

**SAMPLE QUESTIONS****MATHEMATICS**

Q. 1. The upper part of a tree broken by the wind makes an angle of  $60^\circ$  with the ground and the horizontal distance from the root of the tree to the point where the top of the tree meets the ground is 10 meters. What was the height of the tree before it was broken?

- (1) 43.20 m                      (2) 20 m  
 (3) 37.30 m                      (4) 39.70 m

Q. 2. Find the length of the major axis of the ellipse  $16x^2 + 5y^2 = 400$ .

- (1) 5                                (2)  $8\sqrt{5}$   
 (3) 10                              (4)  $10\sqrt{5}$

Q. 3. A, B & C are three mutually exclusive & exhaustive events associated with a random experiment. If  $P(C) = \frac{3}{4} P(A)$ ,  $P(A) = \frac{2}{3} P(B)$ , then  $P(B)$  is

- (1)  $\frac{3}{2}$                             (2)  $\frac{4}{13}$   
 (3)  $\frac{6}{13}$                            (4)  $\frac{3}{13}$

Q. 4. The average salary of male employees in the firm is Rs. 5,000/- and that of female employees is Rs. 4,000/-. The mean salary of all the employees is Rs. 4,500/- and If there are 10 male employees, then how many female employees are there in that firm?

- (1) 12                              (2) 10  
 (3) 08                              (4) 11

**LOGICAL/ABSTRACT REASONING**

Q.1. In a row of girls, if Seeta who is 10th from the left and Lina who is 9th from the right interchange their seats, Seeta becomes 15th from the left. How many girls are there in the row ?

- (1) 16                      (2) 18                      (3) 19                      (4) Other than those given as options

Q.2-4. Read the information given below and answer the questions.

Six plays A, B, C, D, E and F of a famous play wright are to be staged one on each day from Monday to Saturday. The schedule of the plays is to be in accordance with the following.

- (1) A must be on the immediately previous day of the on which E is staged.  
 (2) C must not be staged on Tuesday.  
 (3) B must be on a day which immediately follows the day on which F is staged.  
 (4) D must be staged on Friday only and should not be immediately preceded by B.

(5) E must not be staged on the last day of the schedule.

Which of the following is the schedule of plays, with the order of their staging from Monday ?

- (1) E A B F D C                      (2) A F B E D C  
 (3) A F B C D E                      (4) Other than those given as options

Play C cannot definitely be staged on which of the following days in addition to Tuesday?

- (1) Monday (2) Wednesday (3) Thursday (4) Other than those given as options

Which of the following plays immediately follows B ?

- (1) F      (2) E (3) D (4) Other than those given as options

**ENGLISH LANGUAGE**

Q. 1-3 In the given passage there are blanks, each of which has been numbered. Against each blank, five words are suggested, one of which fits the blank appropriately. Choose the appropriate word in each case.

The true (1) of rights is duty. If we all (2) our duties, rights will not be (3) to seek. If leaving duties unperformed we run after rights, they will escape us like an elusive person.

(1) end	(2) Source	(3) Joy	(4) purpose
(1) fulfill	(2) devote	(3) discharge	(4) imagine
(1) far	(2) close	(3) easy	(4) against

Q.4-5 Directions : In the given sentences, two words are bold & underlined. For each bold & underlined part, four words are listed below. Choose the words nearest in meaning to the italicized & underlined part.

The prisoner made an **abortive** attempt to **escape** from the jail.

- (1) Courageous, Gateway                      (2) Futile, Run Away  
 (3) Illegal, Flee                                      (4) Furtive, Break Out

The new volume provides **substantial** critical **excerpts** and biographical information on eight to ten major poets from all eras.

- (1) Sizeable, Sources                              (2) Ample, Explanation  
 (3) Extensive, Extracts                              (4) Large, Substances