MPMJET
January 19, 2003

We are pleased to present a detailed analysis of the MPMJET that was held on January 19, 2003.
The questions has been recalled with the help of PT faculty and PT students from across the nation.

A bird's eye view :

- ➤ Duration : 150 minutes; Number of Questions : 200.
- ➤ Total 4 sections:

    - ◗ Section 1: 90 Q   (Reading Comprehension + English Usage)

    - ◗ Section 2: 50 Q   (Mathematical Aptitude)

    - ◗ Section 3: 20 Q   (Business Judgement + Logical Reasoning)

    - ◗ Section 4: 40 Q   (Data Interpretation + Data Sufficiency)

- ➤ The marking scheme:
    - ◗ 3 marks for each correct question
    - ◗ No negative marking.

Section 1 : 90 Q (English Usage + Reading Comprehension)

There were five RC passage were asked in the paper and total 30 Question were asked on RC passages. The Rest 60 questions of the English Language part were of Synonyms, Antonyms, Analogies and Grammar related. A decent attempt in this section could have been around 70 - 75 questions.

Section 2 : 50 Q (Mathematical Aptitude)

There were 50 Questions on Mathematical Aptitude, the questions were simple. There were some questions related to Co - ordinate Geometry was asked in the test. A decent attempt in this section could have been around 35 - 40 questions.

Section 3 : 20 Q (Business Judgment)

This section was also manageable. There were 10 - 12 question of Logical Reasoning were asked in the Business Judgement section. A decent attempt in this section could have been around 12 - 15 questions.

Section 4 : 40 Q (Data Interpretation + Data Sufficiency)

There were 40 questions were related to the DI and DS. In which 20 questions were related to DI and 20 question were related to DS. In DI there were one table and one bar graph were asked and DS questions were of 4 option, direct type. A decent attempt in this section could have been around 30 - 35 questions.

Reading Comprehension + English Usage

Questions 1 to 30 : Five moderate RC passages were asked in the paper. In all around 30 questions were asked on passages. The theme of the passages are as follows :

Passage	Theme of Passage	Number of Questions
I.	Based on a revolutionary created in the aftermath of Jaliawala bagh. His deeds etc.	5
II.	Leadership and Management	8
III.	Jargons and argots. (Related)	6
IV.	Journalism	6
V.	Balance of payment situation of India.	5

Questions 31 to 40 : 10 questions were based on Synonyms.

31. Synonyms of EPHEMERAL is :

32. Synonyms of INDIGENOUS is :

Questions 41 to 50 : 10 questions were based on Antonyms.

41. Antonyms of RELEASE is :

42. Antonyms of DEFUNCT is :

Questions 51 to 60 : 10 questions were based on Verbal Analogies.

51. Hot : Cold

52. People : Crowd

53. Flower : Garden

54. Tree : Forest

55. Teacher : Student

56. Student : School

Questions 61 to 90 : Remaining questions of EU and RC part were based on Idioms and Fill in the blanks.

61. He is <u>on the wrong side of Seventy</u>.
  (1) Greater than 70
  (2) Less than 70
  (3) 70
  (4) 80

Mathematical Aptitude

Directions for Q.90 to 140 : *For the following questions choose the correct option .*

91. If a town had the population of 4000 before three years, and the population is increasing at the rate 12% every year then what is the present population of the town ?
   (1) 5515   (2) 5240
   (3) 5560   (4) 5619

Sol: The present population of the town = $4000 \times \dfrac{112}{100} \times \dfrac{112}{100} \times \dfrac{112}{100} = 5619.712 \cong 5619$. **Ans.(4)**

92. Before 10 years mother's age is 4 times the age of daughter and after 10 years mother will be twice the age of daughter. What is the present age of daughter ?
   (1) 10 years   (2) 20 years
   (3) 30 years   (4) 15 years

Sol: Let the present age of mother = x years and the present age of daughter = y years. Then by the conditions given in question : $(x - 10) = 4(y - 10)$ ....(1) and $(x + 10) = 2 (y + 10)$ ....(2). By solving equations (1) and (2) simultaneously we get y = 20 years. **Ans.(2)**

93. If the cost of 2 tables and 3 chairs is Rs. 3500 and the cost of 3 tables and 3 chairs is Rs. 4000, then what is the cost of two tables ?
   (1) Rs. 1000   (2) Rs. 2000
   (3) Rs. 3000   (4) Rs. 4000

