SCHMRD Analysis
December 08, 2002

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 SCMHRD test paper was on similar lines as that of the last year's.

A bird's eye view :

- ➤ **200 Questions, 2:30 hours** (inclusive of the last 10 minutes for essay type questions)

- ➤ **Total 5 sections:**
  - o   Section 1: 60 Q. - MA + DS.
  - o   Section 2: 25 Q. - DI.
  - o   Section 3: 40 Q. - RC.
  - o   Section 4: 35 Q. - EU + CR.
  - o   Section 5: 40 Q. - GK.

- ➤ **The Marking Scheme:**
  - o   The answers had to be marked with a blue ballpoint pen only.
  - o   +1 for a correct answer.
  - o   – ¼ mark for incorrect answers.
  - o   – 1 mark was awarded in case more than one answers had been marked on the answer sheet.

Section 1: 60 Q. - MA + DS.
This section contained 45 questions on MA and 15 on DS. The DS questions appeared in three sets of five questions each and were of the four options - straight variety. The toughness level of the questions was on the easier side and a decent attempt could have been in the range of 30-35 questions. Some of the DS questions were indeed tricky and required presence of mind.

Section 2: 25 Q. - DI.
This section was the toughest of all. There were four sets, each containing a large number of graphs and tables. However, the discerning student would not have taken long to realize that a lot of information was presented in duplicate - both in graphs and in the tables. Despite the duplicacy in data presented, the section was more a test of one's number crunching skills as the options were closely spaced and each question hence became very time consuming. A decent attempt would have been 12+ questions.

Section 3: 40 Q. - RC.
The section contained three passages - all of different lengths. However, the striking feature common to all the passages was the nature of questions - all inference based. The passages on the whole were on the easier side.

For the well-read student, it would not have taken long to make out the sources of two of the passages - one from the SCMHRD brochure itself and the other from the book "Rich Dad, Poor Dad". All the passages had a relatively simple and easy to understand language. A decent attempt would be in the range of 27+ questions. A few of the questions recalled with the help of the PT students have been included in the analysis.

Section 4: 35 Q. - EU + CR.
The section contained direct questions on synonyms and verbal analogies (5 questions each). They were followed by questions on sentence completion, and paragraph formation. There were two variants of sentence correction - one where the most clear and concise form of the underlined phrase in the given statement was to be selected and the other, where there options were the sentences themselves and the test-taker was required to mark the incorrect statement as the answer. Besides, there were also, five questions on critical reasoning requiring the test-taker to infer and reason.

The section could have easily been cracked in under 30 minutes and an attempt of 28+ would be decent.

Section 5: 40 Q. - GK.
The GK section was indeed severe in testing the ability of the students to recall facts and figures and stressed upon facts and figures related to economy, trade, export-import etc. However, the well-informed and aware student would not have found difficulty in attempting atleast 15 questions.

Descriptive type questions.
The paper contained four descriptive type questions and it was mandatory for all the students to answer them within the stipulated 10 minute time limit.

Mathematical Aptitude and Data Sufficiency

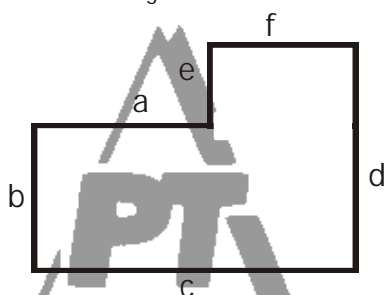**Directions for Q. 1 – 60 :** *For the following questions, choose the correct option.*

1. The area of the rectangle enclosed in a regular hexagon of side 2 cm is :
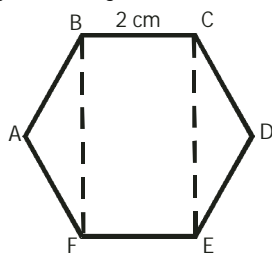
(1) $4\sqrt{3}$ cm²
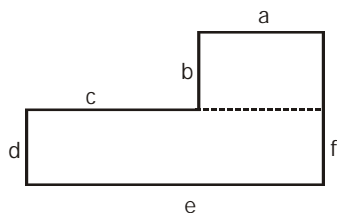(2) $2\sqrt{3}$ cm²
(3) 5 cm²
(4) None of the above

Sol: Included angle is 120°. Applying the cosine formula. $\cos 120° = \dfrac{AB^2 + AF^2 - BF^2}{2 \times AB \times AF} \Rightarrow -\dfrac{1}{2} = \dfrac{4 + 4 - BF^2}{2 \times 2 \times 2}$

$\Rightarrow BF = \sqrt{12} = 2\sqrt{3}$. Hence area $= 2\sqrt{3} \times 2 = 4\sqrt{3}$ cm² **Ans.(1)**

2. Which of the following cannot be the area of the figure ?
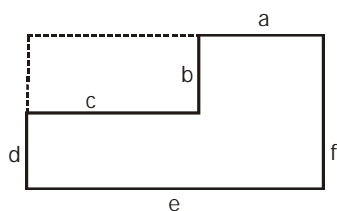

(1) ed + ab
(2) ef - bc
(3) ab + cd
(4) None of the above

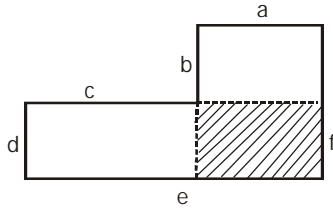**Sol:** Considering option (1) : ed + ab. Breaking the figure along the dotted line.

