

CAT 2022 Slot 1 Memory-based Question Paper with Answer Key

Ques. In a village, the ratio of total males to females is 5:4. Ratio of literate males and literate females is 2:3. Also, the ratio of illiterate males to illiterate females is 4:3. If 3600 males are literate, then the total number of females in the village is?

Ans. 43200

Ques. Out of a total 100 people surveyed, 73 like Coffee, 80 like Tea, 52 like Lemonade. Find the difference between the minimum and maximum number of people who like all 3 drinks.

- A. 52
- B. 48
- C. 47
- D. 53

Ans. 47

Ques. Let A, B, C be non-zero numbers such that $b^2 < 4ac$, and $f(x) = ax^2 + bx + c$. If set S consists of all integers 'm' such that $f(m) < 0$, then set S must necessarily be:

- A. Either empty or set of all integers
- B. The set of all integers
- C. The Empty Set
- D. Set of all Positive integers

Ans. Option A

Ques. The largest real value of 'A' for which equation $|x-a|+|x-1|=2$ has an infinite number of solutions

for x is:

- A. 0
- B. 1
- C. 2
- D. -1

Ans. 1

Ques. Two trains - A&B started from two points X and Y, respectively, towards each other simultaneously. Train A reaches point Y in 10 minutes. Train B takes 9 more minutes to reach point X, after meeting train A. What is the total time taken by train B to travel the complete distance YX?

- A. 12
- B. 6
- C. 15
- D. 10

Ans. Option C

Ques. Let ABCD be a parallelogram, such that the coordinates of 3 vertices (i.e. A, B, and C) are (1,1), (3,4), (-2, 8), respectively. Then, the coordinates of vertex D is:

- A. (-4, 5)
- B. (0, 11)
- C. (-3, 4)
- D. (4, 5)

Ans. Option A (-4,5)

Ques. Let $0 \leq A \leq X \leq 100$, and $f(x) = |X-A| + |X-100| + |X-A-50|$ such that the maximum of $f(x)$ becomes 100 when $A =$ _____.

- A. 25
- B. 100
- C. 50
- D. 0

Ans. 50

Ques. Amal buys 100 kg of syrup and 120 kg of juice. The syrup is 20% less costly than the juice per kg. He sells 10 kg of syrup at 10% profit and 20 kg of juice at 20% profit. He mixes the remaining liquids to sell at Rs. 308.32 per kg. If overall profit is 64%, then Amal's cost price for syrup in Rs./kg is:

Ans. 0.5 per kg

Ques. Let a and b be natural numbers such that a

$$2 + ab + a = 14. \quad b$$

$$2 + ab + b = 28.$$

Then $2a+b =$ _____.

- A. 10
- B. 8
- C. 7
- D. 9

Ans. 8

Ques. Ankita buys 4 kg cashews, 14 kg peanuts, and 6 kg almonds.

Cost of 7 kg cashews = 30 kg of peanuts = 9 kg almonds

She mixes all three nuts and marks a price for the mixture in order to make a profit of Rs.1752.

She sells 4 kg of mixture at this marked price and remaining at a 20% discount on marked price, thus making a total profit of Rs.744.

The amount amount (in Rs.) that she had spent in buying almonds is:

- A. 2520
- B. 1440
- C. 1680
- D. 1176

Ans. 1680

Ques. A trapezium ABCD has a single BAD 90 degree. Side BC measures 3 cm and side AD measures 8 cm. If the perimeter of Trapezium is 36 then what is the area of Trapezium?

Ans. 66

Ques. Alex invested his savings in 2 parts, first part at 15% p.a. on a simple interest for 4 years and second part at 12% p.a. on a simple interest of 3 years. If interests from both the investments are equal, then the percentage of his savings in 1st part is?

- A. 37.5%
- B. 40%
- C. 60%
- D. 62.5%

Ans. 37.5%

Ques. Average weight of students in class increases by 600gm when some new students join the class. If the average weight of new students is 3kg more than original students, then the ratio of number of original students to new students is?

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

Ans. 4:1

Ques. Find the total number of ways such that 20 identical balloons are distributed to 4 children if each of them gets some, but none of them gets an odd number of balloons.

