

**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.

88. Akash gives two successive discounts of 10% and 14% on his product. The total discount is
- (1) 22.4% (2) 22.6%
- (3) 23% (4) 24%
89. One kg of tea and one kg of sugar together cost Rs. 95. If the price of tea falls by 10% and that of sugar rises by 20%, the price of 1 kg combined comes to Rs. 90. The original price of tea per kg is
- (1) Rs. 72/- (2) Rs. 55/-
- (3) Rs. 60/- (4) Rs. 80/-
90. If the cost price of 6 articles is the same as the selling price of 5 articles, the profit will be
- (1) $22\frac{1}{2}\%$ (2) 20%
- (3) 25% (4) 19%
91. Compound interest on a sum for 2 years at 4% per annum is Rs. 102. The simple interest on the same sum for the same period at the same rate will be
- (1) Rs. 99 (2) Rs. 93
- (3) Rs. 97 (4) Rs. 100
92. A man travels 20 km on foot at 5 km/hr and another 10 km by bus at 20 km/hr. What is his average speed ?
- (1) 5 km/hr (2) 6 km/hr
- (3) 6.67 km/hr (4) 8 km/hr
93. If an article is sold at 8% profit instead of 8% loss, it would have brought Rs. 12 more. Find out the cost price of the article.
- (1) Rs. 75 (2) Rs. 72
- (3) Rs. 60 (4) Rs. 70
94. If three-fourths of students in the class have cars and half of the car-owners own a Santro, what fraction of the class has a Santro ?
- (1) 40% (2) 42.5%
- (3) 37.5% (4) 32.5%
95. If the length of a rectangle increases by 10%, by what percent should the breadth decrease to maintain the same area ?
- (1) 10% (2) 11%
- (3) 9.09% (4) 8.5%

96. Romi purchases toffees at Rs. 10 per dozen and sells them at Rs. 12 for every 10 toffees. Find the gain in percentage.
- (1) 44% (2) 24%
- (3) 34% (4) 54%
97. An amount kept at C.I. earns an interest of Rs. 600 in the 7th year and an interest of Rs. 660 in the 8th year. Find the rate of interest.
- (1) 9% (2) 10%
- (3) 11% (4) 8%
98. Anu's expenditure and savings are in the ratio 3 : 2. Her income increases by 10%. If her expenditure increases by 12%, what is the increase in savings in percentage ?
- (1) 5% (2) 6%
- (3) 7% (4) 8%
99. A group of 7 students with average weight of 66 kg is joined by another group of 5 students with an average weight of 64 kg. What is the average weight of the new group ?
- (1) 64.8 kg (2) 64.5 kg
- (3) 65.3 kg (4) 65.17 kg
100. A weighing machine shows 900 gm for 1 kg. What is the net profit percentage if the trader marks up his cost price by 20% ?
- (1) 7% (2) 10%
- (3) 11% (4) 8%
101. Find the value of $\frac{\tan 45^\circ}{\sin 30^\circ + \cos 60^\circ}$.
- (1) 4 (2) 6
- (3) 1 (4) 7
102. If $a = 5$, $b = 3$, $c = 2$, find the value of $(a + b - c) + (a - b + c) + (b + c - a)$.
- (1) 10 (2) 11
- (3) 12 (4) 15
103. What will be 80% of a number whose 200% is 90 ?
- (1) 36 (2) 40
- (3) 48 (4) 52

104. Find x if $\frac{1}{x-3} + \frac{3}{x-1} = \frac{4}{x-2}$.
- (1) 4 (2) 3
(3) 2 (4) 5
105. The surface of a cube is 150 sq.m. Find its volume.
- (1) 105 cu.m. (2) 110 cu.m.
(3) 150 cu.m. (4) 125 cu.m.
106. Ratio of boys to girls in a class is 5 : 3. Which of these *cannot* be the number of students in the class ?
- (1) 32 (2) 36
(3) 40 (4) 56
107. A person has a total of Rs. 370 in Rs. 2, Re. 1 and 25 paise coins. They are in the ratio 2 : 5 : 1. How many Re. 1 coins are there ?
- (1) 40 (2) 80
(3) 200 (4) 120
108. In a sports meet 5% of participants won prizes. Assuming that each participant got only one prize and total prizes won were 30, what was the total number of participants ?
- (1) 500 (2) 600
(3) 1000 (4) 700
109. Three positive numbers are in the ratio 2 : 3 : 4 and the sum of their squares is equal to 464. The numbers are
- (1) 6, 8, 10 (2) 4, 6, 8
(3) 8, 12, 16 (4) 10, 20, 30
110. If $x : y = 2 : 3$, find the value of $(3x + 2y) : (2x + 5y)$.
- (1) 15/17 (2) 19/17
(3) 13/18 (4) 12/19
111. The incomes of Bharat and Sudhir are in the ratio 3 : 2 and their expenditures are in the ratio 5 : 3. If each saves Rs. 2,000, what are their incomes ?
- (1) Rs. 12,000, Rs. 8,000 (2) Rs. 15,000, Rs. 12,000
(3) Rs. 15,000, Rs. 10,000 (4) Rs. 24,000, Rs. 16,000