Considering option (2) :ef – bc.

Considering option (3) : ab +cd.

In this case we are not considering the shaded area. So, (3) is the correct answer . **Ans. (3)**

3. Find the area of an octagon of sides 2, 2√2, 2, 2√2, 2, 2√2, 2, 2√2.
   (1) 10   (2) 20
   (3) 28   (4) 36

Sol : Area of the octagon = Area of all the four triangles + Area of the five squares.
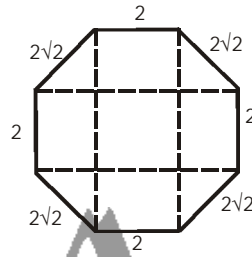
Area of the triangle = $\frac{1}{2}$ × 2 ×2 **=** 2 sq. units.

Therefore, area of all the triangles = 4 × 2 = 8 sq. units.
Area of the square = 2 × 2 = 4 sq. units.
therefore, area of all the squares taken together = 5 × 4 = 20 sq. units. Hence the total area of the octagon is 28 sq. units. **Ans.(3)**
PT students ... remember, a similar question was asked in the final CT series. We hope most of you must have got this right.

4. Aeroplane A starts at 4 : 00 am from a certain place with X kmph and aeroplane B starts at 5 : 30 am from the same place with Y kmph. If Y > X then after how many hours of taking start will plane B overtake plane A ?

   (1) $\frac{3X}{2(Y-X)}$ hours   (2) $\frac{2X}{3(Y-X)}$ hours

   (3) $\frac{2(Y-X)}{3X}$ hours   (4) $\frac{3(Y-X)}{2X}$ hours

Sol: Let t hours after plane B will overtake plane A. Then, by the condition given in question :

Yt = X(t + $\frac{3}{2}$) $\Rightarrow$ t (Y − X) = $\frac{3X}{2}$ $\Rightarrow$ t = $\frac{3X}{2(Y-X)}$ hours. **Ans.(1)**

5. If (X/2) − (2/X) = 3, then which of the following expressions is not equal to zero ?
   (1) $x^2 - 12x - 16$ (2) $x^2 - 36x - 144$
   (3) $x^2 - 6x - 13$ (4) None of the above

Sol : $\frac{x}{2} - \frac{2}{x} = 3 \Rightarrow x^2 - 4 = 6x \Rightarrow x^2 - 6x - 4 = 0$. From the options we can see that :

$x^2 - 6x - 13 = x^2 - 6x - 4 - 9 = -9$ [Since $x^2 - 6x - 4 = 0$]
Roots of $x^2 - 6x - 4 = 0$ are $3 \pm \sqrt{13}$.
Roots of $x^2 - 36x - 144 = 0$ are $18 \pm 6\sqrt{13}$ and that of $x^2 - 12x - 16$ are $6 \pm 2\sqrt{13}$.
Therefore, options (1) and (2) equal to zero. **Ans.(3)**

6. In a 366 days year how many days occur 53 times ?
   (1) 0   (2) 1
   (3) 2   (4) 3

Sol : In a leap year there are two odd days i.e., two day that occurs 53 times. **Ans.(3)**


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.

7. How much more is $\frac{1}{2}$ of $\frac{2}{3}$ than $\frac{1}{3}$ of $\frac{3}{4}$?

   (1) $\frac{1}{10}$ (2) $\frac{1}{12}$

   (3) $\frac{1}{5}$ (4) None of the above

Sol : $\frac{1}{2}$ of $\frac{2}{3} = \frac{1}{3}$, $\frac{1}{3}$ of $\frac{3}{4} = \frac{1}{4}$. Therefore $\frac{1}{3}$ of $\frac{1}{4} = \frac{1}{12}$. **Ans.(2)**

8. The father's age is 4 times that of the daughter. After 5 years, the father shall be thrice as old as his daughter. After how many years the father's age will be twice his daughter's?
   (1) 20 years   (2) 40 years
   (3) 60 years   (4) None of the above
Sol : Let, the age of the father = x years. So, the age of the daughter = x/4 years. By the condition given in the question :
x + 5 = 3{(x/4) + 5} ⇒ x = 40 years. Again let,after t years fathers age will be twice the age of daughter :
(40 + t) = 2(10 + t) ⇒ t = 20 years **Ans.(1)**

