left(\frac{135^\circ}{2}\right) \sin\left(\frac{45^\circ}{2}\right) \\
 &= \frac{1}{2} \left[2 \sin \frac{135}{2} \sin \frac{45}{2} \right] \\
 &= \frac{1}{2} \left[\cos\left(\frac{135}{2} - \frac{45}{2}\right) - \cos\left(\frac{135}{2} + \frac{45}{2}\right) \right] \\
 &= \frac{1}{2} \left[\cos \frac{180}{2} - \cos \frac{90}{2} \right] \\
 &= \frac{1}{2} [\cos 90 - \cos 45^\circ] \\
 &= \frac{1}{2} \left[0 - \frac{1}{\sqrt{2}} \right] \\
 &= -\frac{1}{2\sqrt{2}}
 \end{aligned}$$

$$\begin{aligned}
 24. (*) \frac{\sqrt[3]{x^6}}{\sqrt[3]{x^{12}}} \times x^{-3} \times \sqrt[3]{x^9} \\
 = \frac{x^2}{x^4} \times x^{-3} \times x^3 = \frac{1}{x^2}
 \end{aligned}$$

25. (D)

$$\begin{aligned}
 26. (D) ? &= \sqrt{23409} = \sqrt{(153)^2} \\
 &= 153
 \end{aligned}$$

$$\begin{aligned}
 27. (C) \because ? - 4 &= \sqrt[3]{6859} = \sqrt[3]{(19)^3} \\
 \therefore ? &= 19 + 4 \\
 &= 23
 \end{aligned}$$

$$\begin{aligned}
 28. (A) ? &= 86 \times 5.6 \times 0.3 \\
 &= 144.48
 \end{aligned}$$

$$\begin{aligned}
 29. (B) ? &= 3.44 + 5.22 + 7.23 + 5.24 \\
 &= 21.13
 \end{aligned}$$

$$\begin{aligned}
 30. (A) ? &= 45698 - 23367 + 43237 \\
 &= 65568
 \end{aligned}$$

$$\begin{aligned}
 31. (C) \because \frac{42}{100} \text{ of } ? + \frac{18}{100} \text{ of } 400 &= 219 \\
 \Rightarrow ? \times 0.42 + 72 &= 219 \\
 \therefore ? &= \frac{219 - 72}{0.42} = \frac{147}{0.42} \\
 &= 350
 \end{aligned}$$

32. (C)

$$\begin{aligned}
 \because (4)^7 \times 64 &= 4096 \times (16)^3 + 16 \\
 \Rightarrow (4)^7 \times 4^3 &= (4)^6 \times \frac{(4)^6}{4^2} \\
 \Rightarrow (4)^{7+3} &= 4^{6+6-2} \\
 \therefore ? &= 10 - 3 = 7
 \end{aligned}$$

$$33. (B) \because 18 \times 15 \times ? = 6210$$

$$\begin{aligned}
 \therefore ? &= \frac{6210}{18 \times 15} \\
 &= 23
 \end{aligned}$$

$$\begin{aligned}
 34. (A) ? &= 32.97 + 45.33 + 17.24 \\
 &= 95.54
 \end{aligned}$$

$$\begin{aligned}
 35. (D) ? &= 45 \times 253 - 782 \\
 &= 11385 - 782 = 10603
 \end{aligned}$$

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$$36. (D) ? = \frac{12}{19} \times \frac{76}{81} \times \frac{3}{8}$$

