

Management Aptitude Test December 05, 2004

We are very pleased to present you the detailed analysis of Management Aptitude Test held on December 05, 2004 on various centres all over India. Like last year this year also the test comprised 200 questions, to be solved in a time span of 150 minutes. No sectional time limits were mentioned. While there was 1 mark allotted for each correct answer, no quantification was done for negative marking. Thus, while solving the paper students had to concentrate more on accuracy.

Bird's eye view :

Total Number of Questions	:	200 Objective type questions.
Total Time	:	150 minutes.
The Marking Scheme	:	1 mark for each correct answer. Negative marking was not quantified
Number of options	:	FOUR
Sectional Break-up	:	

Sections	Number Of Questions
Intelligence and critical reasoning	40
Language comprehension	40
Mathematical aptitude	40
Data analysis and sufficiency	40
Indian and global environment	40
Total	200 Questions

Disclaimer: All these questions have been memorised by PT students. We are merely reproducing a few of them here in fragments to ensure that the huge community of students eagerly waiting to see an objective comparison of their performance gets the right picture.

Detailed Analysis

In the following pages we have provided some of the actual test questions with their solutions for your reference.

SECTION I INTELLIGENCE AND CRITICAL REASONING

There were 40 questions in this section. The questions was on **Logical Reasoning** and **Critical Reasoning**. The detail break-up of questions asked in LR and CR is as follows :

Topics	Number of Questions	Level of Difficulty
Coding and Decoding	5	Easy
Decision Making	4	Easy
Statement- Assumption	7	Moderate
Statement- Argument	6	Moderate
Statement-Conclusion	6	Moderate
Series	5	Moderate
Data Arrangement	2 sets of 2 questions	Moderate
Miscellaneous	3	Easy

SECTION II LANGUAGE COMPREHENSION

In the **Language Comprehension** section there were 16 questions on **Reading Comprehension** based on 5 passages. Rest questions of this section were on **English Usage**. The detail break-up of this section is as follows :

Topics	Number of Questions	Level of Difficulty
Reading Comprehension		
Passage I	16	Easy to Moderate
Passage II		
Passage III		
Passage IV		
Passage V		
English Usage		
Fill in the blanks	5	Easy
Synonyms	5	Moderate
Paragraph Jumbling	5	Moderate
Identify the correct meaning of underlined idiom	3	Moderate
Classification of underlined words as Nouns, Verbs, Adverbs and Adjectives	6	Easy

SECTION III
MATHEMATICAL APTITUDE

The third sections was on **Mathematical Aptitude**. Again there were 40 questions in this section which were related to Basic Maths. We are producing some of the questions as follows

DIRECTIONS for (Q.81 to 120) : For the following questions, four options are given. Choose the correct option.

88. The smallest possible x satisfying $\log_{\cos x} \sin x + \log_{\sin x} \cos x = 2$ is

- (1) $\pi/3$ (2) $\pi/6$ (3) $\pi/4$ (4) $\pi/2$

Sol. **Ans.(3)**

89. The sum of the series $1, 2, 4, 8, 16, \dots, 2^n$ is

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

Sol. **Ans.(3)**

90. Last year a home appliance store sold an average (arithmetic mean) of 42 microwave ovens per month. In the first 10 months of this year, the store has sold on average (arithmetic mean) of only 20 microwave ovens per month. What was the average number of microwave ovens sold per months during entire 22 month period?

- (1) 21 (2) 28 (3) 31 (4) 32

Sol. **Ans.(4)**

91. Astha borrowed Rs. 240 intrest free, from her parents to pay for her college education. If she pays back 2.5% of this amount quarterly and has already paid Rs. 42.00, for how many months has she been paying back her loan?