9. Which of the following number has maximum factors ?
   (1) 88   (2) 99
   (3) 91   (4) 101
Sol: 88 = 2 × 2 × 2 × 11. Hence divisors of 88 = 1, 2, 4, 8, 11, 22, 44 and 88 - 8 in all.
99 = 3 × 3 × 11. Hence divisors of 99 = 1, 3, 9, 11, 33 and 99 - 6 in all.
91 = 13 × 7. Hence divisors of 91 = 1, 7, 13 and 91- 4 in all.
101 = 101 × 1. Hence divisors of 101 = 1 and 101 - 2 in all **Ans.(1)**

10. Which of the following number has maximum factors ?
    (1) 176   (2) 182
    (3) 99   (4) 36
Sol: 176 = 2 × 2 × 2 × 2 × 11. Hence divisors of 176 = 1, 2, 4, 8, 11, 16, 22, 44, 88 and 176 - 10 in all.
182 = 2 × 13 × 7. Hence divisors of 99 = 1, 2, 7, 13 and 91 - 5 in all
99 = 3 × 3 × 11. Hence divisors of 99 = 1, 3, 9, 11, 33 and 99 - 6 in all
36 = 2 × 2 × 3 × 3. Hence divisors of 36 = 1, 2, 4, 6, 9, 12, 18 and 36 - 8 in all. **Ans.(1)**
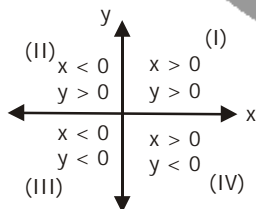
11. If X and Y are integers such that X < Y, then (X, Y) cannot lie in which quadrant :
    (1) First quadrant   (2) Second quadrant
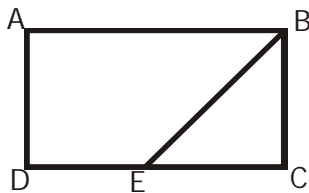   (3) Third quadrant   (4) Fourth quadrant

Sol:

As it can be clearly seen if Y > X the ordered pair (X,Y) can never lie in the fourth quadrant. **Ans.(4)**

12. In the adjacent figure, area of isosceles Δ CDE is 14 cm² and CD = 3BC, then what is the area of rectangle ABCD ?

    (1) 152 cm²   (2) 44 cm²
    (3) 112 cm²   (4) 56 cm²

Sol: Area of Δ BCE = $\frac{1}{2}$ × EC × BC = 14 cm ⇒ BC² = 28 ⇒ BC = √28.

Then, the area of rectangle ABCD = DC × BC = (DE + EC)× BC = 4 × BC² = 112 square cm. **Ans.(3)**

13. If X<2, which of the following conclusions can be definitely drawn ?

   (1) $X^2 > X$ (2) $X < 0$

   (3) $X = 0$ (4) None of the above

Sol: Since, its given to us that X < 2. Therefore, X can satisfy any other following conditions

1< X < 2 $\Rightarrow$ Neither of the options hold correct.

0 < X < 2 $\Rightarrow$ Only option (1) is correct.

X = 0 $\Rightarrow$ Only option (3) is correct. But if X < 0 both options (1) and (3) are correct. **Ans.(4)**

14. If Anita types 32 pages in 6 hours and Sunita types 40 pages in 5 hours, then how much time will they take together to type 110 pages ?

   (1) 10 hours   (2) 12.5 hours

   (3) 8.25 hours   (4) 18 hours

Sol: Anita can type 32/6 pages in one hour. Sunita can type 40/5 pages in one hour. Together, they can type

$\dfrac{32}{6}+\dfrac{40}{5}=\dfrac{40}{3}$ pages in one hour. So, they will type 110 pages in $\dfrac{3}{40}\times110$ = 8.25 hours. **Ans.(3)**

15. What is the radius of the largest sphere that can be kept inside a cylinder of 5 cm. height and 45 cc volume?

   (1) $\pi/\sqrt{3}$.   (2) $3\sqrt{\pi}$.

   (3) $5/\sqrt{\pi}$.   (4) $3/\sqrt{\pi}$.

Sol: Volume of cylinder = $\pi r^2 h$ = 45 $\Rightarrow$ r = $3/\sqrt{\pi}$. Since r < h, therefore the radius of the largest sphere shall be restricted by the radius of the cylinder. **Ans(4)**

16. $\angle$ A is less than 90°, then BC can be :
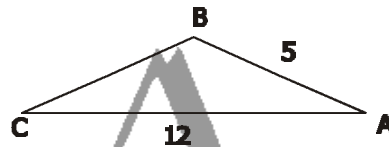
   (1) 5 < BC < 12   (2) BC = 13

   (3) 7 < BC < 17   (4) 7 < BC < 13

Sol: $\angle$ A < 90° i.e., 0 < $\angle$ A< 90°. Had, the angle been 90° the side BC would have been 13 units. Hence, BC < 13. Only Option (4) satisfies this condition. Also, BC > 7 , since the sum of the two sides of the triangle has to be greater than the third side. Therefore, 7< BC < 13. **Ans.(4)**

17. 82% people read atleast one paper of A, B, C. 45% read A, 25% read B, 30% read C and 5% read all three. How many people read atleast two papers ?

