OPENMAT (XX) Entrance Test for Management Programmes 2006

Total No. of Questions = 200 *Time : 180 Minutes*

— All questions are compulsory.

— Use of calculator is not allowed. Rough work may be done in the space provided at the back of the Test booklet.

— The Test booklet has the following 4 tests :

Test-I	General Awareness	No. of Questions 30
Test-II	English Language	No. of Questions 50
Test-III	Quantitative Aptitude	No. of Questions 50
Test-IV	Reasoning	No. of Questions 70

Read the instructions given on the OMR Response Sheet carefully before you start.

How to fill up the information on the OMR Response Sheet (Examination Answer Sheet)

1. Write your complete enrolment no. in 9 digits. This should correspond to the enrolment number indicated by you on the OMR Response Sheet. Also write your correct name, address with pin code in the space provided. Put your signatures on the OMR Response Sheet with date. Ensure that the Invigilator in your examination hall also puts his signatures with date on the OMR Response Sheet at the space provided.

2. On the OMR Response Sheet student's particulars are to be filled in by pen. However use HB pencil for writing the Enrolment No. and Examination Centre Code as well as for blackening the rectangle bearing the correct answer number against the serial number of the question.

3. Do not make any stray remarks on this sheet.

4. Write correct information in numerical digit in Enrolment No. and Examination Centre Code columns. The corresponding rectangle should be dark enough and should be filled in completely.

5. Each question is followed by four probable answers which are numbered 1, 2, 3 & 4. You should select and show only one answer to each question considered by you as the most appropriate or the correct answer. Select the most appropriate answer. Then by using HB pencil, blacken the rectangle bearing the correct answer number against the serial number of the question. If you find that answer to any question is none of the four alternatives given under the question you should darken the rectangle '0'.

6. If you wish to change your answer, ERASE completely the already darkened rectangle by using a good quality eraser and then blacken the rectangle bearing your revised answer number. If incorrect answer is not erased completely, smudges will be left on the erased rectangle and the question will be read as having two answers and will be ignored for giving any credit.

7. No credit will be given if more than one answer is given for one question. Therefore, you should select the most appropriate answer.

8. You should not spend too much time on any one question. If you find any particular question difficult, leave it and go to the next. If you have time left after answering all the questions, you may go back to the unanswered ones. There is no negative marking for wrong answers.

GENERAL INSTRUCTIONS

1. No cell phones, calculators, books, slide-rules, note-books or written notes, etc. will be allowed inside the examination hall.

2. You should follow the instructions given by the Centre Superintendent and by the Invigilator at the examination venue. If you violate the instructions you will be disqualified.

3. Any candidate found copying or receiving or giving assistance in the examination will be disqualified.

4. The Test Booklet and the OMR Response Sheet (Answer Sheet) would be supplied to you by the Invigilators. After the examination is over, you should hand over the OMR Response Sheet to the Invigilator before leaving the examination hall. Any candidate who does not return the OMR Response Sheet will be disqualified and the University may take further action against him/her.

5. All rough work is to be done on the test booklet itself and not on any other paper. Scrap paper is not permitted. For arriving at answers you may work in the margins, make some markings or underline in the test booklet itself.

6. The University reserves the right to cancel scores of any candidate who impersonates or uses/adopts other malpractices or uses any unfair means. The examination is conducted under uniform conditions. The University would also follow a procedure to verify the validity of scores of all examinees uniformly. If there is substantial indication that your performance is not genuine, the University may cancel your score.

7. Candidates should bring their hall tickets duly affixed with their latest photograph to appear in the test. The photograph should be attested by a Gazetted Officer, failing which you will not be allowed to take the examination. It should be got signed by the Invigilator. In the event of your qualifying the Entrance Test, this hall ticket should be enclosed with your admission form while submitting it to the University for seeking admission in Management Programme along with your testimonials and programme fee. Admission forms received without hall ticket in original will be summarily rejected.

TEST IV

REASONING

Directions for Questions No. 131 – 134. *Consider the following information.*

Six school board members — A, B, C, D, E and F — are seated at a conference table in the auditorium. They take six seats, numbered 1 through 6 from left to right, on the same side of the table. However, there are the following restrictions on seating :

(i) A has openly clashed with B, and cannot be seated immediately to the left or immediately to the right of B.

