

Sl. No. :

MBA/MCA 2

**MBA/MCA ENTRANCE TEST, APRIL 2011.**

**HALL TICKET No. :**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|

**Signature of the Candidate**

**Signature of the Invigilator**

**(Name of the Candidate)**

---

Time :  $2\frac{1}{2}$  hours

Max. Marks : 200

Min. Marks for Pass : 70

**INSTRUCTIONS TO CANDIDATES**

1. Separate Answer Sheet is supplied to you along with Question Paper Booklet to record your responses. Please read and follow the instructions for marking the responses.
2. Candidate should write the Hall Ticket Number only in the space provided on this page and Answer Sheet. **DO NOT WRITE HALL TICKET NUMBER ANYWHERE ELSE.**
3. Immediately on opening this Question Paper Booklet, please verify for (i) Serial number of the questions (1–200) (ii) The number of pages and (iii) Correct printing.  
**IN CASE OF ANY DEFECT, PLEASE REPORT TO THE INVIGILATOR AND ASK FOR REPLACEMENT WITH IN FIVE MINUTES FROM THE COMMENCEMENT OF THE TEST.**
4. Each correct answer will be awarded one mark.
5. Adoption of any kind of unfair means at the time of the test or any act of impersonation will result in invalidation of his/her claim for taking the test and will be subjected to prosecution under AP Public Examination (Prevention of Malpractice and Unfair Means) Rules, 1997.
6. Use of Calculators, Mathematical/Log tables, Pagers, any other electronic gadgets and loose sheets of paper is strictly prohibited.
7. **Darken the appropriate circles of 1, 2, 3 or 4 on the Answer Sheet** corresponding to correct answer to the concerned question number in the sheet. If you want to change the answer, erase the wrong answer completely and then darken the correct circle. **DARKENING OF MORE THAN ONE CIRCLE AGAINST ANY QUESTION AUTOMATICALLY GETS INVALIDATED.**
8. **Rough work should be done only in the space provided for this purpose in Question Paper Booklet.**
9. Once the candidate enters the Examination Hall, he/she shall not be permitted to leave the Hall till the END of the Examination.
10. Ensure that invigilator puts his/her signature in the space provided on Question Paper Booklet and the Answer Sheet. Candidate should sign in the space provided on the Answer Sheet.
11. The candidate should write the Question Paper Booklet number and sign in the space provided in the Nominal Rolls.
12. Return the Answer Sheet and Question Paper Booklet to the Invigilator before leaving the Examination Hall.

MBA/MCA 2011

## COMMON ENTRANCE TEST FOR MCAMBA COURSE

Time :  $2\frac{1}{2}$  hours

Maximum : 200 marks

SECTION A  
ANALYTICAL ABILITY

75 Marks

Directions (Q. No. 1-20) : In questions numbered 1 to 20, a question is followed by data in the form of two statements labelled as I and II. You must decide whether the data given in the statements are sufficient to answer the questions. Using the data make the appropriate choice from (1) to (4) as per the following guidelines :

- (a) Mark choice (1) : if statement I alone is sufficient to answer the question;
- (b) Mark choice (2): if statement II alone is sufficient to answer the question;
- (c) Mark choice (3) : if both statements I and II are sufficient to answer the question, but neither statement alone is not sufficient;
- (d) Mark choice (4) : if both the statements I and II together are not sufficient to answer the questions and additional data is required.

1. What is the quadratic equation?
  - I. Its roots are reciprocal to each other.
  - II. The coefficient of  $X^2$  is 1
2. Are the triangles ABC and DEF similar?
  - I.  $\angle A = \angle B$
  - II.  $\angle A = \angle D; AB = DE; AC = DF$ .
3. What is  $X_7$  in  $\{X_1, X_2, \dots, X_7\}$ ?
  - I.  $X_1 = 5$
  - II.  $X_1 - X_{i-1} = 2, i = 2, 3, 4, \dots$
4. If  $f(x)$  is a polynomial then  $(x - 2)$  a factor of  $f(2x^2 - 1)$ ?
  - I.  $f(x)$  leaves a remainder zero when it is divided by  $(x - 2)$
  - II.  $f(x)$  leaves remainder zero when it is divided by  $(x - 7)$

5. What is the remainder when the positive integer  $a$  is divided by 2?  
 I.  $a$  is an odd integer  
 II.  $a$  is a multiple of 3
6. Is  $(a + b + c)\left(\frac{1}{a} + \frac{1}{b} + \frac{1}{c}\right) \geq 9$ ?  
 I.  $a > 0, b > 0, c > 0$   
 II.  $a^2 + b^2 + c^2 > 0$
7. Is the quadrilateral ABCD Cyclic?  
 I.  $\angle ABC + \angle ADC = 180^\circ$   
 II.  $AC = BD$
8. What is the value of the positive integer  $a$ ?  
 I.  $21 \mid 1323$   
 II.  $21^a = 1323x$  and  $a, x$  are Primes.
9. What is  $A - B$ ?  
 I.  $A = \{1, 2, 3, 4\}$   
 II.  $B - A = \{5, 8, 9\}$
10. Are  $\frac{1}{\sqrt{b} + \sqrt{c}}, \frac{1}{\sqrt{c} + \sqrt{a}}, \frac{1}{\sqrt{a} + \sqrt{b}}$  in arithmetic progression?  
 I.  $a, b, c$  are in harmonic progression  
 II.  $a, b, c$  are in geometric progression
11. Let  $a, b$  be real numbers, is  $a > b$ ?  
 I.  $|a| > |b|$   
 II.  $a > 0$ .
12. What is the value of the integer  $a$ ?  
 I.  $a$  leaves remainder 2 when divided by 3  
 II.  $a$  leaves remainder 3 when divided by 4.
13. If  $X$  is a real number, what is the value of  $x + \frac{1}{x}$ ?  
 I.  $x^4 + \frac{1}{x^4} = 47$   
 II.  $X$  is an irrational number.

14. Is  $\frac{15n^2 + 8n + 6}{n}$  a natural number?
- I.  $n/3!$
- II.  $n/10$
15. What is the equation of the line?
- I. Its slope is  $\frac{1}{\sqrt{3}}$
- II. The line makes an angle  $30^\circ$  with the x-axis.
16. Is  $3x + 10$  a factor of  $x^3 - 100x^2 + 155x + a$ ?
- I. 10 does not divide  $a$
- II. 10 is a composite number.
17. What is the g.c.d of  $a$  and  $b$ ?
- I.  $a, b$  are multiple of 3
- II.  $a : b = 2 : 3$
18. What is the value of  $a_1 + a_2 + a_3 + a_4 + a_5$ ?
- I.  $a_1, a_2, a_3, a_4, a_5$  are consecutive integers
- II.  $a_5 = 100$
19. What is the value of  $a^3 - b^3$ ?
- I.  $a - b = 9$
- II.  $a : b = 5 : 2$
20. What is the L.C.M. of  $a$  and  $b$ ?
- I.  $ab = 420$
- II.  $a$  and  $b$  are relatively prime.

