OPENMAT (XXII) Entrance Test for Management Programmes 2007

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 circle 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 circle 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 circle 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 circle '0'.

6. If you wish to change your answer, ERASE completely the already darkened circle by using a good quality eraser and then blacken the circle bearing your revised answer number. If incorrect answer is not erased completely, smudges will be left on the erased circle 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.
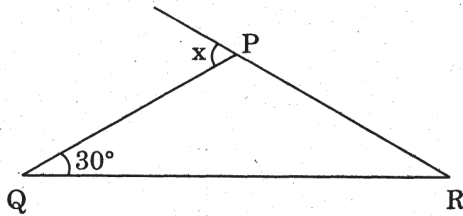
GENERAL INSTRUCTIONS

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. In the event of your qualifying the Entrance Test, the 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 III
QUANTITATIVE APTITUDE

81. The difference between the place value and face value of 5 on the number 87653421 is
    (1) 53416
    (2) 49995
    (3) 4995
    (4) 5341

82. Find the greatest number which divides 285 and 1249, leaving remainders 9 and 7 respectively.
    (1) 138
    (2) 148
    (3) 135
    (4) 145

83. Which of the following numbers is divisible by 3 ?
    (1) 24357806
    (2) 35769812
    (3) 83479560
    (4) 3336433

84. Find the value of 1063 × 127 − 1063 × 27.
    (1) 10630
    (2) 106300
    (3) 10000
    (4) 100

85. A fraction equivalent to $\frac{3}{5}$ is

    (1) $\frac{3 + 2}{5 + 2}$
    (2) $\frac{3 - 2}{5 - 2}$

    (3) $\frac{3 \times 2}{5 \times 2}$
    (4) $\frac{3 \times 2}{5 - 2}$

86. 8 + 4 ÷ 2 × 5 = ?
    (1) 30
    (2) 50
    (3) 18
    (4) 20

87. The distance between Richa's house and her school hostel is 61 km. For reaching her house from the hostel, she covers 54 km 860 m by taxi, 5 km 65 m by tonga and the rest of the distance by rickshaw. How much distance did Richa cover by rickshaw ?

    (1) 1·075 km

    (2) 10·75 km

    (3) 0·1075 km

    (4) 0·0107 km

88. Mona's father is thrice as old as Mona. After 12 years, his age will be twice that of his daughter. Find their present ages (in years).

   (1) 12, 36
   (2) 13, 39
   (3) 14, 42
   (4) 15, 45

89. If the cost of 25 packets of 12 pencils each is Rs. 750, then the cost of 30 packets of 8 pencils each is

   (1) Rs. 600
   (2) Rs. 720
   (3) Rs. 640
   (4) Rs. 800

90. If $45 : x : : 25 : 35$, then the value of x is

   (1) 63
   (2) 72
   (3) 54
   (4) 60

91. The diagonals of a quadrilateral bisect each other at right angles. This quadrilateral is
   (1) a rectangle
   (2) a rhombus
   (3) a kite
   (4) a triangle

92. The sides of a rectangle are in the ratio 5 : 4. If its perimeter is 72 cm, then its length is

   (1) 40 cm
   (2) 30 cm
   (3) 20 cm
   (4) 10 cm

93. Devi purchased a house for Rs. 4,52,000 and spent Rs. 28,000 on its repairs. She had to sell it for Rs. 4,68,000. Find her profit or loss percent.

   (1) 1·5%
   (2) 2·5%
   (3) 3·5%
   (4) 4·5%

94. Find the product of $-7pqr$, $3p^2q$ and $-2pr^2$.
   (1) $-42\,p^4q^2r^3$
   (2) $-6\,p^4q^2r^3$
   (3) $42\,p^4q^2r^3$
   (4) $36\,p^3q^2r^3$

95. I have some 5-rupee coins and some 2-rupee coins. The number of 2-rupee coins is 4 times that of 5-rupee coins. If I have Rs. 117 in all, find the number of coins of 5-rupee and 2-rupee denomination.

