

SCMHRD Entrance Test

December 07, 2003

We are happy to present a comprehensive analysis of this year's SCMHRD test. It has been recreated with the help of PT faculty and PT students from across the nation.

The entrance test for SCMHRD had the same pattern as last year. There were 5 sections followed by 5 descriptive type questions. The only difference was in the number of questions in each section. Following table represents the comparison of the test from last year's test :

	2002	Total number of Questions	2003	Total number of Questions
Section - I	Quantitative Ability + Data Sufficiency	60	Quantitative Ability	40
Section - II	Data Interpretation	25	Data Interpretation + Data Sufficiency	40
Section - III	Reading Comprehension	40	Reading Comprehension + Logical Reasoning	60
Section - IV	English Usage + Logical Reasoning	35	English Usage	40
Section - V	General Knowledge	40	General Knowledge	20
Section - VI	Descriptive Type Questions	5	Descriptive Type Questions	5

A bird's eye view :

- Total Number of Questions** : 200 Objective + 5 Descriptive
- Total Time** : 150 minutes (inclusive of the last 10 minutes for descriptive type questions)
- The Marking Scheme** : The answers had to be marked with a blue ball point pen only.
1 mark for correct answers.
– 0.25 mark for incorrect answers.
– 1 mark was awarded in case more than one answers had been marked on the answer sheet.
- Sectional cut-off** : This was indicated in the paper that there may be sectional cut-off.

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 :

Section - I (Quantitative Aptitude)

There were 40 questions asked in the section which were easy.

Topics which were included in the section:

- A. Number System
- B. Quadratic Equation
- C. Averages
- D. Mensuration
- E. Geometry
- F. Probability
- G. Mixture and Alligation
- H. Profit and Loss
- I. Work and Time
- J. Clock

An attempt of 32 – 35 questions was easily manageable.

We have reproduced some of the questions asked in the test.

1. If the measure of diagonals of a rhombus is 24 cm and 10 cm, then the perimeter of the rhombus is
(1) 52 (2) 49 (3) 28 (4) 120

Sol. Side of rhombus = $\sqrt{5^2 + 12^2} = 13$ cm. Then, perimeter = 52 cm. **Ans.(1)**

2. Four pair of socks are in a box .What is the minimum number of attempts required to get a pair of socks?
(1) 2 (2) 3 (3) 4 (4) 5

Sol. Minimum five socks will have to be taken to be sure to have a pair of socks . **Ans.(4)**

3. The sum of the digits is subtracted from the number itself. The result is
(1) Divisible by 7 (2) Divisible by 9 (3) Not divisible by 9 (4) Not divisible by 7

Sol. Every number is of form $10a + b$.Therefore, $10a + b - a - b = 9a$ which is always divisible by 9. **Ans.(3)**

4. A shopkeeper while returning the money to a customer reversed the digits. In the evening he found a deficit of Rs.54 in his balance. What was the amount which should have been paid to the customer?

- (1) 71 (2) 17 (3) 62 (4) 54

Sol. $10x + y - 10y - x = 54$

$$9x + 9y = 54 \Rightarrow x + y = 6$$

Therefore Rs.17 should have been given to the customer but instead Rs.71 was given which resulted in a difference of Rs.54.

Ans.(2)

5. The number in which the tenth digit is square of the units place and the difference between the number and its reverse is 54
(1) 93 (2) 39 (3) 24 (4) 52

Sol. Go by options, $93 - 39 = 54$ and $3^2 = 9$ **Ans.(1)**

6. In the ΔABC $\angle A = 90^\circ$, $\angle B = 30^\circ$ and $\angle C = 60^\circ$. What can you say about the relationship between the hypotenuse and the side opposite to 30° and 60° .

- (1) $\frac{\sqrt{3}}{2}h, \frac{1}{2}h$ (2) $1h, \frac{\sqrt{3}}{2}h$ (3) $\frac{1}{2}h, \frac{\sqrt{3}}{2}h$ (4) None of these

Sol. Basic property of 30° , 60° and 90° . **Ans.(3)**

7. If $1 = \frac{3}{4}\left(1 + \frac{y}{x}\right)$ then

- (1) $x = 3y$ (2) $x = \frac{1}{3}y$ (3) $y = \frac{2}{3}x$ (4) None of these

Sol. On solving we have $x = 3y$. **Ans.(1)**

8. A starts at 4km/hr from his house which is 53 kms away from B's house. After 1 hrs. B starts at the speed of 3km/hr from his house. How far from B's house will they meet?

- (1) 35 (2) 28 (3) 21 (4) None of these

Sol. In 1 hr. A covers 4 km. \therefore Distance remaining 49 km.