# PROBLEM SOLVING

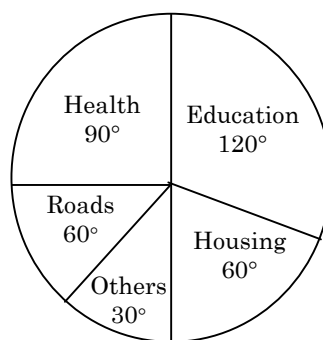
Directions (Qs. 21 to 35) : Find the Correct Answer :

21. 0, 2, 6, 12, 20, 30 \_\_\_\_\_  
 (1) 40 (2) 42 (3) 44 (4) 60
22. 6, 15, 35, 77, \_\_\_\_\_  
 (1) 144 (2) 153 (3) 163 (4) 154
23. 4, 24, 48, 72, \_\_\_\_\_  
 (1) 90 (2) 95 (3) 85 (4) 93
24. 1, 5, 9, 15, \_\_\_\_\_  
 (1) 21 (2) 22 (3) 23 (4) 24
25. 11, 17, 23, 31 \_\_\_\_\_  
 (1) X (2) Y (3) Z (4) U
26. A, B, C, A, D, I, A, H, \_\_\_\_\_  
 (1) B (2) C (3) D (4) A
27. A, D, F, H, I, \_\_\_\_\_  
 (1) J (2) K (3) L (4) M
28. ABC, EFG, IJK, OPQ, \_\_\_\_\_  
 (1) 9 (2) 7 (3) 6 (4) 8
29. B, F, L, T, D, \_\_\_\_\_  
 (1) SOAP (2) PSOH (3) POSH (4) SAOP
30. B, C, E, G, K, \_\_\_\_\_  
 (1) L (2) M (3) N (4) O
31. A : A :: C : \_\_\_\_\_  
 (1) B (2) D (3) A (4) E
32. H : B :: A : \_\_\_\_\_  
 (1) A (2) B (3) C (4) D
33. 14 : 210 :: 15 : \_\_\_\_\_  
 (1) 230 (2) 235 (3) 245 (4) 240
34. 5 : 30 :: 7 : \_\_\_\_\_  
 (1) 56 (2) 42 (3) 63 (4) 49
35. 9 : 65 :: 8 : \_\_\_\_\_  
 (1) 48 (2) 50 (3) 52 (4) 56

**Directions (Qs. 36 to 45) : Find the ODD MAN out.**

36. (1) 57                      (2) 67                      (3) 77                      (4) 87
37. (1) 25                      (2) 49                      (3) 64                      (4) 81
38. (1) 30                      (2) 12                      (3) 20                      (4) 8
39. (1) 10                      (2) 28                      (3) 80                      (4) 244
40. (1) 0.01                      (2) 0.001                      (3) 0.0001                      (4) 0.000001
41. (1) FG                      (2) HI                      (3) KL                      (4) GQ
42. (1) AZ                      (2) CX                      (3) DV                      (4) FU
43. (1) BAT                      (2) CAT                      (3) RAT                      (4) MAT
44. (1) 15                      (2) 77                      (3) 117                      (4) 221
45. (1) 289                      (2) 361                      (3) 529                      (4) 441

**Directions (Qs. 46 – 50) :** The following Pie chart shows how the municipal funds are spent under different heads in a year. Study the chart carefully and answer the questions 46 to 50.

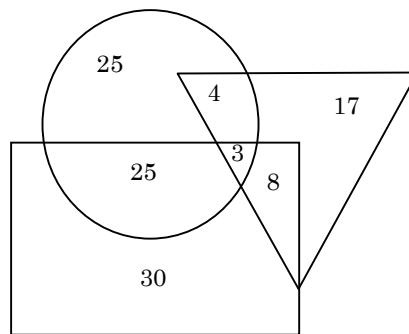


46. Which heads have the same amount of expenditure?
- (1) Housing and Education                      (2) Health and Housing
- (3) Roads and Housing                      (4) Housing and Others

47. Which head has the maximum expenditure?  
 (1) Health (2) Education (3) Roads (4) Housing
48. Which single head uses 25% of the funds?  
 (1) Health (2) Education (3) Housing (4) Roads
49. What is the ratio of the expenditure on education to that of health?  
 (1) 3 : 2 (2) 2 : 3 (3) 3 : 4 (4) 4 : 3
50. What percentage is spent on housing?  
 (1)  $19\frac{2}{3}$  (2)  $16\frac{1}{3}$  (3) 15 (4)  $16\frac{2}{3}$

**Directions (Qs. 51 to 55) :**

In the following diagram circle represents players, triangle represents doctors, rectangle represents artists :



51. How many doctors are both players and artists?  
 (1) 4 (2) 3 (3) 1 (4) 8
52. How many artists are players?  
 (1) 22 (2) 30 (3) 25 (4) 28
53. How many doctors are neither players nor artists?  
 (1) 17 (2) 22 (3) 8 (4) 30
54. How many artists are neither players nor doctors?  
 (1) 30 (2) 25 (3) 29 (4) 22
55. How many players are neither artists nor doctors?  
 (1) 22 (2) 4 (3) 3 (4) 25

### CODING AND DECODING

**Directions : (Qs. 56 to 65) :** The following questions are based on the following pattern of coding and decoding of english alphabet.

Each rth letter of the alphabet coded as (27-rth) letter of the alphabet. i.e.,  $A \rightarrow Z$ ;  $B \rightarrow Y$ ;  $C \rightarrow X$ ; ...  $Z \rightarrow A$  for decoding, an inverse process is followed i.e.,  $Z \rightarrow A$ ;  $Y \rightarrow B$ .

