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DRDO CEPTAM Exam

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Simplifying Government Exams

Section : Numerical Aptitude

Q.1 A travels 15 km with a speed of 30 km/h. He travels another 25 km with a speed of 10 km/h. What is his average speed for the entire journey?

Ans ✔ 1. $\frac{40}{3}$ km/h

✘ 2. $\frac{80}{3}$ km/h

✘ 3. 20 km/h

✘ 4. 12 km/h

Q.2 If P : Q = 5 : 2, then (2P − 3Q) : (3P − 5Q) is equal to:

Ans ✘ 1. 5 : 6

✘ 2. 2 : 7

✔ 3. 4 : 5

✘ 4. 3 : 4

Q.3

The Table given below presents the number of books on different subjects kept on separate shelves. Subjects with odd and even numbers are of Arts and Science respectively.

Subjects	Number of books
S1	26
S2	29
S3	31
S4	34
S5	36
S6	38
S7	44

What is the ratio of the number of books of S1 and the average number of books per subject?

Ans ✔ 1. $13:17$

✗ 2. $18:13$

✗ 3. $14:17$

✗ 4. $14:13$

Q.4 What will be the compound interest on a sum of ₹1200 for 2 years at the rate of 20% per annum when the interest is compounded yearly?

Ans ✗ 1. ₹624

✗ 2. ₹504

✗ 3. ₹576

✔ 4. ₹528

Q.5 The simple interest on a sum for a certain number of years, same as the rate percentage of the interest, is equal to the sum itself. The number of years is equal to:

Ans ✗ 1. 5

✔ 2. 10

✗ 3. 8

✗ 4. 1

Q.6 Pipe A can fill a tank in 6 hours. Pipe B can fill the same tank in 8 hours. Pipe A, B and C together can fill the same tank in 12 hours. Then which of the following statements is true for pipe C?

Ans ✗ 1. It can fill the tank in 4 hours 40 minutes

✗ 2. It can fill the tank in 4 hours 48 minutes

✔ 3. It can empty the tank in 4 hours 48 minutes

✗ 4. It can empty the tank in 4 hours 40 minutes

Q.7 By selling an article for ₹320, a man incurs a loss of 20%. What should be the selling price of an article to gain 20%?

Ans ✗ 1. ₹450

✔ 2. ₹480

✗ 3. ₹420

✗ 4. ₹500

Q.8 0.1 percent of 1.728×10^6 spherical droplets of water, each of diameter 2 mm, coalesce to form a spherical bubble. What is the diameter (in cm) of the bubble?

Ans ✗ 1. 1.2

✗ 2. 1.6

✗ 3. 1.8

✔ 4. 2.4

Q.9 The ratio of monthly incomes of Pawan and Sunil is 4 : 3 and the ratio of their monthly expenditures is 3 : 2. If Pawan and Sunil save ₹4000 and ₹6000 respectively per month, then what is the sum of their monthly incomes?

Ans ✗ 1. ₹60000

✔ 2. ₹70000

✗ 3. ₹50000

✗ 4. ₹36000

Q.10 What is the value of

$$32 \div 4 \ of \ 2 \times 3 + \left[5 \ of \ 6 - \{7 \ of \ 8 \ (10 + 6 \ of \ \tfrac{5}{6} \div 5 - 1) \div 80\}\right] - 7 \times 3 \div 2?$$

Ans ✗ 1. 7.5

✗ 2. 17.5

✗ 3. 12.5

✔ 4. 24.5

Q.11

What is the value of

$$\frac{72 \div 9 + 3 - 6 - (2 \times 3) + 5 \text{ of } 3 - (1 + 5 \times 2 - 2)}{8 \div 4 + 2 - (6 \times 8 \div 2) + (7 \times 4 - 2 \times 2)}?$$

Ans ✗ 1. $\frac{11}{4}$

✔ 2. $\frac{5}{4}$

✗ 3. 0

✗ 4. $\frac{15}{4}$

Q.12 If the volumes of two cubes are in the ratio of 64 : 125, then what is the ratio of their total surface areas?

Ans ✗ 1. 9 : 16

✗ 2. 4 : 5

✔ 3. 16 : 25

✗ 4. 64 : 125

Q.13 The average of 13 numbers is 42. If a 14th number is included, then the average becomes 44. What is the 14th number?

