

# NPAT Mock Question Paper

## Sec 1: Quantitative & Numerical Ability

**Q.1:** For two sets A and B,  $A \cap B$  denotes the set of elements which belong to A and not in B. If  $A = \{1, 2, 3, 4, 5, 6, 7, 8\}$  and  $B = \{2, 3, 4, 5, 6, 7, 8, 9, 10\}$ , then find  $((P - Q) \cup (R - S)) \cap ((P \cap S) \cup (Q \cap R))$ .  
 $P = \{2, 5, 7, 8\}$ ,  $Q = \{5, 6, 9, 10\}$ ,  $R = \{1, 4, 9, 11\}$   $S = \{2, 6, 10, 11\}$

- A. 1
- B. 2
- C. 3
- D. 4

**Q.2:** In a class, students use three mobile applications: Whatsapp, Line and WeChat. The number of students who use Whatsapp, Line and WeChat is 80, 54 and 66 respectively. Twelve students use Whatsapp and WeChat, but not Line. Six students use Whatsapp and Line, but not WeChat. Twenty two students use Line and WeChat. The total number of students in the class is ten times the number of students who use all the three applications. If 16 students use none of the three applications, then find the number of students in the class.

- A. 144
- B. 192
- C. 176
- D. 160

**Q.3:** Let  $A = \{x: |x| < 2\}$  and  $B = \{x: |x - 2| \geq 3\}$ , then

- A.  $A = \{x: |x| < 2\}$   $B = \{x: |x - 2| \geq 3\}$
- B.  $A \cap B = [-2, -1]$
- C.  $A \cup B = R - [2, 5]$
- D.  $A - B = [-1, 2)$   
 $B - A = R - (-2, 5)$

**Q. 4:** Let  $U$  be the universal set and  $A, B, C$  be three subsets of  $U$ . Then  $A \cup B \cup C$  is equal to

$$A \cup B \cup C = U \setminus \{(A - B) \cup (B - C) \cup (C - A)\}$$

A.  $A \cup B \cup C$

B.  $A \cap B \cap C$

C.  $A \cap (B \cap C)$

D.  $A \cap (B \cup C)$

**Q. 5:** \_\_\_\_\_ is equal to:

$$\frac{((12 \times 6 \div 4) \div 9) \times 6 + 34 - 17}{13 \times 6 \div (2 \times 18 + 3) + ((12 \times 8) \div 16) \times 19}$$

A.  $\frac{1}{5}$

B.  $\frac{2}{7}$

C.  $\frac{1}{4}$

D.  $\frac{13}{4}$

**Q. 6:** Simplify:

$$\frac{9^{\frac{1}{3}} \times 8^{\frac{4}{7}} + 9^{\frac{5}{8}} \times 12^{\frac{4}{11}}}{13^{\frac{1}{11}} \times 7^{\frac{1}{3}} + 12^{\frac{4}{11}} \times 12^{\frac{3}{8}}}$$

A.  $\frac{247}{153}$

B.  $\frac{249}{170}$

C.  $\frac{247}{131}$

D.  $\frac{249}{199}$

**Q. 7:** A student was asked to simplify the expression:  $0.3978 \times 0.00385 \times 2.4 \times 0.05$  and her answer was  $\frac{2}{3}$ . What is the difference between the correct answer and the answer given by her?

A.  $\frac{2}{3}$

B.  $\frac{1}{3}$

C.  $\frac{1}{3}$

D.

3

**Q. 8:** The value of  $\sqrt{\frac{0.289 \times 0.064 \times 2.116 \times 1.7424}{0.0256 \times 0.0529 \times 0.036}}$  is:

A.

B. ~~07284~~

C. 2.84

D. 0.374

**Q. 9:** The simplified value of

$$\left\{ 1 - \frac{3^2}{3^{14}} \quad 1 - \frac{3^2}{3^{14}} - 1 + \frac{3^2}{3^{14}} \quad 1 + \frac{3^2}{3^{14}} \right\} \div \left[ 1 + \frac{3^2}{3^{14}} \quad 1 - \frac{3^2}{3^{14}} \right] \text{ is}$$

A.

B.  $\frac{190}{105}$  ) ( ) ( ) ( ) ( )

C. -

D.  $\frac{3}{13}$   
 $\frac{416}{105}$

**Q. 10:** If  $\frac{a^3 + b^3}{x^3 + y^3} = 4$  and  $\frac{a^3 - b^3}{x^3 - y^3} = \frac{4a^3 - b^3}{a^2 - b^2}$ , then  $\frac{a^3 + b^3}{x^3 + y^3}$  is equal to

A.

B. ~~0~~

C. 1

D. 2

**Q. 11:** The simplified value of  $\sqrt{\frac{3-2}{12-18}} - \frac{1}{3} \times \sqrt{27} - \frac{1}{2} \times \sqrt{327}$

A.  $\sqrt{3}$

B.  $(3 - 1)\sqrt{3}$

(1-

C.  $\sqrt{\quad}$

D.  $=(3+1) 3-1)$

**Q. 12:** The total population of a state is 2,50,000. Out of which 1,60,000 are males. If  $\frac{1}{3}$  of the males are married with the females of that state, then what is the percentage of un-married females in the state?  
50%

A. 16%

B. 11.11%

C. 4%

D. 8%

**Q. 13:** The ratio of the cost prices of articles A and B is 4:5 respectively, and that of their selling prices is 7:6 respectively. If the profit on selling article A is 40%, what is the profit/loss percentage on selling article B?

A. loss

B. 4% profit

C. 4% profit

D. 8% loss

8%

**Q. 14:** Three numbers are in Arithmetic Progression (AP) whose sum is 30 and the product is 910. Then the greatest number in the AP is

A. 17

B. 15

C. 13

D. 10

**Q. 15:** If the sum of first  $n$  terms of three different Arithmetic Progressions are in ratio  $n+1:2n+3:5n+7$ , then the 10th term of these three series are in ratio

$n+1:2n+3:5n+7$

- A.
- B. ~~2021~~19102
- C. 1:1:1
- D. 10:21:52

**Q. 16:** If in a GP, the 5<sup>th</sup> term is 8 times the second term, and sum of its <sup>st</sup>1 , <sup>rd</sup>3 and <sup>th</sup>6 terms is 111 , then what is the <sup>th</sup>7 term.

- A.
- B. ~~202~~
- C. 224
- D.

216

**Q. 17:** If  $\alpha$  and  $\beta$  are the roots of a quadratic equation  $x^2 + 50x + 400 = 0$  , then find the equation with roots  $\alpha^3$  and  $\beta^3$  .

- A.  $x^2 - 120x + 2000 = 0$
- B.  $x^2 - 60x + 1000 = 0$
- C.  $x^2 + 150x + 3600 = 0$
- D.  $x^2 + 150x + 1200 = 0$

**Q. 18:** If both the roots of the equation  $x^2 - 6ax + 2 - 2a + 9a^2 = 0$  exceed 3 , then

- A.
- B.  $a < 1$
- C.  $a > \frac{11}{9}$
- D.  $a > \frac{2}{5}$   
 $a < \frac{2}{5}$

**Q. 19:** The respective ratio between the present ages of Ram and Rakesh is 6:11. Four years ago the ratio of their ages was \_\_\_\_\_ respectively. What will be Rakesh's age after five years?