   (1) 13%   (2) 28%

   (3) 18%   (4) 5%

Sol: We know that : n (A $\cup$ B $\cup$ C) = n(A) + n(B) + n(C) – n(A$\cap$ B) – n(B$\cap$ C) – n(C$\cap$ A) + n(A$\cap$ B$\cap$ C). Hence, if there were 100 people in all then, 82 = 45 + 25 + 30 – n(A$\cap$ B) – n(B$\cap$ C) – n(C$\cap$ A) + 5

$\Rightarrow$ n(A$\cap$ B) + n(B$\cap$ C) + n(C$\cap$ A) = 100 + 5 – 82 = 23.

$\Rightarrow$ 23% of the people read exactly two papers and hence 23 + 5 = 28 % of the people read atleast two papers. **Ans.(2)**

18. If 1st year production increases by 25% & in the 2nd year production decreases by 20% then, what is the overall change ?

   (1) No change   (2) Decreases by 6%

   (3) Increases by 10%   (4) None of the above

Sol: Let, the initial production be 100 items. In the first year an increase in 25 % $\Rightarrow$ the production becomes 125 items. In the second year the production decreases by 20%. So, there is a reduction of (20% of 125) = 25 items. The new production is 125 – 25 = 100 items. Hence there is no change overall. **Ans(1)**

19. What are the coordinates of C if the area of the triangle is 20 ?
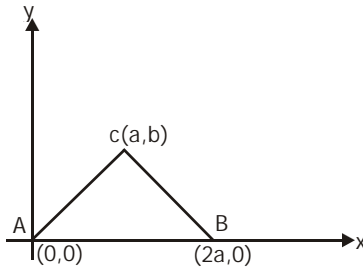
(1) (40, 1/2)   (2) (2, 3/2)
(3) (1/2, 40)   (4) None of the above

Sol: Given, the area of the triangle = 20 sq. units. $\frac{1}{2} \times 2a \times b = 20 \Rightarrow ab = 20$ ...(1)

AC = $\sqrt{a^2 + b^2}$, BC = $\sqrt{a^2 + b^2}$ and AB = 2a.

Area of the isosceles triangle = $\frac{AB}{4}\sqrt{4(AC)^2 - AB} = \frac{2a}{4}\sqrt{4a^2 + 4b^2 - 2a} = \frac{a}{2}\sqrt{4a^2 + 4\left[\frac{20}{a}\right]^2 - 2a}$ =

$\frac{a}{2}\sqrt{4a^2 + \frac{1600}{a^2} - 2a}$ = $\frac{a}{2}\sqrt{\frac{4a^4 + 1600 - 2a^3}{a^2}}$ = $\frac{1}{2}\sqrt{4a^4 + 1600 - 2a^3}$ = $\frac{1}{2}\sqrt{4a^4 + 1600 - 2a^3}$

$\Rightarrow$ The area of the triangle = 20 sq. units $\Rightarrow 4a^4 + 1600 - 2a^3 = 1600$.
$\Rightarrow 2a^3 (2a - 1) = 0$ or a = 1/2. Therefore b = 40. [From equation (1)]. **Ans.(3)**

20. If there is a rectangle of 28×105, then how many smaller rectangle can be enclosed by it of size 6x10 without changing the orientation and none should overlap.
(1) 40   (2) 42
(3) 44   (4) 49
Sol: Area of the smaller rectangle =6 × 10 = 60 sq.units. Area of the larger rectangle = 28 × 105 = 2940 sq. units. Therefore number of smaller rectangles = 2940/60 = 49. **Ans.(4)**

21. If the chances of raining on a particular day is 50%, then what is the probability that in 5 days it will rain for exactly 3 days.
(1) 5/8   (2) 3/7
(3) 5/16   (4) 8/15
Sol : Let, p be the probability that it rains and q is the probability that it does not rains $\Rightarrow$ p = q = 1/2. Now they can be to ways to solve this problem.
Method I : Using elementary combinations probability that it rains for exactly three days of the five = $p^3 \times q^2$ = $(1/2)^5$. However, the 3 days when it rains can be selected in $^5C_3$ ways. Therefore, actual probability = $10/2^5$ = 5/16.
Method II : Using binomial theorem, required probability = coefficient of p^3 in the exp. of
$(p+q)^5 = {}^5C_3 \times p^3 \times q^2$ = 5/16. **Ans.(3)**

22. She lives on the 11th floor and he lives on 51st floor. He comes down at 63 floor per minute and she goes up at 57 floor per minute. At which floor they will meet ?
(1) 28   (2) 19
(3) 30   (4) 32
sol : The lady is living on the 11th floor and the gentleman is living on the 51st floor,
i.e 40 floors between them. Rate of the descent of the man = 63 floors per minute.
Rate of ascent of the lady = 57 floors per minute.
Therefore relative velocity = 120 floors per minute

$\Rightarrow$ the gentleman would have travelled $63 \times \frac{1}{3}$ = 21 floors the two meet at the 30th floor. **Ans (3).**

23. If an hour can be divided in 60 equal minutes or 60 minutes can make up 1 hour then in how many other ways can an hour be divided?

