

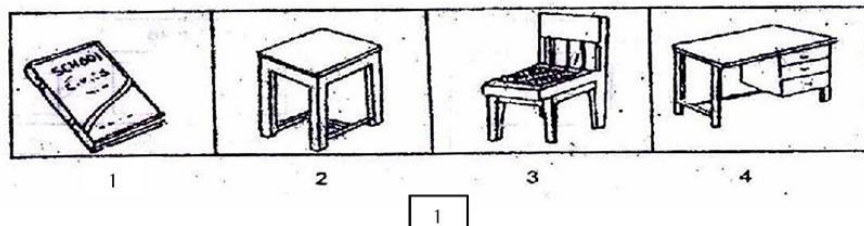
Section-1 Mental Ability Test (MAT)

This is non – verbal test. Questions are based on figures and diagrams only. Questions are meant to assess general mental functioning of the candidates. The section is divided into ten paras having 5 questions each. Given below are some examples:

PART-I (ODD-MAN OUT)

Directions:

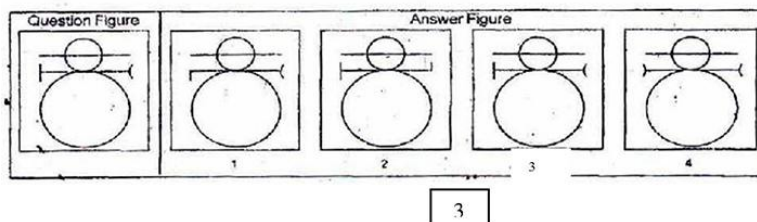
In questions 1 to 5, four figures 1, 2, 3 and 4 have been given in each question. Of these four figures, three figures are similar in some way and one figure is different. Select the figure which is different.



PART- II (FIGURE MATCHING)

Directions:

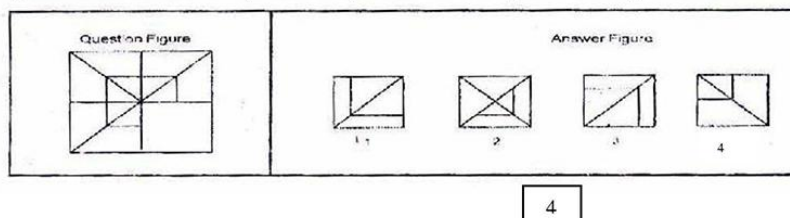
In questions 6 to 10, a problem figure is given on the left side and four answer figures marked 1, 2, 3, 4 are given on the right side. Select the answer figure which is exactly the same as the problem figure.



PART- III (PATTERN COMPLETION)

Directions:

In questions 11 to 15 there is a problem figure on the left hand side, a part of which is missing. Observe the answer figures 1, 2, 3, 4 on the right hand side and find out the answer figure which without changing the direction, fits in the missing part of the problem figure in order to complete the pattern in the problem figure.

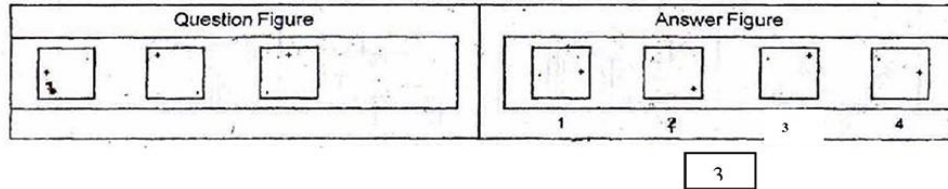


PART- IV (FIGURE SERIES COMPLETION)

Directions:

In questions 16 to 20, there are three problem figures on the left hand side and the space for the fourth figure is left blank. The problem figures are in a series. Find out one figure

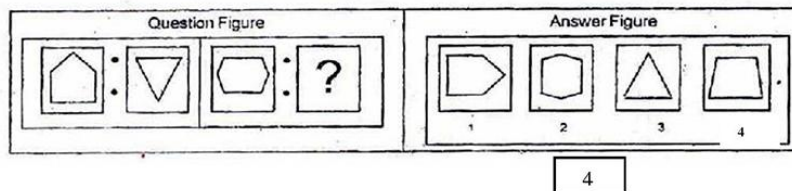
from among the answer figures given on the right hand side, which occupies the blank space for the fourth figure on the left hand side and completes the series.