1:2

- A. \_\_\_\_\_ years
- B. 45 years
- C. 49 years
- D. ~~29~~not be determined

**Q. 20:** The curved surface area of a right circular cone and a right circular cylinder are in the ratio \_\_\_\_\_. Find the ratio of their diameters when the height of the cone is equal to the radius of the cylinder and height of the cylinder is equal to the radius of the cone.

5:6

- A. \_\_\_\_\_
- B. 4:5
- C. 3:2
- D. 5:2

**Q. 21:** If the variance of the data \_\_\_\_\_ is \_\_\_\_\_, then what is the variance of the data \_\_\_\_\_?

2, 4, 6, 17  $\sqrt{v}$

4, 8, 10, 12, 34

- A. \_\_\_\_\_
- B.  $\sqrt{v}$
- C.  $\sqrt{v^2}$
- D.  $4\sqrt{v}$

**Q. 22:** The standard deviation of first 20 natural numbers is \_\_\_\_\_

- A.  $\frac{\sqrt{133}}{2}$
- B.  $\frac{133}{2}$

C.  $\sqrt{\quad}$

D.  $\frac{133}{1015}$   
2

**Q. 23:** If  $P(A \cup B) = 5/7$  and  $P(A^c) = 1/3$ , then  $P(A^c \cap B)$  is equal to

- A.  $2/7$  B.  $3/7$   
C.  $1/21$   
D. None of the above

**Q. 24:** The median distribution 83, 54, 78, 64, 90, 59, 67, 72, 70, 73 is

- A. 71  
B.   
C. ~~76~~  
D. None of these

**Q. 25:** Find the mean of the following data.

	19	25	31	37	43	49
$x:$						
	8	10	13	7	6	5
$f:$						

- A. 38  
B.   
C. 34.5  
D. 32  
36

**Q. 26:** A student was asked to find out the median of following observation: 87, 89, 41, 57, 64, 72, 18, 49 and 92. If he by fault mis-read 18 as 81 and 49 as 94 , find the difference in the median.

- A. 17
- B.
- C.  $\frac{71}{13}$
- D. 31

**Q. 27:** If mean and mode of a distribution are 4 and 28 respectively, then find the median for the distribution.

- A. 12
- B. 14
- C. 16
- D. 18

**Q. 28:** The difference between the simple interest and compound interest on a certain sum for three years of 8% per annum is Rs. 177.408. What was the amount kept at interest?

- A. Rs. 9,000
- B. Rs. 8,000
- C. Rs. 12,000
- D. Rs. 10,000

**Q. 29:** A retailer purchases a watch with an offer of \_\_\_\_\_ discount on the marked price. He sold it to the customer at a profit of \_\_\_\_\_. The price at which the retailer sold the watch was what percent more/less than the marked price?

$20\% + 20\%$   
50%

- A. 32% more
- B. 4% less



C. 36% less

D. more

4%

**Q. 30:** The daily wages of A and B are Rs. 3.50 and Rs. 2.50 respectively. When A finishes a certain work, he gets a total wage of Rs. 63. When B does the same work, he gets a total wage Rs.75. If both of them do it together what is the cost of the work ?

A.Rs. 67.50

B. Rs. 27.50

C. Rs. 60.50

D.Rs. 70.50

**Q. 31:** Find the term of the progression , where

$$S = 1 + 3 + 7 + 13 + 21 + 31 + 43 \dots$$

$S^n$

$n$

A. 150

B. 144

C. 169

D.133

Q. 32: If  $f(x) = 8x^4$  and  $g(x) = 3\sqrt{x}$ , then find the value of  $\log_2(f(g(64)))$ .

A. 39

B. 28

C. 32

D.15

**Q. 33:** Let  $f: R \rightarrow R$  and  $g: R \rightarrow R$  be two functions defined by  $f(x) = \frac{(x-7)^3}{2} + 5$  and

$$g(x) = 23x - 5 + 7\sqrt{x}$$

$-1$

(5) =?

- A.
- B. 145
- C. 10
- D.

7.5

**Q. 34:** If  $f(x) = \frac{1-x}{1+x}$ , then  $f^{-1}(x)$  is equal to

- A.  $\frac{1}{f(x)}$
- B.  $\frac{1}{f(x)}$
- C.  $\frac{f(x)}{f(x)}$
- D.  $\frac{-1}{f(x)}$

**Q. 35:** Milind bought 3 apples, 4 bananas and 7 guavas together for Rs.86. Had he bought 13 guavas, 6 apples and 7 bananas together, it would have costed him Rs.164. Find the cost of 5 bananas, 4 apples and 9 guavas together.

- A.Rs. 104
- B. Rs. 112
- C. Rs. 125
- D.Cannot be determined

**Q. 36:** The angle of elevation of an aeroplane as observed from a point 30 m above the transparent watersurface of a lake is  $30^\circ$  and the angle of depression of the image of the aeroplane in the water of the lake is  $30^\circ$ . The height of the aeroplane from the water-surface of the lake is

60

- A.
- B. 60 m 45 m
- C. 50 m
- D.

75 m

**Q. 37:** If  $1 + \sin 2\theta = 3 \sin \theta \cos \theta$ , then the value of  $(\sin \theta + \cos \theta)^2$  is  $\frac{\pi}{2}$   $0 < \theta < \frac{\pi}{2}$

- A.  $\left( \frac{\pi}{2} \right)$
- B.  $\frac{1}{2}$
- C. 0
- D. 2

**Q. 38:** The value of the expression  $\sec^2 22^\circ + \cot^2 68^\circ + \csc^2 22^\circ + \tan^2 68^\circ$  is

- A.  $(1 + \sec^2 22^\circ + \cot^2 68^\circ + \csc^2 22^\circ + \tan^2 68^\circ)$
- B. 01
- C. -1
- D. 2

**Q. 39:** If  $\sqrt{x^2 + y^2} \sin \theta - y \cos \theta = \frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$  and  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ , then the correct relation is

- A.  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = x^2 + y^2$
- B.  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$
- C.  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$
- D.  $\frac{x^2}{a^2} - \frac{y^2}{b^2} = \frac{1}{a^2} - \frac{1}{b^2}$

**Q. 40:** The equation  $\csc 2\theta = \frac{8xy}{(2x+y)^2}$  is only possible when

- A.  $x < y$
- B.  $x < y$
- C.  $x < 2y$

D.

$$2x=y$$

## Sec 2: Reasoning & General Intelligence

**Directions for questions 41 to 45:** The questions are based on the following conditions. Read them carefully and answer the questions that follow.

Little Blossoms Primary School, Mumbai has invited applications for admissions of students for Nursery. The school will conduct its own test (LBPST) and carry out an admission counseling for all shortlisted students. The following criteria are applicable for the selection of the student.