$$= \frac{2}{9}$$

$$37. (B) ? = \sqrt{450 + 890 + 685}$$

$$= \sqrt{2025}$$

$$= 45$$

$$38. (D) ? = 23578 + 33872 + 17193 - 52559$$

$$= 22084$$

$$39. (B) \because ? - (12)^2 = \sqrt{225} + \sqrt{2304}$$

$$\therefore ? = 15 + 48 + 144$$

$$= 207$$

$$40. (E)$$

$$? = 892.33 + 212.87 + 456.99$$

$$= 1562.19$$

$$41. (C) ? = \frac{3}{8} + \frac{7}{8} - \frac{5}{12}$$

$$= \frac{9 + 21 - 10}{24}$$

$$= \frac{5}{6}$$

$$42. (C) ? = 36 \times \frac{7}{12}$$

$$= 21$$

$$43. (E) ? = 8888 \div 8 + 2332 \div 2$$

$$= 1111 + 1166$$

$$= 2277$$

$$44. (E) ? = (15)^2 + (12)^2 - (18)^2$$

$$= 225 + 144 - 324$$

$$= 45$$

$$45. (A) ? = \frac{3}{4} \text{ of } \frac{46}{100} \text{ of } 400 - 12$$

$$= 138 - 12$$

$$= 126$$

$$46. (E) ? = 0.501 \times 10.011 \times 52.83$$

$$\approx 0.5 \times 10 \times 53$$

$$= 265 \text{ (Approx.)}$$

$$47. (E) ? = 2534 \div 23$$

$$= 110.17$$

$$\approx 110 \text{ (Approx.)}$$

$$48. (C) ? = \sqrt{4590} \approx 67.75$$

$$\approx 68 \text{ (Approx.)}$$

$$49. (D)$$

$$? = 16.002 \times 14.897 \times 20.334$$

$$\approx 16 \times 15 \times 20$$

$$\approx 4800 \text{ (Approx.)}$$

$$50. (C) ? = 4005.33 \div 19.89 \times 1.9$$

$$\approx \frac{4005}{20} \times 2$$

$$\approx 400 \text{ (Approx.)}$$

Part—IV General Awareness

- Present Chief Election Commissioner of India is—
(A) Navin Chawla (B) S. Y. Quraishi
(C) V. S. Sampath (D) None of these
- World's largest camel fair is organized in—
(A) Rajasthan, Jaipur
(B) Rajasthan, Bikaner
(C) Rajasthan, Pushkar
(D) Rajasthan, Udaipur
- Shigmo is one of the prominent festival of the—
(A) Tamil Community
(B) Santhali Community
(C) Konkani Hindu Community
(D) Muslim Community
- Department of 'AYUSH' comes under the ministry of—
(A) Ministry of Human Resources
(B) Ministry of Health and Family Welfare
(C) Ministry of Defence
(D) Ministry of Home Affairs
- How many teams participated in IPL-2013 ?
(A) 9 (B) 8
(C) 7 (D) 10
- Arrange the following devices in ascending order of the speed—

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- (a) RAM (b) Hard disk
(c) Cache (d) Floppy
(A) dbac (B) bdac
(C) badc (D) abdc
7. The outer part of a railway track near the bend or a curve is generally raised—
(A) To prevent the fast wear and tear of railway track
(B) To produce the necessary centripetal force
(C) To produce the necessary gravitational force
(D) To enhance the speed of the train
8. Which one of the following is not the unit of energy ?
(A) joule (B) newton-metre
(C) kilowatt (D) kilowatt-hour
9. As per the monetary policy of Reserve Bank of India, announced in 2011, The reverse Repo rate till RBI decides to delink it—
(A) Will be announced separately and will be linked to repo rate
(B) Will not be announced separately and will be linked to repo rate
(C) Will not be announced separately and will be linked to repo rate and will always be 100 bps below the repo rate
(D) Will not be announced separately and will be linked to repo rate and will always be 100 bps above the repo rate
10. During summer days, water kept in an Earthen pot (Pitcher) becomes cool because of phenomenon of—
(A) Diffusion (B) Transpiration
(C) Osmosis (D) Evaporation
11. There is a temperature at which degree Fahrenheit and degree centigrade have the same numerical value. This numerical value is—
(A) -32° (B) -40°
(C) 0° (D) 32°
12. The smallest functional unit of kidney is—
(A) Neuron (B) Nephron
(C) Air Sac (D) Ovaries
13. What is the salary of ex-officio chairman of Rajya Sabha ?
(A) ₹ 1,25,000 (B) ₹ 1,50,000
(C) ₹ 1,00,000 (D) None of these
14. Smallest and Largest planet of solar system is respectively—
(A) Mercury and Uranus
(B) Neptune and Jupiter
(C) Mars and Saturn
(D) Mercury and Jupiter
15. The First session of Indian National Congress was held in—
(A) Bombay (B) Delhi
(C) Calcutta (D) Bangalore
16. How many members are nominated by President to represent the Anglo Indian community ?
(A) 2 (B) 5
(C) 12 (D) 3
17. Which incident led Gandhiji to call off non-cooperation movement ?
(A) Kakori incident
(B) Chauri Choura incident
(C) Jallianwala Bagh Massacre
(D) None of these
18. Who among the following was the first woman ruler of India—
(A) Razia Sultan (B) Chand Bibi
(C) Nurjahan (D) Mumtaj Mahal
19. Which Mughal emperor imposed Jeziya on Hindus and encouraged the Hindus to convert to Islam—
(A) Shahjahan (B) Jehangir
(C) Aurangzeb (D) Akbar
20. The Earth comes nearest to the Sun in—
(A) July (B) September
(C) December (D) February
21. 2015, ICC Cricket World Cup will be hosted by—
(A) Australia (B) New Zealand
(C) West Indies (D) Both (A) and (B)