- (1) 66 (2) 72 (3) 99 (4) 21

Sol. **Ans.(3)**

97. At m/s Sharma and sons, 70% of this year's new employees are graduates of business school and the remainders are graduates of engineering colleges. If 550 new employees were hired this year, the difference between the number of business school graduates hired and the number of engineering graduates hired is

- (1) 55 (2) 220 (3) 240 (4) 385

Sol. The required difference = $550 \times 40/100 = 220$. **Ans.(2)**

98. If a heavy load trailer traveled 7 km in 1 hour and 10 minute, what was its speed in km per hour?

- (1) 6 (2) 7 (3) 19 (4) 21

Sol. The required speed = $7/(7/6) = 6$ kmph. **Ans.(1)**

99. There are 240 doctors and nurses at a hospital. If the ratio of doctors to nurse is 5:7, the nurses of the hospital are

- (1) 20 (2) 60 (3) 100 (4) 140

Sol. **Ans.(4)**

105. After reading $3/5$ of the biology homework on Monday night, Sanjay read $1/3$ of the remaining homework on Tuesday night. What fraction of the original homework would Sanjay have to read on Wednesday night to complete the biology assignment?

- (1) $1/15$ (2) $2/15$
(3) $4/15$ (4) $2/5$

Sol. Required homework to be done on Wednesday night = $1 - \{(3/5) + (1-3/5)1/3\} = 4/15$. **Ans.(3)**

106. In a housing society, 30 percent of the residents are men over the age of 18 and 40 percent are women over the age of 18. If there are 24 children living in the housing society, how many total residents live?

- (1) 32 (2) 80
(3) 94 (4) 112

Sol. Let the total number of resident = 100. So, the men over the age of 18 = 40 and the women over the age of 18 = 30. Remaining will be children i.e., $100 - (40 + 30) = 30$. Now it is given that there are 24 children in the society. Therefore, total number of resident = $24 \times 100/30 = 80$. **Ans.(2)**

107. The length of a cold storage is double its breadth. Its height is 3 metres. The area of its four walls (including doors) is 108 m². Find its volume.

- (1) 215 m³ (2) 216 m³
(3) 217 m³ (4) 218 m³

Sol. Let the breadth of the cold storage is b meters. So length of cold storage = 2b meters. Now by the conditions given in question : $2\{(3 \times b) + (3 \times 2b)\} = 108 \Rightarrow 18b = 108 \Rightarrow b = \text{breadth} = 6$ meters and length = 12 meters. Therefore Volume = $12 \times 6 \times 3 = 216$ square meter. **Ans.(3)**

108. A six-sided die with faces numbered 1 through 6 is rolled three times. What is the probability that the face with the number 6 on it will *not* face upward on all three rolls?

- (1) $\frac{1}{216}$ (2) $\frac{1}{6}$
(3) $\frac{2}{3}$ (4) $\frac{215}{216}$

Sol. Required Probability = $1 - (1/6) \times (1/6) \times (1/6) = 215/216$. **Ans.(4)**

109. A department store receives a shipment of 1,000 shirts, for which it pays Rs.9,000. The store sells the shirts at a price 80 percent above cost for one month, after which it reduces the price of the shirts to 20 percent above cost. The store sells 75 percent of the shirts during the first month and 50 percent of the remaining shirts afterwards. How much gross income did sales of the shirts generate?

- (1) Rs.10,000 (2) Rs.10,800
(3) Rs.12,150 (4) Rs.13,500

Sol. The income generated during the first month = $1000 \times 0.75 \times 16.2 = \text{Rs. } 12150$. Income generated during the second month = $1000 \times 0.25 \times 0.5 \times 10.8 = \text{Rs. } 1350$. Gross income = $12150 + 1350 = 13500$. **Ans.(4)**

110. The Binary Ice Cream Shoppe sells two flavors, vanilla and chocolate. On Friday, the ratio of Vanilla cones sold to chocolate cones sold was 2 : 3. If the store had sold 4 more vanilla cones, the ratio of vanilla cones sold to chocolate cones sold would have been 3 : 4. How many vanilla cones did the store sell on Friday?

- (1) 32 (2) 35
(3) 42 (4) 48

Sol. By the condition given in question : $(2x + 4)/3x = 3/4 \Rightarrow x = 16$. Vanilla cones sold on Friday = $16 \times 3 = 32$. **Ans.(1)**

111. A bicycle wheel makes 5000 revolutions in moving 11 km. Find the diameter of the wheel.

- (1) 55 cm (2) 60 cm
(3) 65 cm (4) 70 cm

Sol. By the condition given in question : The circumference of wheel = $11000/5000 = 2.2$ meters. So, $2\pi r = 220$ cm $\Rightarrow 2r = 220 \times (7/22) \Rightarrow d = 70$ cm. **Ans.(4)**

112. A store raised the price of an item by exactly 10 percent. Which of the following could *not* be the resulting price of the item?

