TANCET Question Paper 2023

1. Which of the following numbers completely divides (461+462+463+464)?

a. 9
b. 11
c. 10
d. 7

2. In how many ways can 10 engineers and 4 doctors be seated at a round table if all the 4 doctors sit together?

a. 10!×4!
b. 10!10!
c. 13!×4!
d. 14!

3. What is log5 200 × log200 125?

a. 25
b. 6
c. 5
d. 3

4. How many signals can be made using 6 different colored flags when any number of them can be hoisted at a time?

a. 2020
b. 1720
c. 1956
d. 1822

5. 5 coins are tossed together. What is the probability of getting exactly 2 heads?

a. 1/2
b. 7/16
c. 5/16
d. 4/11

6. In 100 meters race, A covers the distance in 36 seconds and B in 45 seconds. In this race A beats B by:

a. 20 meters

b. 9 meters
c. 22.5 meters
d. 25 meters

7. There are two buildings P and Q. If 15 persons are sent from P to Q, then the number of persons in each building is the same. If 20 persons are sent from Q to P, then the number of persons in P is double the number of persons in Q. How many people are there in the building P?

a. 140
b. 90
c. 80
d. 120

8. A boy was asked to multiply a number by 22. He instead multiplied the number by 44 and got the answer 308 more than the correct answer. What was the number to be multiplied?

a. 10
b. 12
c. 16
d. 14

9. John gets on the elevator on the 14th floor of a building and rides up at the rate of 84 floors per minute. At the same time, Vinod gets on an elevator at the 58th floor of the same building and rides down at the rate of 92 floors per minute. If they continue travelling at these rates, then at which floor will their paths cross?

a. 32
b. 36
c. 38
d. 35

10. Find the odd man out 5, 6, 14, 45, 185, 925, 5556

a. 925
b. 185
c. 66
d. 5556

11. The speed of a bus increases by 2 kmph after every hour. If the distance travelled in the first hour was 35 km, what was the total distance travelled in 12 hours?

a. 502 km
b. 552 km

c. 492 km
d. 422 km

12. 6 men and 8 women can complete a work in 10 days. 26 men and 48 women can finish the same work in 2 days. How many days are needed for 15 men and 20 women to do the same work?

a. 6
b. 2
c. 4
d. 8

13. If $3\sqrt{5} + \sqrt{125} = 17.88$, then what will be the value of $\sqrt{80} + 16\sqrt{5}$?

a. 22.35
b. 44.7
c. 13.41
d. 21.66

14. If m and n are whole numbers and mn = 196, what is the value of $(m - 3)n + 1$?

a. 1
b. 121
c. 2744
d. 1331

15. If each edge of a cube is increased by 50%, find the percentage increase in its surface area.

a. 125
b. 150
c. 175
d. 110

16. The average age of a class of 22 students is 21 years. The average increased by 1 when the teacher's age also included. What is the age of the teacher?

a. 48
b. 45
c. 43
d. 44

17. Four bells ring simultaneously at starting and at intervals of 6 sec, 12 sec, 15 sec and 20 sec respectively. How many times do they ring together in 2 hours?

a. 120
b. 60
c. 121
d. 112

18. 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:
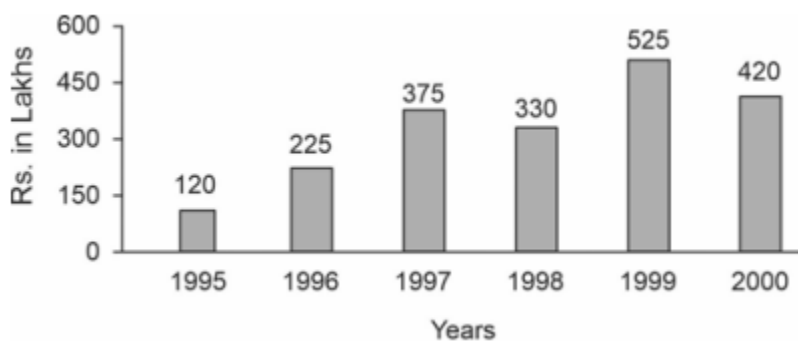
a. 1 : 2
b. 3 : 4
c. 3 : 2
d. None of the above

