Solid DI Set 1

Question

For Questions 1 to 5 read the following instructions:

Nine horses participated in a horse tournament. Five races were held in this tournament. The winner of a race gets 5 points, 2nd gets 3 and the 3rd gets 1. The table gives the points tally.

Horse	A	B	C	D	E	F	G	H	I
Points	5	5	8	2	5	6	4	10	0

One race is held between five horses. The first race is held among the first 5 horses from the left in the above table. Out of these horses, A drops out of the race and a new horse. ie. F enters into the race. In the next race, B drops out and G enters and so on. It is also given that H is the only horse that scored in 2 consecutive races.

Q.1 What was the position of horse F in race 4?
a. 4th b. 2nd c. 3nd d. cannot be determined e.1st

Q.2 What is the ratio of the points scored by "G" and E in race 5?
a. 1:3 b. 3:1 c. 1:5 d. cannot be determined e. 5:1

Q.3 The first 3 rankers of the race 3 in some order?
a .C,E,G b. D,E,F c. C,D,F d. C,E,F e. C,G,F

Q.4 D could have come third in which of the following races?
a. Race 1 b. Race 3 c. Race 4 d. Race 5 e. cannot be determined

Q.5 Suppose if C had 6 points and E had 7 points while the points of the rest of the horses remain unchanged then E could've come second in
a. One race b. Two races c. At most one race d. At most 2 races
e. cannot be determined

Answer:

For ***Solid DI Set 1***

Race1	A	C	E
Race2	B	F	D
Race3	C	E/G	G/E
Race4	H	F	D
Race5	H	G/E	E/G

The table of the winners is as follows:

So 1-b, 2-d, 3-a, 4-c

For 5 interchange the places of C and E in race 1. Hence the answer is d, 5-d

Solid DI Set - 2

Question

For Questions 1 to 5 read the following instructions:

The following Table gives the number of students in all the different classes of Indian Public school in the years 2050 and 2051 respectively.

Class	Students in the year 2050	Students in the year 2051
VII	120	140
VIII	84	100
IX	72	70
X	64	60
XI	48	56
XII	36	54

It is known that
i. New students join the school only in class VII
ii. No student leaves the school before passing out from class XII
iii. The students, who fail, have to repeat the year.

Q.1 If no student of class XI failed in the year 2020, then what is the pass percentage of class XII for the year 2050?
a. 22.66% b. 16.66% c. 83.33% d. 77.77% e. None of these

Q.2 If the new joiners in the year 2051 were 76, then the number of students failed in class XII in the year 2050?
a. 10 b. 14 c. 8 d. 16 e. 20

Q.3 How many students of class IX failed in the year 2050, if no student of class XI failed in the year 2050?
a. 12 b. 8 c.10 d. 14 e. None of these

Q.4 If number of students of class VII failed in the year 2050 is 64, then what is the total number of students failed in the year 2050?
a. 150 b. 182 c. 195 d. 164 e. 176

Q.5 The highest pass percentage of class VII can be?
a. 55% b. 60% c. 58% d. 50% e. 65%

Answer:
For Solid DI Set 2

A general formula here is Strength (c, y) = Pass(c-1,y-1) + Fail(c,y-1)
Where c is the class and y is the year.

1. No. of failures in class XII in 2050 is 54-48=6. Hence the pass percentage is 5/6*100.ie 83.33

2. Back track and obtain the failures and passes in that particular year from the formula. Answer is 16.

3. Same procedure, start from the bottom. Answer is 20.

4. This is a supplement of question. no 7. Answer is 182.

5.The highest pass percentage for class VII can be obtained only when class XI has no failures(because, all the other classes have certainly a min number of failures). You'll get it as 66. so its 66/120 ie.55%

1-c ,2-d, 3-e, 4-b, 5-a

Solid DI Set - 3
Question

For Questions 1 to 5 read the following instructions:

Six people A,B,C,D,E and F are standing in a row(from left to right) in that order. A is at place 1, B is at place 2 and so on. They are rehearsing a dance sequence for a dance competition. When the signal is given the following 3 steps are performed.
Step 1: They break away and form a triangular formation with 4 and 5 in front of 1, 2 and 3 and between 1 and 2 and 2 and 3 respectively, while 6 is in front of 4 and 5.
Step 2: Then 6 goes a step backward and joins between 4 and 5 who form the front row now.
Step 3: After a few dance moves, both these rows merge with the person in front of 1 joining between 1 and 2 and so on.
These 3 steps form a round. These steps are repeatedly performed till the dancers attain their original positions. This is called one sequence.

Q.1 How many times are step 1, step2 and step 3 are performed before one sequence?
a. 8 b. 6 c. 4 d. 5 e. 10

Q.2 At which place is C after the completion of the penultimate round?
a. 1 b. 3 c. 5 d. 2 e. 6

Q.3 How many members come to their original positions at least once before the sequence ends?
a. 1 b. 2 c. 3 d. 4 e. 5

Q.4 Suppose their initial positions were in the order mentioned before but from right to left, and the steps 1 and 2 remain the same while in step 3 the person in front of 3 joins between 3 and 2 and so on to form a single row.

How many rounds before this sequence ends?
a. 4 b. 6 c.8 d. 10
e. They never come back to their original positions

Q.5 In the above mentioned sequence, how many members come back to their original position at least once before the sequence ends?
a. 2 b. 3 c. 4 d. 5 e. 6

Answer:
For Solid DI Set 3

A B C D E F is the initial formation.

Step1: A B C
D E
F

Step 2: A B C
D F E

Step 3: A D B F C E

This is completion of Round 1.
After 5 rounds the formation will **again** be A B C D E F.

1-d, 2-d, 3-a

Another formation is F E D C B A

Step 1: C B A
E D
F

Step 2: C B A
E F D

Step 3: C E B F A D

From this formation it takes 6 rounds to complete a sequence.
4-b, 5-e

Solid DI Set - 4
Questions
For Questions 1 to 5 read the following instructions:

12 Hockey teams participated in a tournament. These teams were equally distributed into 2 pools A and B. In the 1st round, each team played a match against all the other teams in the same pool. Top 3 teams with highest average (from both the pools) went to the next round, where all the six teams played against each other once. Again the top 3 teams with highest average qualified to the finals. In the final round, all the 3 teams played against each other and the team with the highest average was declared the winner.

Scoring: A win earns 4 points, loss earns -2, and a tie will result in 2 each.

Average = Total points/ Number of matches

The following table shows the points tally

Teams	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**
Total	28	0	10	0	16	6	-6	26	6	12	4	14
Average	2.33	0	1	0	1.6	1.2	-1.2	2.16	1.2	1.2	0.8	1.16

Also
--The winner of the tournament won both its matches in the finals
--the total points earned by all the teams (Played in the second round) after second round are 100.

Q.1 Which 2 teams do not play against each other in the finals?
a. A1,B2 b. A1,B6 c. A5,B2 d. B2,B6 e. none of these

Q.2 Find the number of matches won by A2 and A4
a. 0 b. 1 c. 2 d. 3 e. cannot be determined

Q.3 How many points did the second runner up earn in the finals?
a. -4 b. 2 c. 4 d. 0 e. cannot be determined

Q.4 After round 2, the highest average of any team can be
a. 2 b. 2.4 c. 2.6 d. 2.8 e. cannot be determined

Q.5 The first runner up of the tournament was
a. A1 b. B1 c. B6 d. B4 e. None of these

Answer:
For Solid DI Set 4

The teams playing in second round are A1, A3 A5,B2,B4 and B6.
Final is played between B2, B6 and A1.
Total points earned by the teams which dropped out in second round are 10 + 16 +12 =38. So points earned by B2, B6 and A1 after round 2 is 100-38 = 62.
Total points earned by these teams after final round = 28 +26+14=68, ie. They together earned 6 points in the 3 matches happened in the final round. A1 won both its matches in final ie. It got 8 points. So the points earned in these 2 matches =4+4-2-2 =4 points. So the match between B2 and B6 resulted in 2 points. Hence it cannot be a draw.

Suppose, B2 had lost that match , then it must've lost 4 points in the final round , while B6 must've gained 2 points which means it's points after second round must've been 12, equal to that of B4, which contradicts the fact that top 3 with highest average made it to the finals. Hence B2 must've won the B2 v/s B6 encounter. That means B2's points after second round must've been 24. while B6's must've been 18.

Hence 1-c, 2-c, 3-a, 4-b, 5-e

Solid DI Set - 5
Question
For Questions 1 to 5 read the following instructions:

Friday morning, local pediatrician Dr. Johnson N. Johnson had appointments with five infants scheduled at 9:00, 9:30, 10:00, 10:30, and 11:00. Each of the five, including the Ortiz baby, is a different number--1, 2, 3, 4, or 5--of months old. ***The following notes are available***.

1. Immediately after seeing infant Beth, Dr. Johnson examined the Majors infant, who is 2 months younger than Beth.
2. Erica isn't the one of the five who is 1 month old.
3. The doctor saw David later in the morning than the 1-month-old.
4. The 9:30 appointment was with the 3-month-old baby.
5. The Luce infant isn't the one who is 5 months of age.
6. Dr. Johnson saw the Nash infant, then examined Alice, who is 2 months older than the Nash baby.
7. The pediatrician's 10:00 appointment was with Chad, who isn't the Majors or the Nash baby.
8. The Prior baby isn't the 1-month-old and wasn't the doctor's 9:00 examinee.

Q.1. How old(in months) is infant Beth?
a. 1 b. 2 c. 3 d. 4 e. 5

Q.2 At what time did infant Erica meet the doctor?
a. 9 b. 9:30 c.10 d. 10:30 e.11

Q.3 Whose baby is infant Chad?
a. Ortiz b. Majors c. Luce d. Nash e. Prior

Q.4 Which of the following is not correct w.r.t infant David
a. He is Nash's baby b. He is 2 months old
c. His appointment was at 11.00 d. none of these
e. His appointment was at 10:30

Q.5 Who was the last infant to meet the doctor?
a. Alice b. David c. Chad d. Erica e. Beth

Answer:
For Solid DI SET 5

By clue 7, Dr. Johnson saw infant Chad at 10:00, the middle appointment of the five. By clue 1, Dr. Johnson saw Beth and then the Majors baby, while by clue 6, he saw the Nash baby and then Alice. Since Beth is 2 months older than the Majors infant (1) and Alice is 2 months older than the Nash infant (6), Beth can't be the Nash baby and Alice be the Majors infant (the only way possible to combine the two clues), so four different babies are named between the two clues. Since Chad is neither the Majors nor the Nash baby (7), either Dr. Johnson saw Beth at 9:00 and the Nash child at 10:30, or he saw the Nash child at 9:00 and Beth at 10:30. Trying the latter case, he would have examined Alice at 10:00 (6) and the Majors baby at 11:00 (1). By clue 4, Alice would be 3 months old, with the Nash baby then 1 month old. However, neither Erica (2) nor David (3) could be the Nash infant, so this arrangement cannot work. Dr. Johnson's 9:00 patient was Beth, with the Majors baby his 9:30 (1); and he saw the Nash infant at 10:30 and Alice at 11:00 (6). The Majors baby is 3 months (4) and Beth 5 months (1) old. By clue 3, David is the Nash child and Chad the 1-month-old. Erica is the Majors baby. By clue 6, David Nash is 2 and Alice 4 months old. Beth is neither the Luce (5) nor Prior (8) infant and is the Ortiz baby. Chad's surname is Luce and Alice's Prior (8). In sum, Dr. Johnson saw the five babies as follows:

- 9:00 - Beth Ortiz, 5 months
- 9:30 - Erica Majors, 3 months
- 10:00 - Chad Luce, 1 month
- 10:30 - David Nash, 2 months
- 11:00 - Alice Prior, 4 months

Hence 1-e, 2-b, 3-c, 4-c, 5-a

Solid DI Set - 6
Question

Directions for Q.1 to Q.5: Read the information given below and answer the questions that follow.