- (1) Rs.5.50 (2) Rs.7.60
(3) Rs.11.00 (4) Rs.12.10

Sol. **Ans.(2)**

113. The price for a pair of cuff links is Re.1.00. The price for a 5-pair package of cuff links is Rs.3.40. The 5-pair package is what percent cheaper per pair than 5 pair purchased separately?

- (1) 63% (2) 62%
(3) 47% (4) 32%

Sol. The price of 5 pair package of cuff link is Rs. 3.40. The per pair of cuff links = $\text{Rs. } 3.40/5 = 0.68$ paise. So the 5 pair package is $(1 - 0.68) \times 100 = 32\%$ cheaper than 5 pairs purchased separately. **Ans.(4)**

114. A company bought a total of 60 computers and 20 printers to modernize billing operations. If the price of each computer was three times the price of each printer, what percent of the total cost of the purchase was the total cost of the printers?

- (1) 10% (2) 11%
(3) 15% (4) 20%

Sol. Let the price of one printer = Rs. x then the price of one computer = 3x. Therefore price of 60 computers = 180x and price of 20 printers = 20x. So total cost of purchase = 200x. So total cost of the printers is $(20x/200x) \times 100 = 10\%$ of the total cost of purchase. **Ans.(1)**

115. A machine costs m rupees per day to maintain and n paise for each unit it produces. If the machine is operated 7 days per week and produces r units in a week, which of the following is the total cost, in Rs., of operating the machine for a week?

- (1) $7m + 100nr$ (2) $700m + nr/100$
(3) $m + nr$ (4) $700m + nr$

Sol. **Ans.(2)**

116. How many integers between 100 and 150, both inclusive, can be evenly divided by neither 3 nor 5?

- (1) 33 (2) 28
(3) 27 (4) 26

Sol. The numbers are 101, 103, 104, 106, 107, 109, 112, 113, 116, 118, 119, 121, 122, 124, 127, 128, 131, 133, 134, 136, 137, 139, 142, 143, 146, 148, 149. i.e., 27 integers. **Ans.(3)**

117. To fill a number of vacancies, an employer must hire 3 programmers from among 6 applicants, and 2 managers from among 4 applicants. What is the total number of ways in which she can make her selection?

- (1) 1,490 (2) 132
(3) 120 (4) 60

Sol. Required number of ways = ${}^6C_3 \times {}^4C_2 = 20 \times 6 = 120$. **Ans.(3)**

118. On Monday, a certain animal shelter housed 55 cats and dogs. By Friday, exactly $1/5$ of the cats and $1/4$ of the dogs had been adopted; no new cats or dogs were brought to the shelter during this period. What is the greatest possible number of pets that could have been adopted from the animal shelter between Monday and Friday?

- (1) 11 (2) 12
(3) 13 (4) 14

Sol. Given that $c + d = 55$ where c is multiple of 5 and d is multiple of 4. Only two combinations of c and d are possible, which satisfies the above conditions. $(c, d) = (15, 40)$ or $(35, 20)$. Now we have to find the greatest number of pets that could have been adopted, so by considering $(35, 20)$ we have maximum $(7 + 5)12$ pets which can be adopted from the animal shelter. **Ans.(2)**

119. At a college football game, $4/5$ of the seats in the lower deck of the stadium were sold. If $1/4$ of all the seating in the stadium is located in the lower deck, and if $2/3$ of all the seats in the stadium were sold, what fraction of the unsold seats in the stadium was in the lower deck?

- (1) $3/20$ (2) $1/6$
(3) $1/5$ (4) $1/3$

Sol. **Ans.(1)**

120. A man goes 10 m due east and then 24 m due north. Find the distance from the starting point.

- (1) 26 m (2) 24 m
(3) 28 m (4) 30 m

Sol. **Ans.(1)**

121. At company R, the average age of executive employee is 54 years old and the average of non executive employee is 32 years old. What is the average age of all the employees at company R.