Now they will cover distance in ratio of their speed i.e. 4:3. B covers = $\frac{3}{7} \times 49 = 21$ km. **Ans.(3)**

9. In a cylinder the sum of height and radius is 9. What should be the radius and height for the maximum volume?

- (1) 7, 2 (2) 2, 7 (3) 6, 3 (4) 5, 4

Sol. Volume of cylinder = $\pi r^2 h$. Go by options, maximum value is achieved by putting $r = 6$ and $h = 3$ i.e.
 $\pi \times 36 \times 3 = 108\pi$ **Ans.(3)**

10. We have a cylinder a cone and hemisphere the radius of the cylinder and cone is equal to their heights. The radius of all the three is same. What is the ratio of their volumes

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

Sol. Volume of cylinder : volume of cone : volume of hemisphere

$$\pi r^2 h : \frac{1}{3} \pi r^2 h : \frac{2}{3} \pi r^3$$

$$\Rightarrow 3 : 1 : 2. \text{ Ans.(4)}$$

11. A has got Rs.1,00,000 invested in shares. In the first year it increased by 10%. in the next year by 5% & in the third year it decreased by 5%. What amount he has got with him after the third year

- (1) 104550 (2) 103950 (3) 115500 (4) 102850

Sol. After first year he has $1,00,000 \times \frac{11}{10} = 1,10,000$

$$\text{After second year he have } 1,10,000 \times \frac{21}{20} = 1,15,500$$

$$\text{After third year he has } 1,15,500 - 11,550 = 1,03,950. \text{ Ans.(2)}$$

12. A was 24 years old when his son was born. Now he is 3 times the age of his son. How many years before he was four times the age of his son?

- (1) 3 (2) 4 (3) 5 (4) 10

Sol. Let the age of his son be x years.

$$\therefore 24 + x = 3(x)$$

$$\Rightarrow x = 12 \text{ and the age of A is } 36 \text{ years}$$

$$\text{Now, } 4(12 - y) = 36 - y$$

$$\Rightarrow y = 4 \text{ years. Ans.(2)}$$

13. Two flasks-1 containing (A) 10 litres of water and the other containing (B) 10 litres of milk, 1 litre is taken from B of milk and put into A. Then 1 litre of mixture is taken from A and put into B. What can you say about the concentration in the two containers

- (1) The concentration of milk in A is more than milk in B.
 (2) The concentration of milk in A is less than milk in B.
 (3) Same in both the cases
 (4) None of these

Sol. The answer is obviously (2) as the concentration of milk in B will be nearly 99%. **Ans.(2)**

14. A coin is tossed five times and a tail appears four times. What is the probability that a tail will appear on the sixth toss.

- (1) 33% (2) 77.8% (3) 50% (4) 91.9%

Sol. The probability of getting a head or a tail is always 50% irrespective of the number of previous tosses. **Ans.(3)**

15. The sum of 6 consecutive odd numbers is 888. What is the median of the series?

- (1) 147 (2) 148 (3) 149 (4) 146

Sol. The 6 numbers are 143, 145, 147, 149, 151, 153 that add up to 888. Median of this series = 148. **Ans.(2)**

16. The sum of table is

-24	-23	-28	-31	-40
30	16	15	22	27
-15	-20	-31	-44	-16
-12	-18	-17	-19	-12
6	25	30	28	25

- (1) -126 (2) 126 (3) -132 (4) -128

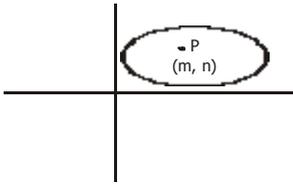
Sol. Observe that in each column the first and fourth element gets cancelled with the second and the fifth element.
 \therefore The total sum of the table is $-15 - 20 - 31 - 44 - 16 = -126$. **Ans.(1)**

17. Chances of A saying the truth is 70% and B saying the truth is 40%. Replying to a question what are the chances that they will contradict.

- (1) 45% (2) 60% (3) 28% (4) None of these

Sol. Chances of A and B contradicting = $0.7 \times 0.6 + 0.3 \times 0.6 = 0.60$. **Ans.(2)**

18.



What will be the coordinates of point P if the above ellipse is rotate 90° clockwise?