56. What is the code for the word "LAPTOP"?  
 (1) OKZGLK      (2) OZGKLK      (3) OZKGLK      (4) KLHKZO
57. What is the code for the word "HARDWARE"?  
 (1) SZIWDZIV      (2) SZEWDZIV  
 (3) SZIWDZR      (4) SZEWDZRV
58. What is the code for the word "COMMERSE"?  
 (1) XLNINVXV      (2) XLBBUVXY  
 (3) VXIVNNLX      (4) XLNNVIXV
59. What is the code for the word "SEBI"?  
 (1) HVYR      (2) HRVY      (3) JEJK      (4) RYHV
60. What is the code for the word "SOFTWARE"?  
 (1) HLUGDZIV      (2) INTERNET      (3) NTERIET      (4) TERNNET
61. Which word is coded as "XLNKFGVT"?  
 (1) COMPUTER      (2) COMUPTER  
 (3) COMPURET      (4) RETUPMOC
62. Which word is coded as "NLFHV"?  
 (1) MOUCE      (2) MOUSE      (3) ESUOM      (4) OMSUE
63. Which word is coded as "RMGVIMVG"?  
 (1) INTRANET      (2) INTERNET      (3) INNERNET      (4) INTENDER
64. Which word is coded as "NZIPVG"?  
 (1) MARKET      (2) SOCKET      (3) ROCKET      (4) TARGET
65. What is the code for the word "KEYBOARD"?  
 (1) WIZYLPVB      (2) WIZLYBVP      (3) PVBYLZIW      (4) PBVYLZZW



## DATE, TIME AND ARRANGEMENT

66. If the last day of march is wednesday, the day on which start is  
 (1) Monday (2) Tuesday (3) Thursday (4) Friday
67. A and B are children of C. B is the mother of D. And E is the grandmother of D. What is the relation of E to C?  
 (1) Husband (2) Sister (3) Wife (4) Brother
68. A, B, C, D, E, F are seated in a circle facing the centre. D is between F and B, A is second to the left of D and second to the right of E. Who is facing 'A'?  
 (1) D (2) F or B (3) C or D (4) E
69. If  $a * b = a^3 + b^3 - 3ab = ((-1) * 1) * 1 = ?$   
 (1) 12 (2) 19 (3) 13 (4) 1
70. What is the angle covered by the minute hand when second hand covers  $300^\circ$ ?  
 (1)  $5^\circ$  (2)  $10^\circ$  (3)  $15^\circ$  (4)  $20^\circ$
71. Six subjects Mathematics, Physics, English, Hindi, Science and Social are scheduled in different periods from I through VI in a class not necessarily in the some order. The subjects were scheduled in the order of the alphabet as given in the dictionary. Which subject will be taught in period IV?  
 (1) Physics (2) Mathematics (3) Science (4) Social
72.  $\{X \in R : X^2 - 31|X| + 2 = 0\} = ?$   
 (1)  $\{1, 2\}$  (2)  $\{-2, -1\}$  (3)  $\{1, 2, -2\}$  (4)  $\{-2, -1, 1, 2\}$
73. What is the least positive integer  $n$  such that  $8^2 + n^2 + 6^2$  is a perfect cube?  
 (1) 2 (2) 4 (3) 5 (4) 6
74. If  $N$  is the set of positive integers, then  $\{n \in N \mid |n - 2| < 3\} =$   
 (1)  $\{1, 2, 3, 4, 5\}$  (2)  $\{1, 2, 3, 4\}$  (3)  $\{2, 3, 4, 5\}$  (4)  $\{2, 3\}$
75. Twenty years back, the ratio of the ages of a father and his son was 11 : 3. If the ratio of their present ages is 2 : 1, then the age of the son is  
 (1) 30 (2) 35 (3) 34 (4) 32

**SECTION B**  
**MATHEMATICAL ABILITY**

**75 Marks**

76. A candidate secured 60% of the votes and is elected by a majority of 124 votes. The total number of votes polled is.  
(1) 542                      (2) 620                      (3) 435                      (4) 713
77. The salary of a person was first increased by 10% and later the same was reduced by 10%. Then the net change in his salary is  
(1) 1% decrease                      (2) 1% increase  
(3) Nil                      (4) 11% increase
78. If the cost price of 20 tables is equal to the selling price of 25 tables, the loss percentage is  
(1) 5%                      (2) 10%                      (3) 15%                      (4) 20%
79. A merchant gets Rs.500 if he sell either item A at 15% profit and item B at 10% profit. The cost of item A is (in Rupees)  
(1) 100                      (2) 150                      (3) 200                      (4) 300
80. In a joint venture three persons A, B, C invest respectively  $\frac{1}{4}$  of the capital,  $\frac{1}{5}$  of the capital and rest. Then the share of B in the total profit of Rs. 6,00,000 in rupees is  
(1) 1,50,000                      (2) 3,30,000                      (3) 1,20,000                      (4) 1,00,000
81. A, B, C invested a total sum of Rs. 1,00,00,000 in a business. A invests Rs. 30 lacs more than C and B invests Rs. 10 lacs more than C. Then the share of B out of a total profit of Rs. 20 lacs (in lacs of rupees) is  
(1) 4                      (2) 5                      (3) 6                      (4) 10
82. The least number to be multiplied by 17640, so that the resulting number is a perfect square  
(1) 10                      (2) 6                      (3) 21                      (4) 15

83. For integers  $a$  and  $b$ , let  $a * b$  denote the remainder when  $ab$  is divided by 12. Then  $(5 * 3) * 4 =$
- (1) 3                      (2) 0                      (3) 1                      (4) 5
84. The sum of three consecutive multiples of 3 is 72. Find the largest of these three numbers
- (1) 21                      (2) 24                      (3) 27                      (4) 30
85. The least number which when divided by 4, 6, 8, 12 and 16 leaves a remainder of 2 in each case is
- (1) 46                      (2) 48                      (3) 50                      (4) 56
86. The L.C.M. of numbers 54, 90 and  $X$  is 1890 and their G.C.D. is 18. Then  $X$  is
- (1) 126                      (2) 144                      (3) 224                      (4) 156
87. If  $m$  and  $n$  are natural numbers such that  $m^n = 121$  then  $(m - 1)^{n+1} =$
- (1) 1100                      (2) 1000                      (3) 999                      (4) 1001
88. If the sum of the first  $n$  natural numbers is a perfect square  $a^2$  where  $a$  is less than 100, then the possible values of  $n$  are
- (1) 1, 8, 49                      (2) 1, 8, 48                      (3) 1, 7, 26                      (4) 1, 9, 27
89. The number of 4 digit numbers greater than 1000 that can be formed with the digits 0, 1, 2, 3 is
- (1) 18                      (2) 19                      (3) 24                      (4) 23
90. The g.c.d. of the numbers  $m$  and  $n$  where  $m = 2^5 \cdot 3^2 \cdot 7^6 \cdot 11^4$  and  $n = 2^3 \cdot 3^4 \cdot 5^6 \cdot 11 \cdot 13^3$  is
- (1) 972                      (2) 279                      (3) 297                      (4) 792