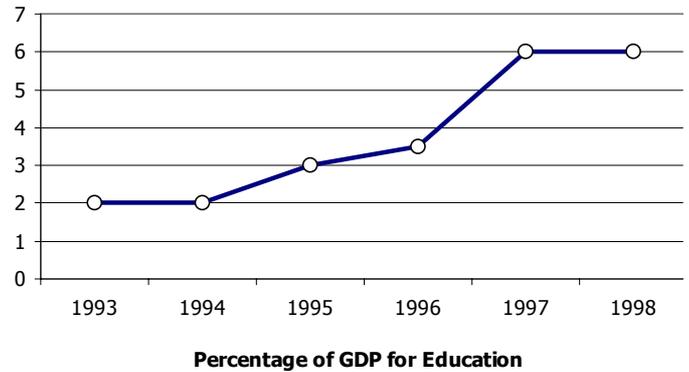
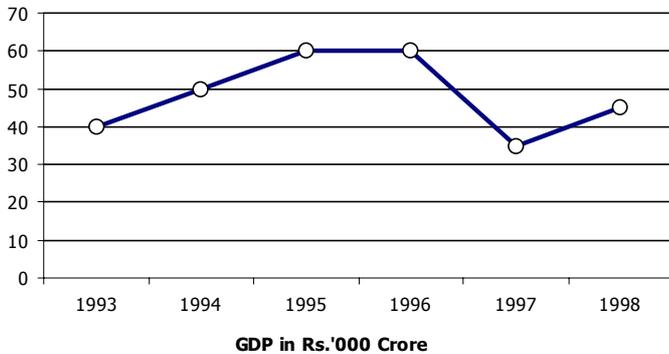
- (1) 46 years (2) 42 years (3) 43 years (4) 45 years

Sol. The required average age = $(54 + 32)/2 = 43$ years. **Ans.(3)**

SECTION IV
DATA ANALYSIS AND SUFFICIENCY

There were 40 questions were on **Data Interpretation** and **Data Sufficiency**. There were 7 to 8 questions were based on Guranted Answer type DS. We are producing some of the questions as follows

DIRECTIONS for (Q.121 to 126) : Answer the questions on the basis of information available in the graphs below which give the GDP of the percentage of GDP for education in the given years.



121. In how many years has actual educational spending reduced as compared to that of the previous year?

- (1) 0 (2) 1
(3) 2 (4) None of these

Sol. **Ans.(1)**

122. Between the given years, both inclusive, what percentage of the country's total GDP has gone into education?

- (1) 4.3% (2) 3.6%
(3) 3.4% (4) 3.1%

Sol. **Ans.(2)**

123. The total amount given to education would be how many times the total amount given to defence, if every year 2% of the GDP is given to defence (for the entire period)?

- (1) 2.15 times (2) 1.55 times
(3) 1.7 times (4) 1.8 times

Sol. **Ans.(4)**

124. If due to an HR Ministry report it is obligatory for the government to allocate at least Rs.3,200 crore for education in 1999, provided educational spending, as a percentage of the GDP, does not exceed 6.5%, what is the least desirable GDP for 1999 (in Rs.'000 crore)?

- (1) 51.52 (2) 48.24
(3) 49.23 (4) 42.72

Sol. **Ans.(3)**

125. In which year was the spending on education the lowest?

- (1) 1996 (2) 1995
(3) 1994 (4) 1993

Sol. **Ans.(4)**

126. If percentage of GDP allocated to education in 1999 increases by twice as much percent from 1998 allocation as the 1995 increase over 1994, what is the increase likely to be in percentage terms?

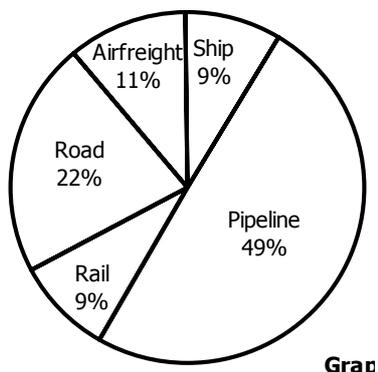
- (1) 2% (2) 33.33%
(3) 6.48% (4) Cannot be determined