(1) 4 (2) 6
(3) 8 (4) 10

Sol: The question suggests that 60 minutes are one way of dividing the hour. With a little bit of presence of mind and out- of-the box thinking,we can get down to the following ways of quantifying the hour :

(i) 1 hour = 1 hour (as a singlr unit)
(ii) 1 hour = 360 secs
(iii) 1 hour = 30° (in terms of angular displacement)
(iv) 1 hour = 100/12 % (as precent of total)
(V) 1 hour = $\pi r^2/12$ (in terms of area swept on the face of the clock by hour hand)
(vi) 1 hour = $\pi r/l$ (in terms of length of arc described by the hour's hand.). **Ans.(2)**

24. There are 36 chairs. They have to be arranged .... Sorry we could not get the complete question. If you happen to remember the question, kindly email the same at pinnacle@ptindia.com

25. Ajay went to Delhi & bought a pair of batteries costing Rs 150/- at 20% discount but on the way lost them & had to buy them back after coming home .How much did he totally spend on the batteries?

(1) Rs. 270 (2) Rs. 200
(3) Rs. 150 (4) Rs. 120

Sol: After a discount of 20% the cost of the batteries is Rs. 120. On his way back he lost these batteries and have to buy them again therefore total expenses = Rs. 150 + Rs. 120 = Rs. 270. **Ans.(1)**

26. One question on flow of water with 5/8 going on one side and so on :

(1) 25% (2) 50%
(3) 75% (4) 62.5%

Sol:

27. From 1 - 70 how many numbers' square end with 1?

(1) 20% (2) 50%
(3) 62% (4) 42%

Sol: For a number's square to end in 1 the number must end in either 1 or 9. Therefore number of two digits numbers that end in 1 or 9 = 2× 7 = 14. Therefore, the required percentage = (14/70) × 100 = 20%.**Ans.(1)**

28. From 10-99 both inclusive how many numbers have their second digit greater than the first ?

(1) 44 (2) 36
(3) 80 (4) 50

Sol: The question does not specify which is the first and which is the second digit, hence the question simply ask us to find out the number of numbers that do not have equal digits in the given range 10– 99 both inclusive.
The numbers with equal digits are 11, 22, 33, 44, 55, 66, 77, 88, 99 – total 9 in numbers. So in all there are 99 – 10 = 89 numbers. Therefore numbers with unequal digits are 89 – 9 = 80. **Ans.(3)**

29. A person walks 9km @ 6kmph .What should be his average speed for the next 1.5 hr so that the total average speed becomes 9kmph?

(1) 12 (2) 10
(3) 9 (4) 18

Sol:

Distance	Time
9km	1.5 hours
d kms	1.5 hours

Average speed = (d + 9) /(1.5 + 1.5) = 9 ⇒ d = 18 kmph. **Ans.(4)**

30. A spends Rs. 200 for every Rs. 20 Spent by B. B spends Rs. 400 for every Rs.150 By C. What is the triple ratio of their expenditure?

(1) 80 : 8 : 3 (2) 10 : 9 : 8
(3) 15 : 6 : 2 (4) None of the above.

Sol: Ratio of expenditure of A and B = 10 : 1
Ratio of expenditure of B and C = 8 : 3

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                        A        B        C
                        10       1

                                 8        3
                        -------------------------   Ans (1)
                        80       8        3
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31. There are 8 men and 8 women. A committee of 3 men and 3 women has to be formed. What are the no. of ways?
    (1) 3136
    (2) 2034
    (3) 256
    (4) 1089

Sol : A committee of 3 men can be formed in $^8C_3$ ways. Hence, Similarly a committee of 3 women can be formed in $^8C_3$ ways. Hence total number of ways = $^8C_3 \times {}^8C_3$ = 3136. **Ans.(1)**

32. In a game show each ticket is worth Rs.150. I person wins Rs10, II wins Rs.50, III gets Rs.100 and IV person wins Rs.200 and then the cycle is repeated. What is the money got by the organiser when 83 players have played the game ?
    (1) Rs. 5090
    (2) Rs. 4990
    (3) Rs. 4900
    (4) Rs. 5100

Sol: Considering a single cycle :
I st player wins Rs. 10.
II nd player wins Rs. 50.
III rd player wins Rs. 100.
IV th player wins Rs. 200.
The total money earned by selling tickets = 4 × 150 = Rs. 600.
Organisers profit = Rs. 600 – Rs. 360 = Rs. 240.
When 83 such players are involved then they will be 20 games played + a last game with 3 players.
From those 20 games played, Profit earned = Rs. 4800 + (3 × 150 – 160) = Rs. 5090. **Ans.(1)**