- A. The student should be at least 3 years old as on        December 2007.
- B. Carrying birth certificates of the student for the admission counseling process is compulsory.
- C. The student should have a score of at least 55 on a scale of 100 in the Little Blossoms Primary School Test (LBPST).
- D. Both the parents should accompany the child during admission counseling.
- E. In case of (d), if only one parent is present during admission counseling, the student will be referred to the students' counselor.
- F. In case of (a), if the student is at least two years old and has scored at least 70 in LBPST, then he or she will be referred to the school principal for admission.

**Mark the answer as:**

- 1. If the student is selected.
- 2. If the student is not selected.
- 3. If the case is to be referred to the School Principal.
- 4. If the case is to be referred to the Students' counselor.
- 5. If data is inadequate to take any decision.

**Q. 41:** Preeti was born on 17th Nov 2004. She scored 69 marks in LBPST. Both her parents were present with her during the admission process.

- A. She is to be selected.
- B. She is not to be selected.
- C. His case is to be referred to the School Principal
- D. Data is inadequate to take any decision.

**Q. 42:** Mr. and Mrs. Daruwala have a son aged four. He scored 80 marks on LBPST. His parents were present at the admission counselling process with his birth certificate and bio data.

- A.He is to be selected.
- B.He is not to be selected.
- C.His case is to be referred to the School Principal.
- D.His case is to be referred to the Student's counsellor.

**Q. 43:** Mrs. Nair's little prankster Sheela was born in the summer of 2004. She broke the teacher's glass during the admission counseling process. Her Father yelled at her. Her mom dutifully showed Sheela's birth certificate to the admission counsellor. Sheela broke two pencils during her test but still scored a ninety on LBPST.

- A. She is to be selected.
- B. She is not to be selected.
- C.Her case is to be referred to the School Principal.
- D.Her case is to be referred to the Student's counsellor.

**Q. 44:** Geetika and Deepak brought their shy daughter Shreya to Little Blossoms with her birth certificate. According to her certificate, Shreya was born on 13th Oct 2005. She scored seventy one on LBPST.

- A. She is to be selected.
- B. She is not to be selected.
- C.Her case is to be referred to the School Principal.
- D.Her case is to be referred to the Student's counsellor.

**Q. 45:** Radhika Sharma is a single parent. She took her son Rahul to Little Blossoms. The admissions counselor saw that Rahul's birth certificate showed that he will be three and half years old by the 2007 December. Rahul scored 87 in LBPST.

- A. She is to be selected.
- B. She is not to be selected.
- C.Her case is to be referred to the School Principal.
- D.Her case is to be referred to the Student's counsellor.

**Direction for question 46:** Answer the questions on the basis of the information given below.

Seven friends - A, B, C, D, E, F and G - are sitting in a row facing North. Each of them was born in the same year, but in a different month from January to July. Each of them is a student of a different subject. It is also known that:

- I. The person who studies Commerce or Chemistry is not the neighbour of E.
- II. D, who studies Math, is the third person from the left of the row and neighbour of the person born in April.
- III. The person born in February studies History and is the only neighbour of A, who studies Arts.
- IV. Among the seven persons, the youngest is sitting at the middle most position and the eldest is sitting at the right end of the row.
- V. The persons who were born in April, June and July, study Chemistry, Medicine and Physics respectively.
- VI. Exactly two persons are sitting between B and E.
- VII. Both B and E do not study Chemistry. C does not study Chemistry or Medicine.

**Q. 46:** Which of the following is a correct combination of the person and his month of birth?

- A. E - June
- B. B - April
- C.D - March
- D.C - February

**Q. 47:** While speaking to a lady, Aryan said 'You are the mother of the daughter of the only son of the wife of the father of my sister's father'. How is the lady related to Aryan?

- A.Mother
- B. Aunt
- C. Sister
- D.Cannot be determined

**Q. 48:** A writer works under the compulsive need to create a product of beauty. A work is itself a Statement: reward. Conclusion: I. A worker does not expect any reward for his works. II. Appreciating a work of art is equivalent to appreciating beauty in itself.

- A. Only Conclusion I follows
- B. Only Conclusion II follows.
- C. Both Conclusions I and II follow.
- D. Neither Conclusion I nor II follows.

**Q. 49:** Statements: We do not educate children for the purpose of educating them. We want to prepare them for life.

Conclusion: I. Our system of education is the most effective one.

II. Vocational education is the real education.

- A. Only Conclusion I follows.
- B. Only Conclusion II follows.
- C. Both Conclusions I and II follow.
- D. Neither Conclusion I nor II follows.

**Q. 50:** Traditional role of the universities was to give scholarships. But now, it takes into account the

Statements: needs of the society.

Conclusion: I. The role of the universities has changed.

II. University is a seat of learning.

- A. Only Conclusion I follows.
- B. Only Conclusion II follows
- C. Both Conclusions I and II follow.
- D. Neither Conclusion I nor II follows.

**Q. 51:** Statements: A number of companies are considering the use of alternate fuels like vegetable oil in order to reduce air pollution that is caused by the use of fuels like petrol and diesel.

Assumption:

I. Alternate fuels like vegetable oil are environment friendly fuels that do not cause air pollution.

II. Until recently, all companies have been using fuels like petrol and diesel.

- A. If only assumption I is implicit
- B. If only assumption II is implicit.
- C. If neither I nor II is implicit.

D. If both I and II are implicit.

**Q. 52:** The question is followed by two statements I and II. Answer the question using the following instructions.

- Choose 1 if the question can be answered by using one of the statements alone but not by using other statement alone.
- Choose 2 if the question can be answered by using either of the statements alone.
- Choose 3 if the question can be answered by using both the statements together but not by either statement alone.
- Choose 4 if the question cannot be answered on the basis of the two statements.

By how much percentage a is greater than b ?

I.

$$\text{II. } \frac{b}{a} = \frac{6000}{5}$$

- A.
- B.
- C.
- D.4

**Q. 53:** The question is followed by two statements I and II. Answer the question using the following instructions.

- Choose 1 if the question can be answered by using one of the statements alone but not by using other statement alone.
- Choose 2 if the question can be answered by using either of the statements alone.
- Choose 3 if the question can be answered by using both the statements together but not by either statement alone.
- Choose 4 if the question cannot be answered on the basis of the two statements.

and T are standing in a row for a photograph. Who is standing at the extreme left position?

P, Q, R, S

is standing three places to the left of .

I. R standing at the second rightmost position.

II. R P

- A. 1



- B.
- C.
- D.4

**Direction for question 54:** In the following question two statements are followed by two inferences.

Mark the answer as:

- A.If only inference I follows
- B.If only inference II follows
- C.If both of them follow
- D.If neither of them follows

**Q.54:** Statements: No train is a van. No van is a car. So,

Conclusions:

- I. No train is car.
- II. No car is train.