Sol. **Ans.(2)**

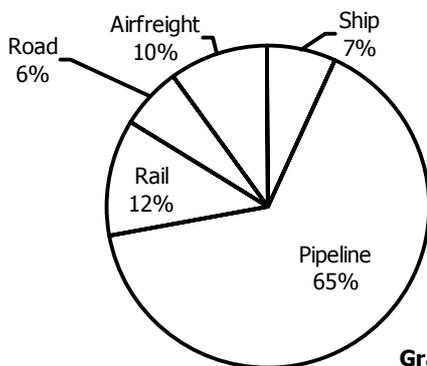
DIRECTIONS for (Q.127 to 129) : Graph 1 below shows the distribution of twelve million tonnes of crude oil transported through different modes over a specific period of time. Graph 2 shows the distribution of the cost of transporting this crude oil. The total cost was Rs.30 million.

Volume of Crude Oil Transported Over a Specific Period

Distribution Cost of Transported Crude Oil



Graph 1



Graph 2

Graph 1

Graph 2

127. The cost in rupees per tonnes of oil moved by airfreight happens to be roughly

- (1) 3 (2) 2.125
 (3) 2.23 (4) Cannot be determined

Sol. **Ans.(3)**

128. From the charts given, it appears that the costliest mode of transport is

- (1) road (2) rail
 (3) pipeline (4) ship

Sol. **Ans.(2)**

129. If the costs per tonne of transport by pipeline, air and rail are represented by P, Q and R respectively, which of the following is true?

- (1) $R > Q > P$ (2) $P > R > Q$
 (3) $P > Q > R$ (4) $R > P > Q$

Sol. **Ans.(4)**

Success Simplified!

DIRECTIONS for (Q.130 &131) : Following table shows the datas of total export and software exports. Refer to the table and answer the questions that follow.

Years	Total Export	Software Export
1992-93	59688.00	7884.00
1993-94	69778.00	13,427.00
1994-95	82723.00	13,836.00
1995-96	1,06,387.00	21,237.00
1996-97	1,18,917.00	24,263.00
1997-98	1,30,171.00	24,687.00
1998-99	1,39,776.00	25,257.00
1999-2000	1,62,747.00	26,862.00
2000-2001	1,73,526.00	29,938.00
2001-2002	1,75,914.00	30,648.00

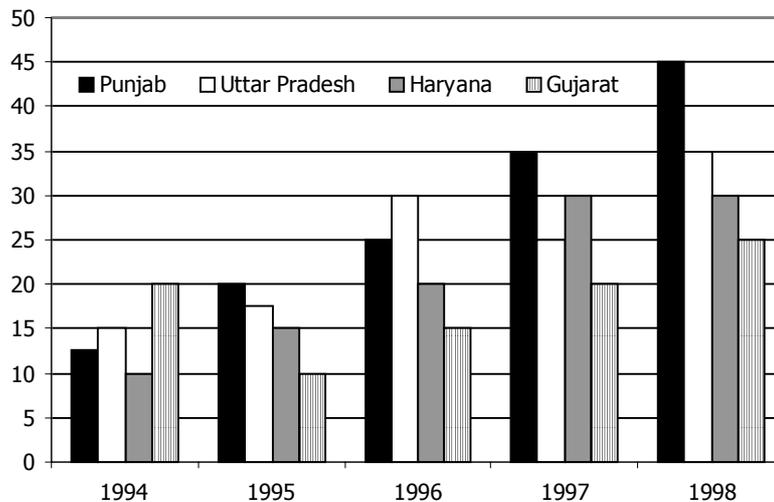
130. The growth of software exports in 1998 over 1997-98 is closet to
 (1) 3% (2) 1% (3) less than 1% (4) 2.5%

Sol. **Ans.(4)**

131. The rate of growth of software exports compared to the rate of growth of total exports from 1992-1993 to 2001-02 is
 (1) 11/16 (2) 3/5 (3) 4/5 (4) None of these

Sol. **Ans.(1)**

DIRECTIONS for (Q.150 to 155) : Following bar graph shows the production of wheat in (lakh tonnes). Refer to the graph and answer the questions that follow.