(ii) C has a hearing impairment that only D knows about, and so must be immediately to the left of D.

(iii) F will not occupy seat 6 at the table.

131. Which of the following board members ***cannot*** be seated in seat 1 ?

(1) A
(2) B
(3) C
(4) D

132. If D is seated in seat 3, C must be seated in seat

(1) 1
(2) 2
(3) 4
(4) 5

133. If A is seated in seat 5, which of the remaining board members must be seated in seat 6 ?

(1) C
(2) D
(3) E
(4) F

134. If F is seated in seat 3, immediately to the right of D, which of the remaining board members must be seated in seat 5 ?

(1) E
(2) D
(3) C
(4) B

Directions for Questions No. 135 – 140. *Find the number that comes next in the sequence.*

135. 5, 6, 7, 8, 10, 11, 14, 15, _____

(1) 17 (2) 19

(3) 20 (4) 23

136. 4, 10, 28, 82, 244, _____

(1) 488 (2) 612

(3) 644 (4) 730

137. 0·5, 0·55, 0·65, 0·8, _____

(1) 0·9 (2) 0·95

(3) 1·0 (4) 1·05

138. 4, 23, 60, 121, _____

(1) 212 (2) 242

(3) 101 (4) 100

139. 840, 168, 42, 14, 7, _____

(1) 0 (2) 7

(3) 1 (4) 5

140. 0, 2, 8, 14, 24, 34, 48, _____

(1) 60 (2) 61

(3) 62 (4) 66

141. If N is the average (arithmetic mean) of five numbers, which of the following must be true ?

I. At least one of the five numbers is greater than or equal to N.

II. At least one of the five numbers is less than or equal to N.

III. At least two of the five numbers are greater than or equal to N.

(1) I only (2) II only

(3) I and II only (4) I and III only

142. If the sum of two numbers is known, which of the following is ***not*** sufficient to determine the values of the two numbers ?

(1) One number is greater than the other

(2) The cube of one number is 8

(3) The product of the two numbers is 8

(4) One number is half the other

Directions for Questions No. 143 – 147 : *Study the following information.*

(i) A, B, C, D, E and F are six members in a family in which there are two married couples.

(ii) E, a professor, is married to a doctor who is the mother of C and F.

(iii) B, the lawyer, is married to A.

(iv) A has one son and one grandson.

(v) Of the two married ladies one is a housewife.

(vi) There is also one student and one male engineer in the family.

143. How is A related to C ?

(1) Grandfather (2) Mother

(3) Sister (4) Grandmother

144. Who among the following is the housewife ?

(1) A (2) B

(3) D (4) E

145. How is C related to F ?

(1) Brother (2) Sister

(3) Brother or Sister (4) Data inadequate

146. Which of the following represents the group of females in the family ?

(1) ADC (2) ADF

(3) BEC (4) Data inadequate

147. Which of the following is true about the granddaughter in the family ?

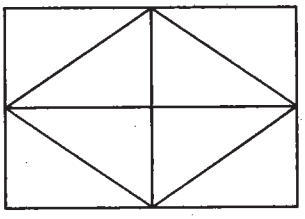
(1) She is a lawyer

(2) She is a student

(3) She is an engineer

(4) Data inadequate

148. What is the number of triangles in the following figure ?



(1) 8

(2) 10

(3) 12

(4) 16

149. Some boys are sitting in a row. P is sitting fourteenth from the left and Q is seventh from the right. If there are four boys between P and Q, how many boys are there in the row, considering that Q is to the right of P ?

(1) 25

(2) 21

(3) 20

(4) 18

150. A bus for Delhi leaves every thirty minutes from a bus stand. An enquiry clerk told a passenger that the bus had already left ten minutes back and the next bus will leave at 9·35 a.m. At what time did the enquiry clerk give this information to the passenger ?

(1) 8·55 a.m.

(2) 9·08 a.m.

(3) 9·10 a.m.

(4) 9·15 a.m.