- A.a
- B.b
- C.c
- D.d

**Directions (Q. 55 and 56):** Read the following information carefully and answer the questions given below.

means is the son of  
 means is the sister of  
 $P \div Q$  means  $P$  is the brother of  $Q$   
 $Q$  means  $P$  is the mother of  $Q$   
 $P \times Q$  means  $P$  is the mother of  $Q$   
 $Q$  means  $P$  is the mother of  $Q$

**Q.55:** If  $P \div Q$ , which of the following is true?

$P - Q$  means  $P \times Q + R$

$Q$  A. is the mother of

$P$   $R$

- B. is the daughter of  
 C. is the sister of  
 D.  $\begin{matrix} O & P & R \\ P & & R \\ P & & R \end{matrix}$  is the aunt of

Q. 56: Which of the following means that is the husband of ?

$S$   $T$

- A.  
 B.  $T-R \div V \times ST-R+V \div S$   
 C.  $OT \times R - V + S$   
 $T \div R \times V + S$

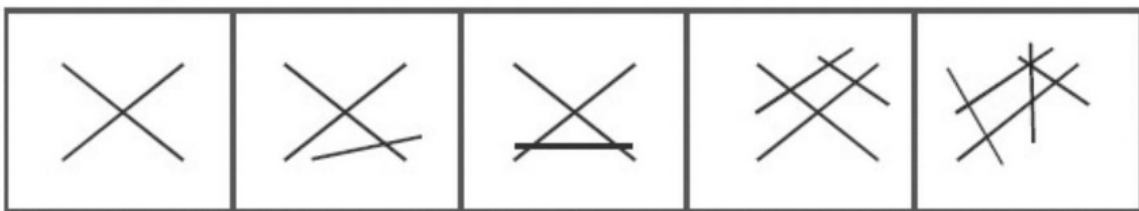
Q. 57: If '-' stands for '+', 'x' stands for '-', ' ' stands for ' ' and '+' stands for ' ', then what will be the value of  $4 + - 2 ?$

$6 \div 3 \times 8$

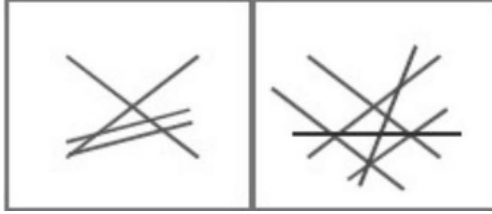
- A. ~~68/3~~  
 C.  $2 - 3$   
 D.  $1/8$

Q. 58: In the question given below, which one of the four answer figures should come after the problem figures if the sequence was continued?

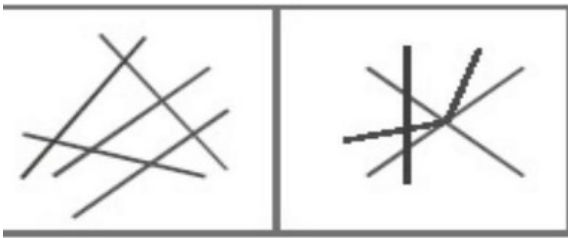
Problem Figures



Answer Figures



- (a)  
(b)

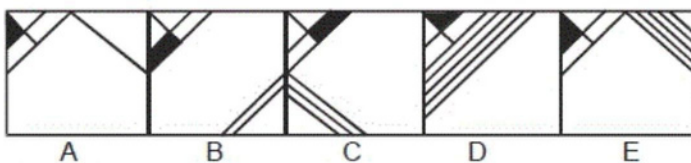


- (c)  
(d)

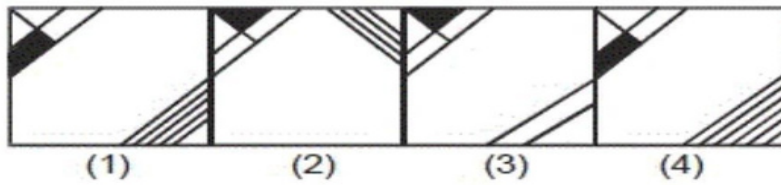
- A.a  
B.b  
C.c  
D.d

**Directions for question 59:** In each of the following problems there are five 'Problem Figures' marked A,B, C, D and E and five 'Answer Figures' marked 1, 2, 3, 4 and 5. You have to choose an option from the 'Answer Figures', so that the series given in the 'Problem Figures' is continued.

**Q. 59:** Problem Figures



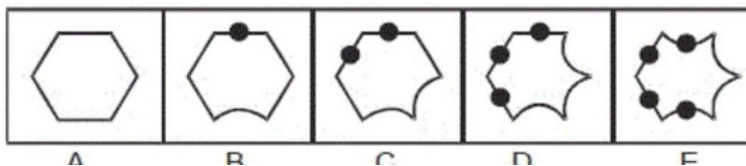
Answer Figures



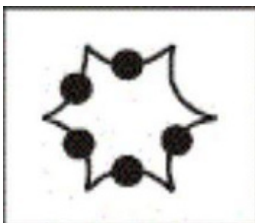
- A.1
- B.2
- C.3
- D.4

**Direction for Question 60:** In each of the following problems there are five 'Problem Figures' marked A, B, C, D and E and five 'Answer Figures' marked 1, 2, 3, 4 and 5. You have to choose an option from the 'Answer Figures', so that the series given in the 'Problem Figures' is continued.

**Q. 60:** Problem Figures



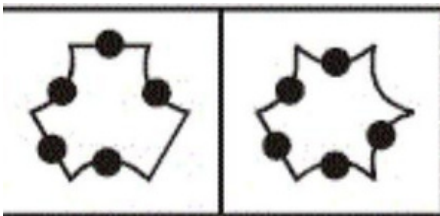
Answer Figures



(1)



(2)



(3) (4)

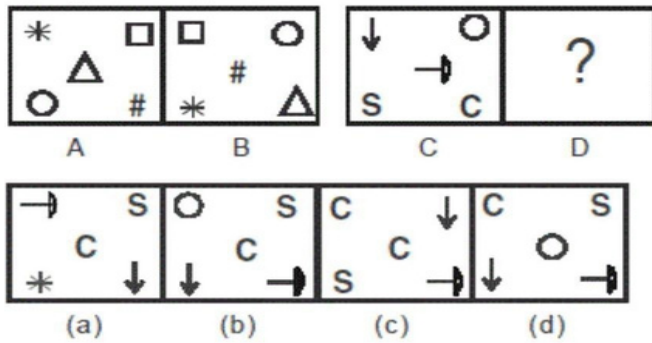
- A.1
- B.2
- C.3
- D.4

**Direction for the following 61:** (one) item: Read the information given below and answer the questions based on the same.

In each of the following questions there are two sets of figures. Figures A, B, C and D constitute the Problem Set while figures (a), (b), (c) and (d) constitute the Answer Set. There is a definite relationship between figures A and B. Establish a similar relationship between figures and by choosing a suitable figure from the Answer Set.