- (1) $-m, -n$ (2) $m, -n$ (3) $-m, n$ (4) $n, -m$

Sol. After rotating the ellipse 90° it will come in the fourth quadrant where x coefficient is positive and y coefficient is negative. Therefore answer is $(m, -n)$. **Ans.(2)**

19. What will be the coordinate of point P if the above ellipse is rotated 90° anticlockwise?

- (1) $-m, n$ (2) $m, -n$ (3) $-m, -n$ (4) $n, -m$

Sol. After rotating 90° anticlockwise the ellipse will come in the second quadrant where x coefficient is negative and y coefficient is positive. Therefore answer is $(-m, n)$. **Ans.(1)**

Section - II (DI/DS)

There were 25 questions were asked on Data Interpretation and Data Sufficiency. The Data Interpretation was on the average side with two DI sets being easy, one average and one difficult. There were three sets on tables and one set on Table + Bar Graph. Questions were relatively direct which can be answered seeing the tables directly and an attempt of 25+ was achievable.

In the Data sufficiency part their were 15 questions which were also a combination of average, easy and difficult. But still atleast 7 were very easily manageable.

The options were as follows:

- (1) If a is sufficient alone but b is not
 (2) If b is sufficient alone but a is not
 (3) If a and b are both required to answer the question
 (4) If the question cannot be answered using a and b both

The complete break-up of section, topic wise is given in the following table :

Data Interpretation	: 30 Questions
3 Sets on Tables	
1 Set on table	+ Bar Graph
Data sufficiency	: 15 Questions

SECTION - III (READING COMPREHENSION + LOGICAL REASONING)

The RC section was a complete surprise to the students as for the first time only two passages containing 20 questions each were asked. Both the passages were philosophical in nature and of length two and half pages and one and half pages respectively. The questions were generally inference based and the options were close. A good reader would found them relatively easy and both the passages were attemptable.

The first passage was on man and on his style of living. It showed how we lived either in our past or for our future. The passage emphasised the importance of living in present and taking each day as it comes. Nirvana, said the passage, can be attained if one learns the art of accepting what each moment of life has to offer.

The second passage emphasised on the love and respect given by Anglo Indians to their land, water, trees etc. and their distinct ways of living in comparison to the people living in towns and cities.

The logical reasoning section contained 20 questions which were very easy and an attempt of 18 would have been manageable.

Some of the questions reproduced by our students are given below:

1. Find the missing letter

- ADF HKM SV_ (1) W (2) X (3) y (4) V

Sol. Their is a gap of two letters between the first two and a gap of one letter between the next two i.e., A (B) (C) D (E) F similarly it will be S (T) (U) V (W) X. Hence **Ans.(2)**

2. The six faces of a die have been marked with alphabets A, B, C, D, E and F respectively. This die is rolled down three times. The three positions are shown as :



(i)



(ii)



(iii)

Find the alphabets opposite A.

(1) B

(2) C

(3) D

(4) E

Sol. From figure (ii) and (iii) it is clear that C, D, B and F cannot appear opposite E. So, A appear opposite E i.e., E is the alphabets opposite A. **Ans.(4)**

SECTION - IV (ENGLISH USAGE)

The section contained 40 questions and again was a surprise package. It contained 30 questions on para jumbles and 10 questions on fill in the blanks (cloze test). The first 15 questions on para jumbles were rather tough and required good application. The next 15 questions were in the average category and should have been attempted first.

The 10 Fill In The Blanks question were easily manageable with all questions being direct.

SECTION - V (GENERAL KNOWLEDGE)

This section contained 20 questions which were rather difficult and only a regular reader of news paper and business magazines would have been able to get through the GK section. An attempt of 8 questions were achievable.

Some question from the GK section are gives below:

- (1) Mr. Shreenevasan, who made the world's first computer is associated with which company?
- (2) Current rate of inflation in India is
- (3) In which country ONGC has discovered largest resources of natural gas?
- (4) FDI in private bank has changed upto
- (5) Percentage share of GDP going to the defence in India is
- (6) How much percentage does India contribute in WORLD TRADE?
- (7) Wipro started a polytechnic college in which state?
- (8) What is the HPA value of Indian Banks?
- (9) 15 million fine is given by which organisation?

SECTION - VI (OBJECTIVE QUESTION)

This section contained 5 questions which were to be answered in 10 min. in approximately 4-5 lines each. The questions were as follows :

- (1) What changes would you like to see in the school and college education system?
- (2) What measures would you take to reduce the number of scams happening in India?
- (3) What measures would you take to resolve the KASHMIR and the AYODHYA issue?
- (4) Can Educational Institutes, Educators, Education create honourable and professional leaders?
- (5) Why is SCMHRD unique?

Expected Cut-Offs

Pune Marketing	80-85
Pune Finance	75-80
Pune Human Resources Development	75-80
Pune Systems	70-75
Nasik	50-60