Directions for Questions No. 151 to 155. *In each of these questions, four words have been given, out of which three are alike in some manner and the fourth one is different. Find out the odd one.*

151. (1) Curd (2) Butter

(3) Oil (4) Cheese

152. (1) Rose (2) Lotus

(3) Lily (4) Marigold

153. (1) Arrow (2) Sword

(3) Axe (4) Knife

154. (1) Metre (2) Yard

(3) Mile (4) Acre

155. (1) Tortoise (2) Duck

(3) Snake (4) Whale

Directions for Questions No. 156 to 161 : *Study the following information.*

A circus manager must divide eight circus acts — F, L, M, O, R, T, X, and Z — into two groups of four acts each, one group scheduled to perform, one act at a time, in ring 1 and the other group scheduled to perform, also one act at a time, in ring 2. All acts take equally long to perform, and every act that takes place in one of the rings must be scheduled for exactly the same time slot as an act that takes place in the other ring. The schedule must also conform to the following conditions :

(i) Act F must take place in one of the rings at the same time that act M takes place in the other ring.

(ii) Act L must take place in one of the rings at the same time that act O takes place in the other ring.

(iii) Act R must take place in the same ring as act F.

(iv) Act T must take place in the same ring as act O.

(v) Act X must be the second act that takes place in ring 2.

156. Which of the following, without regard to the order in which they will be performed, could be the group of acts to be scheduled for performance in ring 1 ?

(1) L, M, O, and T (2) M, O, T, and Z

(3) F, L, M, and T (4) F, L, O, and T

157. If act T performs in ring 1, which of the following acts must perform in ring 2 ?

(1) L (2) M

(3) R (4) Z

158. If act R must perform in one of the rings at the same time that act T performs in the other ring, which of the following must be the second act in ring 1 ?

(1) M (2) O

(3) Z (4) F

159. If the order, from first to last, of circus acts in ring 2 is O, X, T, M, which of the following is an acceptable order of acts in ring 1, also from first to last ?

(1) L, Z, F, R (2) L, Z, R, F

(3) Z, L, F, R (4) Z, R, L, F

160. If act F must perform between act X and act R in ring 2, which of the following must be the first act in ring 1 ?

(1) L (2) M

(3) O (4) Z

161. If act T must take place in ring 1 immediately after act F and immediately before act R, which act must be the third act in ring 2 ?

(1) M (2) O

(3) T (4) Z

162. A decrease of 1 in which of the factors below would result in the greatest decrease in the product ?

$11 \times 13 \times 17 \times 19$

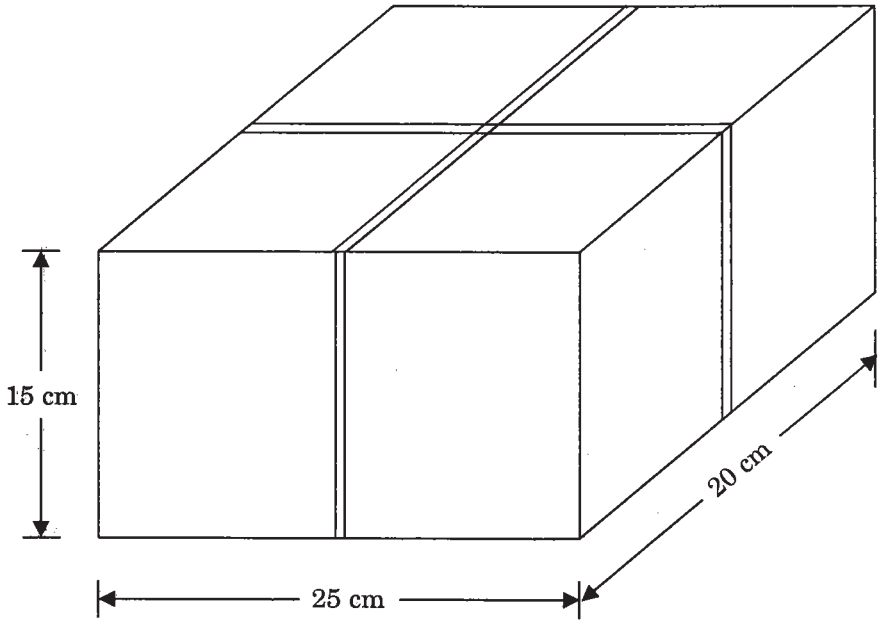
(1) 11

(2) 13

(3) 17

(4) 19

163. The rectangular box shown below has been wrapped with two tapes, each going exactly once around the box and running parallel to the edges of the box. How many centimeters of tape were used on the box ?