C D

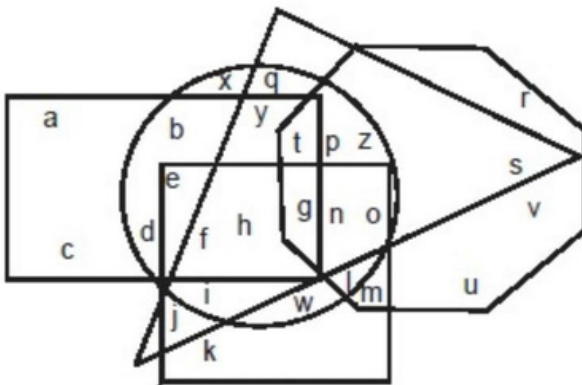
**Q. 61:**



- A.a
- B.b
- C.c
- D.d

**Directions for questions 62 to 63:** Read the given information and answer the following questions based on it.

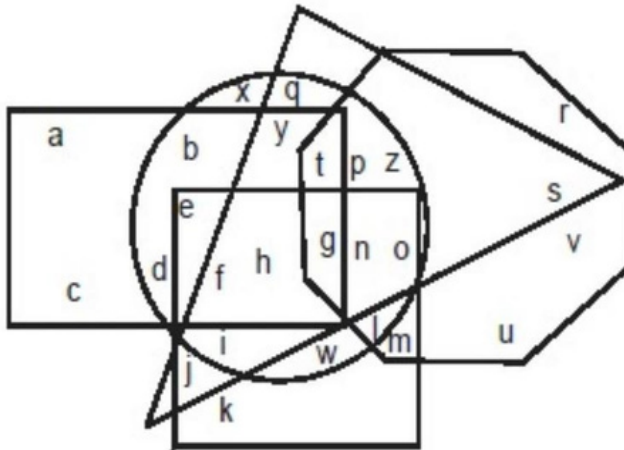
The following figure represents a set of attributes for the participants of Miss X and the alphabets in these figures represent a particular participant having that particular attribute. The circle represents 'Smartness', the rectangle represents 'Quick witted', the square represents 'Appearance', the triangle represents 'Education' and the hexagon represents 'Presentation'. The candidate fulfilling all of the given attributes is selected for the final round.



**Q. 62:** How many participants are selected for final round?

- A. 1

- B.2
- C.3
- D.4



**Q. 63:** If no other participant is allowed beside the given in the figures, then how many participants are there.

- A.24
- B.25
- C.36
- D.23

**Direction for question 64:** Answer the questions on the basis of the information given below.

Seven friends - A, B, C, D, E, F and G - are sitting in a row facing North. Each of them was born in the same year, but in a different month from January to July. Each of them is a student of a different subject. It is also known that:

- I. The person who studies Commerce or Chemistry is not the neighbour of E.
- II. D, who studies Math, is the third person from the left of the row and neighbour of the person born in April.
- III. The person born in February studies History and is the only neighbour of A, who studies Arts.
- IV. Among the seven persons, the youngest is sitting at the middle most position and the eldest is sitting at the right end of the row.

- V. The persons who were born in April, June and July, study Chemistry, Medicine and Physics respectively.
- VI. Exactly two persons are sitting between B and E.
- VII. Both B and E do not study Chemistry. C does not study Chemistry or Medicine.

**Q. 64:** The subject studied by B is

- A. Physics
- B. Medicine
- C. Commerce
- D. Either (a) or (b)

**Q. 65:** Each of the four different games was played on a different day from Monday to Thursday. Hockey and Cricket were not played on two consecutive days. Ludo was played after Hockey but before Chess. Which game was played on Tuesday?

- A. Cricket
- B. Hockey
- C. Ludo
- D. Either (b) or (c)

**Q. 66:** Five students? A, B, C, D and E ? are standing in a row from left to right in ascending order of their heights. A is neither the shortest nor the tallest; exactly 3 students are shorter than D and exactly 3 students are taller than E . If C is at the extreme right end, then the correct order from left to right is

- A. BDAEC
- B. BEADC
- C. EBADC
- D. BAEDC

**Directions for question 67:** In making decisions about important questions, it is desirable to be able to distinguish between 'strong' and 'weak' arguments so far as they are related to the questions. 'Strong' arguments must be both important and directly related to the question. 'Weak' arguments may not be directly related to the question and may be of minor importance or may be related to the trivial aspects of the question.



Each statement below is followed by two arguments numbered (I) and (II). You have to decide which of the arguments is a strong argument and which is a weak argument.

**Q. 67:** Statement: Is braindrain better than brain in the drain?

**Arguments:**

- I. Yes - It is better to go abroad, where talent is nurtured and hard work is rewarded.
- II. No - Our country is as good as any other country. The person with drive can make it big anywhere in the world.

**Answer Options:**

- A. if only argument (I) is strong
- B. if only argument (II) is strong
- C. if either (I) or (II) is strong
- D. if neither (I) nor (II) is strong

**Directions for questions 68 to 70:** Each of the questions below consists of a question and two statements numbered I and II are given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and give answer:

**Q. 68:** What is Sonal's rank from the top in a group of 10 students?

- I. Meenu's rank is three ranks above Sonal.
- II. Sita is second from the bottom and is three ranks below Sonal.

**Answer Options:**

- A.O If the data in only statement I alone or in only statement II alone is sufficient to answer the question.
- B.O If the data in either statement I or in statement II are sufficient to answer the question.
- C.If the data in both the statements I and II together are not sufficient to answer the question.
- D.O If the data in both the statements I and II together are necessary to answer the question.

**Q. 69:** How far is A from the starting point?

- I. A drives 10 km towards East, then takes a right turn and drives another 10 km . He again drives 5 km towards left and again drives 15 km towards left. Finally, he moves 15 km towards left and stops.
- II. A drives 20 km towards East, then takes a left turn and drives another 20 km . He again drive 10 km towards right and again drives 25 km towards right. Finally he moves 30 km towards right and stops.

**Answer Options:**

- A.If the data in only statement I alone or in only statement II alone is sufficient to answer the question.
- B.If the data in either statement I or in statement II are sufficient to answer the question.
- C.If the data in both the statements I and II together are not sufficient to answer the question.
- D.O If the data in both the statements I and II together are necessary to answer the question.

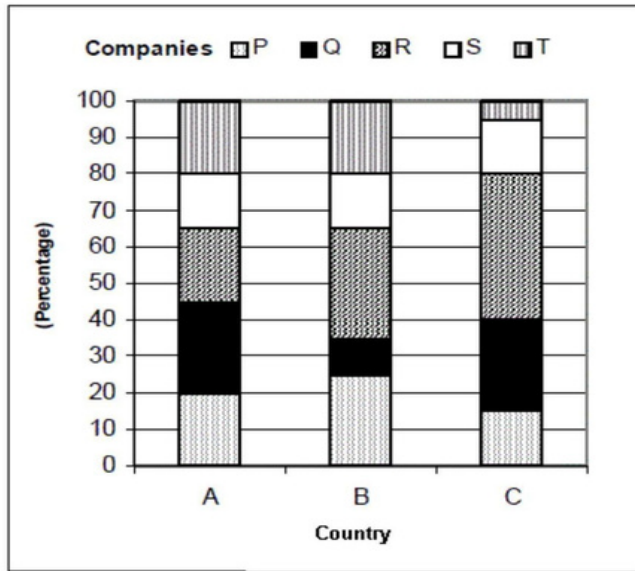
**Q. 70:** What does '7' stand for in a certain code?

- I. '753' stands for B \* D' and '539' stands for 'DB#' in that code.
- II. '427' stands for 'AJ\*' and '214' stands for 'J@A' in that code.