Five friends (Avinash, Vijay, Alok, Vivek and Rajiv) went to a hotel and ordered five different soups (Tomato, Chicken, Vegetable, Corn and Mutton), followed by lunch. After lunch, they ordered five different desserts. (Mango, Pista, Vanilla, Tutti-Fruti and Casatta).

(i) Avinash ordered for vegetable soup and Mango ice-cream
(ii) Vivek didn't order mutton soup but ordered Vanilla ice-cream
(iii) Vijay is a vegetarian who ordered Tutti-Fruti ice-cream
(iv) The person who ordered corn-soup also ordered Pista ice-cream while Rajiv ordered Casatta ice-cream

1. Who among the following ordered Tomato soup?
(1) Avinash (2) Vijay (3) Alok (4) Vivek

2. Which among the following soups was ordered by Vivek?
(1) Vegetable (2) Corn (3) Chicken (4) Mutton

3. Which of the following combinations is FALSE?
(1) Rajiv - Chicken soup
(2) Tomato soup - Tutti Fruti ice-cream
(3) Chicken soup - Vivek
(4) Alok - Corn soup

4. Which of the following ice-creams was ordered by Alok?
(1) Vanilla (2) Tutti-Fruti (3) Mango (4) Pista

5. Which of the following combinations is TRUE?
(1) Avinash - Tomato soup - Tutti-Fruti ice-cream
(2) Vijay - Corn soup - Mango ice-cream
(3) Alok - Mutton soup - Pista ice-cream
(4) Vivek - Chicken soup - Vanilla ice-cream

Answer:
For Solid DI SET 6
Make a table as below

	Avinash	Vijay	Alok	Vivek	Rajiv
Tomato	**X**		**X**	**X**	**X**
Chicken	**X**	**X**	**X**		**X**
Veg		**X**	**X**	**X**	**X**
Corn	**X**	**X**		**X**	**X**
Mut	**X**	**X**	**X**	**X**	
Mango		**X**	**X**	**X**	**X**
Pista	**X**	**X**		**X**	**X**
Vani	**X**	**X**	**X**		**X**
T.F	**X**		**X**	**X**	**X**
Cass	**X**	**X**	**X**	**X**	

1. Ans.(2) 2. Ans.(3) 3. Ans.(1) 4. Ans.(4) 5. Ans.(4)

Solid DI Set - 7
Question

1. If (a) '1 2 3' stands for These are boys',
(b) '1 3 4' stands for 'boys are naughty' and
(c) '1 4 5' stands for 'Naughty boys sing',
which numeral stands for 'naughty'?
(1) 1 (2) 2 (3) 3 (4) 4

2. In a certain code 'BROAD' is written as 'ASNBC'. How is 'PLUGH' written in that code?
(1) OMTHG (2) QMTHG (3) QMTFG (4) OMTGH

Answer:
For Solid DI SET 7

A1) **Correct answer is (4)**
1 = boys, 2 = these, 3 = are, 4 = naughty, 5 = sing

A2) **Correct answer is (1)**

p stands for Preceding letter and s for Succeeding letter. Coding is done by taking the preceding and succeeding letters alternately

Solid DI Set - 8
Question

An Inspector has discovered that 5 people were involved in the murder of Miss Batliwala. Nine suspects are short listed by him. Maina, Naina and Raina are women. Ooman, sangha, Topaz, Unni Vasu and Wagle are men. Through intelligent deliberation and analysis, Ghote has also made a checklist of points.
I) There were at least two women involved in the crime.
II) Raina will never collude with Ooman.
III) Sangha and Topaz will always commit crimes together.
IV) Unni and Vasu never work together.

A). If Maina was involved in the crime and Naina is not, which statements given below are true necessarily.
I) Either Unni or Vassu but not both are involved.
II) Sangha and Topaz will be involved
1. I only 2. II only 3. Both I and II 4. Either I or II

B) Greatest number of combinations are possible if which of the following are definitely involved in the crime.
1. Sangha and Topaz 2. Vasu 3. Raina 4. Wagle

C) Which of the following statements is definitely true ?
I) If only two women are involved in the crime Sangha and Topaz must be involved.
II) If Raina is not involved in the crime, Ooman must be involved.
III) If either Maina or Naina is not involved in the crime Sangha and Topaz must be involved.
1. I only 2. I and III only 3. II only 4. III only

Answer:
For Solid DI SET 8

A) **Correct answer is 2**.
Women : M, N and R Men ; O, S, T, U , V & W
If M is involved and N is not means that R must be involved so 3 men, of which O is not a part, of must be involved so analysing given statements : either U or V but both not involved This means that U or V can pair up only with S & T But S & T have the option of choosing W. So U or V must not necessarily be involved so statement I is not necessarily true

B) **Correct answer is 1.**
If V is involved U cannot be involved If R involved O cannot be involved since We require 2 more men of which U and O are not available so the option is S & T.

C) **Correct answer is 4.**
M and N can pair with U +W + O or V + W + O. If R is not involved, it can give options like M and N with S + T +U or S + T + V or S + T + W so is definitely not true.

Solid DI Set - 9
Question

1) Find the word which does not fit in the group.
(1) D A B (2) H E F (3) T S R (4) P 0 N

2) Insert the missing word from the brackets.
54 (HIDE) 98 53 (....) 16
(1) FACE (2) 6135 (3) HIDE (4) ECAF

3) Which will come next in the series?
N Q L S J U –
(1) W (2) T (3) I (4) H

Answer:
For Solid DI SET 9

A1) **Correct answer is (3)**
All other options contain a vowel (A, E, I, 0, U) as the middle term.

A2) **Correct answer is (1)**
Numbers outside the brackets denote the alphabet, a = 1, b = 2, c = 3. HIDE has numbers 4,5,8 and 9. For second series, we get EC and AF which are then reversed t

A3) **Correct answer is (4)**
Alternate letters are one letter away in the alphabetical order. There are two sets one beginning with N-L-J and hence H, the other beginning with Q-S-U. The former is descending, while the latter is ascending.

Solid DI Set - 10
Question

At the IIM 5 areas of specilisation are available. They are Marketing, finance, production, personnel and systems. However it is necessary for any student to take up a combnination of two of the above.

Based on common preference, preset combinations called moducles are offered, coded M001, M002, M003, M004 and M005. Each allows two specialisations such that every specilisation is assigend to two modules. Further to allow for uncommon prefercences a student is allowed to take up more than one commbination in such a manner that the specialisation common to the two modules is necessarily dropped.

However, a smart student, by manipulating combinations, may be able to specialise in more than two subjects.

Additional information is as follows :
M001 has not been assigned production. M003 has not been assigned marketing. M004 has not been assigend finance. By choosing M001 and M003 one may specialise in marketing and systems. By choosing M001 and M002 one may specialise in Marketing, production finance and personnel. By choosing M001 and M004 one may specialise in finance and personeel .

1. What is the maximum number of modules any person may take to specialise in at least two areas ?
1. 2 2. 4 3. 5 4. 3

2. Which of the following number of specialisations is impossible ?
1. 2 2. 3 3. 4 4. None of these

3. Personnel is available in modules
1. M002 and M003 2. M001 and M003 3. M002 and M004 4. M003 and M005

4. Finance is available in modules
1. M001 and M003 2. M003 and M004 3. M002 and M003 4. M001 and M004

Answer:
For Solid DI Set 10
1) 2 2) 2 3) 3 4) 1

The main thing is that if any specialisation is common to the 2 modules selected it gets dropped and is not a specialisation. M001 does not have production and M003 does not have marketing. But their combination gives us marketing and systems so M001 must have marketing since Moo1 and M002 have 4 different subjects three must be no common specialisation and M002 will not have marketing but will have production M003 will have systems included because it is not a part of M001 so M001 will have finance or personnel and it will be common to M003. Since the M001 and M004 combination does not have marketing as a specialisation it means that they have marketing in common. Since they have finance and personnel in common M001 has finance and M004 has personnel. So M002 also has personnel. So M003 must also have finance. This leaves M005 with production and systems.

Solid DI Set - 11
Question

There are two ethnic groups, the Dravids and the Aryans. No marriage is permitted within a group. After marriage, men become a part of their wives' group; women remain in their own group. Children belong to the same group as their parents. Widowers and divorced males revert to the group of their birth. Marriage to more than one person at a time and marriage to a direct descendant is forbidden.

1. A Dravid male could have
a. an uncle in either group b. a Dravid daughter
c. a Dravid son d. an Aryan son-in-law

2. Which of the following is not permitted under the rules stated?
a. a Dravid man marrying his father's sister.
b. an Aryan woman marrying her mother's brother.
c. a widower born Aryan, marrying his brother's widow.
d. a widower marrying his wife's sister.

3. If widowers and divorced males had retained the group they had upon marrying, which of the following would be permissible, assuming that no previous marriage had occurred?
a. a woman marrying her dead sister's husband.
b. a woman marrying her divorced daughter's ex-husband.
c. a widower marrying his brother's daughter
d. a divorced male his ex-wife's divorced sister in law.

Answer:
For Solid DI SET 11
1) The key to remember in this question is that when it says "Dravid male" they refer to his group when he was born, and not after he gets married. I will shorten Dravid to D and Aryan to A.
Given that, the answer is trivial. You can eliminate b and c immediately, since a D must be married to an A, becomes an A, his children (sons and daughters) are A's. Option d is similarly eliminated since his daughter A, must marry a D. That leaves option a, which can be quickly verified. An uncle could be maternal or paternal. His paternal uncle could be a D (if unmarried), or an A (if married). His maternal uncle could be an A (if unmarried), or a D (if married). **Hence option a) is correct**.

2) Try and eliminate each option.
Option a) D marrying his father's sister(A).Possible.
Option b) A marrying her mother's (A) brother (A). Not possible.
Option c) A widower born A, therefore now A, marrying his brother (A)'s widow (D). Possible.

