

## Part I

### *Test of quantitative ability*

1. If each side of a square is increased by 40%, find the percentage change in its area.  
(A) 44%            (B) 80%            (C) 84%            (D) 96%
2. If 2 boys can shovel a driveway in 4 hours, how many minutes will it take 6 boys to do the job?  
(A) 96            (B) 66            (C) 80            (D) 52
3. There are two numbers. H.C.F. (highest common factor) of the two numbers is 12, and their L.C.M. (least common multiple) is 504. If the first number is 72, find the second number.  
(A) 91            (B) 88            (C) 86            (D) 84
4. Two trains P and Q start simultaneously in opposite directions from two points X and Y and arrive at their destinations 36 and 25 hours respectively after their meeting each other. At what speed does the second train Q need to travel if the first train P travels at 100 km/h?  
(A) 120            (B) 125            (C) 115            (D) 110
5. Nisha is trying to collect all the cards in a special commemorative set of baseball cards. She currently has exactly  $\frac{1}{4}$  of the cards in that set. When she gets 10 more cards, she will then have  $\frac{1}{3}$  of the cards. How many cards are there in the set?  
(A) 30            (B) 60            (C) 120            (D) 240

6. In 2019, Ravi read 10 English books and 7 Kannada books. In 2020, he read twice as many Kannada books as English books. If 60% of the books that he read during the two years were Kannada, how many books did he read in 2020?
- (A) 16                      (B) 26                      (C) 32                      (D) 48
7. A jar contains only red, white, and blue marbles. The number of red marbles is  $\frac{5}{6}$  the number of white ones, and the number of white ones is  $\frac{3}{5}$  the number of blue ones. If there are 420 marbles in all, how many of them are blue?
- (A) 180                      (B) 360                      (C) 280                      (D) 200
8. P : Q : R is in the ratio of 5 : 3 : 2. How much money will R get out of Rs. 1155?
- (A) 211                      (B) 221                      (C) 231                      (D) 241
9. If  $x^2 - y^2 = 30$  and  $x - y = 10$ , what is the average of x and y?
- (A) 1.5                      (B) 3.5                      (C) 5                      (D) 6
10. Kusuma completed exercises 6-20 on her math review sheet in 30 minutes. At this rate, how long, in minutes, will it take her to complete exercises 29-57?
- (A) 56                      (B) 58                      (C) 60                      (D) 62
11. After Sushil gave 85 marbles to Asima and 60 to Suhana, she still had 355 left. What percent of his marbles did Sushil give away?
- (A) 37                      (B) 31                      (C) 32                      (D) 29

12. In 15 years, P will be twice as old as Q was 15 years ago. If P is now 14 years older than Q, the present age of Q is:
- (A) 29            (B) 39            (C) 49            (D) 59
13. In how many different ways can the letters of the word 'READING' be arranged in such a way that the vowels always come together?
- (A) 720            (B) 480            (C) 360            (D) 120
14. Pipe A can fill a tank in 10 minutes whereas pipe A along with pipe B can fill the same tank in 6 minutes. In how many minutes can pipe B alone fill the tank?
- (A) 12            (B) 15            (C) 18            (D) 21
15. Krish has 4 times as many books as Jatin and 5 times as many as Isha. If Isha has more than 40 books, what is the least number of books that Krish could have?
- (A) 200            (B) 220            (C) 210            (D) 205

## Part II

### *Test of Reasoning Ability*

*The following questions (16 - 17) consist of statements that may have cause and effect relationship, can be the effects of the same or independent causes or may be independent causes without having any relationship. You have to read the statements carefully and choose the right answer.*

16. Statements:

Statement I: There is a sharp decline in the production of rice this season.  
Statement II: The government has decided to increase the import of rice.

- (A) Statement II is the cause, and statement I is its effect
- (B) Statement I is the cause, and statement II is its effect
- (C) Both the statements are effects of independent causes
- (D) Both the statements are independent causes

17. Statements:

Statement I: People living in the coastal areas have been evacuated to safer places in the last few days.  
Statement II: The government has rushed in relief supplies for the people living in the affected coastal areas.