**Answer Options:**

- A.If the data in only statement I alone or in only statement II alone is sufficient to answer the question.
- B.If the data in either statement I or in statement II are sufficient to answer the question.
- C.If the data in both the statements I and II together are not sufficient to answer the question.
- D.If the data in both the statements I and II together are necessary to answer the question.

**Directions (Q. 71 to 74):** The bar graph given below shows the percentage distribution of the sales of five different automobiles manufacturing companies - P, Q, R, S and T in three different countries A, B and C in a year.



The total sales in A, B and C was 50000 units, 70000 units and 80000 units respectively.

**Q. 71:** What was the sum of the units sold by P in country A and that by R in country C?

- A. 32000
- B. 42000
- C. 52000
- D. 62000

**Q. 72:** Among the pairs given below, sales of which pair has ratio as ?

4:7

- A. P in country A and B
- B. R in country A and C
- C. S in country B and C
- D. T in country B and C

**Q. 73:** If in the next year P and Q register an increase of 21% and 17% respectively in the sales in country A, then the difference between their sales (in units) will be

- A. 2500

- B.2525
- C.2570
- D.2580

**Q. 74:** Which of the following alternatives gives the second highest value of sales, when all the alternatives are arranged in decreasing order of sales?

- A.P in country B
- B.S in country C
- C.T in country A
- D.R in country B

**Direction for questions 75 to 77:** Study the data and answer the questions based on this. The following table gives the statewise sugar production (in 000? tonnes) from 1995-96 to 1999-2000.

Statewise sugar production					
States					
Andhra Pradesh	1995-96	1996-97	1997-98	1998-99	1999-2000
Gujarat	1130	967	890	1025	1141
Karnataka	1263	871	959	1372	1577
Maharashtra	5394	3445	3847	5337	6503
UP Central	1777	1632	1600	1552	1843
UP East	1043	1058	881	783	1210
UP West	1559	1393	881	783	1503
Tamil Nadu	1671	1083	1441	1394	1768
Others	1755	1684	1266	1774	1473
All-India	1755	12905	1189	1189	18200
	16451		12855	15539	

**Q. 75:** On how many occasions in these 5 years the production of sugar in Tamil Nadu exceeded average production of sugar in Gujarat in these 5 years?

- A. one
- B. Four
- C.Two
- D.Three

**Q. 76:** In which year was the highest percentage contribution of Andhra Pradesh to all-India production of sugar (along contributions of Andhra Pradesh)?

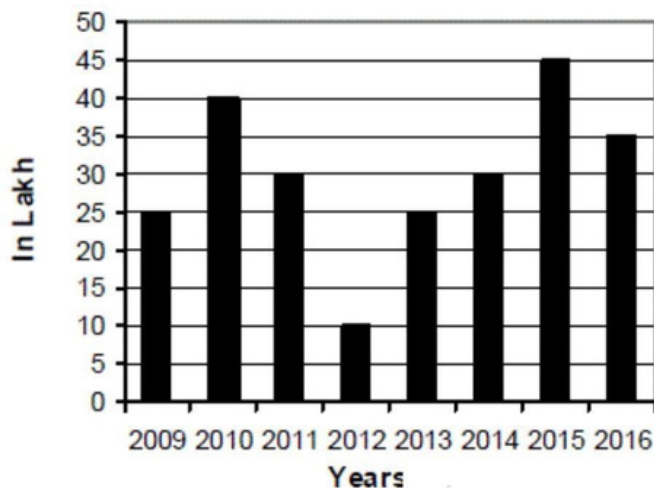
- A.1995-96
- B.1997-98
- C.1998-99
- D.1999-2000

**Q. 77:** Simple annual growth rate of all-India production of sugar in these 5 years has been closest to

- A. 10.63%
- B.2.65%
- C.2.12%
- D.26.5%

**Directions for question 78 to 80:** Study the following graph and answer the questions.

**Number of bicycle sold by Zero Ltd.**



**Q. 78:** If the price of a bicycle was Rs. 1,875 in 2014, then what was the total value of sales (in Rs) of the Zero Ltd.?

- A.Rs. 562.5 crore
- B. Rs. 447.5 crore
- C. Rs. 525 crore
- D.Rs. 480 crore

**Q. 79:** From the year 2012 to the year 2013, what was the percentage increase in the number of bicycle sold by Zero Ltd.?

- A. 50
- B. 100
- C. 150
- D.250

**Q. 80:** From the year 2015 to the year 2016, what was the approximate percentage reduction in the number of bicycle sold by Zero Ltd.?

- A. 30
- B. 22
- C. 8
- D.16

## Sec 3: Proficiency in English Language

**Q.81:** Select the related pair of words from the given alternatives. Light: Opaque:

- A.Air:Hermetic
- B.Document: Author
- C.Sand: Desert
- D.Wood:Tree

**Q.82:** Four alternatives are given for the underlined idiom. Choose the alternative which best expresses the meaning of the idiom. **Beat around the bush**

- A.Avoiding the main topic
- B.Trim a tree

- C. Confront an adversary
- D. Get involved in a brawl

**Q. 83:** Some parts of the sentences have errors and some are correct. Choose which part of a sentence has an error.

**During the earthquake (A) / people listened a strange noise, (B) / and rushed out of their homes. (C)**

- A. During the earthquake
- B. people listened a strange noise,
- C. and rushed out of their homes.
- D. No error

**Q. 84:** Out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase given in bold. **Bag and baggage**

- A. Partly
- B. Completely
- C. Cursory matters
- D. Essential things

**Q. 85:** Four words are given in each question, out of which only one word is correctly spelt. Find the correctly spelt word.

- A. Playgue
- B. Plague
- C. Plageu
- D. Playgeu

**Q. 86:** Four words are given in each question, out of which only one word is correctly spelt. Find the correctly spelt word.

- A. Insideous
- B. Incidious
- C. sidous
- D. Insidious

**Q. 87:** Out of the four alternatives, choose the one which best expresses the meaning of the given word. **Absurd**

- A. Senseless
- B. Clean
- C. Abrupt
- D. Candid

**Q. 88:** Some parts of the sentences have errors and some are correct. Find out which part of a sentence has an error. If a sentence is free from error, your answer is option (d).  
**When the plane landed (A) / he found that (B) / one of the wings is damaged. (C) / No error (D)**

- A. When the plane landed
- B. he found that
- C. one of the wings is damaged.
- D. No error

**Q. 89:** Sentences are given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four. **The earthquake warnings and the fragility of our houses made us certain that a disaster was..**

- A. catastrophic
- B. imminent
- C. available
- D. distant

**Directions for Q. 90 and 91:** the 1st and the last sentences are numbered 1 and 6 . The rest of the passage is split into four parts and named P, Q, R and S . These four parts are not given in their proper order. Read the passage and find out which of the four combinations is correct. Then find the correct answer.

**Q. 90:**

- 1. It takes years to build trust.  
P. After all, your customers come back to you only because they trust you to give them the best.



- Q. And just one wrong to undo it.
- R. They follow your advice as you have consistently showcased true quality in every aspect of your relationship.
- S. Our company respects this and is working towards ensuring that only its genuine software is available to customers.
- 2. The company takes periodic litigation and nonlitigation actions against errant resellers; who indulge in the sale of pirated or unlicensed software.