Option d) A widower X, marrying his wife's (X') sister (X'). Possible.
Hence answer is b)

3)Once again eliminate each option:
Option a) A woman X marrying her dead sister X's husband (X (because he retains X after his wife died). X-> X not possible.
Option b) A woman X marrying her divorced daughter X's ex-husband (X). Not possible.
Option c) A widower X (born X', but X after marriage, retained after his wife's death), marrying his brother (X')'s daughter (X) (since daughter will get her mother's group which must be X). Not possible.
Option d) A divorced male X (born X') marrying his ex-wife's (X)'s divorced sister-in-law (X' or X). Sister-in-law can be the wife's husband's sister -> (potentially her husband's sister (heaven forbid!), who would be an X') or her brother's wife (also an X'). Either way X, marrying an X' makes it permissible.

Solid DI Set - 12
Question

In 2001 census, the following data regarding two village 'Rajgarh' and 'Sukhgarh' was found
I. Rajgarh has 2104 more males the Sukhgarh
II. Sukhgarh has 2041 fewer females than Rajgarh
III. Sukhgarh has 687 more males than females
IV. Rajgarh has 750 fewer females than males

1. What is the total number of males in Rajgarh and Sukhgarh?
   1. 11,924 2. 10,510 3. 12,510 4. Cannot be determined

2. What is the difference between the number of males in Sukhgarh and the number of females in Rajgarh?
   1. 27,961 2. 1,354 3. 2,747 4. Cannot be determined.

Answer:
For Solid DI SET 12

1.1 Let x be number of males in Rajgarh, z the number of males in Sukhgarh, y the number of females in Rajgarh, and t the number of females in Sukhgarh. Check the options if x + z = 11924. Then x = 7014, z = 4910, y = 6264 and t = 4223
So, all other equations (ii) , (iii) and (iv) are satisfied.

2. 2 Here y – t = 2041 and z – t = 687 So, y – z = 1354

Solid DI Set - 13
Question

A hedge fund has recently acquired four companies - BOB, MOB, ZOB and DOB. The sales of DOB are half that of BOB whereas the profits of DOB are double that of BOB. The expenses of ZOB are Rs 3 crores less than that of DOB whereas the profit of MOB is Rs 1 Crore less than that of ZOB. The expenses of BOB are three times that of DOB. It is also known that the sales of ZOB are Rs 15 crores or one-fourth that of MOB. The auditing firm has also reported that sales of DOB are Rs 10 crores more than that of ZOB and the expenses of BOB are 90% of its own sales.

Q1) The total sales of all the four companies is (Rs crores):
   a) 200 b) 150 c) 125 d) 160

Q2) The expenses of BOB exceed that of ZOB by (Rs crores):
   a) 34 b) 43 c) 33 d) 62

Q3) Which company had the maximum profits?
a) BOB b) MOB c) ZOB d) DOB

Q4) The expenses of MOB exceed the profits of BOB by (Rs crores):
a) 51 b) 52 c) 53 d) 54

Q5) Total profits of the four companies are (Rs. Crores):
a) 15 b) 20 c) 25 d) 40

Q6) The profits of MOB form what percentage of the expenses of ZOB?
a) 16% b) 20% c) 15% d) 23%

Answer:
For Solid DI SET 13

Based on the information given, best way to solve this is to make a table. May seem tedious initially but would save you time for answering other questions

	Sales	Expenses	Profits
BOB	2 X = 5	0.9 x 50 = 45	50 – 45 = 5
MOB	60	60 – 2 = 58	B – 1 = 3 – 1 = 2
ZOB	15	A – 3 = 12	B = 15 – 12 = 3
DOB	X = 25	A = 45/3 = 15	2 x 5 = 10
Total	150	130	20

A1) Correct answer is **(b)**
A2) Correct answer is **(c)**
A3) Correct answer is **(d)**
A4) Correct answer is **(c)**
A5) Correct answer is **(b)**
A6) Correct answer is **(a)**

Solid DI Set - 14
Question

For questions in this test, use the following answer choices

a) If the question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.
b) If the question can be answered by using either statement alone.
c) If the question can be answered by using both statements together, but cannot be answered by using either statement alone.
d) If the question cannot be answered based on the information provided

1) Average of ten numbers s 15.34. If the fifth number is incorrect then what would be the average of the remaining nine numbers?

I. In the given ten numbers the average of the first five numbers is 14.35 and the average of the last six numbers is 15.43.

II. In the given ten numbers, the average of the first six numbers is 14.38 and the average of the last six numbers is 15.40.

2) Is the prime number p equal to 37?

I. $p = n^2 + 1$, where n is an integer
II. p^2 is greater than 200

Answer:
For Solid DI SET 14

A1) Correct answer is (a)
Only A alone is sufficient. From B, we can get only the sum of the fifth and the sixth numbers.

A2) Correct answer is (d)
Since 142 = 196 and 152 = 225, if follows from (B) that p > 14

In (A) the expression n2 + 1 can represent a prime number less than 37, equal to 37, or greater than 37, depending on the value of n. For example, if n = 4, the 42 + 1 = 17; if n = 6, then 62 + 1 = 37; if n = 10, then 102 + 1 = 101; and 17, 37, and 101 are all prime numbers. Thus, (A) alone is not sufficient
Both the statements together are not sufficient

Solid DI Set - 15
Question

For questions in this test, use the following answer choices

a) If the question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.
b) If the question can be answered by using either statement alone.
c) If the question can be answered by using both statements together, but cannot be answered by using either statement alone.
d) If the question cannot be answered based on the information provided

1) Two schools decide to send their students to a picnic on the same day. How many students attend the picnic from the first school?

I. 40 students in all attend the picnic
II. If you multiply the number of students from first school with the number of students from the second school, the answer is 300

2) Radhesh is a class X student and is practicing for his board exam. He draws a circle of radius 9.6 cm. He also draws a chord, whose length is
I. If you measure the perpendicular distance from the centre of the centre of the circle to the chord, you get 6 cm
II. If you draw a triangle with two end points being the end points of the chord and the third point touching the circle, the 3rd angle is 80 degrees

Answer:
For Solid DI SET 15

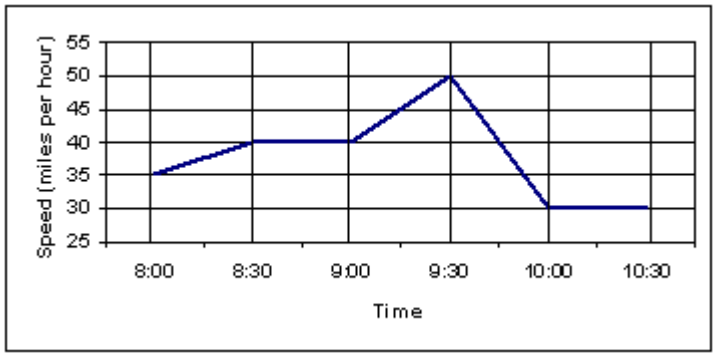
A1) Correct answer is (d)

While at first glance, you may be tempted to answer ©, since there are two linear equations and two variables, as you try to solve the question you will get two answers 30 and 10. So you can't say which one of those applies to the first school

A2) Correct answer is (a).
Statement I allows you get the answer since the perpendicular from the centre of the circle to the chord is going to bisect the chord. Then using Pythagoras theorem, you can calculate the length of the ½ chord
Statement II doesn't provide you any concrete information to be useful

Solid DI Set - 16
Question

Mr. Malik went to US on a business trip and rented a car to drive from his hotel to the plant that he was visiting. Being new to driving in US, he was very cautious and wanted to ensure he drove within the speed limits. The graph below shows the speed he was driving at different times of the day



1) For what percent of the time was he driving at 40 miles per hour or faster?
a) 20 b) 45 c) 40 d) 50

Q2) How far, in miles, did Mr. Malik drive between 8:30 and 9:00?
a) 0 b) 20 c) 30 d) 40

Q3) The total distance traveled by Mr. Malik is
a) less than 50 miles b) between 50 and 100 miles
c) greater than 100 miles d) Can't be calculated

Q4) How much time Mr. Malik would have taken if he had traveled the whole distance at the average speed of 40 miles per hr?
a) 2 hrs b) 2.8 hrs c) 2.4 hrs d) 3 hrs

Answer:
For Solid DI SET 16

A1) Correct answer is (d)
A quick glance at the graph will show you that x axis has equally spaced intervals. Out of the 5 intervals that he drove, for 2.5 of those the graph on y axis is above 40, so 50%

A2) Correct answer is (d)
Since his speed was 40 miles per hr, he would have driven 40 miles

A3) Correct answer is (b)
Take the average speed for 30min. intervals and divided by 2 (since each interval is ½ hr)
(37.5 + 40 + 45 + 40 + 30)/2 = 192.5 / 2 = 96.125

A4) Correct answer is (c)
Use data from previous question re distance traveled 96.125 / 40 = 2.4 hrs approx.

Solid DI Set - 17
Question

Two shopkeepers go to buy newly designed weights from the trade fair. In a particular shop the salesman asks their limits of weighing at a time. Both of them tell their limit as 120 kg at a time. The salesman shows them the price list as:

Any weight less than 10 kg ?	Rs. 10 per piece
More than 11 kg but less than 50 kg ?	Rs. 20 per piece
More than 51 kg but less than 100 kg ?	Rs. 30 per piece.
More than 100 kg ?	Rs. 50 per piece.

The salesman gave them two options:

In the 1st option, the shopkeepers might have to put the weights on both sides. He gave them an example: Suppose you want to weigh 7 kg, so put 10 kg on weight side and put 3 kg on the goods side.

In the second option, the shopkeeper did not need to put the weights on goods side.

1. If the 1st shopkeeper opts for the 1st option, what is the minimum number of weights he would need to buy at the lowest cost?
   1. 8 2. 10 3. 5 4. None of these

2. The 2nd shopkeeper opts for the 2nd option. What is the min. no. of weights he would need to buy at the lowest cost?
   1. 5 2. 7 3. 10 4. None of these

3. One of them needed as much more amount as the other has left after purchase. Suppose both of them left their home with the same amount. Who borrowed and what amount was borrowed?
   1. First shopkeeper borrowed Rs. 30
   2. Second shopkeeper borrowed Rs. 30
   3. Second shopkeeper borrowed Rs. 15
   4. First shopkeeper borrowed Rs. 15

Answer:
For Solid DI SET 17

A1) Correct answer is (3)
In the first option, the minimum no. of weights needed is 5. The weights are 1 kg, 3 kg, 9 kg, 27 kg, 81 kg.

A2) Correct answer is (2)
In the second option , the minimum no. of weights needed is 7. The weights are 1 kg, 2 kg, 4 kg, 8 kg,16 kg, 32 kg, 64 kg.