91. Two pipes A and B can fill a tank in 5 hours and 20 hours respectively. Both pipes together can fill it in (hours).
- (1) 4                      (2) 6                      (3) 10                      (4) 12
92. Pipe A can fill an empty tank in 6 hours, while pipe B can empty the full tank in 7 hours. If both are opened in the empty tank it will be filled in (in hours).
- (1) 13                      (2) 21                      (3) 28                      (4) 42
93. A and B can do a work individually in 12 and 8 days respectively. If C also joins them, the work can be completed in 4 days. The number of days required for C alone to do the work is
- (1) 20                      (2) 22                      (3) 24                      (4) 25
94. A sum of money is sufficient to pay A's wages for 21 days or B's wages for 28 days. The number of days for which the money is sufficient to pay the wages of both A and B are
- (1) 12                      (2) 15                      (3) 11                      (4) 14
95. A is twice as fast as B and B is thrice as fast as C. Distance covered by C in one hour will be covered by A in \_\_\_\_\_ minutes
- (1) 10                      (2) 5                      (3)  $\frac{1}{6}$                       (4) 30
96. One train is travelling at 90 kmph and the other at 15 m per second. Then the ratio of their speeds is
- (1) 2 : 5                      (2) 3 : 2                      (3) 4 : 3                      (4) 5 : 3
97. The area of a trapezium is  $\frac{1}{2}(a^2 - b^2)$  sq. units. Where  $a$  and  $b$  are the lengths of the parallel sides. Then the distance between the parallel sides (in units).
- (1) 5                      (2)  $2a$                       (3)  $a + b$                       (4)  $a - b$
98. The ratio of the area of a square of side  $a$  to the area of an equilateral triangle of side  $a$  is
- (1)  $4:\sqrt{3}$                       (2)  $2:\sqrt{3}$                       (3)  $\sqrt{3}:2$                       (4)  $\sqrt{3}:4$

99. The two sides forming the right angle of a triangle whose area is 24 sq. cm, are in the ratio 3 : 4. Then the length of the hypotenuse (in cm) is

- (1) 12                      (2) 10                      (3) 8                      (4) 5

100. The point of concurrence of the medians of a triangle is

- (1) In centre                      (2) Ortho Centre  
(3) Centroid                      (4) Circum Centre

101. Find  $\frac{dy}{dx}$ , if  $Y = 3x^2 - 5x + 3 = 0$

- (1)  $6x - 5$                       (2)  $4x - 3$                       (3)  $2x - 4$                       (4)  $7x - 3$

102. For the individual series complete the median 13, 15, 20, 22, 30, 35, 38, 40, 42, 53

- (1) 26                      (2) 32.5                      (3) 36.5                      (4) 33.5

103. Mode =

- (1) 2 median – 3 mean                      (2) 3 median – 2 mean  
(3) Median – mean                      (4) None

104. Calculate the range for the following individual series 7, 12, 18, 20, 27, 35, 38

- (1) 32                      (2) 33                      (3) 31                      (4) None

105. Calculate the quartile deviation for the following individual series 5, 10, 16, 18, 25, 33, 36

- (1) 10.5                      (2) 11.5                      (3) 11                      (4) None

106. Calculate the mean deviation for the following individual series 7, 12, 18, 20, 27, 35, 38

- (1) 10                      (2) 9.705                      (3) 11                      (4) 11.5

107. Two unbiased coins are tossed. What is the probability of getting at most one head?

- (1)  $\frac{1}{4}$                       (2)  $\frac{2}{3}$                       (3)  $\frac{3}{4}$                       (4) None

108. In a simultaneous throw of a pair of dice, find the probability of getting a total more than 7

- (1)  $\frac{5}{7}$                       (2)  $\frac{5}{12}$                       (3)  $\frac{7}{12}$                       (4)  $\frac{11}{12}$

109. A bag contains 6 white and 4 black balls. Two balls are drawn at random. Find the probability that they are of the same colour.

- (1)  $\frac{8}{15}$                       (2)  $\frac{7}{15}$                       (3)  $\frac{10}{15}$                       (4)  $\frac{11}{15}$

110. An unbiased die is tossed. Find the probability of getting a multiple of 3.

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

111. Two unbiased coins are tossed is the probability of getting atleast one head?

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

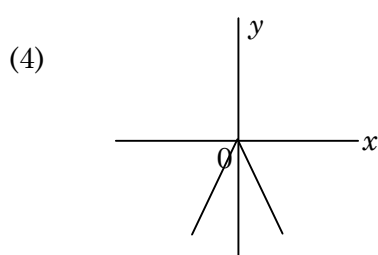
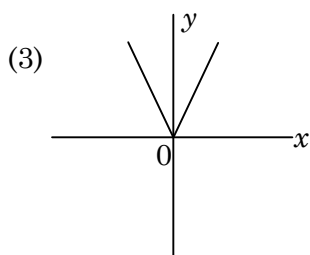
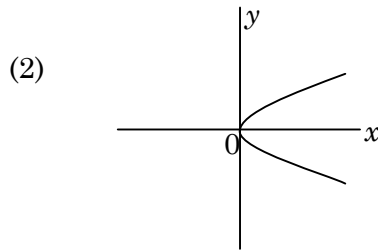
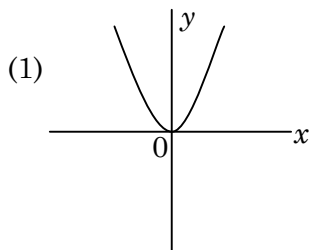
112. What is the values of the statement “ $3 < 4$  and  $4 > 7$ ”?

- (1) T                                              (2) F  
(3) Neither T nor F                                              (4) Cannot be determined

113. Which of the following is a tautology?

- (1)  $p \Rightarrow q$                       (2)  $p \Rightarrow p \wedge q$                       (3)  $p \wedge q \Rightarrow q$                       (4)  $p \Rightarrow \neg p$

114. Which of the following represents the graph of  $y=|x|$ ?



115. Solve  $|x+7|=5$

- (1)  $x = 12, 2$       (2)  $x = 2, -12$       (3)  $x = -2, 12$       (4)  $x = -2, -12$

116. If  $\alpha$  and  $\beta$  are the roots of the equation  $x^2 - 2x - 1 = 0$  then find

$$\alpha\beta + (\alpha\beta)^2 + (\alpha\beta)^3 + \dots + (\alpha\beta)^n$$

- (1)  $-1$       (2)  $1$       (3)  $2$       (4)  $0$

117. If  $(3 + \sqrt{5})$  is a root of the quadratic equation  $x^2 - 6x + k = 0$ , what is the value of  $k$ ?

- (1)  $2$       (2)  $3$       (3)  $4$       (4)  $8$

118. The  $n$ th term of a series in an arithmetic progression is  $(6n - 1)$  what is the sum of first ten terms of the series?