Ans. 28 ways

DILR Set 1

5 interviewers A,B,C,D,E and F carried interviews of 5 researchers P,Q ,R ,S and T to allocate the fund for their research. The interviewers have tokens numbered 2,3,5,7,11 and 13 in some order. All the interviewers take interview of all 5 researchers and award at most 1 token to them, finally the fund is allocated to the researcher in following manner- the product of all the token that researcher has received is multiplied by 1000 and that value is given to the respective researcher as the fund.

The different amounts of funds that researcher received in decreasing order are as follow 390000, 210000, 165000, 77000, 66000 also we know the following

- 1) F awarded tokens to everyone except Q. while A awarded token to no one except P.
- 2) R received highest number of tokens than anyone but she did not receive from E
- 3) B awarded token to S but not to Q while D awarded token to Q but

Ques. How many tokens Q received?

Ans. 2

Ques. Who definitely received tokens from B but not from D?

Ans. P

Ques. How many tokens was C awarded?

Ans. 3

Ques. How many tokens S received?

Ans. 3

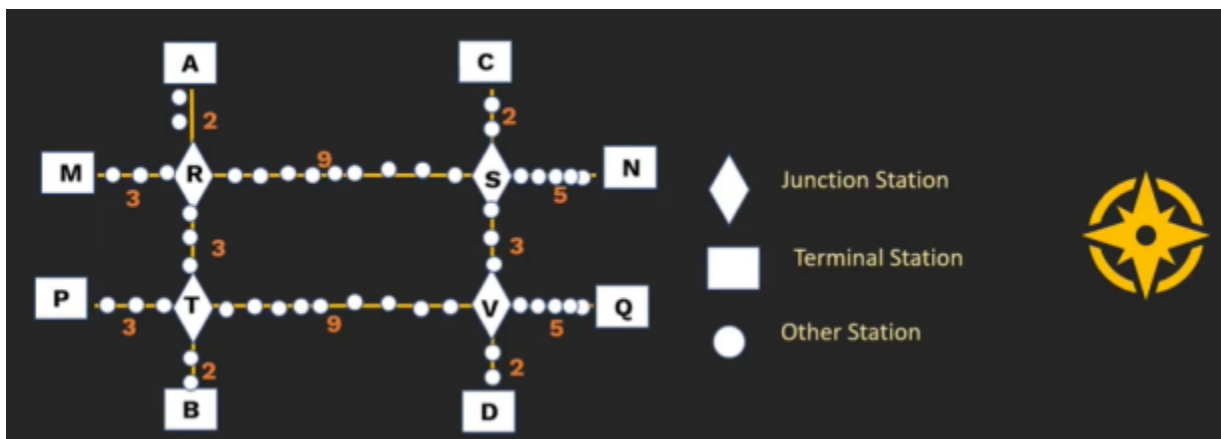
Ques. Which of the following could be the amount of funding that T received?

1. 66,000
 2. 165,000
- A. Only 1
 - B. Only 2
 - C. Both 1 and 2
 - D. Neither 1 nor 2

Ans. Both 1 and 2.

DILR Set 2

Each train runs either in east-west direction or north-south direction, but not both. All trains stop for 2 mins at each of the junction stations on the way and for 1 min at each of the other stations. It takes 2 minutes to reach the next station for trains going in east-west direction and 3 minutes to reach the next station for trains going in north-south direction. From each terminal station, the first train starts at 6 a.m. the last trains leave the terminal stations at midnight other wise, during the service hours, there are metro service every 15 minutes in the north-south lines and every 10 minutes in east-west lines. A train must rest for at least 15 minutes after completing a trip at the terminal station, before it can under take the next trip in the reverse direction. Call questions are related to train metro service only Assume that if some one reaches a station exactly at a time a train is supposed to leave (s) he can catch the train.



Ques. If Hari is ready to board a train at 8:05 AM from station M, then when is the earliest he can reach station N?

Ans. 9:11 AM

Ques. If Priya is ready to board a train at 10:25 AM from station T, then when is the earliest she can reach station S?

Ans. 11:22 AM

Ques. Hari and Priya are expected to reach station S late. What is the latest time by which she must reach station B before 1 AM via station R?.

Ans. 11:49 AM

Ques. What is the minimum number of trains that are required to provide service on the AB line considering both north and south directions?

Ans. 8

Ques. What is the minimum number of trains that are required to provide the service in this city?

Ans. 48