Sol: By the condition given in the question $2t + 3c = 3500$ ....(1) and $3t + 3c = 4000$ ....(2). By solving equation (1) and (2) simultaneously we get the cost of two table = Rs. 1000. **Ans.(1)**

94. How many times 3 comes in the number from 1 to 100 ?
   (1) 20 times   (2)   22 times
   (3) 25 times   (4) 28 times

Sol: Ans.(1)

95. If the angles of a triangle are 45°, 45°, 90° and the hypotenuse of the triangle is 10 cm, then the area of the triangle is :
   (1) 25 square cm   (2) 50 square cm
   (3) 75 square cm   (4) 100 square cm

Sol: Let the base and the perpendicular of the triangle = x. Then $100 = 2x^2 \Rightarrow x = \sqrt{50}$.

Area = $\dfrac{1}{2} \times \sqrt{50} \times \sqrt{50}$ = 25 square cm. **Ans.(1)**

96. The value of $\sqrt{0.000064}$ is :
   (1) 0.008   (2) 0.8
   (3) 0.0008   (4) 0.08

Sol: Ans.(1)

97. The classes started at 10 : 00 am continues till 3 : 51 am 4 lectures each with a gap of 5 minutes. Find the duration of each lecture.
   (1) 50 min.   (2) 84 min.
   (3) 52 min.   (4) 90 min.

Sol: Total duration = 352 minutes. Duration of each lecture = (351 – 15)/4 = 336/4 = 84 minutes

98. 40 % of 180 + 50% of 150 = x % of 350. Value of x is :
   (1) 21   (2) 42
   (3) 63   (4) 84

Sol: Ans.(2)

99. If the sum of money doubles itself in 10 years at Simple Interest, then the rate of interest is :
   (1) 5%   (2) 10%
   (3) 8%   (4) 15%

Sol: Let the Principle amount = Rs. x. So, Simple Interest will also be Rs. x. $x = \dfrac{x \times R \times 10}{100} \Rightarrow R = 10\%$. **Ans.(2)**

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100. Distance between two points (3, 1) and (11, 6).
  (1) $\sqrt{75}$ (2) $\sqrt{98}$
  (3) $\sqrt{89}$ (4) $\sqrt{99}$

Sol: Required distance = $\sqrt{(11-3)^2 + (6-1)^2} = \sqrt{64+25} = \sqrt{89}$. **Ans.(4)**

101. Perimeter of square made on diagonal of square of area a2.
  (1) $2a^2$ (2) $6a^2$
  (3) $4a^2$ (4) $8a^2$

Sol: Ans.(1)

102. Circle circumscribing a equilateral triangle of side 3 cm has radius of $\sqrt{3}$ cm. The area of circle is :
  (1) 13/2   (2) 14
  (3) $9\sqrt{3}/4$ (4) $15\sqrt{2}$

Sol: We know that circumradius = (side of equaliteral triangle)^3/(4× Area of triangle)

⇒ $\sqrt{3}$ = 27/(4 × Area of triangle) ⇒ Area of triangle = $9\sqrt{3}/4$. **Ans.(3)**

103. One ball is dropped from a height of 1 m and each time it bounces the half of the height previously covered. What is length of the path traced ?
  (1) 2 m   (2) 3 m
  (3) 5 m   (4) 4 m

Sol: $1 + (1 + \dfrac{1}{2} + \dfrac{1}{4} + \dfrac{1}{8} + \ldots\ldots)$

Sum of an infinite terms of a Geometrc Progression = $\dfrac{a}{1-r}$ where a = 1 and r = $\dfrac{1}{2}$.

Hence the length of the path traced = 1 + 2 = 3. **Ans.(2)**

104. Meena was 5 times of her daughter Teena 10 years ago. After 5 year Meena will be thrice the age of her daughter Teena. What is the present age of Teena ?
  (1) 20 m   (2) 30 m
  (3) 25 m   (4) 40 m

Sol: Let the age of Meena = x years and the age of Teena = y years. Then by the conditions given in the question: (x – 10) = 5(y – 10)…(1) and (x + 5) = 3 (y + 5)….(2). By solving equations (1) and (2) simultaneously we get the age of Teena = 25 years. **Ans.(3)**

105. 15 % of 700 is what % of 200 ?
  (1) 20 %   (2) 22.5 %
  (3) 25 %   (4) 27.5 %

Sol: Ans.(2)