A3) Correct answer is (3)
First shopkeeper needs 3 x 10 + 1 x 20 + 1 x 30 = Rs. 80
Second shopkeeper needs 4 x 10 + 2 x 20 + 1 x 30 = Rs. 110
Therefore Second shopkeeper needed to borrow Rs. 110-80/2 = Rs. 15

Solid DI Set - 18
Question

The following is the list of instructions to be followed
Step1: x=0 A=2 B=3
Step2: If X<5 then do Steps3-6 otherwise Step7
Step3: Y=A+B replace A by B, replace B by Y
Step4: Type Y
Step5: Increase X by 2
Step6: Goto Step2
Step7: Exit

1.When X=4 what value of Y is typed?
1] 12 2] 8 3] 13 4] 5 5] 8

2.Suppose Step5 is replace by 'Increase X by 5' then what would be the last value of Y typed?
1] 5 2] 4 3] 6 4] 9 5] 8

3. After the set of instructions is over at Step 7 what is the value of X
1] 5 2] 4 3] 3 4] 7 5] 8

Answer:
For Solid DI SET 18

1. While X=0, Y=5, A=3, B=5
While X=2, Y=8, A=5, B=8
While X=4, Y=13, A=8, B=13
Hence [3]

2. While X=0, Y=5, A=3, B=5
If X is increased by 5 further values of Y will not be calculated.
Hence [1]

3. The last value of X is 4
Hence [2]

Solid DI Set – 19 Question

Five brothers have among them a pair of twins who are neither the oldest nor the youngest. E is older than C but younger than B. D is younger than 3 brothers

1) The youngest is
1] A 2] B 3] C 4] D

2). One of the twin pair is
1] B 2] C 3] D 4] E

3). The eldest is
1] A 2] B 3] C 4] E

4) The one who has as many elder brothers as younger brothers is
1] A 2] B 3] E 4] none of these

5) Who is the fourth brother
1] A 2] B 3] D 4] E

Answer:
For Solid DI SET 19

The following table explains the answers

1	2	3	4	5
B	E	A	D	C

1) [3] **2) [4]** **3) [2]** **4) [1]** **5) [3]**

Solid DI Set - 20
Question

Each item has a question followed by two statements each giving some data.

- Mark 1 if the question can be answered by using one of the statements alone; but cannot be answered by using other statement alone.
- Mark 2 if the question can be answered by using either statement alone.
- Mark 3 if the question can be answered by using both statements together, but cannot be answered by using either statement alone.
- Mark 4 if the question cannot be answered even by using both the statement together.

1) a and b are two positive numbers. How many of them are old?
I. Multiplication of b with an odd number gives an even number
II. $a^2 - b$ is even.
1] 1 2] 2 3] 3 4] 4

2)A, B, C, D have to stand in a queue in descending order of their heights. Who stands first?
I. D was not the last, A was not the first.
II. The first is not C and B was not the tallest.
1] 1 2] 2 3] 3 4] 4

3) Of two boxes of sweets A and B, which costs more?
I. The box A has 32 sweets of one kind and box B has 24 sweets of another kind.
II. 6 sweets of box B cost more than 8 sweets of box A.
1] 1 2] 2 3] 3 4] 4

Answer:
For Solid DI SET 20

1) From statement I - b is even but nothing can be said about a
From statement II, a^2 - b is even only if both are of the same parity (odd or even),which means a is also even. Therefore none of a and b are odd.
Using both statements we can answer the question. Choice (3)

2) Taking II and I we get A, B, C are not the tallest, hence D has to be the tallest. Thus D stands first. Choice (3)
3) From statement I, the price cannot be calculated.

From statement II, 6 sweets of B>8 sweets of A or 24 sweets of B > 32 sweets of A
Hence, we can say box B is more expensive than box A. Choice (3)

Solid DI Set - 21

Question

Each item has a question followed by two statements each giving some data.

- Mark 1 if the question can be answered by using one of the statements alone; but cannot be answered by using other statement alone.
- Mark 2 if the question can be answered by using either statement alone.
- Mark 3 if the question can be answered by using both statements together, but cannot be answered by using either statement alone.
- Mark 4 if the question cannot be answered even by using both the statement together.

1) How many boys are there in the class?
I. The number of boys in the class is 8 more than the number of girls in the class, which is five times the difference between the number of girls and boys in the class.
II . The number of girls in the class is four less than half the total number of students in the class.
1] 1 2] 2 3] 3 4] 4

2) How many guests attended the party hosted by Rajesh? He invited 60 people for the party.
I. 12 of the invitees expressed their inability to attend the party where as another 12 did not get back to Rajesh nor did they attend the party later on.
II. 50% of the invitiees confirmed that they would attend the party, but only 80% of them actually attended the party.
1] 1 2] 2 3] 3 4] 4

Answer:

For Solid DI SET 21

1) From statement I
B = G + 8
G = 5 x (B – G) = 5 x 8 = 40
B = 48
From statement II
G + 4 N/2 Choice (1)

2) From statement I only 60 people, 12 have expressed inability and 12 have not come. Still nothing can be said about the other 24.
From statement II though 80% of 50% did come. No information on the other 50% is given. Choice (4)

Solid DI Set - 22

Question

Priya has agreed to feed a friend’s dog for a full week, running from Monday to Sunday. A total of seven brands of dog food are available, of which exactly five, M, N, O, P and Q are protein-enriched, and exactly two, R and S, are vitamin-enriched. Priya must adhere to the following feeding instructions.
On each of the seven days, a different brand of dog food must be fed.
Protein-enriched dog food cannot be fed for more than two consecutive days.
R must be fed earlier in the week than S.
M must be fed earlier in the week than R.
M must be fed earlier in the week than Q and exactly four of the other brands must be fed between N and Q.

1) Which of the following brands must be scheduled to be fed on Wednesday?
[1] M [2] O [3] P [4] R

2). If Q is scheduled to be fed on Sunday, which of the following could also be true?
[1] R and O are scheduled to be fed on consecutive days.
[2] N is scheduled to be fed earlier than M.
[3] Two days intervene between the day O is fed and the day P is fed.
[4] P is scheduled to be fed on Tuesday.
3) Which of the following pair of brands could be scheduled to be fed on consecutive days?
[1] M and O [2] N and P
[3] O and S [4] Q and R

Answer:
For Solid DI SET 22
The possible combinations that meet all the conditions

	Mon	Tue	Wed	Thurs	Fri	Sat	Sun
a)	N	M	R	O/P	S	Q	P/Q
b)	M	N	R	O/P	S	P/O	Q

1. [3] 2. [1] 3. [3]

Solid DI Set - 23
Question
DIRECTIONS for the questions 1 to 3
A quack- Dr. Fool's Paradise- fools his customers by claiming to predict future using a unique method. He has three parrots kept in three different cages. Each cage has three cards with a single non-zero digit inscribed on every card. No two cards have the same number & no cage contains two cards with digits totalling ten. Further, the total of three cards in the first cage is greater by two than the total in the second cage & by four than that of third cage. When a customer asks for his prediction, the quack lets out three parrots which randomly picks one card out of their respective cages. Before the prediction is made, the quack totals the digits on the three picked cards & charges the customer the same number of rupees as the total of the cards. One day a customer paid seven rupees for his prediction.
1. What is the lowest payment possible?
(1) Rs. 5 (2) Rs. 7 (3) Rs. 6 (4) Rs. 8

2. What is the maximum possible amount that anyone can pay?
(1) Rs. 22 (2) Rs. 23 (3) Rs. 24 (4) Rs. 25

3. Which of the following payments can never be made by any customer?
(1) Rs. 19 (2) Rs. 16 (3) Rs17 (4) Rs. 23

Answer:
For Solid DI SET 23
The cards are numbered 1,2,3…..9
There fore, the sum of numbers on all cards = 9 * 10 /2 = 45
If sum of numbers of cards in the 1st cage = X , then
Sum of numbers of cards in the 2nd cage = X-2
Then , sum numbers of cards in the 3rd cage = X-4
X + X-2 + X-4 =45 or X =17
There fore the three cages would have cards totaling 17 , 15 and 13 respectively.So, each cage should have one card from each of the following three sets of cards .
1,2,3 4,5,6 7,8,9
The following combinations are possible if one has to satisfy the requirements.

Case 1 : 17 = 9 + 6 +2 9 + 5 + 3 9 + 5 + 3
Case 2 : 15 = 8 + 4 +2 8 + 6 + 1 6 + 7 + 2
Case 3 : 13 = 7 + 5 + 1 7 + 4 + 2 8 + 4 +1
But combinations 2 and 3 are not possible because the only way a person can pay Rs 7 is if three cards are 4 , 2, 1 = 7
But in combination 2 and 3 , this is not possible.
Therefore the only combination possible is 1.
The lowest possible payment is 3 + 2 + 1 = 6
Ans 1 (3)
Ans2 (3)
The maximum possible payment is 9 + 8 + 7 = Rs 24.
Ans3 (4)
A customer cannot pay Rs 23 as 23 = 9 + 8 + 6 as 9 and 6 are in the same cage.
Option (2) is possible as all three cards mentioned are in different cages. A customer can pay Rs 19 i.e 19 = 9 + 3 + 7. as all three cards are in different cages.

Solid DI Set - 24
Question

DIRECTIONS for the questions 1 to 5
Robert received a large order for stitching school uniforms for Pink Flower school.He has two cutters who will cut the fabric , five tailors who will do the stitching , and two assistants to stitch the buttons and button holes. Each of these 9 persons will work for exactly 10 hours a day.Each Pink Flower uniform requires 20 utes for cutting,1hour for stitching and 15 minutes for buttons and button holes. The Little Flower uniform requires 30 minutes , 1 hour and 30 minutes respectively.
1) Find the maximum number of Little Flower uniforms that Robert can complete in a day.
(1)30 (2) 35 (3) 40 (4) 36

2) If on a day ,Robert decides to complete 20 Little Flower uniforms , then how many Pink Flower uniforms can he complete that day?
(1) 30 (2) 35 (3) 40 (4) 36

3) If Robert decided to complete 30 Little Flower uniforms only and no other uniform on a particular day, then how many total man hours will go idle?
(1) 30 (2) 60 (3) 45 (4) 36

4) If Robert hires one more assistant , then what is the maximum number of Pink Flower uniforms that he can complete in a day ?
(1) 60 (2) 48 (3) 120 (4) 50
5) Robert has the option to hire one more employee of any category.Whom should he hire to get maximum increase in production capacity , assuming that he needs to stitch only Pink Flower uniforms on that day?
(1) One cutter (2) One tailor
(3) One assistant (4) Either a tailor or a cutter.

Answer:
For Solid DI SET 24

When he has to complete maximum number of Pink Flower uniforms in a day, he will not at al devote to the Little Flower uniforms .Now , to find the maximum number of Little Flower uniforms , we have to concentrate on the time resource .It will be the category with the least available time which will then decide the maximum no. of uniforms which can be prepared.
Cutting :20hours available and30minutes required per uniform.
Thus 20*60/30 = 40 uniforms can be cut.
Stitching 50 hours available and 60 minutes required per uniform .Thus 50*60/60 = 50 uniforms can be stitched.