- (1)  $320$       (2)  $240$       (3)  $360$       (4)  $380$

119. The tenth term of an A.P. whose common difference and the first term are the lesser and the greater roots of the quadratic equation  $3x^2 - 8x + 4 = 0$  respectively is

- (1)  $8$       (2)  $\frac{56}{3}$       (3)  $\frac{52}{3}$       (4)  $6$

120. The sum of two numbers is 18. The product of the numbers is 56. Find the larger of the two numbers.

- (1)  $5$       (2)  $6$       (3)  $8$       (4)  $14$

121. Ramu has a total of 15 coins of 50 paise and 20 paise. If the total amount with Ramu is Rs.6, find the number of 50 paise coins he has?

- (1) 1                      (2) 5                      (3) 10                      (4) 6

122. If  $A:B:4$ , then  $\frac{A}{B}:\frac{B}{C}:\frac{C}{A}$  is equal to

- (1) 4 : 9 : 16              (2) 8 : 9 : 12              (3) 8 : 9 : 16              (4) 8 : 9 : 24

123. If 40% of a number is equal to  $\frac{2}{3}$  of another number, what is the ratio of first number to the second number?

- (1) 2 : 5                      (2) 3 : 7                      (3) 5 : 3                      (4) 7 : 3

124. If 720 is 20% of a number, then 120% of that number will be

- (1) 720                      (2) 4320                      (3) 3600                      (4) 120

125. The fourth proportional to 5, 8, 15 is

- (1) 18                      (2) 24                      (3) 19                      (4) 20

126. Due to an increase of 30% in the price of eggs, 3 eggs less are available for Rs.7.80. The present rate of eggs per dozen is

- (1) Rs. 8.64                      (2) Rs. 8.88                      (3) Rs. 9.36                      (4) Rs. 10.40

127. A shopkeeper sold an article offering a discount of 15% earned a profit of 30%. What would have been the percentage of profit earned if no discount was offered?

- (1) 33%                      (2) 42%                      (3) 52.94%                      (4) 53.85%

128. A Product when sold with 20% rebate on the listed price gave a profit of Rs.70. What was its cost price?

- (1) 700                                              (2) 600  
(3) 500                                              (4) Can't be determined



129. P, Q and R enter into a partnership. They invest Rs. 80,000, Rs.1,60,000 and respectively. At the end of the first year, Rs.1,60,000. In what ratio the profit will be shared at the end of 3 years?
- (1) 4 : 3 : 7      (2) 3 : 4 : 7      (3) 7 : 3 : 4      (4) 2 : 3 : 7
130. X, Y and Z started a business by investing Rs. 2,40,000, Rs. 2,70,000 and 3,00,000 respectively. Find the share of 'y' out of an annual profit of Rs. 1,13,400?
- (1) Rs. 33,600      (2) Rs. 37,800      (3) Rs. 42,000      (4) None
131. A man, woman and a boy can complete a work in 3, 4 and 12 days respectively. How many boys must assist 1 man and 1 woman to complete the job in  $\frac{1}{4}$  of a day?
- (1) 1      (2) 4      (3) 19      (4) 41
132. 10 women can complete a work in 7 days and 10 children take 14 days to complete the work. How many days will 5 women and 10 children take to complete the work?
- (1) 3      (2) 5  
(3) 7      (4) Cannot determine
133. Two pipes can fill a tank in 20 and 24 minutes respectively, and a waste pipe can empty 3 gallons per minute. All the three pipes working together can fill the tank in 15 minutes. The capacity of the tank is
- (1) 60 gallons      (2) 100 gallons      (3) 120 gallons      (4) 180 gallons
134. A is twice as fast as B. and B is twice as fast as the journey covered by C in 54 min. will be covered by B in
- (1) 18 min.      (2) 27 min.      (3) 9 min.      (4) 38 min
135. Bombay express left Delhi for Bombay at 14.30 hrs, travelling at a speed of 60 kmph and Rajadhani Express left Delhi for Bombay on the same day at 16 : 30 hrs, travelling at a speed of 80 kmph. How far away from Delhi will the two trains meet?
- (1) 120 km      (2) 480 km      (3) 500 km      (4) 360 km

136. Two trains running in opposite directions cross a man standing on the platform in 27 sec and 17 sec respectively and they cross each other in 23 sec. The ratio of their speeds in
- (1) 1 : 3 (2) 3 : 2  
(3) 3 : 4 (4) None of these
137. What will be the area of the semi-circle of 14 m diameter?
- (1) 22 m<sup>2</sup> (2) 77 m<sup>2</sup> (3) 154 m<sup>2</sup> (4) 308 m<sup>2</sup>
138. The area of a sector of a circle of radius 10 cm, formed by an arc of length 7 cm is
- (1) 33 cm<sup>2</sup> (2) 34 cm<sup>2</sup> (3) 36 cm<sup>2</sup> (4) 35 cm<sup>2</sup>
139. A wheel makes 1000 revolutions in covering a distance of 176 km. Find the radius of the wheel?
- (1) 29 m (2) 14 m (3) 28 m (4) 56 m
140. The length of a rectangle is halved, while its breadth is tripled. What is the % change in area?
- (1) 25% (2) 75% (3) 35% (4) 50%
141. A solid piece of iron of dimensions  $49 \times 33 \times 24$  cm is moulded into a sphere. Then the radius of the sphere is
- (1) 35 cm (2) 21 cm (3) 28 cm (4) None
142. The volume of the largest right circular cone that can be cut out of a cube edge 7 cm is
- (1) 89.8 cm<sup>3</sup> (2) 13.6 cm<sup>3</sup> (3) 98.7 % (4) 67.9%
143. A solid metallic cylinder of base radius 6 cm and height 10 cm is melted to form cones, each of height 1 cm and base radius 1 mm. The no. of cones is
- (1) 1,80,000 (2) 50,400 (3) 75,000 (4) 1,09,000
144. A tailor has 37.5 meters of cloth and has to make 12 pieces cut of a meter of a cloth, how many pieces can be made cut of this cloth
- (1) 850 (2) 300 (3) 450 (4) 400

145. When 0.343434 \_\_\_\_\_ is converted into a fraction, the result is \_\_\_\_\_

- (1)  $\frac{3434}{10000}$       (2)  $\frac{34}{9}$       (3)  $\frac{34}{99}$       (4)  $\frac{34}{999}$

146. The L.C.M. of two numbers is 48, the numbers are in the ratio 2 : 3 then the sum of the numbers is

- (1) 28      (2) 32      (3) 40      (4) 64

147. H.C.F. and L.C.M. of two numbers are 84 and 21 and ratio of the two numbers is 1:4 then the larger of the two numbers is