106. Two trains left stations A and B opposite to each other and 270 km apart, at the same time with a speed of 40 and 50 kmph respectively. When will they cross each other ?
  (1) After 5 hours   (2) After 2 hours
  (3) After 4 hours   (4) After 3 hours

Sol: Let they crossed each other after t hours. Then 40t + 50 t = 270 ⇒ t = 3 hours. **Ans.(4)**

107. A square X has a diagonal of length d cm. What will be the perimeter of the square whose area is double that of the square X ?
  (1) d   (2) 2d
  (3) 4d   (4) 3d

Sol: Side of square X = $d/\sqrt{2}$. Area of square X = $d^2/2$. Side of the square whose area is double that of the square

X = $\sqrt{2 \times \dfrac{d^2}{2}}$ = d. **Ans.(1)**

108. $\sqrt{\left[\left(\sqrt{2} - \dfrac{1}{\sqrt{2}}\right)\right]} = ?$

    (1) $2^{-1/4}$ (2) $2^{-1/5}$

    (3) $2^{-1/2}$ (4) $2^{-1/3}$

Sol: Ans.(1)

109. If 5x, 2x, 3x are the angles of a triangle then what is the measure of x ?
    (1) 18°   (2) 20°
    (3) 36°   (4) 40°

Sol: Ans.(1)

110. An angle is 3 times of its compliment. What is the angle ?
    (1) 36°   (2) 20°
    (3) 45°   (4) 40°

Sol: Ans.(3)

111. Three men invested money of ___ amount for___ month, ___ amount for___ month and ___ amount for ___ month respectively for a business. The profit made was Rs. ___ . What is the share of the third man?

112. Total no of people 100. 60 out of which like coffee and 70, like tea. How many people like both? (Figures mention are not the one specified there)

113. Radius of incircle/cirumcircle inscribed in an equilateral triangle is ___ cm. What is the area of the triangle ?

114. From a given point. A tangent drawn on a circle of radius ___ cm . the distance between that point and the centre is ___ cm. What is length of tangent.

115. A main covered ___ m distance with a speed of ____ m/s and ____ m distance with a speed of ____ m/s then what is his average speed for the whole journey ?

116. A train crosses a bridge 500 m long in 45 seconds. And it crosses a man standing over the bridge in 15 seconds. What is length of the train?

117. What is the least no. which when divided by __ , __ , __ leaves a remainder __ ?

118. A can finish a piece of work in ___ hours and B can finish the same work ___ hours. They work together and earned ___ for the same. What is share of A?

119. The population of a town increases 15% annually if the current population is ___ then what would have been the population of the town 5 years ago ?

120. Find the equation of the line perpendicular to the line ___ and passes through the points ___.

121. The average height of a group of 35 people is ___ if a man of height ___ is replaced by another man the average reduces by 1. The height of the new man is :

122. The number of spheres of radius ___ cm created by melting a cone of volume _____ cm³.

123. What are the factors of the quadratic equation_____?

124. A farmer uses 1/2 his filed to sow ___ , of the rest 1/3 he uses to sow ___ , and of the rest 2/3 he uses for ___ . What is the area of the field left.

125. In a ___ litre mixture, ratio of Milk : Water is ___ : ___ . What amount of water should be added so that the ratio becomes 1 : 1.

126. In an election a candidate receives 60% of the valid vote and wins by ____ number of votes. What is the total number of valid votes ?

Business Judgement + Logical Reasoning

Five Question were based on following information.

A, B, C, D and E are five boys. P, Q, R and S are four girls and various arrangements and conditions were given.

Five Questions were based on following information.

There are 5 peoples are in a group. Two of which Passed First Class in Post Graduation, two passed in First Class in Graduation, one passed in Second Class in Graduation. Two of them working in Personnel , one in A/C, one in PR, one in Legal Cell. Two of them from same state and 3 of them from different states. Three persons in the group were Married and two were unmarried.

Questions of Strong and Weak Arguments.

Data Interpretation + Data Sufficiency

Directions for Q. 161 to 200 : *For the following questions, choose the correct option.*

20 Questions were asked on Data Interpretation.

Table : Total students pass in one subject, pass in two subjects, Fail in all, Fail in one subject, Fail in two subjects etc. and Direct questions were asked.

Bar Graph : Percentage average production (In tones) given for 1997 to 2002. Five Questions were asked.

20 Questions were asked on Data Sufficiency (4 Options Direct)

Overall analysis

The test can be rated as a moderate one.

Although every student gets a call for the GD - PI process, thus no cut-offs are needed for the test right now.