Buttoning : 20 hours available and 30 minutes required per uniform. Thus (20 * 60)/30 = 40 uniforms can be buttoned .Obviously , the least number of the above three will determine the maximum number of uniforms that can be completed.
Ans1 (3) 40 uniforms of Little Flower can be completed.
Total uniforms of Little Flower to be completed = 20
Cutting time required = 20 * 30 = 600 minutes = 10 hours
Stitching Time required = 20 * 60 = 1200 minutes = 20 hours
Buttoning time required = 20 * 30 = 600 minutes = 10 hours
Cutting time remaining = 20 –10 = 10 hours: Stitching time remaining = 50 –20 = 30 hours;
Buttoning time remaining = 20 – 10 = 10 hours. Since the times for cutting , stitching and buttoning each Pink Flower uniform are 20 minutes , 60 minutes and 15 minutes respectively.
We can cut (10 * 60) /20 = 30 Pink Flower uniforms , we can stitch (30 * 60)/ 60 = 30 Pink Flower uniforms and we can stitch
(30 * 60)/60 = 30 Pink flower uniforms , and we can button (10 * 60)/60 = 30 Pink Flower uniforms, and we can button
(10 * 60)/ 15 = 40 Pink Flower uniforms
30 is the maximum number possible (the bottleneck resource)
Ans2(1)
Ans3(1)
Total man- hours available = 20 + 50 + 20 = 90 per day.
If Robert makes 30 Little Flower uniforms in a day , time utlised
= (30 * 30) minutes + (30 * 1) hours + (30 * 30) minutes
Total time utilized = 15 + 30 + 15 = 60 hours
Man hours remaining = 90- 60 = 30 hours
Again we have to basically find out the bottleneck resource
Total cutting time available = 20 hours
Number of uniforms that can be stitched = (50 * 60) / 60 = 50
Total stitching time available = 50 hours
Number of uniforms that can be stitched = (50 * 60)/60 = 50
Total buttoning time available = 30 hours
Number of uniforms that can be buttoned = 30 * 60 /15 = 120
The minimum hour = 50 = The maximum uniforms that can be completed
Ans 4(4)
When he makes only Pink Flower uniforms on a day , as per the current availability
No. of uniforms that can be cut = 20 * 60 /20
Number of uniforms stitched = 50 * 60 / 60 = 50 , and the number of uniforms buttoned = (20 * 60)/15=80.
Thus maximum no. of uniforms completed = 50 and the bottle neck was time for tailoring (stitching). Hence to get the maximum increase in the production capacity , he should employ one more tailor. Ans5 (2).

Solid DI Set - 25

Question

1) A, B, C, D & E are five different integers. When written in the ascending order of values, the difference between any two adjacent integers is 3. D is the greatest and A is the least. B is greater than E but less than C. The sum of the five integers is equal to E- 1. A + B is:
A] 15 B] -8 C] -9 D] 16

2) Mark your answer as
(1) If statement (A) alone is sufficient to solve the question but statement (B) alone is not;
(2) If statement (B) alone is sufficient to solve the questions but statement (A) alone is not;
(3) If neither (A) nor (B) is individually sufficient to solve the question but a combination of these is sufficient to solve the question;
(4) If both the statements (A) & (B) are individually sufficient to solve the question and
(5) If both the statements taken together are not sufficient and more information is required to solve the question
Q. If the average height of three people if 68 inches, is the shortest person more than 60 inches tall ?
(A) The height of the tallest person is 72 inches
(B) One of the persons is 70 inches tall

1] 1 2] 2 3] 3 4] 4

Answer:

For Solid DI SET 25

1. Answer is B]

We know that D>C>B>E>A and D+C+B+E+A=E-1. We also know that the numbers are E-3, E, E+3, E+6, E+9 or E = -4.

B = -1, A = -7, A+B = -8

2. Answer is 1]

Only the first statement is needed. If x, y and z are the heights,

X + y + z = 68 x 3 = 204

If z = 72, x + y = 132

Since x and y are less than 72 (z is the tallest person), the shortest person has to be as tall as 132 – 72 = 60 inches.

Solid DI Set - 26

Question

In a one-day cricket international between India and Australia. Australia managed to score 329 runs in 50 overs. To win the match India was required to score 330 runs in 50 overs. Tendulkar and Seghwag opened the innings for India. The first wicket fell at the end of the 9th over when the score was 63. At the end of the 19th over the second wicket fell at 128. 3rd wicket fell at the score of 187 when Tendulkar was caught behind in the 32nd over. 4th & 5th wicket fell when score was 261 in 42nd over. Finally, India scored 333 with a four hit by Harbhajan of the first fall he faced in the 50th over. India won the match by 4 wickets with two balls to spare. Tendulkar scored approx 37% of the total runs scored by India, but man of the match was given to the player who scored curtail runs in the pressure situation at the end of the innings. Two more players scored more than 50 runs. Seghwag and Pathan scored in mid 20's. Dhoni scored more than Pathan and Seghwag but still Seghwag was not the least scorer. Indian batting order – Tendulkar - Seghwag – Pathan – Dhoni – Yuvraj – Dravid – Kaif - Harbhajan – Zaheer – Balaji – kumble. Each team had 11 players 5 batsmen, 1 wicketkeeper and 5 bowlers, where only 10 wickets is to be taken of a team. The game was played in accordance with the rules laid down by the ICC.

1. What can be said about Sachin's contribution in the three partnerships he was involved in assuming that there were no extras conceded by the Australian team?

1] 39, 40 & 44 2] 38, 39, 46 3] 40, 37 & 46 4] 41, 39, 44

2. What can be concluded from theanalysis of the paragraph given above inaccordance with the two statements give with this question:

Statement 1: Dhoni scored second highest runs and was the 5th wicket to fall for India in the 42nd over.

Statement 2: Dravid scored a duck in the match.

1] If statement 2 is true then statement 1 is necessarily false.

2] If statement 1 is false then statement 2 is necessarily true.

3] If statement 1 is true then statement 2 is necessarily true.

4] None of the above.

3. What can be said regarding the following two statements?

Statement 1: Kaif was not out at the end of Indian innings with second highest score.

Statement 2: Tendulkar was not involved in the highest partnership.

1] Both statements could be true.

2] At least one of the statements must be true.

3] At most one of the statement is true.

4] None of the above

Answer:
For Solid DI SET 26

1. 2 Sachin scored approximately 37% runs scored by India i.e. 333 *37% = 123 runs approx. He was involved in the partnerships of 63 (Seghwag), 65 (Pathan) and 59 (Dhoni). Seghwag and Pathan scored in mid 20's (between 24 – 26) As Pathan scored more than Seghwag, so lets assume they score 25 and 24 respectively. In first partnership of 63 if Seghwag scored 24 so Sachin cannot score more than 39 runs. In second partnership of 65 if Pathan scored 26 so Sachin cannot score more than 39 runs. There in the first two partnerships Sachin cannot score more than 78 runs. So he must have score 45 runs in the third partnership with Dhoni to make 123 runs. So option 2.
2. 1 If statement 2 is true, than 1 cannot be true as if Dravid scored a duck than he must be the one to get out as the 5th wicket in the 42nd over for India. In such case either Dhoni or Yuvraj was the 4th wicket to fall for India as they were batting after the fall of 3rd wicket (Sachin). Dravid can only come to the crease after the fall of 4th wicket and he is the second batsman to get out in the 42nd over. So he can only be the 5th wicket to fall without scoring a run. See the batting order for India. So option 1.
3. 3 Statement 1: Kaif batted at no 7th, which means he came to crease after the fall of 5th wicket in 42nd over when score was 261. So Kaif was involved in a partnership of 72 runs for the 6th wicket, where as either or 5th or 6th (Rahul or Yuvraj) was involved in two partnerships of 74 and 72. So logically it could not be true.
Statement 2: 1st wicket partnership was of 63, second wicket partnership was of 128 – 63 = 65, third wicket partnership was of 187- 128 = 61 when Tendulkar got out), 4th partnership was of 261- 187 = 74, 5th wicket fell at same over (given), 6th wicket partnership was of 333 – 261 = 72.
So statement 2 is absolutely true.

Solid DI Set - 27
Question

A Quality Assurance inspector is planning to inspect certain vehicles on this Monday and Tuesday at Tata Motors. He has to inspect three vehicles on each of the two days. On these two days put together, he has to inspect at least three Indica's, at least one Safari and at least one Ace. The registration numbers of a vehicle available for inspection are as follows:
Indica : I 21, I 22, I 24, I 23
Safari : S 11, S 21, S 12, S 13
Ace : A 22 , A 11 , A 12
Each vehicle is given a registration number, which consists of a single – letter code (I, S or A) followed by a two – digit numerical code (21, 22, etc.)
The following restrictions are placed in a selection of the vehicles to be inspected:
(i) Not more than two vehicles of the same kind can be inspected on one day.
(ii) Vehicles whose registration numbers have a numerical code of 21, 22 and 23 are available for inspection on Tuesday only.
(iii) No vehicle inspected on Monday can be inspected on Tuesday.
1. Which of the following vehicles must be inspected by the vehicle inspector?
1] S 13 2] A 22 3] I 23 4] I 24

2. Which of the following is possible combination of vehicles that can be inspected on Tuesday?
1] I 21, S 21, I 14 2] S 11, A 12 , I 23 3] I 22, S 13, I 21 4] I 23, S 21, A 22

Answer:
For Solid DI SET 27

1. 4 Among the Indica's I 21, I 22 and I 23 can be inspected only on the second day. As three Indica's have to be inspected in two days and at most two Indica's can be inspected on Tuesday, I 24 must be inspected on Monday.

2. 3 I 24 must be inspected on the first day. As only one Indica can be inspected on the first day, at least two Indica's must be inspected on the second day. Hence option 2 and 4 are not possible combinations. Option 3 does not violate any condition.

Solid DI Set - 28
Question

There are six companies – Rediff, Bazee, Naukri, Contest 2 Win, Shaadi and MCX. In the dotcom companies market capitalization, four of these six companies have secured the first four positions. Three venture capitalists – Natwest, Chrysalis and General Atlantic – have invested in these companies their individual speculations regarding the companies that would top the market capitalization among the first four positions are given in the following tables.

Venture Capitalists	Speculated Positions			
	1st	2nd	3rd	4th
Natwest	Rediff	Bazee	Naukri	MCX
Chrysalis	Bazee	Shaadi	Rediff	Contest 2 Win
General Atlantic	MCX	Naukri	Bazee	Contest 2 Win

It is also known that,
(i) No companies ranked in market capitalization in the same position as speculated by Natwest but exactly two of the four companies speculated by them finished the market capitalization within the first four positions.
(ii) Exactly two companies ranked in market capitalization in the same positions as speculated by Chrysalis, while only one company speculated by them failed to finish the market capitalization within the first four positions.
(iii) Exactly two companies speculated by General Atlantic ranked in the market capitalization within the first four positions while only one company ranked the market capitalization in the same position as they speculated.