Ans ✔ 1. 70

✗ 2. 62

✗ 3. 66

✗ 4. 68

Q.14 Radius of base of a right circular cone and a sphere is each equal to r. If the sphere and the cone have the same volume, then what is the height of the cone?

Ans ✗ 1. $7r$

✔ 2. $4r$

✗ 3. $2r$

✗ 4. $3r$

Q.15 What is a single discount equivalent to two successive discounts of 10% and 15%?

Ans ✗ 1. 21.5%

   ✔ 2. 23.5%

   ✘ 3. 25%

   ✘ 4. 26.5%

Q.16 Selling price of an article is $\frac{8}{7}$ of cost price. What is the profit percentage?

Ans

   ✘ 1. $\frac{100}{9}$

   ✘ 2. $\frac{100}{11}$

   ✘ 3. $\frac{100}{8}$

   ✔ 4. $\frac{100}{7}$

Q.17 What is the HCF of $2^3 \times 3^4$ and $2^5 \times 3^2$?

Ans

   ✘ 1. $2^5 \times 3^3$

   ✘ 2. $2^3 \times 3^4$

   ✔ 3. $2^3 \times 3^2$

   ✘ 4. $2^5 \times 3^4$

Q.18 A number is first increased by 20% and then reduced by 15%. If the final value is 2040, then what is the initial value of the number?

Ans

   ✘ 1. 2100

   ✘ 2. 1800

   ✔ 3. 2000

   ✘ 4. 1900

Q.19 The daily average rainfall on 5 days of a week is 30 mm. If the rainfall on 6th and 7th day are 42 mm and 25 mm respectively, then what is the average daily rainfall for the 7 days?

Ans

   ✔ 1. 31

   ✘ 2. 29.5

✗ 3. 33

✗ 4. 28.5

Q.20 The Table given below presents the number of books on different subjects kept on separate shelves. Subjects with odd and even numbers are of Arts and Science respectively.

Subjects	Number of books
S1	26
S2	29
S3	31
S4	34
S5	36
S6	38
S7	44

The number of books of S3 is what percent (correct to one decimal place) of the average number of Science books?

Ans ✔ 1. 92.1

✗ 2. 91.2

✗ 3. 93.1

✗ 4. 90.7

Q.21 The Table given below shows the number of students having obtained different marks.

Marks	Number of Students
9 – 11	6
11 – 13	5
13 – 15	2
15 – 17	2
17 – 19	5

What is the mean marks per student?

Ans ✔ 1. 13.5

✗ 2. 12.25

✗ 3. 15.5

✗ 4. 14.25

Chosen Option : 4

Q.22 If $\frac{a}{b} = \frac{3}{4}, \frac{b}{c} = \frac{4}{5}$ and $\frac{c}{d} = \frac{5}{6}$, then the sum of the numerator and the denominator (which are coprimes) of $\left(\frac{a}{d}\right)^{10}$ is:

Ans ✔ 1. 1025

✗ 2. 4097

✗ 3. 2049

✗ 4. 513

Q.23 A man leaves from P at 6 am and reaches Q at 2 pm on the same day. Another man leaves Q at 8 am and reaches P at 3 pm on the same day. At what time do they meet?

Ans ✗ 1. 11 : 46 am

✗ 2. 11 : 24 am

✔ 3. 10 : 48 am

✗ 4. 11 : 00 am

Q.24 The Table given below presents the number of books on different subjects kept on separate shelves. Subjects with odd and even numbers are of Arts and Science respectively.

Subjects	Number of books
S1	26
S2	29
S3	31
S4	34
S5	36
S6	38
S7	44

What is the ratio of the total number of books on Arts to that of Science?

Ans ✗ 1. 141 : 97

✗ 2. 145 : 93

✔ 3. 137 : 101

✗ 4. 149 : 89

Q.25 Two teachers A and B can complete an academic work in 10 days and 15 days respectively. They started the work together, but A left after 5 days and another teacher C joined, who alone can complete the work in 60 days. In how many days the work got completed?

Ans ✔ 1. 7

✗ 2. 5

✗ 3. 6

✗ 4. 2

Question ID : **239087397**
Status : **Answered**
Chosen Option : **3**

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