PART - V (ANALOGY)

Directions:

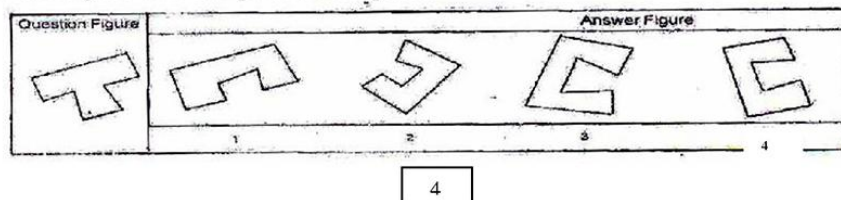
In questions 21 to 25, there are two sets of two problem figures each. The second set has a mark of interrogation (?). There exists a relationship between the first two problem figures. Similar relationship should exist between the third and fourth problem figure. Select one of the answer figure which replaces the mark of interrogation.



PART - VI { Geometrical Figure Completion (Triangle, Square, Circle) }

Directions:

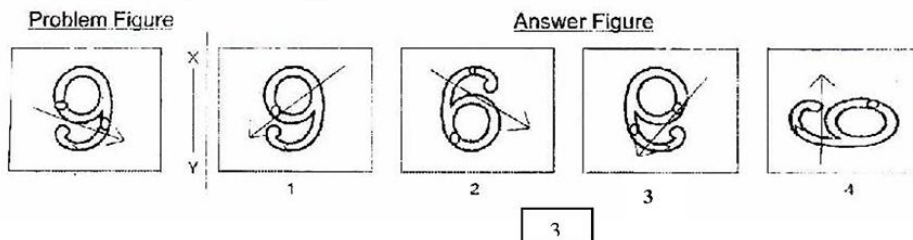
In questions 26 to 30 one part of a square is on the left hand side as question figure and the other one is among the four answer figures 1, 2, 3, 4 given on the right hand side. Find out the figure that completes the square.



PART - VII (MIRROR IMAGING)

Directions:

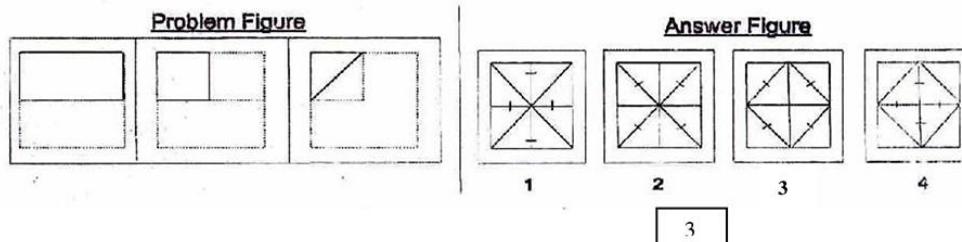
In questions 31 to 35 there is a problem figure on the left side and four answer figures marked 1, 2, 3, 4 are given on the right side. Select the answer figure which is exactly the mirror image of the problem figure when the mirror is held at X Y.



PART - VIII (PUNCHED HOLD PATTERN - Folding/Unfolding)

Directions:

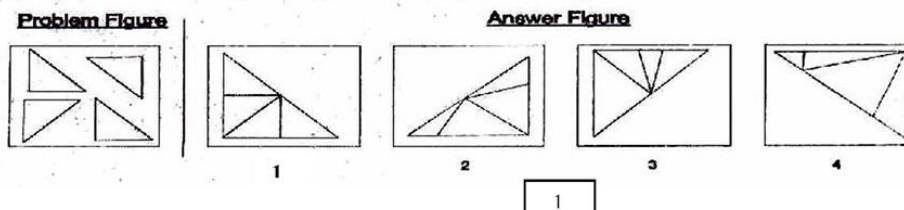
In question 36 to 40 a piece of paper is folded and punched as shown in problem figures on the left side and four answer figures marked 1, 2, 3, 4 are given on right side. Select the answer figure which indicates how the paper will appear when opened (unfolded).



PART - IX (SPACE VISUALISATION)

Directions:

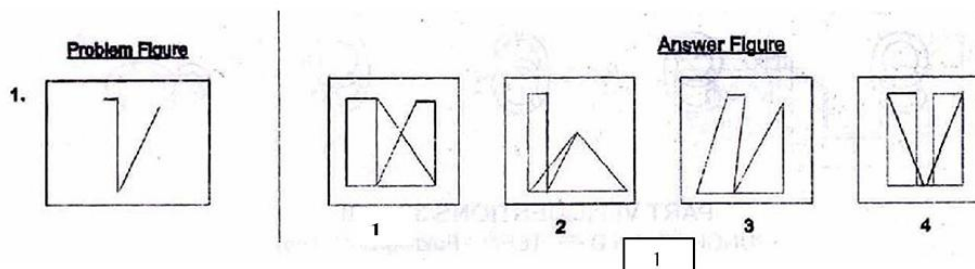
In questions 41 to 45 a problem figure is given on the left side and four answer figures, marked 1, 2, 3, 4 are given on the right side. Select the answer figure which can be formed from the cut-off pieces given in the problem figure.