1. Which company ranked third in market capitalization?
1] Naukri 2] Shaadi 3] Rediff 4] Contest 2 Win

2. Which of the following is the correct order of the companies,
whichfinishedthemarket capitalization in the first four positions respectively?
1] Rediff, Bazee, Contest 2 Win, Shaadi.
2] Shaadi, MCX, Rediff, Contest 2 Win.
3] Shaadi, Naukri, Rediff, Contest 2 Win.
4] Cannot be determined.

Answer:
For Solid DI SET 28

1. 3 From (ii), three of the four companies speculated by Chrysalis finished in the first four positions. Hence, exactly one of the other two companies – Naukri and MCX – finished in the top four positions.
From
(i), Exactly one of Rediff and Bazee finished in first four positions. Hence, from
(ii), Both Contest 2 Win and Shaadi must have finished in first four positions. From
(iii), Bazee did not finish in the first four positions.
Hence, Rediff finished in the first four positions.
Now, the companies finished in the first four positions are Contest 2 Win, Rediff, Shaadi and MCX / Naukri.
From (ii), Two of the companies as predicted by Chrysalis finished at the same positions.
\ Rediff cannot finish at 2nd or 4th positions as in this case the above value for Chrysalis can be at most one.
From (i), Rediff cannot finish at first position.
\ It must have finished at third position.

2. 2 If Contest 2 Win did not finish at the finish, then it should have finish at first position, in this case no company according to General Atlantic's predictions could have finished at the correct position. Hence, Contest 2 Win finished at 4th position; Shaadi finished at first position and MCX finished at 2nd position. The correct order is

Shaadi	MCX	Rediff	Contest 2 Win

Solid DI Set - 29
Question

There are 11 players on each side in ODI cricket, and one team bats while the others bowl. Then the teams swap after 50 overs. Kraig Chapal, the coach of the Indian ODI cricket team is a master strategist when it comes to shuffling the batting order. In a match in which India scored 340 runs, 9 batsmen were out and the last unbeaten pair of batsmen together scored 40 runs before they ran out of overs. In the batting order the 4th and the 5th men each scored exactly a 100 runs, while the first two batsmen scored 50 between themselves. The ratio of the runs scored by the first three batsman, Ganguly, Sehwag and Pathan (though not necessarily) 1, 2 and 3 in the batting order) was 6 : 4 : 3. Two consecutive batsman scored 0, and the first 9 batsmen in the batting order scored either 0 or scores that were multiples of 5. Dhoni was the 8th batsmen in the batting order, and the next person after Dhoni scored a 5. The runs scored by Tendulkar if added to theextras (bonus runs not scored by any batsmen but given by the bowling team to the batting team) equaled Ganguly's scores. Sehwag scored one-fifth of Yuvaraj and equal to Tendulkar. Srinath scored 5 times what Tendulkar scored. Munaf and Mohanty scored 18 and 22 respectively, while together they scored 25 more than Dhoni and Pathan together. Kumble was India's most successful bowler of the match, and Harbhajan took 2 wickets less than Kumble.

1.What was the number of extras in the Indian score?
(1) 0 (2) 10 (3) 20 (4) Indeterminate

2. Tendulkar's number in the batting order was immediately after
(1) Yuvaraj (2) Srinath (3) Yuvaraj or Srinath (4) Indeterminate

3. What is the total of the least 5 scores in the Indian Cricket team (excluding extras)?
(1) 20 (2) 30 (3) 35 (4) 38

4. Who has scored 5 runs?
(1) Kumble (2) Harbhajan (3) Tendulkar (4) Kumble or Harbhajan

Answer:
For Solid DI SET 29

- It is given that the first a batsmen scored multiples of 5.Also the first two scored a total of 50 and the ratio of scores of the first three batsmen Ganguly, Sehwag and Pathan was 6 : 4 : 3.
  i.e. either 6x + 4x = 50 or 6x + 3x = 50 or 4x + 3x = 50
  As the only possibility is 6x + 4x = 50, Ganguly scored 30, Sehwag scored 20 and Pathan scored 15.
  Hence Pathan was 3rd in the batting order.
- Yuvraj scored 5 times that of sehwag, i.e. 100.
- Tendulkar scored equal to sehwag, i.e. 20
- Srinath scored 5 times Tendulkar, i.e.100
- Hence Yuvaraj and Srinath occupy positives 4 and 5, not necessarily in that order
- Ganguly = Tendulkar + Extras. \ Extras = 10
- Munaf and Mohanty are batsmen 10 and 11, though not necessarily in that order.
- Together they score 40 which is equal to 25 + Dhoni + Pathan. Hence Dhoni = 0
- Batsmen 9 scored 5. As the two who score 0 are consecutive, batsmen 7 scores 0. Hence Tendulkar has only one slot left, i.e. 6. Now all questions can be answered.

Solid DI Set - 30

Question

At 3:00 pm afternoon I'm 11th in a college fee payment counter queue. The queue increased at the rate of 1 person every minute the counter clerk takes 3 minutes to entertain a person. There is one girl after every 2 boys in the queue. The Tea break of 10 minute is at 3:35. The first person is a boy and the person behind me is a girl. The ratio of boy to girl gets interchanged after the 17th person. At 3:02 and 3:04 girls join the queue.

1. Assuming that there was delay of 5 minutes at 3:07 pm in the counter clerks working. At what time I'll be free to catch up with my friends?

1. 3:43 2. 3:48 3. 3:45 4. 3:40

2. Where will I be at 3:18 hrs, i.e. my position? If the 3rd person in the queue decides to pay the fees of two persons (including herself) and a boy who was exactly after her, left the counter without paying his fees? position

1. 4th position 2. 5thposition 3. 6th position 4. None of these

Answer:

For Solid DI SET 30

1. 2 After 2 boys there is a lady. 1 st person is a boy, thus it can be BBG or BGBBGB. And so on, where B stands for boy and G stands for girl. The person behind me is a girl (12th in a row). There for it is BBGBBG i.e. 3rd 6th 9th 12th & 15th are girls. After 12th person girls ratio interchanges i.e. it becomes 2 girls to boys in a group … at 3:02 and 3:04.

I am 11th in a queue, i.e. my number shall arrive after 10 people (3 minute per) 10X3 = 30 min. + 10 minutes tea break + 5 minutes interruption + 3 minute processing time. (30 + 10 + 5 + 3 = 48 min. So I'll be free by 3:48 pm..

2. 2 Counter clerk takes 3 minutes to entertain on person. So in 18 minutes 18/3 = 6 persons have paid their fees.

I was 11th so now I am 5th Now one of the girls has paid 2 fees, so it is like being 6th in the queue, but a boy exactly after her, so we are back to being 5th position..

Solid DI Set - 31

Question

The table below shows the sales and expenditure of three companies JAI foods, HAWAI foods and WAI foods for the financial year 2004-2005. These companies are located in the different parts of the world. Expenditure break ups are in percentage. Closely analyse the data and answer the questions.

Particulars	**Jai foods** (Sales Rs 7.5)	**Hawai foods** (Sales Rs 1.9)	**Wai foods** (Sales Rs 6.9)
Operating Profit	7	9	9
Interest paid	10	11	12
Rental	21	19	18
Taxes	8	8	11
Salaries	12	9	12
Raw material cost	25	18	19
Power and Electricity	5	10	7
Labour cost	5	6	4
Transportation	3	2	3
Maintenance	2	5	2
Miscellaneous	2	3	3
Total	**100**	**100**	**100**

* Sales to be read as Rs. million / month
* Sales break ups are in percentages (%)

1. What can be concluded about the expenditure in salaries, raw material, transportation and rental of all the three companies listed above in the table?
1. Percentage wise Wai food is spending more then the other two.
2. Revenue wise Jai food is spending more then Hawai and Wai together.
3. Revenue wise Hawai and Wai are spending less then Jai foods.
4. Percentage wise Hawai spends more than Jai, which in turn spends more than Wai.

2. If the interest paid by JAI FOODS is reduced by 1%, and everything else remains the same, its operating profit will:
1. Increase by 1% percent. 2. Not change.
3. Increase by 0.0075 million 4. Increase by 2% percent.

3. If the average monthly salary in WAI FOODS is Rs 9,500, then how many employees does WAI have?
1. Can't say 2. 18 3. 81 4. 87

Answer:
For Solid DI SET 31
1. 3 Option 1, 2 and 4 are not true, by visual observation and approximation. Revenue wise hawai and wai are spending less then Jai foods..
2. 3 The reduction of 1% in the expenditure will result in increase of 10% x 1% in operating profit for Jai foods, so operating profit of Jai foods will increase 0.1% of 7.5 m. Increase of 0.0075 million..
3. 4 Total salary paid by WAI foods = 6.9 x 0.12 x 1,000,000 = 828000. So number of employees = total salary paid/ average salary = 828000 / 9,500 = 87 employees..

Solid DI Set - 32
Question
Between two persons, A and B, there is one apple and one banana. When I asked them as to who among them had the apple, they gave two statements each in reply :
A: B has the apple.
B has the banana.
B: A doesn't have the banana
A has the apple.
It is known that at least one of A and B tells a least one false statement.

1. Which of the following statements must be true?
(1) Each of A and B tells at least one true statement.
(2) At least one of A and B tells at least one true statement.
(3) Neither A nor B tells at least one true statement.
(4) Both A and B tell at least one true and at least one false statement.

2. If it is also known that each of A and B tells at least one true statement, then which of the following statements must be true?
(1) All the four statements given by both A and B are true.
(2) Both the statements given by exactly one person out of A and B must be true.
(3) Each of A and B tells at least one false statement
(4) B has the banana as well as the apple with him.