19. The sum of the first 45 natural numbers is:
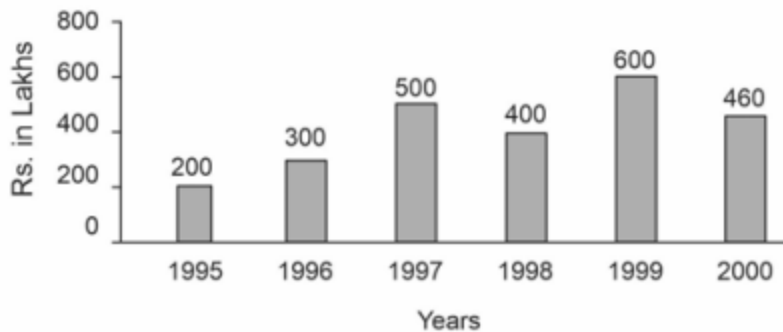a. 1035
b. 1280
c. 2070
d. 2140

20. 49 pumps can empty a reservoir in 6.5 days, working 8 hours a day. If 196 pumps are used for 5 hours each day, then the same work will be completed in:

a. 2 days
b. 2.5 days
c. 2.6 days
d. 3 days

Direction (21-25): Out of the two bar graphs provided below, one shows the amounts (in Lakh Rs.) invested by a Company in purchasing raw materials over the years and the other shows the values (in Lakh Rs.) of finished goods sold by the Company over the years. Amount invested in Raw Materials (Rs. in Lakhs)

Value of Sales of Finished Goods (Rs. in Lakhs)

21. The maximum difference between the amount invested in Raw materials and the value of sales of finished goods was during the year

a. 1995
b. 1996
c. 1997
d. 1998

22. The value of sales of finished goods in 1999 was approximately what per cent of the sum of the amount invested in Raw materials in the years 1997, 1998 and 1999?

a. 33
b. 37
c. 45
d. 49

23. What was the difference between the average amount invested in Raw materials during the given period and the average value of sales of finished goods during this period?

a. Rs. 62.5 lakhs
b. Rs. 68.5 lakhs
c. Rs. 71.5 lakhs
d. Rs. 77.5 lakhs

24. In which year, is the percentage change (compared to the previous year) in the investment in Raw materials is same as that in the value of sales of finished goods?
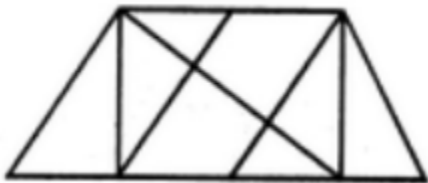
a. 1996
b. 1997

c. 1998
d. 1999

25. In which year, there has been a maximum percentage increase in the amount invested in Raw materials as compared to the previous year?
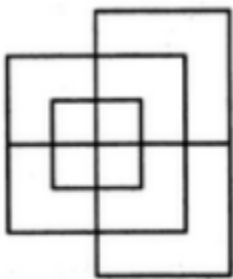
a. 1996
b. 1997
c. 1998
d. 1999

26. Find the number of triangles in the given figure.

a. 8
b. 10
c. 12
d. 14

27. Find the minimum number of straight lines required to make the given figure.

a. 13
b. 15
c. 17
d. 19

28. Choose the alternative which closely resembles the water image of the given combination/figure. ADVANCE

a. ƎƆИAⅤᗡA

b. ᗄᗡAⅤИCE

c. ƎƆИAⅤᗡA

d. None of the above

29. A university library budget committee must reduce exactly five of eight areas of expenditure — I, J, K, L, M, N, O and P – by the following conditions: If both I and O are reduced, P is also reduced. If L is reduced, neither N nor O is reduced. If M is reduced, J is not reduced. Of the three areas J, K, and N exactly two are reduced.

Question :

If both K and N are reduced, which one of the following is a pair of areas neither of which could be reduced?

a. I, L
 b. J, L
 c. J, M
 d. I, J

30. Rahul, Prem, Shyam, Geet and Rinku are five friends among which Shyam is the tallest. Rahul is shorter than Prem but taller than Rinku. Geet is a little shorter than Prem but a little taller than Rahul. Who is taller than Rinku but shorter than Geet?

 a. Rahul
 b. Rinku
 c. Prem
 d. Geet

31. If white is called black, black is called red, red is called yellow, yellow is called green, green is called blue, blue is called violet and violet is called orange, what would be the colour of human blood?

 a. Green
 b. Black
 c. Red
 d. Yellow

32. A can work twice as fast as B. A and C together can work three times as fast as B. If A, B and C complete a job in 30 days working together, in how many days can each of them complete the work?

a. 50, 100, 120
 b. 60, 120, 120
 c. 60, 100, 80
 d. 40, 80, 100

48. Answer the questions based on the following information: Four sisters- Suvarna, Tara, Uma and Vibha are playing a game such that the loser doubles the money of each of the other players from her share. They played four games and each sister lost one game in alphabetical order. At the end of the fourth game, each sister has Rs. 32. Who started with the lowest amount?

 a. Suvarna
 b. Tara
 c. Uma
 d. Vibha