

## Appendix C: Syllabus Content

<b>GA</b>	<b>General Aptitude</b>
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### Verbal Aptitude

Basic English grammar: tenses, articles, adjectives, prepositions, conjunctions, verb-noun agreement, and other parts of speech  
Basic vocabulary: words, idioms, and phrases in context  
Reading and comprehension  
Narrative sequencing

### Quantitative Aptitude

Data interpretation: data graphs (bar graphs, pie charts, and other graphs representing data), 2- and 3-dimensional plots, maps, and tables  
Numerical computation and estimation: ratios, percentages, powers, exponents and logarithms, permutations and combinations, and series  
Mensuration and geometry  
Elementary statistics and probability

### Analytical Aptitude

Logic: deduction and induction, Analogy, Numerical relations and reasoning

### Spatial Aptitude

Transformation of shapes: translation, rotation, scaling, mirroring, assembling, and grouping  
Paper folding, cutting, and patterns in 2 and 3 dimensions

### Sample questions

#### Verbal Aptitude

- Q.1 Out of the following four sentences, select the most suitable sentence with respect to grammar and usage.
- (A) I will not leave the place until the minister does not meet me.
  - (B) I will not leave the place until the minister doesn't meet me.
  - (C) I will not leave the place until the minister meet me.
  - (D) I will not leave the place until the minister meets me.

**ANSWER: D**

- Q.2 Indian currency notes show the denomination indicated in at least seventeen languages. If this is not an indication of the nation's diversity, nothing else is.
- Which of the following can be logically inferred from the above sentences?
- (A) India is a country of exactly seventeen languages.
  - (B) Linguistic pluralism is the only indicator of a nation's diversity.
  - (C) Indian currency notes have sufficient space for all the Indian languages.
  - (D) Linguistic pluralism is strong evidence of India's diversity.

**ANSWER: D**

- Q.3 The unruly crowd demanded that the accused be \_\_\_\_\_ without trial.  
 (A) hanged (B) hanging (C) hankering (D) hung

**ANSWER: A**

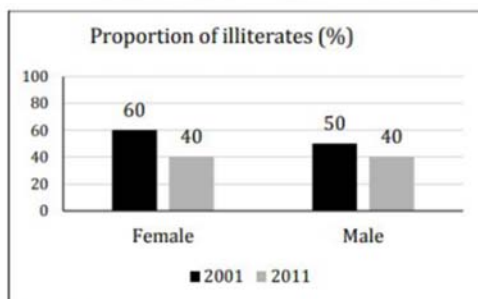
- Q.4 Archimedes said, "Give me a lever long enough and a fulcrum on which to place it, and I will move the world."  
 The sentence above is an example of a \_\_\_\_\_ statement.  
 (A) figurative (B) collateral (C) literal (D) figurine

**ANSWER: A**

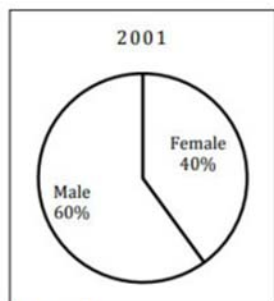
**Quantitative Aptitude**

**ANSWER: A**

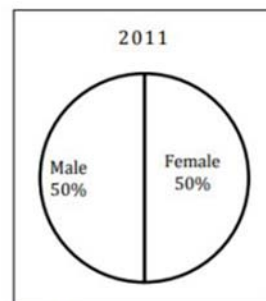
- Q.5 The bar graph in Panel (a) shows the proportion of male and female illiterates in 2001 and 2011. The proportions of males and females in 2001 and 2011 are given in panel (b) and (c) respectively. The total population did not change during this period. The percentage increase in the total number of literates from 2001 to 2011 is -----



Panel (a)



Panel (b)



Panel (c)

- (A) 30.43 (B) 33.43 (C) 34.43 (D) 35.43
- Q.6 If  $pqr \neq 0$  and  $p^{-x} = \frac{1}{q}$ ,  $q^{-y} = \frac{1}{r}$ ,  $r^{-z} = \frac{1}{p}$ , what is the value of the product  $xyz$ ?
- (A) -1 (B)  $\frac{1}{pqr}$  (C) 1 (D)  $pqr$