22. Barack H. Obama has been recently re-elected as President of USA, defeating republican challenger—
 (A) Joe Biden
 (B) Mitt Romney
 (C) Jesse Kelly
 (D) Kelving Mc Carthy
23. Russia is expected to supply Admiral Gorshkov by 2013 end. What is 'Admiral Gorshkov' ?
 (A) Rifles (B) Aircraft Carrier
 (C) Tank (D) Space craft
24. Bhopal Gas tragedy is associated with leakage of—
 (A) Sulphur dioxide
 (B) Carbon dioxide
 (C) Methyl ISO cyanate
 (D) Nitrogen dioxide
25. Headquarters of UNO are situated at—
 (A) New York, USA
 (B) Hague (Netherlands)
 (C) Geneva
 (D) Paris
26. Kathak, Nauntanki and Kajri are art form of—
 (A) Uttaranchal (B) Uttar Pradesh
 (C) Jharkhand (D) Chhattisgarh
27. Leonardo da Vinci—
 (A) was a great Italian painter, sculptor and architect
 (B) Got universal fame from his masterpiece 'Monalisa'
 (C) Drew models of organs such as the heart, lungs and womb
 (D) All of these
28. National Anthem was first sung on—
 (A) December 27, 1911 during the Indian National Congress Session at Calcutta
 (B) January 24, 1950 by the Constituent Assembly of India
 (C) January 26, 1959 by the Government of India
 (D) None of these
29. ISRO recently cleared a frequency band from satellite to be used for internet on trains—
 (A) KU Band (B) S Band
 (C) C Band (D) None of these
30. The National Development Council has approved recently the 12th Five Year Plan and set an annual average growth target of—
 (A) 8.2% (B) 9%
 (C) 10% (D) 11%
31. India on Oct. 4, 2012 successfully test fired nuclear capable Prithvi-II ballistic missile from a test range at Balasore. This was a—
 (A) Surface to Surface Missile
 (B) Air to Surface Missile
 (C) Air to Air Missile
 (D) Surface to Air Missile
32. Rath Yatra—This famous festival is held in—
 (A) Tamil Nadu (B) Karnataka
 (C) Odhisha (D) West Bengal
33. The world cheapest computer 'Aakash', which has the potential to revolutionize educational access in developing world, is manufactured by—
 (A) IBM (B) HCL
 (C) Data Wind (D) Intel
34. With the 92nd Constitutional amendment, how many new languages were added to the 8th schedule of the Constitution—
 (A) 2 (B) 5
 (C) 4 (D) 3
35. The lowest layer of atmosphere, extending upto 10 miles in the tropics, is called the—
 (A) Stratosphere (B) Tropopause
 (C) Troposphere (D) Mesosphere
36. The Chipko Andolan is associated with—
 (A) Tigers
 (B) Trees
 (C) Fevicol
 (D) Cleaning of Ganga
37. The river water is polluted with acidic wastes if pH of water is—
 (A) Below 7 (B) Above 7
 (C) Equal to 7 (D) Any one of these

38. India is progressing in technological development and planning Mangalyaan mission in 2013. If India's mission goes successful, it would become the doing so.
 (A) Fourth Nation (B) Third Nation
 (C) Second Nation (D) Sixth Nation
39. Who was named AIFF (All India Football Federation) player of the year 2012 ?
 (A) Subrata Paul
 (B) Gouramangi Singh
 (C) Sunil Chhetri
 (D) Syed Rahim Nabi
40. How many gold medals were won by India at Copa Brasil-2012 Tournament for wrestling ?
 (A) Six (B) Eight
 (C) Nine (D) Seven
41. Dr. Montek Singh Ahluwalia said that the term 'Bimaru' States should be done away with. Which States was/were termed as Bimaru states ?
 (A) Bihar, Uttar Pradesh
 (B) Bihar, Jharkhand, Uttar Pradesh, Madhya Pradesh
 (C) Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh
 (D) Bihar
42. When Rongali bihu is celebrated—
 (A) In the month of April
 (B) In the Month of October
 (C) In the Month of January
 (D) In the Month of December
43. The International Kite Festival is one of the most colorful events of which state of India ?
 (A) Bihar (B) Uttar Pradesh
 (C) Gujarat (D) Rajasthan
44. Consider the London Olympics held recently. Identify the wrong match—
 (A) Yogeshwar Dutt—Silver in Wrestling
 (B) Vijay Kumar—Silver in Shooting
 (C) Saina Nehwal—Bronze in Badminton
 (D) Gangan Narang—Bronze in Shooting
45. Which country recently elected its first woman President in December 2012 ?
 (A) North Korea (B) South Korea
 (C) Japan (D) China
46. What is Basel III norms ?
 (A) The Global Capital norms for Banks
 (B) The Global Pollution Norms for Auto Manufacturer
 (C) The Global Norms for Cyber World
 (D) The Global Pollution Norms for Heavy Industries
47. Uday an intensive Five Year Programme is launched by public health foundation of India. This is initially focussed for improving outcome for people with—
 (A) Cancer
 (B) TB
 (C) Diabetes and high blood pressure
 (D) Neurological diseases
48. Santhali language is chiefly spoken by more than six million people in India. Apart from the States of Bihar and Jharkhand, it is also spoken in the State of—
 (A) Assam, Orissa, West Bengal and Tripura
 (B) Uttar Pradesh and Rajasthan
 (C) Haryana, Jammu and Kashmir
 (D) Himachal and Jammu and Kashmir
49. Ebb and flow is—
 (A) A Missile recently launched from Odisha
 (B) A gravity mapping satellites of NASA
 (C) A discovery of new star
 (D) A system of Measurement of liquid
50. Which of the following countries has become first to pass Climate Act ?
 (A) Australia (B) Germany
 (C) Canada (D) USA