**Which one of the following is the correct sequence?**

- A.QSRP
- B.RPQS
- C.QPRS
- D.RSQP

**Q. 91:**

- 1. Russia's test firing  
P. to US steps that have sparked an arms race  
Q. of an intercontinental ballistic missile on  
R. and undermined  
S. Tuesday was in response
- 2. world security.

**Which one of the following is the correct sequence?**

- A.SQPR
- B.QSRP
- C.SQRP
- D.QSPR

**Q. 92:** A part of the sentence is underlined. Below are given alternatives to the underlined part which may improve the sentence. Choose the correct alternative. In case no improvement is needed, your answer is (D). Snow White is prettiest of all.

- A.more prettier than all.
- B.most prettiest of all.
- C. the prettiest of all.
- D.No improvement

**Q.93:** A part of the sentence is underlined. Below are given alternatives to the underlined part which may improve the sentence. Choose the correct alternative. In case no improvement is needed, your answer is (D). **It's empty, except for large electrical cables snaking along the floor.**

- A. sneaking on the floor
- B. sneaking for the floor
- C. snaking by the floor
- D.No improvement

**Directions for Q. 94 to 98:** Some of the words have been left out in the following passage. Read the passage carefully and choose the correct answer to each question out of the four alternatives and fill in the blanks.

**Passage:**

"Stand up, both of you", Radhika had commanded them 94 the police van. Both prisoners had followed her instructions \_\_\_95\_\_\_. She had quickly patted down Priya while Rathore had done the \_\_\_96\_\_\_ to Saini. 'With the two of you, I can't afford any chances', she \_\_\_97\_\_\_explained as she sat down once again, having \_\_\_98\_\_\_stuck a small tracing microchip - the size of a baby's thumbnail - on Priya's clothing.

**Q. 94:** Choose correct word from the following:

- A. along
- B. by
- C. inside
- D.beneath

**Q. 95:** Choose correct word from the following:

- A.Oriskly
- B.submissively
- C.submediantly
- D.lightly

**Q. 96:** Choose correct word from the following:

- A. Osame
- B. exact
- C. opposite
- D. unlike

**Q. 97:** Choose correct word from the following:

- A. has
- B. have
- C. had
- D. hadn't

**Q. 98:** Choose correct word from the following:

- A. candidly
- B. overtly
- C. officially
- D. surreptitiously

**Direction for Q. 99 to 103:** The passage given below is followed by a set of questions. Choose the most appropriate answer to each question.

Henry Ford grinned at his wife Clara, while wiping his grease-stained hands on a piece of cloth. His face was aglow with excitement. It seemed to tell his dame, "I have it, dear ready to be tested. All that it needs is your signal." Clara smiled while gently holding the cup with the gasoline, steady at an angle, so that the fuel could flow in at a regular pace. Ford whipped the engine out of its slumber by triggering the mechanism. The engine seemed reluctant to start. But, soon, it spluttered and as the fuel nudged, it roared loudly. The noise was deafening. Yet, as the engine was turned off, Henry ran into the outstretched arms of Clara. The two stood hugging each other, savouring the moment of success. Henry gently tilted Clara's face up and peered into her eyes. For a long time, they stood, almost mesmerized. Then Clara wriggled out, while gently reprimanding him for his dirty hands and the smears they had left on her cheeks where they had run freely. Did Henry cheer her, saying "these are the signs of my first triumph," at least, that was his impression. Henry stood and admired the enigma which would revolutionize travel.

go. There was a tiny ray of hope that the boy would come back to the sylvan settings, finally settle down at the farm. This hope sustained the old man. It was at Detroit that Henry sharpened his native talent. He would spend hours to understand the intricacies of every machine, which was assigned to him by the small firm where he was employed. Soon, he gained a reputation as a boy who could repair any machine. His reputation was matched by hard work. Henry knew that he was getting the insight into machines. He would soon break off, start work on the 'horse-less carriage' that he wanted to produce. He was finally earning enough to live in reasonable comfort. He fell in love with Clara Byrant. He was 25. Youthful desires were coursing through him. Yet he did not want to enter wedlock unless he was sure that Clara would share his dream. The two sat together in a lonely place, while Henry detailed his future plans. He hinted that life would not be a bed of roses. His first love would always be machines. If she could share his enthusiasm, the two together could target for fame, wealth, and recognition. In other words, what he wanted of Clara was a multiple role. Not only should Clara be his wife, but his friend, critic, associate, his Woman Friday. That was not an easy role to play. However, Clara did not bat an eyelid. She responded with warmth to his proposal. Two decided to go through life hand in hand, creating a path that had never been trekked by others. It was hard world for Henry. During the day, he worked at the Edison Illuminating Company. At night, he huddled along with Clara, at the workshop, at the rear of their humble house. Henry would have an assortment of old parts - many of them partly worn-out, brought by him from the pile of discards - from which he wanted to fabricate an engine that would work on gasoline. He had read about a gasoline engine developed by Dr. Nicolaus A. Otto, of Germany. Henry did not miss the cue. If he could develop such an engine, he would have the horse-less carriage. He shared his excitement with Clara.

**Q. 99:** "Every clock in the village shudders when it sees Henry coming." Why did Henry's neighbor make this joke?

- A. The whole world of the protagonist lay around machines.
- B. Mechanical contraptions fascinated Henry.
- C. Henry had no interest in farming, as every other villager did.
- D. None of these

**Q. 100:** The example of the engine driver is given by the author to elucidate which of the following character traits of Henry Ford?

- A. Inquisitive
- B. Contemplative
- C. Challenging
- D. Apathetic

**Q. 101:** The role of Clara in the success of Henry Ford can best be described in the following words:

- A. She was not exactly a part of his success.
- B. She was with him as a great support and a second love.
- C. She should be given equal accolades for Ford's success.
- D. Cannot be derived from the passage.

**Q. 102:** "Horse-less Carriage" - this was the dream of Henry Ford. He got a major cue from Dr. Nicolaus Otto. This cue was in the form of

- A. The idea, which he got from Dr. Otto's discovery.
- B. material help which Dr. Otto gave him.
- C. the confidence, which he got from Dr. Otto's discovery.
- D. All of these

**Q. 103:** What is the normal relation between parental expectations and the natural proclivities of the progeny, as per the passage?

- A. Natural proclivities superimpose the parental expectations.
- B. They are often on different paths.
- C. They have no definite relation.
- D. Parental expectations build natural proclivities or, natural proclivities are inherent.

**Directions for questions 104 and 105:** Choose the most appropriate option to fill in the blanks.

**Q. 104:** Everyone seems to be attacking the anti corruption panel. To a dispassionate observer it seems to be a campaign to the panel.