112. Simplify $\frac{\sqrt{8} + \sqrt{2}}{\sqrt{8} - \sqrt{2}}$
- (1) 2 (2) 6
(3) 3 (4) 4
113. The expense of carpeting a room thrice as long as it is broad at Rs. 7.50 per sq.m. is Rs. 1,102.50. Find the length of the room.
- (1) 7 m (2) 14 m
(3) 10 m (4) 21 m
114. Equal quantities of a 1 : 5 and 3 : 5 ratio of milk and water solution are mixed together. What will be the ratio of water and milk in the resultant solution ?
- (1) 13 : 35 (2) 4 : 10
(3) 5 : 8 (4) 35 : 13
115. An amount of money is to be divided among A, B and C in the ratio 5 : 8 : 12 respectively. If the total share of B and C is four times that of A, what is A's share ?
- (1) Unique solution cannot be found
(2) Rs. 3,000
(3) Rs. 8,000
(4) Rs. 10,000
116. A can do a piece of work in 12 days. B is 60% more efficient than A. Find the number of days that B takes to do the same piece of work.
- (1) 6 days (2) 7 days
(3) 10 days (4) $7\frac{1}{2}$ days
117. All the sides of a hexagon become three times the original length. Find the ratio of areas of the new and old hexagons.
- (1) 9 : 1 (2) 16 : 1
(3) 36 : 1 (4) 9 : 16
118. In a zoo there are rabbits and pigeons. If heads are counted, there are 200 and if legs are counted there are 580. How many pigeons are there ?
- (1) 90 (2) 100
(3) 110 (4) 120

119. If a person drives for 4 hours at a speed of 10 km/hr and for 6 hours at a speed of 20 km/hr, what is the average speed ?
- (1) 20 km/hr (2) 18 km/hr
(3) 16 km/hr (4) 14 km/hr
120. In a race of 1 km, A beats B by 100 m or by 5 sec. What is the speed of A ?
- (1) 20 m/sec (2) 25 m/sec
(3) 30 m/sec (4) 22.22 m/sec
121. Pipe A can fill the tank in 10 hours, while pipe B can empty the same tank in 25 hours. When both the pipes are open, in what time will the tank fill up ?
- (1) 15 hours (2) 20 hours
(3) $16\frac{2}{3}$ hours (4) 18 hours
122. If a clock shows 3:45, what is the acute angle between the hands of the clock ?
- (1) 190° (2) 150°
(3) $157\frac{1}{2}^\circ$ (4) $93\frac{1}{2}^\circ$
123. A path 7 m wide surrounds a circular lawn whose diameter is 252 m. Find the area of the path.
- (1) 5698 sq.m. (2) 5968 sq.m.
(3) 5689 sq.m. (4) 5678 sq.m.
124. If 83 is multiplied by a certain number and the product is equal to the product of 415×115 , what is that number ?
- (1) 565 (2) 575
(3) 505 (4) 455
125. A man is 37 years old and his two sons are 8 years and 3 years old. After how many years will he be twice as old as their united age ?
- (1) 4 years (2) 8 years
(3) 7 years (4) 5 years
126. Which of the following *cannot* be the unit digit in a perfect square number ?
- (1) 9 (2) 7
(3) 5 (4) 1

Directions for Questions no. 127 to 130.

Study the following table and answer following questions based on it.

Production of Automobiles (in million)

<u>Name of the vehicle</u>	<u>1980 – 81</u>	<u>2004 – 05</u>
Scooters	51.0	173.0
Cars	6.9	205.0
Trucks	5.1	16.9

127. What is the percentage increase in 2004 – 05 in the production of scooters ?
- (1) 239.2
 - (2) 70.5
 - (3) 41.8
 - (4) 29.5
128. The production of cars in 1980 – 81 is approximately what percent of production of cars in 2004 – 05 ?
- (1) 96.6
 - (2) 3.4
 - (3) 287.7
 - (4) 92.0
129. The production of trucks in 2004 – 05 is how many times more than that in 1980 – 81 ?
- (1) 3.3
 - (2) 1.3
 - (3) 4.3
 - (4) 2.3
130. The total production of vehicles in 2004 – 05 is approximately what percent of production in 1980 – 81 ?
- (1) 626.8
 - (2) 15.9
 - (3) 526.8
 - (4) 25.9