**ANSWER: C**

- Q.7 An e-mail password must contain three characters. The password has to contain one numeral from 0 to 9, one upper case and one lower case character from the English Alphabet. How many distinct passwords are possible?
- (A) 6,760      (B) 13,520      (C) 40,560      (D) 1,05,456

**ANSWER: C**

- Q.8 The area of a square is  $d$ . What is the area of the circle which has the diagonal of the square as its diameter?
- (A)  $\pi d$       (B)  $\pi d^2$       (C)  $\frac{\pi d^2}{4}$       (D)  $\frac{1}{2}\pi d$

**ANSWER: D**

### Analytical Aptitude

- Q.9 Computers were invented for performing only high-end useful computations. However, it is no understatement that they have taken over our world today. The internet, for example, is ubiquitous. Many believe that the internet itself is an unintended consequence of the original invention. With the advent of mobile computing on our phones, a whole new dimension is now enabled. One is left wondering if all these developments are good or, more importantly, required. Which of the statement(s) below is/are logically valid and can be inferred from the above paragraph?
- (i) The author believes that computers are not good for us.  
(ii) Mobile computers and the internet are both intended inventions.
- (A) (i) only  
(B) (ii) only  
(C) both (i) and (ii)  
(D) neither (i) nor (ii)

**Answer D**

- Q.10 Some students were not involved in the strike  
If the above statement is true, which of the following conclusions is/are logically necessary?
- (i). Some who were involved in the strike were students.
  - (ii). No student was involved in the strike
  - (iii). At least one student was involved in the strike
  - (iv). Some who were not involved in the strike were students.
- (A) (i) and (ii)  
(B) (iii)  
(C) (iv)  
(D) (ii) and (iii)

**Answer C.**

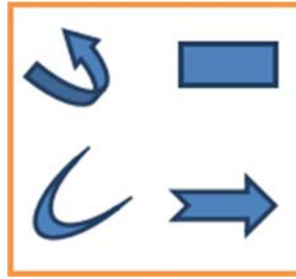
### **Spatial Aptitude**

- Q.11 A rectangular sheet of length 6cm and breadth 4cm is coiled to form an open cylinder (say, P) such that the breadth sides meet. The same sheet can also be coiled to form a cylinder (say, Q) such that the length sides meet. Which one of the following statements is **FALSE**?

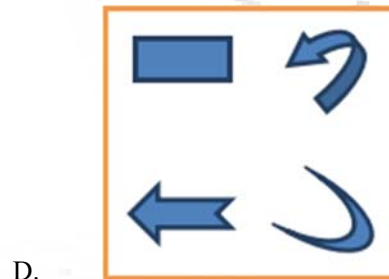
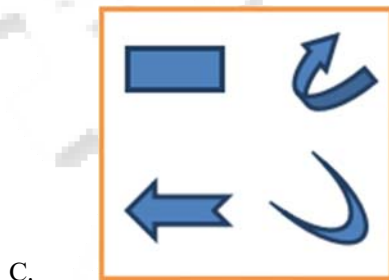
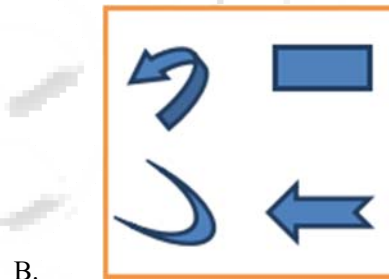
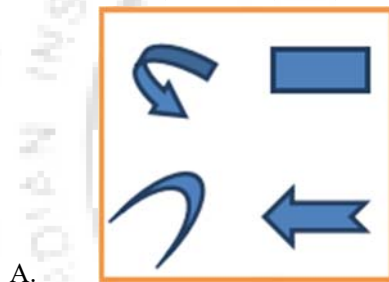
- Surface area of the open cylinders P and Q are equal.
- Volume of P and Volume of Q are equal.
- Volume of P is greater than that of Q.
- The height of cylinder Q is greater than that of P.

**Answer: B**

Q12



Which one of the following closely resembles the mirror image of the above figure?



**Answer: C**