33. There are two friends. They come to Delhi. Ramesh gives Rs.2500 to an agent and hires a flat on Rs.5000 monthly rent whereas Suresh directly gets a building for Rs.5500 as rent. After how many months will they have paid the same amount?
   (1) 4 months
    (2) 5 months
    (3) 6 months
    (4) 8 months

Sol : Let the number of months be 'X'
Therefore total amount spent by Ramesh = $2500 + 5000 \times X$
total amount spent by Suresh = $5500 \times X$
$5500 \times X = 2500 + 5000 \times X$
$\Rightarrow x = 2500/500$
$\Rightarrow x = 5$ months. **Ans (2)**

34. Find the distance between two farthest point on the cylinder with radius 8cm & height 8cm?
    (1) 5 √3 cm
    (2) 8 cm
    (3) 4 √5 cm
    (4) 8 √5 cm

Sol: The cylinder can be visualise as :

The two farthest points will be on the opposite bases of the cylinder lying diametrically opposite to each other like A and C or B and D. Therefore, the length

$AC = \sqrt{AD^2 + DC^2} = \sqrt{8^2 + 16^2} = \sqrt{320} = 8\sqrt{5}$ cm. **Ans.(4)**
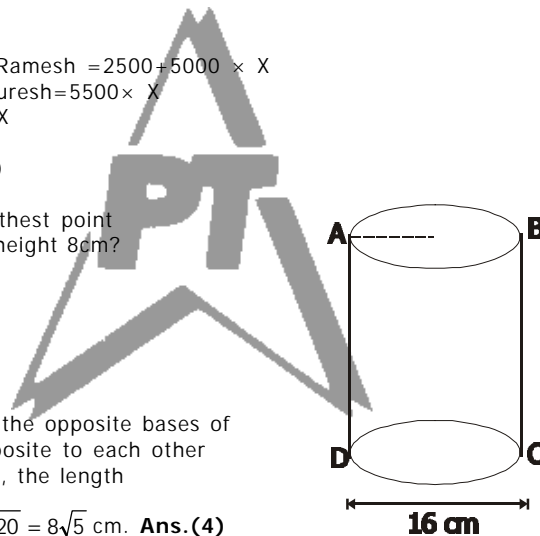
35. I have 100 chairs of Rs. 200 each. If I increase …….. Sorry we could not get the complete question. If you happen to remember the question, kindly email the same at pinnacle@ptindia.com

Directions for Q. 36 to Q. 42 : *Each question is followed by two statements, (A) and (B). Answer each question using the following instructions.*
Choose (1), if you can get the answer from the (A) statement alone but not from the (B) statement alone.
Choose (2), if you can get the answer from the (B) statement alone but not from the (A) statement alone.
Choose (3), if you can get the answer from the combination of both the statements
Choose (4), if the data given is insufficient and more data is required to give you the answer.

35. Which company has more standard deviation?
    (A) Company A has 800 employees whose wage difference is not more than 50.
    (B) Company B has 1000 employees whose wage difference is not less than 100.

Sol: For calculating standard devation of set of given values we need either the variance or the mean of all the observations. None of the statements (A), (B) or both together provide any of the required information. **Ans.(4)**

36. What is the value of x (given x is an integer) ?
   (A) $(128 + x)^{1/3} = 4$
   (B) $5x^2 + 107x + 5 = 0$

Sol. From statement (A) alone, we can get that
   $128 + x = 4^3 = 64$
   $\Rightarrow x = -64.$
   Hence, we can get our answer from (A) alone. **Ans.(1)**

37. In the radius of the circle greater than 4?
   (A) The points (6, 11) and (2, 4) lie on the circle.
   (B) The points (2, 6) and (4, 11) lie on the circle.

Sol. From statement (A) alone, we get:
   The distance between the two points (6, 11) and (2, 4),

   $1 = \sqrt{(6-2)^2 + (11-4)^2} = \sqrt{4^2 + 7^2} = \sqrt{65}.$

   Now, there can be two possibilities are that the given points he at the ends of a diameter of the circle. In this

   case, the radius would be $= \dfrac{I}{2}$; slighthly greater than 4.

   If, however, the given points happes to be only the end-points of chord, then the diameter of the circle would

   definitely be greater than 1 $\Rightarrow$ radius $> \dfrac{I}{2}$. In either case, we get that the radius is greater than four. **Ans.(1)**

38. Is $x^2 - 2x - 3 = 0$?
   (A) x > -1
   (B) x < 1

Sol: Let $f(x) = x^2 - 2x - 3$.
   From statement (A) alone, we do not get a definite answer since f(0) = −3: f(3) = 0 and f(5) = 12.
   From statement (B) alone also, we cannot obtain a definite answer since f(0) = −3, f(−1) = 0 and
   f(−4) = 9. However, on combining the two statements, we get that f(x) can never be zero. **Ans.(3)**

39. There are 80 students in the class. What is the average marks in the class?
   (A) The boys and girls are in the ratio of 3:1. The average marks of boys is 48 and that of the girls is 30.
   (B) There are 45 boys in the class.