Answer:

For Solid DI SET 32

The given statements are :
A : B has the apple.
B has the banana.
B : A doesn't have the banana.
A has the apple
Let us study the choice and eliminate the incorrect choice:
1. (1) We can have an arrangement in which A's statements are true and false in that order, and B's statement are both false, which defers the statements given in choice (1)
Bothe A and B cannot be liars as the first statement of A is the same as the second statement given by B, and one of them must have the banana. Hence, at least one of A and B tells at least one truth.
(3) This means that both A and B are liars which is not possible.
(4) This suggests that both A and B are altermators (i.e. one truth and one lie), which defies the arrangement mentioned in (1).
Hence, only choice (2) is correct. Choice (2)
2. (1) Defies the initial condition.
(2) Is correct as either A's both statements are true and B's statements, are true and false, in that order, or both of B's statements are true and A's statements are false and true, in that order.
(3) Is incorrect as per the arrangement given above.
(4) Is incorrect as in the second arrangement mentioned in (2) Choice (2)

Solid DI Set - 33

Question

From one sequence of digits another sequence of digits has to be formed as per the following rules:
Single switch: Interchange of any two adjacent digits.
Double switch: Interchange of any two digits with maximally one digit in between.
Random switch: Interchange of any two digits.
1. Using only single switching what is the minimum number of steps required to change 42153 to 12345?
a) 4 b) 5 c) 6 d) 7

2. Using only double switching what is the minimum number of steps required to change 53124 to 12345?
a) 3 b) 4 c) 5 d) 6

3. Using only random switching what is the minimum number of steps required to change 312546 to 654321?
a) 4 b) 5 c) 6 d) 7

4. Using only single switching for first two steps and then double switching what is the minimum number of steps required to change 54321 to 12345?
a) 5 b) 6 c) 7 d) 8

5. Using only single switching for first three steps and then random switching what is the minimum number of steps required to change 621534 to 123456?
a) 5 b) 6 c) 7 d) 8

Answer:

For Solid DI SET 33

1. b Starting with 42153 interchange 3 and 5 to get 42135. Next, interchange 2 and 4 to get 24135. Next, interchange 4 and 1 to get 21435. Next, interchange 1-2 and 4-3 to get the required sequence 12345. Hence, the single switch operation has to be invoked 5 times.
2. b Starting with 53124, interchange 1-5, then 5-3, then 2-5, and then 4-5 to get 12345.
3. a Starting with 312546, first interchange 5-1, then 6-3, then 3-1, and 4-2 to get 654321.
4. b Starting with 54321, first interchange 2-3, then 4-5, then 2-5, then 1-5, then 1-4 and then 3-4 to get 12345. The first two operations being single switches and he rest double.
5. b Starting with 654321, first interchange 2-3, then 2-4, then 3-5, then 1-6 to get the required sequence 123456.

Solid DI Set - 34

Question

The following questions consist of a questions and two statements ,I and II.
Choose
(1) If one of the two statements (I or II) alone is sufficient but the other statement alone is not
(2) If each statement alone is sufficient to answer the question asked.
(3) If statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
(4) If even statements I and II together are not sufficient to answer the question
1) P, Q, R are three polygons of having different number of sides. Which has the largest area among them?
I. Their perimeters are the same and Q is a square.
II. R is a pentagon.
1.1 2.2 3.3 4.4

2) What is (ad – bc)?
I. a, b, c, d are 4 consecutive terms of an A.P with common difference = 3.
II. a, b, c, d are 4 consecutive positive even numbers.
1.1 2.2 3.3 4.4

Answer:

For Solid DI SET 34

Ans 1) 4 We cannot find the polygon which is the largest area.
Because we don't have any information about P.
Ans 2) 2 Each statement independently will give the answer.
Assume in statement (I) the values of a, b, c, d as x, x + 3. x + 6, x + 9. Find ad – bc …it is equal to –18.
Similarly for statement (II) we get the difference as –8.

Solid DI Set - 35

Question

Srinivas intends to draw one rectangle of integer sides with a pencil which can last for a maximum possible length of 100 units only. Let R denote the set of all possible distinct rectangles from which Srinivas can choose to draw one such rectangle.
1. The number of rectangles in set R is
1. 636 2. 601 3. 613 4. 625

2. All the rectangles in R are formed in to groups such that all the rectangles of same perimeter are in the same group. What is maximum number of groups that is possible?
1. 99 2. 96 3. 49 4. 51

Answer:

For Solid DI SET 35

1. 4 Given 2(l + b) =100. But minimum 2(l + b) will be 4 units.
i.e. 49 possible values that perimeter can assume for each possible l + b = n, we have different ways of choosing distinct pairs of l & b.

Value of (l+b)	Number of Ways
2	1
3	1
4	2
5	2
6	3
49	24
50	25

= 2(1 + 3 + …… 25) – 25 = 625
2. 3 As explained above, 49 distinct parameters are possible or 49 groups are possible.

Solid DI Set - 36

Question

A student is allotted 1950 points to bid for courses totaling 16 credits in IIM. For every extra credit undertaken, he gets an additional 75 points. He is required to bid a minimum of 75 points per credit for all uncapped courses. However, in the case of capped courses, he can bid more than 75 points per credit. "A" decides to take 18 credits in which all courses, other than one course which is 3 credits, are uncapped.

1. What is the maximum number of points he can bid for the capped course?
(1) 975 (2) 950 (3) 1125 (4) 1050 (5) None of the above

2. What would be the maximum number of points he could bid for the same course if he decides to take a total of 16 credits only?
(1) 925 (2) 975 (3) 950 (4) 1125 (5) 1050

Answer:

For Solid DI SET 36

Ans 1) 1
Minimum points to be allotted for uncapped course = 15 * 75 = 1125
Therefore Maximum points available for capped course = 2100 – 1125 =
975

Ans 2) 2
Round about method
Total credits = 16, Total points allotted = 1950
Capped credits = 3, Uncapped credits = 13
Minimum points allotted for uncapped courses = 13 x 75 = 975
Maximum points available for capped course = 1950 – 975 = 975
Short cut method
Maximum points available for capped course = 975
As 150 less points allotted and 150 (2 x 75) used up. Choice (2)

Solid DI Set - 37

Question

Each of the letters of the alphanumeric addition EAT + THAT = APPLE are distinctly different. The addition is done in the decimal system.
1). What is the sum of the digits of APPLE?
a. 9 b. 10 c. 11 d. 12 e. 15

2). What is the value of L?
a. 3 b. 4 c. 5 d. 6 e. 2

Answer:

For Solid DI SET 37

A1) d A2) a
The hints are:
1. A has to be 1.
2. T has to be 9.
3. So E is 8
4. If three digit number added to 4 digit number to get a
5 digit number then the second digit of APPLE has
to be zero.

Using all these we get
(8 19) + (9 2 1 9) = (10 0 38)

Solid DI Set - 38

Question

The following questions consist of a questions and two statements ,I and II.
Choose
(1) If one of the two statements (I or II) alone is sufficient but the other statement alone is not
(2) If each statement alone is sufficient to answer the question asked.
(3) If statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
(4) If even statements I and II together are not sufficient to answer the question

1) A survey was conducted among 500 people and it was found that 58% preferred coffee, 47% liked tea and 9 % drank milk in the morning. How many people preferred nothing between coffee, milk and tea?
I. 21% liked both coffee and tea. No person liked both milk and tea.
II. 4 % liked both coffee and milk.
1.1 2.2 3.3 4.4

2) What is the value of x if it is a natural number?
I. y is divisible by 3 and y – x = 720.
II. y is divisible by 9 and y – x = 720.
1.1 2.2 3.3 4.4

Answer:

For Solid DI SET 38

Ans 1.3
From statement I we know that the number of people drinking milk and tea is zero, so number of people drinking all 3 is also zero. From I and II we know that the number of people drinking exactly 1 drink or 2 drinks. So, we can find out the number of people not drinking any of the drinks.

Ans 2.4
We cannot get the answer from statement II. Statement I is implied if statement II is true. Hence we cannot find the answer.

Solid DI Set - 39

Question

Rahul Sharma has a factory which manufactures Alpha I, Beta I and Gamma I. All these are manufactured by processing Omega 34. Alpha I requires 1 kg/unit, Beta I requires 2 kg/unit and Gamma I Gamma I requires 2.5 kg per unit of Omega 34, which costs Rs. 2 per kilogram. The total availability of Omega 34 is 350 kilogram. the processing is done on a machine having production hours of 160 hours in day shift and 182 hours in the night shift. The time required per unit production is as follows.

Product	Day Shift	Night Shift
Alpha I	2 hours	2.5 hours
Beta I	3 hours	4.0 hours
Gamma I	1 hour	1.5 hours

The machine costs Rs. 1 per hour. Selling price of Alpha I Beta I and Gamma I are Rs. 8 per Unit, Rs. 12 per Unit and Rs. 3.50 per Unit respectively. At least 5o units of Alpha I have to be produced and at the most 150 units of Gamma I can be produced.

1. Which of the following is possible?
   a) 75 units of Alpha 1, 4 units of Beta I in day shift, manufacture 40 units of Beta I and 40 units of Gamma I and 10 units of Alpha I in night shift.
   b) 75 units of Alpha I, 4 units of Beta I, in the day shit. Manufacture 40 units of Beta I and 40 units of Gamma I and 5 units of Alpha I in night shift.
   c) 74 units of Alpha I, 4 units of Beta I in day shift, 25 units of Beta I, and 10 units of Gamma I and 30 units of Alpha I in night shift.
   d) 74 units of Alpha I, 5 units of Beta I in day shift, 40 units of Beta I, 10 units of Gamma I and 30 units of Alpha I in night shift.

2. What percentage of the available raw material is utilised if 100 units of Alpha I, 40 units of Beta I, and 10 units of Gamma I are produced?
   a) 50% b) 58% c) 68% d) 78%

3. If Rahul Sharma spends initially 150 machine hours in day shift to manufacture Gamma I, 10 hours to manufacture Alpha I, and in the night shift manufactures 53 units of Gamma I and spends the rest of the night shift to manufacture Alpha 1. What will be his profit/loss?
   a) loss of Rs. 65 b) profit Rs. 65
   c) No profit to loss d) This manufacturing pattern is not possible

4. If the minimum possible manufacturing requirement for Alpha I is met and the remaining raw material is utilised for the manufacture of the other 2 products then
   a) 10 units of Beta I can be manufactured
   b) 0 units of Beta I can be manufactured
   c) 5 units of Beta I can be manufactured
   d) Any of the above

5. If in the shift, 65 units of Alpha I, 4 units of Beta I, 15 units of Gamma I and in the night shift. 20 units of Beta 1,40 units of Gamma I and 20 units of Alpha I are manufactured then which of the following is true?
I. 5 hours of machine time is unutilised
II. Total cost of production is Rs. 54
III. More than 20% of the available raw material is unutilised
   a) I only b) II only c) I and III d) I and II

Answer:

For Solid DI SET 39

1. c 74 units of Alpha I and 4 units of Beta I in day shift will require (74 x 2 + 4 x 3) = 160 hours of day shift which are available as per the condition given in the question. 25 units of Beta I, 10 units of Gama I and 30 units of Alpha in night shift will require (25 x 4 + 10 x 1.5 + 30 x 2.5) = 190 hours which again satisfies the condition given in the question.

2. b Amount of raw material i.e. Omega 34 utilised will be (100 x 1 + 40 x 2 + 10 x 2.5) = 205 kg. Total amount of Omega 34 available is 350 Kg. So % of total = 205/350 x 100 = 58%.

3. d Since in the question it is mentioned that the maximum no of units of Gamma I have to be 150 but according to the question total no of Gamma I units being manufactured are 203.

4. d Minimum possible manufacturing requirement of Alpha I is 50 units. So amount of raw material used will be 50 kg. Remaining raw material is 300 kg. so any of the first three options are possible.