Answers with Explanations

- (C)
- (C) In Rajasthan, largest camel/ cattle fair is organized each year on large scale at **Pushkar**-Ajmer. 15 km away nearby Brahma Temple as well as on small scale at Bikaner (Raj.)
- (C) 4. (B) 5. (A) 6. (A) 7. (B)

8. (C) kilowatt is unit of power.
 9. (C) 10. (D)
 11. (B) For conversion of temperature ($^{\circ}\text{C}$ to $^{\circ}\text{F}$ or v/s), the formula is used as;

$$\frac{C}{5} = \frac{F - 32}{9},$$

hence, $9C = 5F - 160$,

$$\frac{-40}{5} = \frac{-40 - 32}{9},$$

$$-360 = -200 - 160; -360 = -360.$$

Thus, -40° value is equal or having same numerical value.

12. (B)
 13. (A) Chairman of Rajya Sabha is Vice-President, its salary is 1,25,000.
 14. (D) Smallest planet of solar system is Mercury (4,878 km diameter) and largest planet is Jupiter (having diameter of 1,38,081 km), respectively.
 15. (A) 16. (A) 17. (B) 18. (A) 19. (C)
 20. (C) 21. (D) 22. (B) 23. (B) 24. (C)
 25. (A) The Headquarters (Hq.) of United Nations Organization (UNO) is located at New York (USA) established in 1945 with Chief Administrative / Chief Secretary Ban Ki-Moon of South Korea.
 26. (B) Kathak, Nautanki and Kajri, as well as Rasleela, Jhoola, Diwali, Karan, Sheela etc., are the art form of U.P.
 27. (D)
 28. (A) National Anthem—'song Jangnamana', composed originally in Bengali by Rabindranath Tagore, was first sung on 27 December, 1911 at the Kolkata Session of the Indian National Congress, which consists of five stanzas.
 29. (A) 30. (A) 31. (A) 32. (C) 33. (C)

34. (C)
 35. (C) There are 4 layers in atmosphere i.e., (i) **Troposphere** lowest layer spread upto 12 km height from ground level; (ii) **Stratosphere** 13–32 km height (iii) **Ozonosphere** 32–80 km height and **Ionosphere** 80–640 km height spread.
 36. (B) '**Chipko Andolan**' is associated with trees plantation. Say, Afforestation, so there is a need to save environment pollution and be control on Deforestation. Since, **FOREST** gives us 6 things i.e., **F**—Food, **O**— O_2 (oxygen), **R**—Rains, **E**—Environmental protection, **S**—Soil conservation and **T**—Timber, and finally **Fund**.
 37. (A) Infact, river water is polluted with acidic wastes and hence the pH of water is going down from pH level 7 to 3 depending up the acidity of water/acidic wastes.
 This pH scale can be expressed as; pH 3 to below 7 (Acidic) \rightarrow 7.0 pH (Neutral) \rightarrow above 7 to 8.5 (normally) pH (Alkaline/Saline). Slightly acidic water 6.5–7 pH would be useful to crops.
 38. (D) If India's Mars mission in 2013 succeeds it will be the 6th nation in the world to do so after U.S.A., Russia, Europe (European Space Agency), Japan and China.
 39. (D)
 40. (C) India won 9 gold medals and 4 bronze medals at Copa, Brasil–2012 Tournament for Wrestling held during November 29, 2012 and December 2, 2012.
 41. (C) 42. (A) 43. (C)
 44. (A) Yogeshwar Dutt won a bronze medal India won 6 medals in London Olympic.
 45. (B) 46. (A) 47. (C) 48. (A) 49. (B)
 50. (C)