Sol. From statement (A) alone, we can calculate number of boys and girls and also the average of the entire class.
   No. of boys = 60; No. of girls = 20.

   $\therefore$ average of entire class $= \dfrac{(60 \times 48) + (20 \times 30)}{80} = 43.5.$ Hence **Ans.(3)**

40. Which is greater, X or Y ?
   (A) 3X = 4Y
   (B) $Y = K^2$

Sol: From statement (A) alone, we cannot say anything since X and Y both might be negative as well.
   from statement (B) alone also, we cannot conclude anything since it only gives that $Y = K^2$ and
   $\therefore$ positive. However on combining both the statements, we can definitely say that X > Y (since Y > 0). **Ans.(3)**

41. Did XYZ Co.'s share price rose each week during 2001?
   (A) Its share price was Rs.100 on 01.01.2001.
   (B) Its share price was Rs.250 on 31.12.2001.

Sol. We cannot make any conclusion using either of statement (A) or (B) alone. Even by combining both the statements, we cannot say of there has been a price rise every week. **Ans.(4)**

   Similar question is in the PT Quant. Zen Book DS test #11, Q.4.

42. Which of the two figures has the larger area?
   (A) Their perimeters are same.
   (B) Diagonal AC > EG.
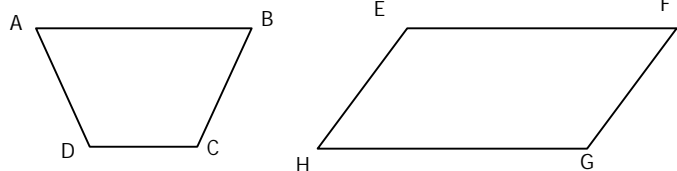
Sol. Using statement (A) alone, we cannot infer anything about the areas of the two figures.
   Using statement (B) alone also, no conclusion can be drawn.
   In order to calculate the areas of the two figures, we/used to know about their heights. Since neither statements
   (A) not (B) given any into on the heights. **Ans.(4)**

Data Interpretation

Questions 61 to 85 : Questions 61 to 85 were based on Data Interpretation. The DI section contained 4 sets.

§ The first set was of 8 questions and was based on figures from car sales in various segments. The data was spread over 7 charts and was arguably, the toughest set in the section.

§ The second set contained 4 questions and was based on the performance of four computer-manufacturing companies. The set was on the simpler side with the data arranged in a line chart.

§ The third set was based on the meteorological data of maximum, minimum and average temperatures along with the moisture content in the air for the twelve months - Jan to Dec. for the years 1961 to 1991. The data was again, presented in a tabulated manner.

§ The data for the fourth set was presented in a combination of a line graph and a pie chart. We are unable to recollect the theme for this set.

Reading Comprehension

Questions 86 to 125 : Questions 86 to 125 were based on Reading Comprehension. The section contained three RC passages.

§ The first passage was extracted from the Institute's information brochure and stressed on the institute's philosophy - the need for spreading education in India in order to harness the immense human resources of the country in an effective manner. The passage was followed by 14 questions, some of which are:

1. What is the author trying to say in the first part of the passage?
2. When the author says that we must shift from 'qualification' to 'education 'what does he mean by this?
3. When the author says that we must shift from 'Service' to 'Serving' what does he mean by this?
4. When the author says that we must lay emphasis on 'To Give and not on 'To Get 'what does he want us to do?
5. When the author says that "incentives will not work' if?
6. What is meant by responsibility?
7. What does 'Teaching' to 'Learning' indicates?
8. What does 'Competitive Rivalry' to 'Support & Collaboration' indicates?
9. When the author says that we must try and shift from 'I Can to 'I Can't ',what does he mean by this?
10. When the author emphasizes on Self examination rather than External examination what do you think does he mean by this?
11. The author wants a shift from Reward based limited motivation to limitless self motivation?

§ The second passage was directly taken from the book "Rich Dad, Poor Dad" and was a simple one. The passage was followed by 6 questions which included:
1. 'How can I afford this' signifies what with respect to the passage?
2. Nations won't improve their conditions because of what reasons?
3. What is the reason for people living under poverty?
4. What is necessary for people to live a better life?

§ The third and the longest of the three passages was based on Self-realization. The passage, through the examples of a beggar and a child, stressed upon the need for every individual to realize one's own potential and utilize it to the maximum. The passage, all of 1½ pages, contained 20 questions in all. The simple language and the question to length ratio for the passage made it a MUST SOLVE. Though, the options were quite close. However, some of the questions were in fact, mere repetitions. Some of the questions of the passage were:
1. The example of beggar in the passage is representative of ?
2. The example of boy with the toy in the passage signifies what?
3. 'Respect, Deference, Values' are a result of what?
4. What is meant by 'Now of Then'?
5. As an intelligent person, what conclusion can u derive from this passage?
6. Why is the author very happy when he has inner solitude?
7. 'Future & Past don't matter to me.' What does the author mean by this?
8. Why does the author say that nothingness is necessary to him?
9. When the author says that I don't want to live with 'myself', what does he mean by this?

