

Quantitative Aptitude in the CMAT

CMAT is one of the few management entrance exams that favours students who are weak in math. This is because pure quant in CMAT is only about 25 questions in all. The difficulty level of these questions is much simpler than the ones asked in any other MBA entrance exam. Also, on an average you get to devote more time per question in the CMAT. Because of all the above factors, an attempt of 20 to 23 is very common in the Quantitative Aptitude section of the CMAT is very common. These questions can be classified into three categories: 1. Pure math, 2. Data Interpretation and 3. Data Sufficiency.

Although it is difficult to give the exact break-up of questions in an online exam like the CMAT (an exam having multiple testing windows), pure math questions take the lion's share accounting for approximately 20 to 22 questions. Data Interpretation and Data Sufficiency questions account for the remaining 3 to 5 questions.

Pure Math Questions

These are questions based on different topics of math like Number System, Ratio Proportion, Percentage, Speed, Algebra, Geometry, and Permutation Combination. There was no clear trend across different slots about the importance given to any one topic in particular and all of them accounted for almost the same number of questions.

Here are some representative types of questions that one could encounter in the CMAT:

1. A bag consists of 8 red balls, 5 blue balls and 4 white balls. Two balls are drawn at random. What is the probability that both of them are blue?

Solution: $\frac{{}^5C_2}{{}^{17}C_2}$

2. What will be the circumference of a circle with area equal to 98.56 sq.m?

Solution: In a circle, $radius = \sqrt{\frac{Area}{\pi}}$, while $Circumference = 2 \times \pi \times (radius)$

$$= 2 \times \pi \times \sqrt{\frac{98.56}{\pi}} = 35.2 \text{ m}$$

3. What will be the compound interest accrued on an amount of Rs.2,750/- @ 14.p.c.p.a.at the end of 3 years?

Solution: CI in year 1 = 14% of 2750 = Rs.385, CI in year 2 = 385 + 14% of 385 = Rs.439,
CI in year 3 = 439 + 14% of 439 = Rs.500
Total CI for 3 years = 385 + 439 + 500 = Rs.1325.

4. A 280 meters long train crosses a platform thrice its length in 50 seconds. What is the speed of the train in kms./hr.?

Solution: Total distance travelled = $4 \times 280 = 1120 \text{ m}$. Total time taken = 50 s.



Hence, speed = $\frac{1120}{50} = 22.4 \text{ mps}$ i.e. $22.4 \times \frac{18}{5} = 80.64 \text{ kmph}$.

5. If 'n' is the LCM of first 15 natural numbers, find 'n'.

Solution: All prime numbers need to be multiplied at least once i.e. $2 \times 3 \times 5 \times 7 \times 11 \times 13 = 30030$.

Now, highest power of 2 is in 8 i.e. 2^3 . Of these, we have already considered one 2, we need two more.

The highest power of 3 in any number is in 9 i.e. 3^2 . Of these, we have already considered one 3, we need one more.

All other prime factors appear a maximum of 1 time in all numbers.

Hence, the answer is $30030 \times 2^2 \times 3 = 360360$.

6. 80 oranges and 54 apples cost Rs.483. If the average price of 1 apple is Rs.4.50., find the average cost of 1 orange.

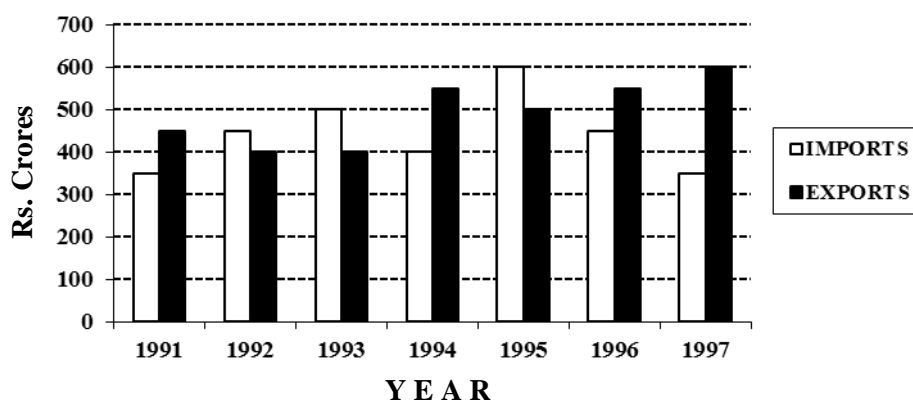
Solution: Let the average cost of each orange be 'x'. Thus, $80x + (54 \times 4.50) = 483$. Hence, $x = \text{Rs.}3.00$.

Data Interpretation

The first edition of the CMAT (March 2012), had the Data Interpretation questions completely missing in majority of the slots. However, the second edition (September 2012) saw 2-3 questions in almost every slot. The difference between the Data Interpretation (DI) questions asked in the CMAT and the other exams is in the number of questions following every set. While in other exams, every DI set is followed by 3 to 5 questions each, in the CMAT it is followed by only 1 question. This makes the DI questions a little time consuming compared to the rest. You need to interpret an entire set of data only for the sake of 1 question. However, from what was seen across all slots was that the DI sets was easy to interpret and a couple of simple calculations led you to the answer.

Here is a representative DI set:

Imports and Exports of a country over the years (in crore Rs.)



1. During which of the given years is the percentage rise/fall in imports over the previous year the lowest?

Solution: For lowest percentage rise/fall, there must be a very small change over a big value. This happens in the year 1993.

Data Sufficiency Questions

Data Sufficiency has a weightage of about 1 to 2 questions in the CMAT and is found to be extremely tricky. One needs to be very careful in solving these questions or else there is a possibility of accuracy taking a beating.

The following questions should give you a good idea about how the Data Sufficiency questions in the CMAT are:

Each Data Sufficiency problem consists of a question and two statements labeled I and II, in which certain data is given. You have to decide whether the data given in the statement/s is/are sufficient for answering the question. Read both the statements and give answer:

- (a) *If the data in statement I alone but not II alone or the data in statement II alone but not I alone is sufficient to answer the question;*
- (b) *If the data in both the statements I and II together are necessary to answer the question;*
- (c) *If the data either in statement I alone or in statement II alone is sufficient to answer the question; and*
- (d) *If the data even in both the statements together are not sufficient to answer the question.*

1. What is the average percentage marks scored by Khushbu in the three exams taken by her?

- I. She has scored 40%, 50% and 60% in the three subjects respectively.
- II. All the tests carry equal maximum marks.

Solution: Merely knowing individual percentage marks in each subject is not enough to calculate the overall average, we also need to know the maximum marks that each subject carried or at least the ratio of the maximum marks. Hence, we need both the statements to answer the question.

2. a , b and c are three consecutive integers (not necessarily in that order). What is the value c ?

- I. The average of b and c is 73.
- II. The average of a and b is 74.

Solution: In case of three consecutive numbers, the average of the first and the last numbers will be the third number. From statement I, we get $a = 73$. From statement II, we get $c = 74$. Hence, statement II alone is sufficient to answer the question.

To sum up, like other exams, the quantitative aptitude section of the CMAT is unlikely to give you jitters. The idea however is to finish this section as soon as possible, so that one can focus on the other more time consuming sections of the paper. Since the questions here are very easy, it is not accuracy, but speed at which you solve the questions in this section, that will determine how you fare in the overall paper.

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