150. In which of the following states did the production of wheat increase every year?
 (1) Punjab (2) Uttar Pradesh (3) Haryana (4) Punjab and Haryana

Sol. **Ans.(1)**

151. What is the percentage rise in wheat production in Gujarat in 1998 over the previous year?
 (1) 25% (2) 20% (3) 33.33% (4) None of these

Sol. **Ans.(1)**

152. What is the difference between the average production of wheat in the states of Haryana and Gujarat over the entire period?
 (1) 30,000 tonnes (2) 10,00,000 tonnes (3) 45000 tonnes, (4) 4,50,000 tonnes

Sol. **Ans.(1)**

153. The production of wheat in Gujarat in 1998 is what percentage less than the production of wheat in Uttar Pradesh in 1997?
 (1) 16.60% (2) 20% (3) 40% (4) 0%

Sol. **Ans.(4)**

154. For which of the following years is the production closet to average yearly production for the entire period?

- (1) 1995 (2) 1996 (3) 1997 (4) 1998

Sol. **Ans.(2)**

DIRECTIONS for (Q.155 to 160) : In each question below is given a statement followed by two assumptions numbered I and II. You have to consider the statements and the assumption and decide which of the assumption is implicit in the statement. Mark your answer as

- (1) if only assumption I is implied
(2) if only assumption II is implied
(3) either assumption I or II is implied
(4) if neither I or II is implied

155. Statement : A's advice to B – 'Go to Jammu via Amritsar – the shortest route'

Assumptions : I. B wishes to go to Jammu II. A gives advice to everybody

Sol. **Ans.(1)**

156. Statement : Detergents should be used to clean clothes.

Assumptions : I. Detergents form more lather. II. Detergents Help to dislodge grease and dirt.

Sol. **Ans.(2)**

157. Statement : "To keep myself up-to-date, I always listen to 9.00 p.m. news on radio." – a candidate tells the interview board.

Assumptions : I. The candidate does not read newspapers.
II. Recent news are broadcast only on radio.

Sol. **Ans.(4)**

158. Statement : A line in an advertisement in a newspaper - "You really get your money's worth when you buy from our shop."

Assumptions : I. Other shops price goods above their worth.
II. People want full value for their money.

Sol. **Ans.(2)**

159. Statement : I cannot contact you on phone from Karshik.

Assumptions : I. Telephone facility is not available at Karshik.
II. Nowadays it is difficult to contact on phone.

Sol. **Ans.(4)**

160. Statement : Apart from the entertainment value of television, its educational value cannot be ignored.

Assumptions : I. People take television to be a means of entertainment only.
II. The educational value of television is not realised properly.

Sol. **Ans.(2)**

Success Simplified!

SECTION V

INDIAN AND GLOBAL ENVIRONMENT

There were 40 questions were on current and traditional **General knowledge** in this section.

161. The Union Minister of Commerce and Industry is

- (1) P. Chidambaram (2) Kamal Nath (3) Shared Pawar (4) None of these

162. Ad line "We understand your world" is associated with which bank?

- (1) State Bank of India (2) HDFC Bank (3) ABN – AMRO (4) UTI Bank

163. Name India's first listed IT firm to have crossed \$ 1 billion turnover.

- (1) Infosys (2) Satyam (3) Polaris (4) Wipro

164. SEZ stands for

- (1) Southern Economic Zone (2) South European Zone
(3) Special Economic Zone (4) Special Eastern Zone

165. Which state **not** a leading sugar producer?
(1) U.P. (2) West Bengal (3) Maharashtra (4) Bihar
166. Getz is a car model introduced by
(1) Toyota (2) Ford (3) Mitsubishi (4) Hyundai
167. Which country won the silver medal for hockey in Athens Olympics 2004?
(1) Australia (2) Pakistan (3) The Netherlands (4) Germany
168. Commonwealth games in year 2040 are scheduled to be held in
(1) Bristol (2) Malbourn (3) Manchester (4) Delhi
170. The late palestinian leader Mr. Yaser Arafat was born in
(1) Paris (2) Giza (3) Ramallah (4) Jerushalam
169. The term 'Fourth Estate' refers to
171. IRDA stands for



Overall Analysis

As the scores of this test are used a lot of institutes thus an exact cut-off cannot be provided.

But a score of approx. 110 + should be a very good scores for the best institutes accepting the MAT scores.

Success Simplified !