- A. contrived, compel
- B. collaborative, commend
- C. concerted, discredit
- D. fortuitous, desecrate

**Q. 105:** Customized products that on data and better risk analysis could provide new for growthboosting innovations.

- A. Opostulate, conduits
- B. gamble, routes
- C. rely, avenues.
- D. Olean, expectations

**Directions for questions 106 and 107:** In each of the following questions, mark the antonym of the given word.

**Q.106:** Condone

- A. Condemn
- B. Forgive
- C. Bypass
- D. Free

**Q.107:** Delirious

- A. Composed
- B. Maniac
- C. Dippy
- D. Intelligent

**Directions for questions 108 and 110:** In each of the following questions a set of sentences marked A, B, C and D is given. Identify the sentence(s) that is/are incorrect in terms of grammar and usage. Then, choose the most appropriate option.

**Q.108:**

**A.** The rightfully believing that his geniuses in poetry laid in personal utterances, Irish poet William Butler Yeats recognized that these personal utterances alone could not organize a body of a lyric poetry and drama into the organic structure he hoped to build.

**B.** For one thing personal utterances is beset by danger of sentimentality, which leads poetry away from that reality that poetry would deal with various kinds of self-pity and self-deceptions.

**C.** He thus has to find a technique by which the person should somehow be objectified, be given the appearance of impersonal "truth" and yet retained motive force of privately felt belief.

**D.** The partial solution was the theory of the mask.

**Answer Options:**

A.B, C, and D

B.A, C and D

C.A, B, C, and D

D.A and

*B*

Q. 109

**A.** In the long history of the world, only a few generations have been granted the role of defending freedom in its hour of maximum danger.

**B.** I do not believe that any of us would exchange places with any other people or any other generation.

**C.** The energy, the faith, the devotion which we bring to this endeavor will light our country and all who serve it.

**D.** The glow from that fire can truly light the world.

**Answer Options:**

A.B only

B.A only

C.C only

D. No error

**Q. 110:**

**A.** As the growing economy makes increasing demands on infrastructure inputs, these problems could worsen in the coming year.

**B.** Therefore, addressing infrastructure gaps needs to doing our topmost priority next year.

**C.** The second risk lies in the global macroeconomic imbalances, reflected in the twin deficits of the US and rising surpluses of Asia.

**D.** The longer these imbalances have persisted, the greater has become the risk of disruptive correction.

**Answer Options:**

A.A only

B.B only

C.D only

D.C only

**Directions for questions 111 and 113:** For each of the words given below, a contextual usage has been provided. Pick the word from the given alternatives that is most inappropriate in the given context.

**Q.111:** Headway: The talks between the authorities and the hijackers made no headway even as the crisis entered its tenth day.

A. progress

B.mistake

C. breakthrough

D.advance



**Q. 112:** Obsequious: Being obsequious will not help your career in the long run.

- A. servile
- B. sycophantic
- C. observant
- D. stubborn

**Q.113:** Percolate: Too little uncovered soil will not allow sufficient amount of rain water to percolate down.

- A. filter
- B. permeate
- C. egress
- D. trickle

**Directions for questions 114 and 117:** Read the passage carefully and answer the questions that follow.

**Passage:**

At Paris in 1742, Voltaire was coaching Ms. Dumesnil to rise to tragic heights in a rehearsal of his play Merope. She complained that she would have to have "the very devil" in her to simulate such passion as he required. "That is just it," answered Voltaire, "you must have the devil in you to succeed in any of the arts." Even his critics and his enemies admitted that he himself met this requirement perfectly. "Il avait le diable .au corps - he had the devil in his body," said Sainte-Beuve, and De Maistre called him the man "into whose hands hell had given all its powers."

Unprepossessing, ugly, vain, flippant, obscene, unscrupulous, even dishonest at times, Voltaire was a man with the faults of his time and place, missing hardly one. And yet this same Voltaire turns out to have been tirelessly kind, considerate, lavish of his energy and his purse, as sedulous in helping friends as in crushing enemies, able to kill with a stroke of his pen and yet disarmed by the first advance of conciliation, so contradictory is man.

But all these qualities, good and bad, were secondary, not of the essence of Voltaire. The astounding and basic thing in him was the inexhaustible fertility and brilliance of his mind. His works fill ninety-nine volumes, of which every page is sparkling and fruitful, though they range from subject to subject across the world as fitfully and bravely as in an encyclopedia. "My trade is to say what I think" : and what he thought was always worth saying, as what he said was always said incomparably well. If we do not read him now, it

feeling and thought, to open the mind to experiment and change, before the great Revolution could come. Not that Voltaire and Rousseau were the causes of the Revolution, perhaps rather they were co-results with it of the forces that seethed and surged beneath the political and social surface of French life.

**Q. 114:** Which of the following negative qualities has not been associated with Voltaire?

- A. ugliness
- B. Laziness
- C. Obscenity
- D. Dishonesty

**Q. 115:** Which of the following statements has been mentioned in the passage?

- A. Italy had a Reformation and Germany had a Renaissance, but France had Voltaire.
- B. Voltaire carried on the antiseptic skepticism of Rabelais, and the healthy earthy humor of Montaigne.
- C. Voltaire fought superstition and corruption more savagely and effectively than Luther or Mirabeau.
- D. Voltaire helped to make the powder with which Mirabeau and Marat, Danton and Robespierre blew up the Old Regime.

**Q. 116:** Which of the following was said by Victor Hugo about Voltaire?

- A. "Il avait le diable au corps - he had the devil in his body."
- B. "You must have the devil in you to succeed in any of the arts."
- C. "To name Voltaire is to characterize the entire eighteenth century."
- D. None of these

**Q. 117:** What is the tone of the passage?

- A. Critical
- B. Analytical
- C. Positive
- D. Callous

**Directions for questions 118 to 120:** In each of the following questions, a sentence has been written in four different ways.

**Q. 118:** Choose the grammatically correct sentence.

- A. The Greek poetry of Homer was at first transmitted orally, stored in the memory, as were the Vedas, the Sanskrit hymns of the ancient Hindus, which were unwritten for centuries.
- B. he Greek poetry of Homer were at first transmitted orally, stored in the memory, as were the Vedas, the Sanskrit hymns of the ancient Hindus which were unwritten for centuries.
- C. The Greek poetry of Homer was first transmitted orally, stored in the memory, as were the Vedas, the Sanskrit hymns of the ancient Hindus, that were unwritten for centuries.
- D. The Greek poetry of Homer was at first transmitted orally, stored in memory, as were the Vedas, the Sanskrit hymns of the ancient Hindus, that were unwritten for centuries.

**Q. 119:** Choose the grammatically correct sentence.

- A. Even as this goes to press, number of lives lost to the Asian tsunami and its aftermath appears literally countless.
- B. Even as this goes to press, the number of lives lost to the Asian tsunami and its aftermath appears literally countless.
- C. Even as this goes to press, the number of lives lost to the Asian tsunami and its aftermath appears literally countless.
- D. Even as this goes to press, the number of lives lost to the Asian tsunami and its aftermath appears countless literally.

**Q. 120:** Choose the grammatically correct sentence.

- A. Under this tightly oligarchic constitution two consuls - most powerful officials in the state - were elected each year.
- B. Under this tightly oligarchic constitution two consuls - the most powerful officials in the state - was elected each year.
- C. Under this tightly oligarchic constitution two consuls - the most powerful officials in the state - were elected each year.

D. Under this tightly oligarchic constitution two consuls - the most powerful officials in the state - were each year elected.