- (1) 12      (2) 48      (3) 184      (4) 84

148. A number was divided successively in order by 4,5,6. The remainders were 2,3, and 4, then the number is

- (1) 214      (2) 472      (3) 954      (4) 1908

149. The smallest number that must be added to 803642 in order to obtain a multiple of 11 is

- (1) 5      (2) 11      (3) 6      (4) 9

150.  $397 \times 397 + 104 \times 104 + 2 \times 104 \times 397 = ?$

- (1) 250001      (2) 251001      (3) 260101      (4) 261001

**SECTION C**  
**COMMUNICATION ABILITY**

**50 Marks**

**PART I**

**Directions (Qs. 151 to 155) : Read the passage carefully and then answer the questions :**

Today perhaps your only association with the word 'polio' is the Sabin Oral Vaccine that protects children from the disease. Fifty-five years ago, this was not so. The dreaded disease, which mainly affects the brain and the spinal cord, causes stiffening and weakening of the muscles, crippling and paralysis - which is why I am in a wheelchair today. If somebody had predicted, when I was born, that this would happen to me, no one would have believed it. I was the seventh child in a family of four pairs of brothers and sisters, with a huge 23-year gap between the first and the last. I was told that, unlike the others. I was so fair and brown-haired that I looked more like a foreigner than a Dawood Bohri. I was also considered to be the healthiest of the brood.

151. In this passage, the narration is a patient of?
- |                   |                      |
|-------------------|----------------------|
| (1) Heart disease | (2) Polio            |
| (3) Paralysis     | (4) Nervous weakness |
152. The narrator was the seventh child in a family of?
- |                 |                 |
|-----------------|-----------------|
| (1) 8 children  | (2) 16 children |
| (3) 23 children | (4) 4 children  |
153. In his childhood, the narrator was
- |                   |                     |
|-------------------|---------------------|
| (1) a weakling    | (2) very healthy    |
| (3) tall and slim | (4) short and stout |
154. In his childhood, the narrator looked "more like a foreigner than a Dawood Bohri". This was because he was
- |                     |                           |
|---------------------|---------------------------|
| (1) a foreign child | (2) a very healthy boy    |
| (3) tall and smart  | (4) fair and brown-haired |
155. In this passage, the word 'brood' refers to
- |                            |                      |
|----------------------------|----------------------|
| (1) Polio victims          | (2) Foreign children |
| (3) children in the family | (4) Indian children  |

**Read the passage carefully and then answer questions (Qs. 156 to 160) :**

Soft-bodied animals like caterpillars often fall a prey to voracious hunters like birds or reptiles. Despite having no means to 'actively' defend themselves, with weapons like claws or jaws, they have nevertheless, evolved other equally effective deterrents. A particular species of the caterpillar lives at an altitude of over 2,500 metres in the Himalayas. It uses prominent colours to inform would be predators of its inedibility. In the event that an inexperienced or adventurous bird did eat the caterpillar, it would probably vomit it out soon after, and subsequently desist from attacking similar species in the future. Though this would do the unfortunate victim no good, the species benefits. A rare example of the martyr among animals.

156. Caterpillars cannot defend themselves because they

- |                            |                           |
|----------------------------|---------------------------|
| (1) are passive animals    | (2) are lazy              |
| (3) cannot acquire weapons | (4) have no claws or jaws |

157. The Himalayan caterpillar uses prominent colours to

- |                       |                         |
|-----------------------|-------------------------|
| (1) warn the predator | (2) attack the predator |
| (3) reveal itself     | (4) defend itself       |

158. The expression "others equally effective deterrents" means

- |                                                                                                            |
|------------------------------------------------------------------------------------------------------------|
| (1) preventive weapons which have equal effect of other                                                    |
| (2) mechanism which scares everyone equally well                                                           |
| (3) preventive equipment which is as effective as something that has been already mentioned in the passage |
| (4) weapons like claws or jaws                                                                             |

159. Experienced birds do not attack the Himalayan caterpillars because they are

- |               |                     |
|---------------|---------------------|
| (1) repulsive | (2) very aggressive |
| (3) inedible  | (4) diseased        |

160. In the context of this passage, a martyr is one who dies

- |                                    |                                 |
|------------------------------------|---------------------------------|
| (1) without putting up resistance  | (2) without any gain to oneself |
| (3) while defending one's homeland | (4) to save others              |

**Read the following passage carefully and answer questions :  
(Qs. 161 to 165) :**

The overwhelming vote given by the greater part of the public has so far been in favour of entertainment which passes the time easily, and satisfies that part of our imagination which depends on the more obvious kind of daydreams. You can argue that these daydreams are usually substitutes for our own inactivity, ineffectualness, and lack of power of influence, so that we make up for what we secretly regard as our deficiencies by watching the stimulating adventures of other people who are larger, stronger, more effective, or more beautiful than we are. The conventional starts act our daydreams for us in a constant succession of existing situations set in the open spaces of the American West, or in the jungles we will never visit (we would not dare to, most of us, if we could), or in the underworld of great cities where crime and violence may not pay in the end, but are very exciting to watch if your youth is being spent in the day-to-day routine of school or office, on the one hand, or in the kitchen and living-room of 39 Blank St, on the other.

Whether we admit it to ourselves or not, most of us very conscious of deficiencies in our looks, our clothes, and the circumstances of our homes. But on the screen we can feast our eyes on people selected to appear because of their good looks, dressed in expensive and sometimes extravagantly showy clothes, and moving about most of the time in the plushy environment of wealth! What you cannot have yourself, at least you can continuously look at surrounding other people, and, who knows, one day you may have these things too, like the stars who have come up from nowhere but now earn large fortunes!

161. Why do we enjoy films in which there are larger-than-life characters?
- (1) We don't like films to be true to life
  - (2) We like the big screen
  - (3) Art is not for art's sake
  - (4) They enable us to compensate ourselves for our shortcomings.
162. Why do we enjoy films based on crime and violence?
- (1) Human beings admire criminals
  - (2) They provide for us some relief from the boredom of routine life
  - (3) Crime and violence have become part of our life
  - (4) All human beings are sadists.
163. What aspect of human psychology does the author refer to in the second paragraph?
- (1) Human beings enjoy the very sight of qualities and luxuries they are deprived of
  - (2) Human psychology is very complex
  - (3) Human beings love being poor
  - (4) Human beings admire themselves.

164. What does the word plyshy means?
- (1) extremely soft
  - (2) extremely happy
  - (3) extremely comfortable and expensive
  - (4) extremely delicate
165. What kind of entertainment do people like most?
- (1) That which kills their strong desires
  - (2) That which makes their daydreams become real
  - (3) That which feeds their imagination
  - (4) That which transforms daydreams into nightmares.