- (A) Statement II is the cause, and statement I is its effect
- (B) Statement I is the cause, and statement II is its effect
- (C) Both the statements are effects of independent causes
- (D) Both the statements are effects of some common cause

*In the following questions (18 - 19), each question is followed by two statements. You are required to analyze the data of both the statements and decide whether the statements are sufficient to answer the question. After analyzing the statements, you have to choose the appropriate answer out of the four options.*

18. How many brothers does Siva have?

Statement I: Siva's father has three children.

Statement II: Siva has one sister.

- (A) Statement I alone is sufficient, but statement II alone is not sufficient
- (B) Statement II alone is sufficient, but statement I alone is not sufficient
- (C) Either I or II is sufficient
- (D) Both I and II are needed

19. Hari, Rishav, Harish, and Husain are friends. Who is the heaviest?

Statement I: Rishav is heavier than Hari and Husain, but lighter than Harish.

Statement II: Hari is lighter than Rishav and Harish, but heavier than Husain.

- (A) Statement I alone is sufficient, but statement II alone is not sufficient
- (B) Statement II alone is sufficient, but statement I alone is not sufficient
- (C) Either I or II is sufficient
- (D) Both I and II are needed

20. Arrange the following words in a meaningful sequence.

1. Cow
2. Grass
3. Milk
4. Curd
5. Butter

(A) 1, 3, 2, 4, 5

(B) 4, 3, 5, 1, 2

(C) 3, 4, 5, 1, 2

(D) 1, 2, 3, 4, 5

21. Pointing to a man, Nitu said, "He is the only son of the mother of my sister's brother." How is that person related to Nitu?

(A) Father

(B) Maternal Uncle

(C) Brother

(D) None of these

*In the following question 22, a statement is followed by two assumptions. You have to read and understand the statement and assumptions, and decide which of the assumption is implicit in the statement.*

22. Statement:

The efforts to boost the tourist numbers in Kashmir are being made by the state government.

Assumptions:

I. The special fares are being announced in the railway.

II. For the last few years, tourism has fallen in Kashmir.

A. Only I is implicit.

B. Only II is implicit.

C. Neither I nor II is implicit.

D. Both I and II are implicit.

*In the following question 23, the two statements followed by two conclusions numbered I and II. You have to take the two given statements to be true even if they seem to be at variance from commonly known facts. Read the conclusion and then decide which of the given conclusions logically follows from the two given statements, disregarding commonly known facts.*

23. Statements:

- I. All fish are a tortoise.
- II. No tortoise is a crocodile.

Conclusions:

- I. No crocodile is a fish.
- II. No fish is a crocodile.

- (A) Only conclusion I follows
- (B) Only conclusion II follows
- (C) Neither I nor II follows
- (D) Both I and II follow

24. Match the following:

- |                  |               |
|------------------|---------------|
| a. A mob of      | i. birds      |
| b. A regiment of | ii. wolves    |
| c. A flock of    | iii. soldiers |
| d. A pack of     | iv. ruffians  |

- (A) a-iv, b-iii, c-ii, d-i
- (B) a-iii, b-i, c-iv, d-ii
- (C) a-iv, b-iii, c-i, d-ii
- (D) None of the above

25. Select the odd one out.
- (A) Flute      (B) Guitar      (C) Sitar      (D) Violin
26. If in a certain language, MUMBAI is coded as NVNCBJ, how is BANGALORE coded in that language?
- (A) CBOHBMPSF      (C) CBOHBMSPF  
(B) OBCHBMPSF      (D) CBOBHMPSPF
27. Harish walks 5 km toward the South and then walks 4 km to his left. Finally, he turns to his right and walks 6 km. In which direction is he from the starting point?
- (A) South      (B) South-West      (C) South-East      (D) West
28. Find the best analogy: Eyes : Tears
- (A) Sea : Water      (C) Heart : Artery  
(B) Volcano : Lava      (D) Hunger : Bread
29. 13, 26, 16, 32, 22, 44, \_\_, which number should come next?
- (A) 34      (B) 36      (C) 38      (D) 40
30. 0, 11, 13, 26, 51, 85, 152, \_\_, which number should come next?
- (A) 237      (B) 247      (C) 257      (D) 267