19GET276 – VQAR II
Time and work, Pipes and cisterns

1. A person crosses a 600 m long street in 5 minutes. What is his speed in km per hour?

   a) 3.6 b) **7.2**

   c) 8.4 d) 10

2. A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is

   a) 1/4 b) 1/10

   c) 7/15 **d) 8/15**

3. A train 125 m long passes a man, running at 5 km/hr in the same direction in which the train is going, in 10 seconds. The speed of the train is

   a) 45 km/hr **b) 50 km/hr**

   c) 54 km/hr d) 55 km/hr

4. An aeroplane covers a certain distance at a speed of 240 kmph in 5 hours. To cover the same distance in $1\frac{2}{3}$ hours, it must travel at a speed of:

   a) 300 kmph b) 360 kmph

   c) 600 kmph **d) 720 kmph**

5. Two trains running in opposite directions cross a man standing on the platform in 27 seconds and 17 seconds respectively and they cross each other in 23 seconds. The ratio of their speeds is:

   a) 1 : 3 **b) 3 : 2**

   c) 3 : 4 d) None of these

6. A and B can together finish a work 30 days. They worked together for 20 days and then B left. After another 20 days, A finished the remaining work. In how many days A alone can finish the work?

   a) 40 b) 54

   c) 50 **d) 60**

7. A train 360 m long is running at a speed of 45 km/hr. In what time will it pass a bridge 140 m long?

   a) 40 sec b) 42 sec

   c) 45 sec d) 48 sec

8. A goods train runs at the speed of 72 kmph and crosses a 250 m long platform in 26 seconds. What is the length of the goods train?

   a) 230 m b) 240 m

   c) 260 m **d) 270 m**

9. A man on tour travels first 160 km at 64 km/hr and the next 160 km at 80 km/hr. The average speed for the first 320 km of the tour is:

   a) 35.55 km/hr b) 36 km/hr

   c) 71.11 km/hr d) 71 km/hr

10. A, B and C can do a piece of work in 20, 30 and 60 days respectively. In how many

days can A do the work if he is assisted by B and C on every third day?

a) 12 days   **b) 15 days**

c) 16 days   d) 18 days

11. A jogger running at 9 kmph alongside a railway track in 240 metres ahead of the engine of a 120 metres long train running at 45 kmph in the same direction. In how much time will the train pass the jogger?

a) 30 sec   b) 18 sec

c) 36 sec   d) 72 sec

12. A can do a piece of work in 4 hours; B and C together can do it in 3 hours, while A and C together can do it in 2 hours. How long will B alone take to do it?

a) 8 hours   b) 10 hours

c) 12 hours   d) 24 hours

13. In covering a distance of 30 km, Abhay takes 2 hours more than Sameer. If Abhay doubles his speed, then he would take 1 hour less than Sameer. Abhay's speed is:

a) 5 kmph   b) 6 kmph

c) 6.25 kmph   d) 7.5 kmph

14. A train 240 m long passes a pole in 24 seconds. How long will it take to pass a platform 650 m long?

a) 65 sec   **b) 89 sec**

c) 100 sec   d) 150 sec

15. 10 women can complete a work in 7 days and 10 children take 14 days to complete the work. How many days will 5 women and 10 children take to complete the work?

a) 3   **b) 7**

c) 5   d) None of these

16. A boat can travel with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, find the time taken by the boat to go 68 km downstream

a) 2 hours   b) 3 hours

c) 4 hours   d) 5 hours

17. The ratio between the speeds of two trains is 7 : 8. If the second train runs 400 km in 4 hours, then the speed of the first train is:

a) 70 km/hr   b) 75 km/hr

c) 84 km/hr   **d) 87.5 km/hr**

18. In one hour, a boat goes 11 km/hr along the stream and 5 km/hr against the stream. The speed of the boat in still water (in km/hr) is

a) 3 km/hr   b) 5 km/hr

c) 8 km/hr   d) 9 km/hr

19. A train speeds past a pole in 15 seconds and a platform 100 m long in 25 seconds. Its length is:

a) 50 m   **b) 150 m**

c) 200 m   d) 250 m

20. Sakshi can do a piece of work in 20 days. Tanya is 25% more efficient than Sakshi. The number of days taken by Tanya to do the same piece of work is:

a) 15   b) 18

c) 16   d) 25

21. A boat running downstream covers a distance of 16 km in 2 hours while for covering the same distance upstream, it takes 4 hours. What is the speed of the boat in still water?

a) 4 km/hr

b) 6 km/hr

c) 8 km/hr

d) Data inadequate

22. A takes twice as much time as B or thrice as much time as C to finish a piece of work. Working together, they can finish the work in 2 days. B can do the work alone in:

a) 4 days

b) 6 days

c) 8 days

d) 12 days

23. Two trains 140 m and 160 m long run at the speed of 60 km/hr and 40 km/hr respectively in opposite directions on parallel tracks. The time (in seconds) which they take to cross each other, is

a) 9

b) 9.6

c) 10

d) 10.8

24. A works twice as fast as B. If B can complete a work in 12 days independently, the number of days in which A and B can together finish the work in :

a) 4 days

b) 6 days

c) 8 days

d) 18 days

25. How many seconds will a 500 metre long train take to cross a man walking with a speed of 3 km/hr in the direction of the moving train if the speed of the train is 63 km/hr?

