



Instructions :-

Ideal Time to Solve :- 15 minutes

- 1) You should attempt this paper in one go and only when you are mentally & physically prepared to do so.
- 2) Your preparedness level is dependent on the completion of the tasks given, thereafter practising them on your own.
- 3) You may choose to see the paper first and then take a call to revisit the tasks given and then begin at a later stage.
- 4) The results of this test may be used for a psychometric analysis. Be True with the situation.
- 5) Each question without sub-parts is of 10 marks and sub-questions are 5 marks each. Maximum Marks are 100.

- Q.1) A room has 2 windows, 3 doors and 4 big holes. Each of these can be accessed by humans. If a thief is standing outside the room then :-  
a) He can enter or exit the room in how many ways?  
b) He can enter and exit the room in how many ways?
- Q.2) How many double-digit cubes can be calculated?  
a) 810                      b) 900                      c) 729                      d) None of these
- Q.3) An octal number seven is added '7 times to give the sum as \_\_\_\_\_
- Q.4) In a three-digit number the Ten's digit instructs the Unit's digit that we both shall form a number in which you will never be greater than me. How many such two-digit numbers can be formed?
- Q.5) Product  $P = A \times B \times C$  where A, B & C are three natural numbers 'a', 'b' & 'c' digits respectively. The number of digits in "P" are:-  
a)  $a + b + c$               b)  $(a + b + c) - 1$               c)  $(a + b + c) - 2$               d) any one of the options give
- Q.6) What is the coefficient of "a<sup>2</sup>" in y, where  $y = (9 + 9a^2 + 9a) + (9a^3 + 9 + 9a^2 + 9a)^2$  ?
- Q.7) After offering four successive discounts of 10%, 20%, 30% & 40% the price-tag "P" of a product reduces to a P x \_\_\_\_\_  
a)  $69 \cdot 76\%$               b)  $30 \cdot 24\%$               c)  $69 \cdot 76\%$               d) None of the options given
- Q.8) a) The smallest possible four-digit number "N" the square of which gives maximum possible digits "d". What is the value of N & d ?
- Q.9) a) The expansion of  $(A + B + C + D)^3$  gives how many terms?  
b) A single digit number is added to a double-digit and then finally to a three-digit number. The sum thus obtained has how many unique possibilities of the number of digits in it?  
a) 3                      b) 4                      c) 2                      d) None among the options
- Q.10) a) The cube of a single digit natural number is calculated. While calculating digital roots of the Answers how many unique possibilities will be observed?  
b) The perfect cube root of a number 'N' results in a number which has one digit. The number of digits which the original number has is :-  
I. 1                      II. 2                      III. 3  
a) Either I or II              b) either II or III              c) any one of the three              d) None of the options given