(1) 80 cm

(2) 150 cm

(3) 120 cm

(4) 200 cm

164. 'Hair' is to 'Bald' as 'Vegetation' is to

(1) Land

(2) Green

(3) Irrigation

(4) Barren

Directions for Questions No. 165 – 170 : *Consider the following information.*

Five students A, E, I, O, and U were comparing the scores each received in a test and a quiz. The following were discovered :

(i) A's quiz score was 80.

(ii) A's test score equals U's quiz score.

(iii) U's test score equals A's quiz score.

(iv) A's quiz score is 15 less than U's quiz score.

(v) O's test score is 20 more than his quiz score and is 20 more than I's test score.

(vi) O's test score is 40 more than E's quiz score.

(vii) I's quiz score is 10 less than E's quiz score.

165. If E's quiz score is 60, what is O's quiz score ?

(1) 80 (2) 70

(3) 50 (4) 40

166. Which of the following is true ?

I. I's test score equals O's quiz score.

II. E's quiz score equals U's quiz score.

III. A's quiz score equals U's test score.

(1) I only (2) III only

(3) I and III only (4) II and III only

167. What is U's test score ?

(1) 55 (2) 80

(3) 95 (4) 100

168. If I's test score is 45, what is O's test score ?

(1) 35 (2) 45

(3) 55 (4) 65

169. If E's quiz score is 50, which of the following is true ?

I. I's test score is 70

II. O's test score is 90

III. I's quiz score is 30

(1) I only (2) II only

(3) III only (4) I and II only

170. If O's quiz score is same as U's quiz score, which of the following must be true ?

I. I's test score is 95

II. O's test score is 110

III. I's quiz score is 70

IV. E's quiz score is 70

(1) I only (2) II and IV only

(3) I and III only (4) II and III only

171. A father tells his son, "I was of your present age when you were born." If the father is 46 years old now, how old was the boy five years back ?

(1) 15 (2) 17

(3) 18 (4) 19

172. In the figure below, if x = ky, and k is a constant, what is the missing value of y in the table ?

x	5	$\frac{5}{9}$
y	3	?

(1) $\frac{1}{27}$ (2) $\frac{1}{3}$

(3) $\frac{25}{27}$ (4) $\frac{27}{25}$

173. The average of two numbers is XY. If one number is equal to X, the other number is equal to

(1) Y (2) 2Y

(3) XY — X (4) 2XY — X

Directions for Questions No. 174 to 176.

Unscramble the letters in the following words and find the odd man out.

174. (1) RDE

(2) RWBON

(3) LOCORU

(4) LUBE

175. (1) OKOB

(2) NEP

(3) CEPNIL

(4) APPRE

176. (1) IMWS

(2) KALW

(3) URN

(4) NISELT

177. City X is 200 miles east of city Y, and city Z is 150 miles directly north of city Y. What is the shortest distance (in miles) between X and Z ?

(1) 175 (2) 200

(3) 250 (4) 300

178. Points B and C lie on line AD so that AB = BC = CD. What part of AD is AC ?

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

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

179. Which of the following equations gives the relationship between R and S in the table below ?

R	1	2	3	4	5	6
S	2	5	8	11	14	17

(1) $S = 2R$ (2) $S = R^2 + 1$

(3) $S = R^2 - 1$ (4) $S = 3R - 1$

Directions for Questions No. 180 – 184. *Consider the following information.*

A cube is painted red on two adjacent faces, black on the faces opposite to the red faces and green on the remaining faces. It is then cut into 64 smaller cubes of equal size.