   (1) 7, 28
   (2) 8, 32
   (3) 9, 36
   (4) 10, 40

96. Find the value of x in the figure given below, where △ PQR is isosceles with PQ = PR.

(1) 120°   (2) 105°

(3) 90°   (4) 60°

97. Find the surface area of a cuboid whose length, breadth and height are respectively 10 cm, 8 cm and 5 cm.

(1) 300 cm^2 (2) 320 cm^2

(3) 330 cm^2 (4) 340 cm^2

98. How many different numbers can be formed by taking 3 digits at a time out of the 5 digits 2, 4, 6, 8, 9 ?

(1) 30   (2) 40

(3) 50   (4) 60

99. The value of x in the expression $2^x + \dfrac{1}{2^x} = \dfrac{65}{8}$ is

(1) 2 or − 2   (2) 3 or − 3

(3) 4 or − 4   (4) 5 or − 5

100. Simplify :

$$\sqrt{3} + 2\sqrt{48} + \sqrt{12} - 2\sqrt{75}$$

(1) $2\sqrt{3}$

(2) $\sqrt{3}$

(3) $3\sqrt{3}$

(4) $3\sqrt{2}$

101. Shyam was driving to Bharatpur when he spotted a big white parrot on the side of the road. He screeched to a stop, jumped out of his car. He saw the outline of a number on the parrot. He couldn't quite see the number, but he knew it was a 4 digit number. And :

   (i)   He remembered seeing a number 1.

  (ii)   In the hundred's place he remembers the number is 3 times the number in the thousand's place.

 (iii) He said the number in the one's place is 4 times the number in the ten's place.

 (iv) Finally he said the number 2 is sitting in the thousand's place.

What is the number ?

(1)   2614   (2)   1314

(3)   3914   (4)   2641

102. Ehsan decided to grow a garden so he could make salad. He wants to make it 10·1 m long and 4·2 m wide. However, in order to avoid animals from entering his garden he must make a fence surrounding the garden. He decides to make the fence 11·2 m long and 5·0 m wide. What is the area between the fence and the garden ?

(1)   12·58 m^2

(2)   13·58 m^2

(3)   14·58 m^2

(4)   15·58 m^2

103. Jenny bought 7 T-shirts, one for each of her seven brothers, for $9·95 each. The cashier charged her an additional $13·07 in sales tax. She left the store with a measly $7·28. How much money did Jenny start with ?

(1) $60   (2) $70

(3) $80   (4) $90

104. D gave C half of his pots. C gave J half of the pots she received from D. J kept 8 of those pots and gave the remaining 10 to A. How many pots did D give to C ?

(1)   72   (2)   64

(3)   48   (4)   36

105. On an average day, Americans spend $958,904·00 buying video games. Of this total $767,123·00 is spent on X-Box games. How much do they spend on other video games in a week ?

(1) $191,781

(2) $191,718

(3) $1,324,467

(4) $1,342,467

106. The average monthly rainfall for 6 months was 28·5 mm. If it had rained 1 mm more each month what would the average have been ?

    (1) 29 mm   (2) 29·5 mm

    (3) 34 mm   (4) 34·5 mm

107. 99^2 is equal to

    (1) 9921   (2) 9901

    (3) 9801   (4) 9081

108. How many Thai Baht can you buy with $300 Canadian knowing the exchange rate of 20 Baht/Canadian dollar ?

    (1) 6000 Baht   (2) 600 Baht

    (3) 15 Baht   (4) 1500 Baht

109. SALE : Celtic Bakery Sale

    White Bread   –   2 for $1·25
    Rye Bread   –   2 for $1·35
    Onion Rolls   –   6 for $1·00
    Hamburger Buns –   6 for $0·85
    Hot Dog Buns   –   6 for $0·69

Melanie and Kevin are going shopping for their mother at the Celtic Bakery. They were told to buy 15 onion rolls, 10 hamburger buns and 2 loaves of rye bread. How much will it cost them ? (Do calculations upto 2 decimals and round-off)

    (1) $2·50   (2) $1·42

    (3) $1·35   (4) $5·27

110. If you saved Rs. 2·00 on January 1, Rs. 4·00 on February 1, Rs. 6·00 on March 1, Rs. 8·00 on April 1, and so on, how much money would you save in one year ?

    (1) Rs. 136·00   (2) Rs. 146·00

    (3) Rs. 156·00   (4) Rs. 166·00

111. A salesman's term were changed from a flat commission of 5% on all his sales to a fixed salary of Rs. 1000 plus 2·5% commission on all sales exceeding Rs. 4000. If his remuneration according to the new scheme was Rs. 600 more than by the first scheme, what was his sales worth ?

