

## GATE - GENERAL APTITUDE SAMPLE THEORY + PAPER

- NUMERICAL COMPUTATION & ESTIMATION
- WORD GROUPS

# VPM CLASSES

For IIT-JAM, JNU, GATE, NET, NIMCET and Other Entrance Exams

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## 1. Numerical Computation And Numerical Estimation

### Numerical computation

Numerical computation questions involve basic principles of arithmetic like addition, subtraction, multiplication and division. They also use mathematical terms and methods such as percentages, ratios, fractions and decimals. To score well on these questions you will simply need to make quick and accurate calculations.

This type of test can be categorized as a speed test and is used to determine your basic numeracy. You will not be allowed to use a calculator.

### Numerical estimation

Numerical estimation questions test your ability to make quick estimates of the answers to fairly straightforward numerical questions. To score well on these questions you will need to make quick approximations of the answer. You must avoid the trap of working out the answer exactly, which will take up too much time and prevent you from answering enough questions to get a good score.

The speed at which you can answer these questions is the critical measure, as most people could achieve a very high score given unlimited time in which to answer.

Even though numerical estimation questions appear straightforward, it can take some time to develop the optimum compromise between speed and accuracy.

Before you attempt to answer each question, look at the range of answers available and ask yourself how accurate your estimate needs to be.

## 2. Word Groups

The structure and meaning

- 1) The structure is shown by a syntactic formula. It shows the structure of word-groups by the order of the arrangement of their components indicating them as parts of speech (V+N = to release a prisoner, to run a factory).
- 2) By using syntactic patterns. They describe the word groups in relation to the head word (to release, to run).

The word-groups have lexical and structural meaning.

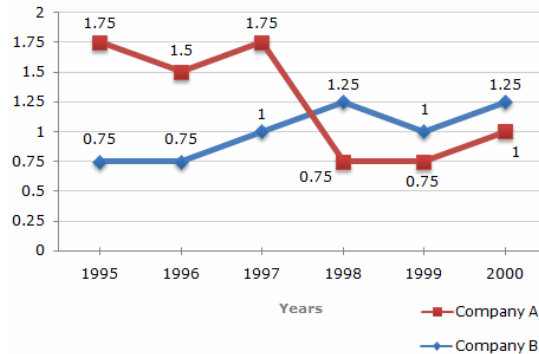
Lexical meaning is defined as the combined lexical meaning of the component words. Idiomatic meaning - the total change of the initial combined meaning (to catch some red-handed)

Structural meaning is conveyed by the pattern of arrangement of its constituents (school grammar - grammar school).

## EXERCISE

1. REASON : SFBTPO :: THINK : ?  
(A) SGHMJ  
(B) UIJOL  
(C) UHNKI  
(D) UJKPM
2. MORTAL opposite word –  
(A) Divine  
(B) Immortal  
(C) Spiritual  
(D) Eternal
3. ALERT similar word –  
(A) Energetic  
(B) Observant  
(C) Intelligent  
(D) Watchful
4. A shopkeeper expects a gain of 22.5% on his cost price. If in a week, his sale was of Rs. 392, what was his profit?  
(A) Rs. 18.20  
(B) Rs. 70  
(C) Rs. 72  
(D) Rs. 88.25

5. IF '+' stands for '-', '-' stands for 'x', 'x' stands for '÷' and '÷' stands for '+' then what is the value of  $56 \times 7 \div 13 - 11 + 15 - 8 \div 2 - 7$ ?
- (A) 30  
(B) 45  
(C) 60  
(D) 90
6. 'Captain' is related to 'Soldier' in the same way as 'Leader' is related to
- (A) Chair  
(B) Followers  
(C) Party  
(D) Minister
7. PORK:PIG
- (A) rooster:chicken  
(B) mutton:sheep  
(C) steer:beef  
(D) lobster:crustacean
8. My uncle decided to take ..... and my sister to the market.
- (A) I  
(B) mine  
(C) me  
(D) myself
9. Answer the question based on the given line graph.  
Ratio of Exports to Imports (in terms of money in Rs. crores) of Two Companies Over the Years.



In how many of the given years were the exports more than the imports for Company A?

- (A) 2
- (B) 3
- (C) 4
- (D) 5

10. Look at this series: 58, 52, 46, 40, 34, ... What number should come next?

- (A) 26
- (B) 28
- (C) 30
- (D) 32

### ANSWER KEY

| Question | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------|---|---|---|---|---|---|---|---|---|----|
| Answer   | B | B | D | C | B | B | B | C | B | B  |

### HINTS AND SOLUTIONS

| As                     | Similarly              |
|------------------------|------------------------|
| R $\xrightarrow{+1}$ S | T $\xrightarrow{+1}$ U |
| E $\xrightarrow{+1}$ F | H $\xrightarrow{+1}$ I |
| A $\xrightarrow{+1}$ B | I $\xrightarrow{+1}$ J |
| S $\xrightarrow{+1}$ T | N $\xrightarrow{+1}$ O |
| O $\xrightarrow{+1}$ P | K $\xrightarrow{+1}$ L |

1.(B) N  $\xrightarrow{+1}$  O

2.(B) Mortal means causing or capable of causing death while Immortal means one who is not subject to death.

3.(D) Alert means engaged in or accustomed to close observation, ie. Watchfulness.

4.(C) C.P. = Rs.  $\left(\frac{100}{122.5} \times 392\right) = \text{Rs}\left(\frac{1000}{1225} \times 392\right) = 320\text{Rs}$

Profit = Rs. (392 - 320) = Rs. 72.

5.(B) Changing the symbols as given in the problem the above expression is

$$56 \div 7 + 13 \times 11 - 15 \times 8 + 2 \times 7$$

Solving the BODMAS rule, we get  $8 + 143 - 120 + 14 = 165 - 120 = 45$

6.(B) 'Captain' is supposed to lead the battalion of 'Soldiers' in the same way as 'Leader' is supposed to lead the 'Followers'

7.(B) Pork is meat from a domestic hog or pig. Similarly, mutton is meat from a mature domestic sheep.

8.(C) My uncle decided to take me and my sister to the market.

9.(B) The exports are more than imports in those years for which the exports to imports ratio are more than 1. For Company A, such years are 1995, 1996 and 1997.

Thus, during these 3 years, the exports are more than the imports for Company A.

10.(B) This is a simple subtraction series. Each number is 6 less than the previous number.