180. How many cubes are there which have no face painted ?

(1) 0 (2) 4

(3) 8 (4) 12

181. How many cubes have only one face painted ?

(1) 16 (2) 24

(3) 36 (4) 48

182. How many cubes have two faces painted ?

(1) 8 (2) 16

(3) 24 (4) 30

183. How many cubes are there with three faces painted ?

(1) 8 (2) 10

(3) 12 (4) 14

184. How many cubes have one face green and one of the adjacent faces black or red ?

(1) 8 (2) 16

(3) 24 (4) 28

Directions for Questions No. 185 – 188. *Consider the following information.*

(i) I, B, and P are three friends. Each of them is either an American or an Indian.

(ii) I is not an Indian.

(iii) P is not a singer.

(iv) Each of them is either a singer or a dancer.

(v) American cannot sing and citizens of a country do not have the same vocation.

185. Who is Indian among the following ?

(1) B only (2) P only

(3) B and P (4) Either B or P

186. Who among the following are Americans ?

(1) I and B (2) I only

(3) I and P (4) Data insufficient

187. Who among the following is a singer ?

(1) I (2) B

(3) P (4) I and B

188. B is an

(1) Indian dancer (2) American dancer

(3) Indian singer (4) American singer

Directions for Questions No. 189 to 192. *Consider the following information.*

B, C, D, E, F and G are to be seated around a table. The following requirements apply to the seating arrangement :

(i) D must sit next to F

(ii) B cannot sit next to F

(iii) C cannot sit next to G

189. If D is one of the two persons who sit next to E, which of the following is a complete and accurate list of the other person who can sit next to E ?

(1) C or G (2) C

(3) G (4) B

190. Who must sit on either side of E if B sits next to D and C sits next to F ?

(1) B and G (2) B and C

(3) B and F (4) C and G

191. If C sits immediately to the left of F and D sits immediately to the right of F, what is the total number of arrangements in which others can be seated in relation to one another ?

(1) 2 (2) 3

(3) 4 (4) 5

192. Who must sit on the chairs on either side of G if C sits directly across the table from E ?

(1) C and D (2) D and E

(3) E and F (4) B and E

Directions for Questions No. 193 to 197. *Consider the following information.*

Six lectures A, B, C, D, E and F are to be organized in a span of seven days — from Sunday to Saturday, only one lecture on each day, in accordance with the following :

(i) A should not be organized on Thursday.

(ii) C should be organized immediately after F.

(iii) There should be a gap of two days between E and D.

(iv) One day there will be no lecture (Friday is ***not*** that day); just before that day D will be organized.

(v) B should be organized on Tuesday and should not be followed by D.

193. How many lectures are organized between C and D ?

(1) 0 (2) 1

(3) 2 (4) 3

194. Which of the following is the last lecture in the series ?

(1) A (2) B

(3) C (4) E

195. Which of the information given above is ***not*** required in finding the complete sequence of organization of lectures ?

(1) I only (2) II only

(3) I and II only (4) All are required

196. Which day will the lecture F be organized ?

(1) Sunday (2) Thursday

(3) Wednesday (4) Friday

197. On which day is there no lecture ?

(1) Sunday (2) Friday

(3) Monday (4) Cannot be determined

Directions for Questions No. 198 – 200. *Consider the following information.*

Exactly 7 persons — I, J, K, L, M, N and O — participate in games played at a picnic. There is one game each of a, b, and c. Game 'a' must be played by either 3 or 4 persons, 'b' must be played by either 4 or 6 persons, and 'c' can be played by any number so long as there are at least 2. The following restrictions also apply to the games played :

(i) Each person must play exactly two of the three games

(ii) I must play 'a'

(iii) K must play 'c'

(iv) N must play 'b'

(v) M must play in both games in which I plays

(vi) O must play in both games in which L plays

198. If K plays in the same two games as N, each of the following must be true *except*

(1) I plays 'a'

(2) N plays 'a'

(3) K plays 'c'

(4) K plays 'b'

199. If I and N play 'c', and if 4 persons play 'a', the persons playing 'a' besides I and M, must be which of the following ?

(1) J and K

(2) J and N

(3) K and O

(4) L and N

200. If N is the only person who plays both 'a' and 'b', it must be true that

(1) M plays 'b'

(2) K plays 'b'

(3) N plays 'c'

(4) I plays 'c'

SPACE FOR ROUGH WORK

SPACE FOR ROUGH WORK