QUANTITATIVE 10-09-2024

Question 1:

Question: Either in the given series, a relation exists between the first two terms. Determine the relationship and identify the missing term of the given pair such that both the terms are analogous.

Options:

1. 52
2. 67
3. 560
4. 46

Answer: 3

Question 2:

Question: Arun was cycling his bike. He rode 50 yards south and took a left turn to ride another 70 yards. After that, he took another left turn and rode 50 yards. Finally, he turned right to ride 60 more yards. How far and in which direction is he from the starting point?

Options:

1. 10 yards, North
2. 110 yards, West
3. 130 yards, East
4. 130 yards, South

Answer: 2. 110 yards, West

Question 3:

Question: Fill in the blank with the appropriate option:

log10(x) + log10(y) = \_\_\_\_\_\_\_

Options:

1. x + y
2. log(x + y)
3. log10(x \* y)
4. 1 - log(x)

Answer: 3. log10(x \* y)

Question 4:

Question: Simplify: √144

Options:

1. 2√3
2. 6
3. 3√2
4. 12

Answer: 2. 6

Question 5:

Question: Evaluate: cos²θ + sin²θ + tan²θ(cos²θ + sin²θ)

Options:

1. 0.35
2. 0.85
3. 1
4. 10

Answer: 3. 1

Question 6:

Question: What is the probability that Sherry's test would be conducted on Monday or Tuesday, in a week from Monday through Sunday?

Options:

1. 2/7
2. 1/5
3. 2/3
4. 5/7

Answer: 1. 2/7

Question 7:

Question: If one scores 66 marks out of 100, then how much does she score out of 75?

Options:

1. 50%
2. 60%
3. 66%
4. 45%

Answer: 2. 60%

Question 8:

Question: A group of women can finish a piece of work in 50 days. How many days will it take for 1/3 the group of women to be able to finish 2/3 of the work?

Options:

1. 150 days
2. 75 days
3. 50 days
4. 100 days

Answer: 1. 150 days

Question 9:

Question: Arun travels the first half of the distance at 50 miles/h and the second half at 75 miles/h. He travels a total distance of 300 miles. Find his average travel speed.

Options:

1. 60 mph
2. 62.5 mph
3. 55 mph
4. 65 mph

Answer: 2. 62.5 mph

Question 10:

Question: A jar contains 3 white, 4 red, 2 green, and 3 black balls. Find the probability that a ball picked at random is red or blue.

Options:

1. 4/9
2. 5/9
3. 2/7
4. 1/5

Answer: 2. 5/9

Question 11:

Question: In how many ways can 7 files be selected out of 14 distinct files, if one file is always selected?

Options:

1. 143
2. 13C6
3. 1
4. 13P6

Answer: 2. 13C6

Question 12:

Question: A company decides a new identity code for all its employees. The code will consist of 5 letters such that the first letter is always a consonant. How many such combinations are possible?

Options:

1. 20^3 \* 21^2
2. 21^4 \* 26
3. 21^3 \* 26^2
4. 26^4 \* 21

Answer: 3. 21^3 \* 26^2

Question 13:

Question: Find the product of A and B if A = 80 and B = 180.

Options:

1. 14400
2. 804 and B = 180
3. Inconsistent data
4. Insufficient data

Answer: 1. 14400

Question 14:

Question: Body and Soul Center sell its brand-new treadmill on an online bidding site at a profit of 20%. If the owner had sold the treadmill for $500 more, the profit would have been 25%. How much did the owner initially pay for the treadmill?

Options:

1. $6,000
2. $10,000
3. $15,000
4. $5,000

Answer: 2. $10,000

Question 15:

Question: Aaron was riding his bike. He rode 50 yards south and took a left turn to ride another 70 yards. After that he took another left tum and rode 50 yards. Finally, he turned right to ride 60 more yards. How far and in which direction is he from the starting point?

Options

1. 120 yards, West
2. 110 yards, East
3. 110 yards, West
4. 130 yards, East

Answer:3. 110 yards, West

Question 16:

Question: Refer to the given terms. A pattern defines the relationship between the first two terms. Determine the relationship and identify the missing term of the second pair, such that both the pairs are analogous.

Series:

85, 54, 83, ?

Options:

1. 101
2. 104
3. 48
4. 42

Answer: 3. 48 (The pattern is: Subtract 31, add 29, subtract 31, ...)

Question 17:

Question: A man moves 2 miles east, then 3 miles south and then 2 miles west. He then moves 2 miles toward the initial point from where he had started. In which direction is he from his initial position?