## PART II

**Directions (Qs. 166 to 170) : choose the correct Answer :**

166. Flagrant
- (1) Scented
  - (2) Shameless
  - (3) Patriotic
  - (4) Burning
167. Incongruous
- (1) Out of time
  - (2) Out of country
  - (3) Out of space
  - (4) Out of place
168. Enigmatic
- (1) puzzling
  - (2) sharp
  - (3) problematic
  - (4) docile
169. Tardy
- (1) quick
  - (2) sluggish
  - (3) dirty
  - (4) progressive
170. Omniscient
- (1) all powerful
  - (2) indefatigable
  - (3) all knowing
  - (4) indomitable

**Directions (Qs. 171 to 175) : Fill in the blank choosing correct word :**

171. Ubiquitous = \_\_\_\_\_  
 (1) somewhere (2) everywhere  
 (3) nowhere (4) hardware
172. The study of coins is called \_\_\_\_\_  
 (1) archaeology (2) palaeontology  
 (3) orthography (4) numismatics
173. We must always resolve our difference \_\_\_\_\_  
 (1) amiably (2) arguably  
 (3) amicably (4) affably
174. It wasn't very \_\_\_\_\_ of you to ring me up at the office during working hours.  
 (1) discreet (2) discrete  
 (3) distinguished (4) delinquent
175. A man with a split personality is a \_\_\_\_\_  
 (1) lunatic (2) misanthrope  
 (3) sadist (4) schizophrenic

### PART III

**Directions (Qs. 176 to 190) : Fill in the blanks with the appropriate phrase/verb/ preposition :**

176. The son \_\_\_\_\_ the business on the retirement of his father  
 (1) takes on (2) takes after  
 (3) has taken over (4) take out
177. I \_\_\_\_\_ the newspaper but I couldn't find any job notifications today.  
 (1) looked out (2) looked over  
 (3) looked through (4) looked at
178. The money must be dealt \_\_\_\_\_ fairly and justly  
 (1) in (2) with (3) off (4) out
179. The plane \_\_\_\_\_ at half past ten in the morning  
 (1) will takeup (2) took off (3) is taking off (4) taken off



180. Run round the corner! Someone is following close ————— us  
(1) behind (2) after (3) beside (4) to
181. They wanted some advice ————— how they could raise funds for their new business.  
(1) about (2) to (3) for (4) on
182. I complimented him ————— his brilliant success in the examination  
(1) over (2) for (3) to (4) on
183. ————— being a dynamic leader, Nehru was also a prolific writer  
(1) Beside (2) Owing to (3) Besides (4) Because of
184. Whales are ————— animals that can grow as long as sixty feet  
(1) immense (2) immediate (3) imaginary (4) impartial
185. The ————— position of the country is not good  
(1) economical (2) economic  
(3) economics (4) none
186. You must apologise ————— what you said.  
(1) for (2) about (3) on (4) in
187. Globalisation has been ————— favourably on our economy.  
(1) impacting (2) improving (3) interpolating (4) intervening
188. I shall not be late for dinner —————  
(1) unless the train will be late (2) unless the train will not be late  
(3) unless the train is late (4) if the train is late
189. I ————— my uncle as soon as he arrived in India.  
(1) called on (2) called with (3) called out (4) called at
190. He takes no interest ————— politics.  
(1) at (2) over (3) in (4) for

**PART IV****Directions (Qs. 191 to 200) Choose the correct answer :**

191. Franchise is a
- (1) a bond
  - (2) a letter of intent
  - (3) an agreement enabling a third party to sell
  - (4) a business fidelity
192. WiFi is the abbreviation for
- (1) Wireless identity for internet
  - (2) World wide internet for fast information
  - (3) World wide imaging for intelligence
  - (4) Wireless fidelity
193. Copy-writer is a person who
- (1) Conceives the ideas and writes the advertisement
  - (2) Transcribes the product design
  - (3) Assists public relation works
  - (4) Represents the management of a company at a new conference.
194. The receipt given by an air carrier for shipment of goods is called
- (1) Air Delivery Note
  - (2) Air Cargo Acknowledgement
  - (3) Airway Bill
  - (4) Air Parcel Receipt
195. The Chamber of Commerce for the IT software and services industry in India is
- (1) NASSCOM
  - (2) CII
  - (3) NIC
  - (4) NSE

196. A general rise in prices measured against a standard level of purchasing power is referred to as

- |                          |                          |
|--------------------------|--------------------------|
| (1) Consumer price index | (2) Cost of living index |
| (3) Inflation index      | (4) GDP                  |

197. A text file contains

- |                                     |                         |
|-------------------------------------|-------------------------|
| (1) Alphabetical and numerical data | (2) A spread sheet      |
| (3) Only alphabetical data          | (4) Only numerical data |

198. When a contract becomes null void, it means that the contract is

- |             |                             |
|-------------|-----------------------------|
| (1) illegal | (2) not binding             |
| (3) immoral | (4) ripe for implementation |

199. A web tool that consists of a searchable data base of websites is called

- |                   |                    |
|-------------------|--------------------|
| (1) Google        | (2) Web Directory  |
| (3) Search Engine | (4) World Wide Web |

200. A device with volatile memory is

- |                   |                  |
|-------------------|------------------|
| (1) RAM           | (2) ROM          |
| (3) Magnetic Disk | (4) Compact Disk |

ROUGH WORK

ROUGH WORK

HALL TICKET No. :

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

Sl. No.

