

## LOGICAL REASONING

1. In the given number series, how many 4's are there which are immediately preceded by a prime number but not immediately followed by a prime number?

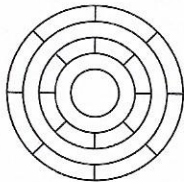
6414154264183492483482845487464542

A. 6      B. 4      C. 3      D. 5

2. If in a certain code language 'GERMANY' is written as 'JJURDSB', then how will 'BRITAIN' be written in that code language?

A. EWXYZMN      B. WNXYLML  
C. EELYDDNQ      D. EWLYDNQ

3. What is the minimum number of different colours required to paint the figure given below such that no two adjacent regions have the same colour?



A. 3      B. 4      C. 5      D. 6

4. How many letters of the word 'RAIMENT' will remain at same position when the letters are arranged in the alphabetical order?

A. Zero      B. Three      C. One      D. Two

5. Select the correct mirror image of the given combination of letters, symbols and numbers, if the mirror is placed vertically to the right.

BEN1037&#\$ION

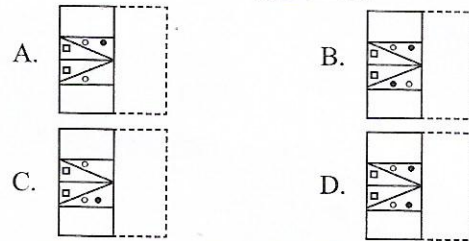
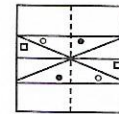
A. NOI2#&L€0IENB  
B. NOI2#&7€0IENB  
C. NO#I2&7€0IENB  
D. NO#I2&7€0IENB

6. There is a definite relationship between the numbers on either side of ::. Establish the same relation on the right side and find the missing number.

14 : 182 :: 23 : ?

A. 514      B. 501      C. 510      D. 506

7. A square transparent sheet with a pattern and a dotted line on it is given. Select a figure from the options as to how the pattern would appear when the transparent sheet is folded along the dotted line.

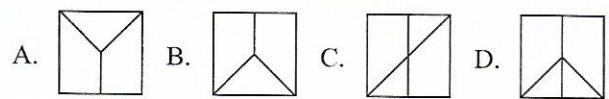
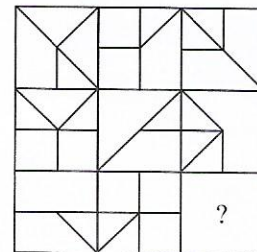


8. Select the correct combination of mathematical signs to be put in order to replace \* in the given equation to balance it.

$2 * 4 * 3 * 4 * 9$

A. +, -, =, ÷      B. +, ×, =, -  
C. ×, ÷, -, =      D. ×, -, +, =

9. Select the figure from the options that would complete the given figure matrix.



10. Study the information given below to answer the following question :

- (i) Six plays A, B, C, D, E and F are to be organised from Monday to Saturday, one play on each day.
  - (ii) There are two plays between C and D and one play between A and C.
  - (iii) There is only one play between F and E and E is to be organised before F.
  - (iv) B is to be organised before A, not necessarily immediately.
  - (v) The organisation does not start with B.
- The organisation would start from which play?

A. A      B. F  
C. D      D. Cannot be determined

## SCIENCE

11. A vessel contains oil (density  $0.8 \text{ g cm}^{-3}$ ) over mercury (density  $13.6 \text{ g cm}^{-3}$ ). A homogeneous sphere floats with half volume immersed in mercury and the other half in oil. The density of the material of the sphere is

A.  $12.8 \text{ g cm}^{-3}$   
B.  $7.2 \text{ g cm}^{-3}$   
C.  $6.4 \text{ g cm}^{-3}$   
D.  $3.3 \text{ g cm}^{-3}$