    (1) Rs. 6000

    (2) Rs. 8000

    (3) Rs. 12000

    (4) Rs. 16000

112. The sum of the cubes of three numbers is 8072 and the ratio of the first to the second as also of the second to the third is as 3 : 2. What is the second number ?

    (1) 4   (2) 6

    (3) 9   (4) 12

113. $\dfrac{1\cdot1 \times 1\cdot1 \times 1\cdot1 + 0\cdot1 \times 0\cdot1 \times 0\cdot1}{1\cdot1 \times 1\cdot1 - 0\cdot1 \times 0\cdot1} = ?$

    (1) $1\cdot1$ (2) $1\cdot01$

    (3) $1\cdot11$ (4) $1\cdot1101$

114. What sum of money is divided between A, B and C if B and C together get Rs. 100 and C and A together get Rs. 150 and A gets twice as much as B ?

    (1) Rs. 200   (2) Rs. 225

    (3) Rs. 240   (4) Rs. 250

115. The total number of undergraduate students in a college is 270. If 2/3 of the number of students in the Science stream is same as 3/4 of the number of students in the Arts stream and 3/5 of the number of students in the Commerce stream, how many are the Science students ?

    (1) 75   (2) 80

    (3) 90   (4) 100

116. $\dfrac{\frac{1}{4} - \frac{1}{6} - \frac{1}{48}}{\frac{1}{4} - \left(\frac{1}{6} - \frac{1}{48}\right)} \div \dfrac{\frac{1}{4} \times \frac{1}{6} - \frac{1}{48}}{\frac{1}{4} \times \left(\frac{1}{6} - \frac{1}{48}\right)} = ?$

    (1) 1   (2) 2

    (3) $\dfrac{21}{20}$ (4) $\dfrac{20}{21}$

117. The distance of a star from the Earth is 9315000 miles. If light travels at 18630 miles per second, how long does it take light from that star to reach Earth ?

    (1) $0\cdot0005$ sec   (2) $0\cdot05$ sec

    (3) 5 secs   (4) 500 secs

Graph showing number of employees of different categories in a factory

118. What was the total number of employees in the year 2006 ?

    (1)   4800   (2)   5000

    (3)   5200   (4)   5400

119. What was the ratio of non-union : union men in 2002 ?

    (1)   3 : 2   (2)   2 : 3

    (3)   2 : 1   (4)   1 : 2

120. In which year was the ratio of non-union : union women 9 : 5 ?

    (1)   2002   (2)   2003

    (3)   2004   (4)   2005

121. The minimum number of employees of any one category in any one year was of

    _____ ; _____ ; _____
    (non-union / union) *(men / women)* *(year)*

    (1)   Union; men; 2004

    (2)   Union; men; 2003

    (3)   Non-union; women; 2004

    (4)   Union; men; 2002

122. From 2004 – 2006, on an average, the factory has employed the maximum number of individuals in one category viz. $\underline{\hspace{3cm}}$ of $\underline{\hspace{3cm}}$ category.
*(men / women)* *(non-union / union)*

(1) men; non-union   (2) women; non-union

(3) men; union   (4) women; union

123. The average number of employees of all categories in 2005 and 2006 was

(1) 5550   (2) 5500

(3) 5800   (4) 5900

124. The year in which the total number of women and men employed was the same was

(1) 2002   (2) 2003

(3) 2004   (4) 2005

125. The year in which the minimum number of people were employed was

(1) 2002   (2) 2003

(3) 2004   (4) 2005

126. The ratio of non-union men and non-union women in 2004 was

(1) 7 : 8   (2) 8 : 9

(3) 9 : 8   (4) 8 : 7

127. The years in which the maximum number of people were employed were

(1) 2002; 2003   (2) 2002; 2004

(3) 2002; 2005   (4) 2003; 2004

128. One clock gains 15 seconds per day and another loses 45 seconds per day. After what length of time will the first clock be 12 hours ahead of the second ?

(1) 120 days   (2) 240 days

(3) 480 days   (4) 720 days

129. A number when halved is half as short of 100 as it exceeds 100 now. What is the number ?

(1) 110   (2) 132

(3) 144   (4) 150

130. At a club meeting, each member shook hands with every other member present. If there were totally 190 hand-shakes, how many members were there at the meeting ?

(1) 190   (2) 100

(3) 95   (4) 20