| ANSWER SHEET |         |       |         |       |         |       |         |
|--------------|---------|-------|---------|-------|---------|-------|---------|
| Q.No.        | Answer  | Q.No. | Answer  | Q.No. | Answer  | Q.No. | Answer  |
| 1            | ① ② ③ ④ | 51    | ① ② ③ ④ | 101   | ① ② ③ ④ | 151   | ① ② ③ ④ |
| 2            | ① ② ③ ④ | 52    | ① ② ③ ④ | 102   | ① ② ③ ④ | 152   | ① ② ③ ④ |
| 3            | ① ② ③ ④ | 53    | ① ② ③ ④ | 103   | ① ② ③ ④ | 153   | ① ② ③ ④ |
| 4            | ① ② ③ ④ | 54    | ① ② ③ ④ | 104   | ① ② ③ ④ | 154   | ① ② ③ ④ |
| 5            | ① ② ③ ④ | 55    | ① ② ③ ④ | 105   | ① ② ③ ④ | 155   | ① ② ③ ④ |
| 6            | ① ② ③ ④ | 56    | ① ② ③ ④ | 106   | ① ② ③ ④ | 156   | ① ② ③ ④ |
| 7            | ① ② ③ ④ | 57    | ① ② ③ ④ | 107   | ① ② ③ ④ | 157   | ① ② ③ ④ |
| 8            | ① ② ③ ④ | 58    | ① ② ③ ④ | 108   | ① ② ③ ④ | 158   | ① ② ③ ④ |
| 9            | ① ② ③ ④ | 59    | ① ② ③ ④ | 109   | ① ② ③ ④ | 159   | ① ② ③ ④ |
| 10           | ① ② ③ ④ | 60    | ① ② ③ ④ | 110   | ① ② ③ ④ | 160   | ① ② ③ ④ |
| 11           | ① ② ③ ④ | 61    | ① ② ③ ④ | 111   | ① ② ③ ④ | 161   | ① ② ③ ④ |
| 12           | ① ② ③ ④ | 62    | ① ② ③ ④ | 112   | ① ② ③ ④ | 162   | ① ② ③ ④ |
| 13           | ① ② ③ ④ | 63    | ① ② ③ ④ | 113   | ① ② ③ ④ | 163   | ① ② ③ ④ |
| 14           | ① ② ③ ④ | 64    | ① ② ③ ④ | 114   | ① ② ③ ④ | 164   | ① ② ③ ④ |
| 15           | ① ② ③ ④ | 65    | ① ② ③ ④ | 115   | ① ② ③ ④ | 165   | ① ② ③ ④ |
| 16           | ① ② ③ ④ | 66    | ① ② ③ ④ | 116   | ① ② ③ ④ | 166   | ① ② ③ ④ |
| 17           | ① ② ③ ④ | 67    | ① ② ③ ④ | 117   | ① ② ③ ④ | 167   | ① ② ③ ④ |
| 18           | ① ② ③ ④ | 68    | ① ② ③ ④ | 118   | ① ② ③ ④ | 168   | ① ② ③ ④ |
| 19           | ① ② ③ ④ | 69    | ① ② ③ ④ | 119   | ① ② ③ ④ | 169   | ① ② ③ ④ |
| 20           | ① ② ③ ④ | 70    | ① ② ③ ④ | 120   | ① ② ③ ④ | 170   | ① ② ③ ④ |
| 21           | ① ② ③ ④ | 71    | ① ② ③ ④ | 121   | ① ② ③ ④ | 171   | ① ② ③ ④ |
| 22           | ① ② ③ ④ | 72    | ① ② ③ ④ | 122   | ① ② ③ ④ | 172   | ① ② ③ ④ |
| 23           | ① ② ③ ④ | 73    | ① ② ③ ④ | 123   | ① ② ③ ④ | 173   | ① ② ③ ④ |
| 24           | ① ② ③ ④ | 74    | ① ② ③ ④ | 124   | ① ② ③ ④ | 174   | ① ② ③ ④ |
| 25           | ① ② ③ ④ | 75    | ① ② ③ ④ | 125   | ① ② ③ ④ | 175   | ① ② ③ ④ |
| 26           | ① ② ③ ④ | 76    | ① ② ③ ④ | 126   | ① ② ③ ④ | 176   | ① ② ③ ④ |
| 27           | ① ② ③ ④ | 77    | ① ② ③ ④ | 127   | ① ② ③ ④ | 177   | ① ② ③ ④ |
| 28           | ① ② ③ ④ | 78    | ① ② ③ ④ | 128   | ① ② ③ ④ | 178   | ① ② ③ ④ |
| 29           | ① ② ③ ④ | 79    | ① ② ③ ④ | 129   | ① ② ③ ④ | 179   | ① ② ③ ④ |
| 30           | ① ② ③ ④ | 80    | ① ② ③ ④ | 130   | ① ② ③ ④ | 180   | ① ② ③ ④ |
| 31           | ① ② ③ ④ | 81    | ① ② ③ ④ | 131   | ① ② ③ ④ | 181   | ① ② ③ ④ |
| 32           | ① ② ③ ④ | 82    | ① ② ③ ④ | 132   | ① ② ③ ④ | 182   | ① ② ③ ④ |
| 33           | ① ② ③ ④ | 83    | ① ② ③ ④ | 133   | ① ② ③ ④ | 183   | ① ② ③ ④ |
| 34           | ① ② ③ ④ | 84    | ① ② ③ ④ | 134   | ① ② ③ ④ | 184   | ① ② ③ ④ |
| 35           | ① ② ③ ④ | 85    | ① ② ③ ④ | 135   | ① ② ③ ④ | 185   | ① ② ③ ④ |
| 36           | ① ② ③ ④ | 86    | ① ② ③ ④ | 136   | ① ② ③ ④ | 186   | ① ② ③ ④ |
| 37           | ① ② ③ ④ | 87    | ① ② ③ ④ | 137   | ① ② ③ ④ | 187   | ① ② ③ ④ |
| 38           | ① ② ③ ④ | 88    | ① ② ③ ④ | 138   | ① ② ③ ④ | 188   | ① ② ③ ④ |
| 39           | ① ② ③ ④ | 89    | ① ② ③ ④ | 139   | ① ② ③ ④ | 189   | ① ② ③ ④ |
| 40           | ① ② ③ ④ | 90    | ① ② ③ ④ | 140   | ① ② ③ ④ | 190   | ① ② ③ ④ |
| 41           | ① ② ③ ④ | 91    | ① ② ③ ④ | 141   | ① ② ③ ④ | 191   | ① ② ③ ④ |
| 42           | ① ② ③ ④ | 92    | ① ② ③ ④ | 142   | ① ② ③ ④ | 192   | ① ② ③ ④ |
| 43           | ① ② ③ ④ | 93    | ① ② ③ ④ | 143   | ① ② ③ ④ | 193   | ① ② ③ ④ |
| 44           | ① ② ③ ④ | 94    | ① ② ③ ④ | 144   | ① ② ③ ④ | 194   | ① ② ③ ④ |
| 45           | ① ② ③ ④ | 95    | ① ② ③ ④ | 145   | ① ② ③ ④ | 195   | ① ② ③ ④ |
| 46           | ① ② ③ ④ | 96    | ① ② ③ ④ | 146   | ① ② ③ ④ | 196   | ① ② ③ ④ |
| 47           | ① ② ③ ④ | 97    | ① ② ③ ④ | 147   | ① ② ③ ④ | 197   | ① ② ③ ④ |
| 48           | ① ② ③ ④ | 98    | ① ② ③ ④ | 148   | ① ② ③ ④ | 198   | ① ② ③ ④ |
| 49           | ① ② ③ ④ | 99    | ① ② ③ ④ | 149   | ① ② ③ ④ | 199   | ① ② ③ ④ |
| 50           | ① ② ③ ④ | 100   | ① ② ③ ④ | 150   | ① ② ③ ④ | 200   | ① ② ③ ④ |

Signature of the Candidate

Signature of the Invigilator