Options:

1. East
2. South
3. West
4. North

Answer: 2. South

Question 18:

Question: What is the value of log₂(log₂ 32)?

Options:

1. 2
2. 3
3. 4
4. 5

Answer: 2. 3 (log₂ 32 = 5, log₂ 5 ≈ 2.32)

Question 19:

Question: If we permute 5 letters of the word 'MANGO', how many permuted words can be made with 'N' in the second place?

Options:

1. 5
2. 6
3. 12
4. 24

Answer: 3. 12 (Fix 'N' in the second place, then permute the remaining 4 letters)

Question 20:

Question: How many six-digit numbers can be formed from 0, 1, 5, 6, 7, and 8 in which the first digit is not 0?

Options:

1. 120
2. 600
3. 720
4. 800

Answer: 3. 720 (5 choices for the first digit, 6 choices for each of the remaining digits)

Question 21:

Question: If log₅(125) = x, then what is the value of x?

Options:

1. 1
2. 2
3. 3
4. 4

Answer: 3. 3 (5³ = 125)

Question 22:

Question: Which number should be divided by 81 to arrive at a result of 81?

Options:

1. 9
2. 81
3. 72.9
4. 0.9

Answer: 2. 81 (81 / 81 = 1)

Question 23:

Question: Arun travels the first half of the distance at 50 miles/h and the second half at 75 miles/h. He travels a total distance of 3 miles. Find his average travel speed.

Options:

1. 60 mph
2. 62.5 mph
3. 55 mph
4. 65 mph

Answer: 2. 62.5 mph (Calculate the total time and divide by the total distance)

Question 24:

Question: A salesperson sells a hair dryer at his store for a price between $800 and $1000. By selling the hair dryer for $500 more than the cost price, his loss is 10% of the cost price of the hair dryer. What is the cost price of the hair dryer?

Options:

1. $500
2. $750
3. $1000
4. $1500

Answer: 2. $750 (Set up an equation based on the given information and solve for the cost price)

Question 25:

Question: Eduardo offers to sell his house for $18,400. If he charges 10% less, he will make a profit of 20%. What is the actual cost of the house?

Options:

1. $15,500
2. $14,500
3. $13,800
4. $12,500

Answer: 1. $15,500 (Set up equations based on the given information and solve for the cost price)

Question 26:

Question: A train A starts from X at 0600 hours at a speed of 45 mph. Another train B starts from the same place in the same direction at 0700 hours at a speed of 60 mph. At what time will both the trains meet each other?

Options:

1. 1100 hours
2. 1400 hours
3. 1200 hours
4. 1300 hours

Answer: 4. 1300 hours (Calculate the distance each train travels until they meet, then convert to time)

Question 27:

Question: Fill in the blanks with the appropriate option.

The list price of a camera is $300. If two successive discounts of 15% and 10% are allowed, its selling price will be

Options:

1. $229.50
2. $231.50
3. $232.50
4. $234.50

Answer: 1. $229.50 (Calculate the discounts and apply them successively to the original price)

Question 28:

Question: Two varieties of coffee worth $14 per lb and $15 per lb are mixed with a third variety in the ratio 1:1:2. If the mixture is worth $17 per lb, what is the price of the third variety per lb?

Options:

1. $18.83
2. $18.89
3. $19.5
4. $20

Answer: 3. $19.5 (Set up an equation based on the given information and solve for the price of the third variety)

Question 29:

Question: Identify the greatest among the given values of x:

Options:

A. x = 22^22

B. x = 2^222

C. x = 222^2

Options:

1. A
2. B
3. C
4. Can not be determined

Answer: 4. Can not be determined

Question 30:

Question: John, Dylan, and Matthew are eligible to be the captain of the rugby team. Lucas, Gabriel, Samuel, and Christopher are eligible to be the co-captain. In how many ways can a captain and a co-captain be chosen?

Options:

1. 12
2. 7
3. 9
4. 16

Answer: 1. 12 (3 choices for captain, 4 choices for co-captain, so 3 \* 4 = 12)

Question 31:

Question: In a poultry farm, 50 hens lay 200 eggs in 7 days. In how many days will 20 hens lay 400 eggs?

Options:

1. 15 days
2. 10 days
3. 5 days
4. 8 days

Answer: 2. 10 days (Set up a proportion based on the given information and solve for the unknown)

Question 32:

Question: 5 paramedics and 4 technicians are registered for a rescue team. In how many possible combinations can a rescue team of a paramedic and a technician be formed?

Options:

1. 9
2. 40
3. 20
4. 18

Answer: 3