English Usage + Critical Reasoning

Questions 126 to 160 : Questions 126 to 160 were based on EU and CR.This section could be broadly classified under the following categories.

§ Choose the pair of words that show a similar relationship to that of the capitalized pair (5 questions).
   1. Facade : Building
   2. Mind : Matter
   3. Celebrate : Marriage
   4. Wheel : Bike
   5. Open :Secretive

§ Choose the word closest in meaning from the capitalized word (5 questions).
   1. Moribund
   2. Egression
   3. Pernicious
   4. Dilettante

§ Paragraph formation (5 questions).

§ Sentence completion (5 questions).

§ Grammatically correct and most concise form of a sentence, with the part to be replaced was underlined (just like those in the CT's and LSB's) (5 number).

§ Spot the incorrect statement - This was a slight variation from the normal form. Each question in the set contained 4 options that were all different sentences. The test taker had to identify the erroneous sentence. (5 questions).

§ Critical Reasoning (5 questions).

General Knowledge

Questions 161 to 200 : Questions 161 to 200 were based on General Knowledge. There were 40 questions in this section that tested the student's general awareness. The stress this time was severely on numerical figures. A majority of the questions were based on figures of trade, export-import, rates of growths of economies etc. A few questions by recollection are:

161. Why was Coca-Cola in news recently?
Fined for polluting the environment by painting advertisements on rocks.

162. Which is the favorite Indian news channel?
AAJ Tak.

163. Which company recently discovered natural gas reserves in India?
Reliance.

164. Which is the largest selling brand of mineral water?
Bisleri

165. The science of printing is known as _____.
Typography.

166. The Sukhoi MKI manufacturing facility is located at _____.
Moscow

167. Who is the second largest exporter of rice?
India

168. Name the financial institution supported by the Govt. of India and has been running in loss?
IFCI

169. What is the current CRR (Cash Reserve Ratio)?
4.75%

170. What is the revised GDP growth rate of India?
5%

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.

171. Recently the satellite METSAT has been launched from ?
    PSLV C - IV

172. Recently a computer firm has taken over a consulting firm. Which one?
    IBM &PWC

173. Which Companies were recently in controversy ?
    AFF & TFL

174. Name the model that Maruti will introduce in the markets of Italy, Sweden, France?
    Alto

    Besides these questions, the following more questions were also asked.

175. The per-capita income of India and China are _____.
176. Which country is the largest exporter of seafood to India ?
177. What was the tourism growth rate in China as compared to India?
178. What is India's contribution to the World GDP?
179. Rupee is :
180. Merger of Pharmaceuticals company?
181. The Final 4's are known as :
182. N.K.Singh committee was set up for what purpose ?
183. Gandhi King award was presented to :
184. Hank yarn is used in the packing of which product?
185. What is the total population working in the Govt Sector and unorganised sector?
186. What is the criteria that a person is below poverty line as per WB ?
187. What is the per capita income of India, China and USA ?
188. What is the number of tourists that visit India, China ?
189. What is the significance of Adapt IQ?
190. What is the share of India's Trade in relation to world trade?
191. How much is India's & China's GDP?
192. Which firm had its licence cancelled?
193. Camera company that recalled its camera on account of people complaining about electric shocks?
194. How many people earn below Rs.10/- in India?

Students would have done well to be well versed with the contents of **FACETS** and kept a regular update on such facts and figures through business dailies.

Descriptive Type questions

The part had 4 questions that needed to be answered in 10 minutes. Those students who had performed their SWOT Analysis with due sincerity would have found it easier to answer these questions. Students were needed to give response to each of the questions. It was explicitly stated, that the student can be disqualified if answers are not provided.The section carried 15 marks in all.

1. What are the hobbies that you are currently pursuing?

2. If you were the PM of India for 3 months, what changes would you like to make to make your country globally competitive and have a no-nonsense approach?

3. What will make you give your 100% to your work ?

4. What all qualities do you need to improve and incorporate in yourself (Leadership, Productivity, Courageous and actions)?

The above mentioned are the only questions, which we were able to collect from our students. We would be glad to add any more questions which you can provide to us.

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.

Overall Analysis & Expected Cut-Offs

The test can be rated as a moderate one. The DI and the GK sections were very typical, based on lots of data to be used and calculations (specifically in DI). The RC section seemed to be easy at the first glance, with 40 Q. spread over 3 passages, but the 20Q. passage had questions which had very close options.

Maths and EU + CR section was very manageable.

Thus overall we expect that the average attempts should be in the range of 110 + and a score of 80 should be a good score to get a call. Of course, this is possibly the min. score expected by us to get a call for any specialization at the Pune Campus. For specific specializations and campus the cut-offs will be definitely lower than this.