PART - X (EMBEDDED FIGURE)

Directions:

In questions 46 to 50 a problem figure is given on the left side and four answer figures, marked 1, 2, 3, 4 are given on the right side. Select the answer figure in which the problem figure is hidden/ embedded.



Section 2: Arithmetic Test

The main purpose of this test is to measure candidate's basic competencies in Arithmetic. All the Twenty-five questions of this test will be based on the following 15 topics

1. Number and numeric system.
2. Four fundamental operations on whole number.
3. Fractional number and four fundamental operations on them.
4. Factors and multiple including their properties.
5. LCM and HCF of numbers.
6. Decimals and fundamental operations on them.
7. Conversion of fractions to decimals and vice-versa.
8. Applications of number in measure length, mass, capacity, time, money etc

9. Distance, time and speed.
10. Approximation of expressions.
11. Simplification of Numerical Expressions,
12. Percentage and its applications.
13. Profit and loss.
14. Simple interest.
15. Perimeter, area and volume.

Note:- Emphasis will be more on testing of understanding and Application of the concepts and skills involved. In order to provide some guidance to the candidates on the types of questions that are expected in Arithmetic test, some examples are given below-

Example - 1 (Test of Understanding):

What is the prime factorization of 1000?

1. $10 \times 10 \times 10$
2. $2 \times 5 \times 5 \times 10$
3. $2 \times 2 \times 2 \times 5 \times 5$
4. $2 \times 2 \times 2 \times 5 \times 5 \times 5$

A factorization of a number is said to be a prime factorization if (i) the product of the factors (taking a factor as many times as it occurs) is equal to the given number, and (ii) each factor is a prime number. Here only serial number 4 satisfies both the requirements. As such, serial number 4 is the correct answer.

Example 2 (Test of Understanding):

What is the average of first four odd numbers?

1. 2.5
2. 4
3. 5
4. 16

The first four odd numbers are 1, 3, 5 and 7. Their average $(1+3+5+7)/4$. As such, serial number 2 is the correct answer.

Example 3 (Test of Application):

A 1 km. long goods train is running at speed of 1 km. per 3 minutes, the time taken by this train to pass through 2 kms. Long tunnel is:

1. 1 minute
2. 3 minute
3. 6 minute
4. 9 minute

The tunnel is 2 km. long and the train is 1 km. in length, the train will have to cover a total distance of 3 km. in order to pass through the tunnel running at a speed of 1 km, per 3 minutes, the train will take 9 minutes to pass through this tunnel and that is the correct answer. As such, serial number 4 is the correct answer.

Section 3: Language Test.

The main purpose of this test is to assess reading comprehension of the candidates. The test consists of three passages. Each passage is followed by 5 questions. Candidates shall read each passage carefully and answer the questions that follow. In addition, there will be 10 questions to test grammar and writing skills of candidates.

Given below is a specimen passage and the questions that follow the passage.

PASSAGE

Forests are useful to us in many ways. They provide us with timber to build houses and make furniture. Forests also provide us with wood for fuel and making paper. They provide shelter for birds, wild animals and insects. Forests bring rainfall. Existence of forests is very important for the preservation of the ecosystem. The fact that we have to care for an ecosystem is indisputably established. Wise use of the environment and its resources are essential for man's continued survival.

- 1. To preserve the ecosystem, existence of.....is essential.**
 1. forests
 2. animals
 3. human beings
 4. resources
- 2. Opposite of preservation' is.....**
 1. conservation
 2. construction
 3. shelter
 4. destruction
- 3. Which one of the following is not a synonym of 'wise'?**
 1. Sensible
 2. Intelligent
 3. Humorous
 4. Judicious
- 4. Carpenters depend on forests because they provide.....**
 1. wood for fuel
 2. wood for making paper
 3. timber to make furniture
 4. houses for animals
- 5. Wild animals will become homeless if.....**
 1. paper mills are destroyed
 2. houses are built
 3. forests are destroyed
 4. ecosystem is taken care of