a) 25

b) 30

c) 35

d) 40

26. Twenty women can do a work in sixteen days. Sixteen men can complete the same work in fifteen days. What is the ratio between the capacity of a man and a woman?

a) 3 : 4

b) 4 : 3

c) 5 : 3

d) Data inadequate

27. Two trains are running in opposite directions with the same speed. If the length of each train is 120 metres and they cross each other in 12 seconds, then the speed of each train (in km/hr) is:

a) 10

b) 18

c) 36

d) 72

28. A and B can do a work in 8 days, B and C can do the same work in 12 days. A, B and C together can finish it in 6 days. A and C together will do it in :

a) 4 days

b) 6 days

c) 8 days

d) 12 days

29. A train 110 metres long is running with a speed of 60 kmph. In what time will it pass a man who is running at 6 kmph in the direction opposite to that in which the train is going?

a) 5 sec

b) 6 sec

c) 7 sec

d) 10 sec

30. A and B together can do a piece of work in 30 days. A having worked for 16 days, B finishes the remaining work alone in 44 days. In how many days shall B finish the whole work alone?

a) 30 days

b) 40 days

c) 60 days

d) 70 days

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31. A train running at the speed of 60 km/hr crosses a pole in 9 seconds. What is the length of the train?

a) 120 metres

b) 180 metres

c) 324 metres

d) 150 metres

32. The speed of a boat in still water in 15 km/hr and the rate of current is 3 km/hr. The distance travelled downstream in 12 minutes is

a) 1.2 km

b) 1.8 km

c) 2.4 km

d) 3.6 km

33. A 300 metre long train crosses a platform in 39 seconds while it crosses a signal pole in 18 seconds. What is the length of the platform?

a) 320 m

b) 350 m

c) 650 m

d) Data inadequate

34. Speed of a boat in standing water is 9 kmph and the speed of the stream is 1.5 kmph. A man rows to a place at a distance of 105 km and comes back to the starting point. The total time taken by him is

a) 16 hours

b) 18 hours

c) 20 hours

d) 24 hours

35. Three pipes A, B and C can fill a tank from empty to full in 30 minutes, 20 minutes, and 10 minutes respectively. When the tank is empty, all the three pipes are opened. A, B and C discharge chemical solutions P,Q and R respectively. What is the proportion of the solution R in the liquid in the tank after 3 minutes?

a) 5/11

b) 6/11

c) 7/11

d) 8/11

36. A man takes twice as long to row a distance against the stream as to row the same distance in favour of the stream. The ratio of the speed of the boat (in still water) and the stream is

a) 2 : 1

b) 3 : 1

c) 3 : 2

d) 4 : 3

37. Two pipes can fill a tank in 20 and 24 minutes respectively and a waste pipe can empty 3 gallons per minute. All the three pipes working together can fill the tank in 15 minutes. The capacity of the tank is:

a) 60 gallons

b) 100 gallons

c) 120 gallons

d) 180 gallons

38. Two pipes A and B can fill a tank in 20 and 30 minutes respectively. If both the pipes are used together, then how long will it take to fill the tank?

a) 12 min

b) 15 min

c) 25 min

d) 50 min

39. In a 100 m race, A can give B 10 m and C 28 m. In the same race B can give C

a) 18 m

b) 20 m

c) 27 m

d) 9 m

40. One pipe can fill a tank three times as fast as another pipe. If together the two pipes can fill the tank in 36 minutes, then the slower pipe alone will be able to fill the tank in

a) 81 min

b) 108 min

c) 144 min

d) 192 min

41. In a 100 m race, A beats B by 10 m and C by 13 m. In a race of 180 m, B will beat C by

a) 5.4 m b) 4.5 m

c) 5 m **d) 6 m**

42. In 100 m race, A covers the distance in 36 seconds and B in 45 seconds. In this race A beats B by

a) 20 m b) 25 m

c) 22.5 m d) 9 m

43. From a group of 7 men and 6 women, five persons are to be selected to form a committee so that at least 3 men are there on the committee. In how many ways can it be done?

a) 564 b) 645

c) 735 **d) 756**

44. In how many different ways can the letters of the word 'LEADING' be arranged in such a way that the vowels always come together?

a) 360 b) 480

c) 720 d) 5040

45. Out of 7 consonants and 4 vowels, how many words of 3 consonants and 2 vowels can be formed?

a) 210 b) 1050

c) 25200 d) 21400

46. In how many ways can the letters of the word 'LEADER' be arranged?

a) 72 b) 144

c) 360 d) 720

47. In a group of 6 boys and 4 girls, four children are to be selected. In how many different ways can they be selected such that at least one boy should be there?

a) 159 b) 194

c) 205 **d) 209**

48. In how many ways a committee, consisting of 5 men and 6 women can be formed from 8 men and 10 women?

a) 266 b) 5040

c) 11760 d) 86400

49. In how many different ways can the letters of the word 'DETAIL' be arranged in such a way that the vowels occupy only the odd positions?

a) 32 b) 48

c) 36 d) 60

50. In how many ways can a group of 5 men and 2 women be made out of a total of 7 men and 3 women?

a) 63 b) 90

c) 126 d) 135