5. c In the day shift time utlised (65 x 2 + 4 x 3 + 15 x 1) = 157 hours. So 3 hours unutilised in day shift. In the night shift time utilised (20 x 4 + 40 x 1.5 + 20 x 2.5) = 190 hours. So 2 hours unutilised in night shift.
So total unutilised time is 5 hours.
Total raw material consumed ((65 + 20) x 1 + (20 + 4) x 2 + (55 x 2.5)) =

270.5 kg.
So amount of raw material unutilised will be (350 - 270.5)/350 x 100 = 22.7% which is more than 20%. Hence c).

Solid DI Set - 40

Question

Toyota motor company's teams A, B, C, D, E and F are racing new concept cars competing in a season of 6 races. Points awarded for rank 1, 2, 3, 4, 5 and 6 are 10, 8, 5, 3, 1 and 0 respectively. Points scored by five teams in the first 4 races are given in the table below.

Race	Team A	Team B	Team C	Team D	Team E
1	1	10	0	3	8
2	0	1	3	10	8
3	10	3	5	0	1
4	10	5	8	1	0

The Championship is won by the team which scores the highest.
Mark 1: If the question can be answered by using one of the statements alone, but cannot be answered using the other, statement alone.
Mark 2: If the question can be answered by using other statements alone.
Mark 3: If the question can be answered by using both statements together, but cannot be answered by using either statement alone.
Mark 4: If the question cannot be answered.
1. If Team C wins the next two races, who wins the championship?
   I. Team F finishes second in the fifth race.
   II. Team F does not finish second in the sixth race.
   1.1 2.2 3.3 4.4

2. If Team E wins the next race and finishes second in the last race, who wins the championship?
   I. Team D finishes second in one of the races.
   II. Team F does not win any race.
   1.1 2.2 3.3 4.4

Answer:

For Solid DI SET 40

1. 3 From the table, Team F scores 5, 5, 8 and 3 in the Race 1, 2, 3 and 4 respectively.Team C has 36 points after the 6 races:
Statement I and II are individually insufficient as the positions of the other players in the last two races are not known.
Combining I and II: Maximum number of points Team F can get = 8 + 5 = 13.
His maximum possible score at the end of 6 races = 21 + 13 = 34.
Team A cannot finish second in the fifth race as Team F is second.
Maximum possible score of Team A is 21 + 13 = 34.
No other player can score more than this, as their scores in the first four races are less than Team F and Team A.
Therefore, Team C wins the championship with 36 points.

2. 4 End score of Team E = 17 + 10 + 8 = 35.
From statement I, Team D's maximum possible score = 14 + 8 + 10 = 32.
Team F and Team A's maximum possible score = 21 + 5 + 10 = 32.
Team F and Team A's maximum possible score = 21 + 5 + 10 = 36.
Thus, nothing can be said about the winner.
Therefore,Statement I is insufficient to answer the question.

Statement II is insufficient to answer the question by itself.
Considering both the statements together nothing can be said about the winner.
Therefore, Question cannot be answered.

Solid DI Set -41

Question

Twenty-one participants from four countries (Africa, America, Australia & Europe) attended a United Nations conference. Each participant was an expert in one of the four fields, labour, health, population studies& refugee relocation. The following five facts about the participants are given.
(a) The number of labour experts in the camp was exactly half the number of experts in each of the three other categories.
(b) Africa did not send any labour expert. Otherwise, every continent, including Africa, sent at least one expert for each category.
(c) None of the continents sent more than three experts in any category.
(d) If there had been one less Australian expert, then the Americans wouls have had twice as many experts as each of the other continents.
(e) Mike and Alfanso are leading experts of population studies who attended the conference. They are from Australia.

1.Which of the following numbers cannot be determined from the information given?
(1) Number of labour experts from America.
(2) Number of health experts from Europe.
(3) Number of health experts from Australia.
(4) Number of experts in refugee relocation from Africa.

2. Which of the following combinations is NOT possible?
(1) 2 experts in population studies from America & 2 health experts from Africa attended the conference.
(2) 2 experts in population studies from America & 1 health expert from Africa attended the conference.
(3) 3 experts in refugee relocation from America & 1 health expert from Africa attended the conference.
(4) Africa & America each had 1 expert in population studies attending the conference.

3. If Ramos is the lone American expert in population studies, which one of the following is NOT true about the numbers of experts in the conference from the four continents.
(1) There is one expert in health from Africa.
(2) There is one expert in refugee relocation from Africa.
(3) There are two experts in health from America.
(4) There are three experts in refugee relocation from America.

4. Alex, an American expert in refugee relocation, was the first keynote speaker in the conference. What can be inferred about the number of American experts in refugee relocation in the conference, excluding Alex?
(I) At least one (II) At most two
(1) Only I and not II
(2) Only II and not I
(3) Both I and II
(4) Neither I nor II

Answer:
For Solid DI SET 41

	Labour	Health	PS	RR	TOTAL
Africa	X				B
America					2B
Australia			Mike, Alfanso		B + 1
Europe					B
Total	A	2A	2A	2A	21

Now solving for A and B , we get 7A = 21 and 5B+1 = 21
=> A = 3 and B= 4
=> Now we will complete the table and get the answer

	Labour	Health	PS	RR	TOTAL
Africa	X				4
America	1				8
Australia	1	1	Mike, Alfanso	1	5
Europe	1	1	1	1	4
Total	3	6	6	6	21

Ans1 (4) **Ans2 (4)** **Ans3 (3)** **Ans4 (3)**

Solid DI Set - 42
Question
Divide a circle into 8 equal parts; number them clockwise from 1 to 8. Assume that you are at 1 & your initial score is 1. If you move a step clockwise, you just add the number in the next slot to your current score. If you move a step anticlockwise, you add the number in that slot but subtract 2 from the total to get your new score. If you move to the number diagonally across, you add that number to your score but subtract 3 from the total. You can move to a slot only once.

1. Your maximum score after the second move can be
(1) 12 (2) 11 (3) 10 (4) 8

2. Assuming you move a step clockwise in your first move, then the digit that you would have left untouched after the third move will be
(1) 7 (2) 4 (3) 8 (4) 5

3. If you have made three moves, without seeking to maximize your score, then you most likely to get a score of
(1) 12 (2) 9 (3) 8 (4) 10

Answer:
For Solid DI SET 42
Ans1 (1)
Moving in anticlockwise direction in 1st step will give the score 1 + 8 –2 = 7 . second step in anticlockwise direction will give the score = 7 + 7 –2 = 12 .

Ans2 (3)
Only digit 8 cannot be reached in the third move.

Ans3(4).
The most common score in the three moves is 10 irrespective of the direction of the moves.

Solid DI Set - 43

Question

Sally and Sue have a strong desire to date Sam, they all live on the same street yet neither Sally nor Sue knows where Sam lives. The houses on this street are numbered 1 to 99.

Sally asks Sam. “Is your house number a perfect square?” He answers. Then Sally asks. “Is it greater than 50?” He answers again. Sally thinks she now knows the address of Sam’s house and decides to visit. When she gets there, she finds out she is wrong. This is not surprising, considering Sam answered only the second question truthfully.

Sue, unaware of Sally’s conversation, asks Sam two questions. Sue asks, “Is your house number a perfect cube?” He answers. She then asks, “Is it greater than 25?” He answers again. Sue thinks she knows where Sam lives and decides to pay him a visit. She too is mistaken as Sam once again answered only the second question truthfully.

Sam’s house number is less than the numbers of the houses where Sue and Sally live, and that the sum of all three of their numbers is a perfect square multiplied by two.

1) What is Sally’s house number?
1. 64 2. 81 3. 25 4. 24 5. Can’t say

2) What is Sue’s house number?
1. 64 2. 81 3. 55 4. 54 5. Can’t say

3) What is Sam’s house number?
1. 45 2. 55 3. 65 4. 72 5. 75

Answer:

For Solid DI SET 43

1) 2 2) 1 3) 2

Since Sally thinks she has enough information, we deduce that Sam answered his house number was a perfect square greater than 50 (answering Yes to both). There are two of these {64, 81} and Sally must live in one of them in order to have decided she knew where Sam lives. Sam answered only the second question truthfully, so his house number is greater than 50, but not a perfect square.
Since Sam answered Sue’s second question truthfully, he had to have answered yes to “Is it greater than 25?”. Sue was able to deduce Sam’s number, so he also must have said it was a perfect cube. Cubes greater than 25: {27,64}. Sue must live in one of these houses to deduce Sam’s number.
Since Sam’s number is greater than 50 and is less than Sue’s number, she must live in 64. Since Sue and Sally are not roommates (we’re told there are three numbers), Sally must live in 81.
Given fact: the sum of their numbers is a perfect square multiplied by two.
Sue + Sally + Sam = 2p (for p an integer)
Or, 64+81+Sam = 2p2
Applying the constraint that Sam’s number is greater than 50 and less than 64, it looks like Sam = 55 (p=10).

In summary,
Sam = 55 Sue = 64 Sally = 81

Solid DI Set - 44

Question

Mr Odd collects all the even numbers between 1 and 100 (both included) and adds them up. Mr Even does the same for all odd numbers between 10 and 100 (both included). Mr. Prime collects all prime numbers between 50 and 65 (both included) and adds them up. Mr Square collects all the perfect squares of positive integers between 1 and 100 (both included) and adds them up.

1. The final sum obtained is what percentage of the sum of first 100 positive integers?
   a) 90% b) 100% c) 110% d) 125%

2. The minimum value is obtained if we subtract the scores of:
   a) Mr Even and Mr Square b) Mr Odd and Mr Prime
   c) Mr Square and Mr Prime d) Mr Odd and Mr Even

Answer:
For Solid DI SET 44

1. c Mr. Odd -> 2 + 4 + 6 +……..+ 100 = 50/2 [4 + (50 - 1) 2] = 25 x (4 + 98) = 2550
Mr Even -> 11 + 13 + 15 +…….. + 99 = 45/2 [22 + (45 - 1) 2] = 2475.
Mr Prime -> 53 + 59 + 61 = 173
Mr Square -> 1 +4 + 9 + 16 + 25 + 36 + 49 + 64 + 81 + 100 = 385,
Sum of 1 to 100 = 100/2 x (100 + 1)= 50 x 101 = 5050.
Odd + Even + Prime + Square = 2550 + 2475 + 173 + 385 = 5583
Hence,Required Percentage = 5583/5050 x 100% = 110%.

2. d From the above.

Solid DI Set - 45
Question
DIRECTIONS for questions 1 to 3:
Among the marriages conducted for poor people by the "Association for Troubled Lowers" five grooms – Ranjha, Majnu, Romeo, Farhaad ;and Devdas – get married to the brides Heer, Laila, Juliet, Siri and Paaro, not necessarily in the same order. Each man marries exactly one woman and vice versa. Ten days after the marriages took place, the marriage registrar lost the records of these marriage, but remembered only the following information in connection with these five marriage.

(a) Either Laila married romeo or Ranjha marride Heer.
(b) Farhaad married either Paaro or Heer.
(c) Devdas marries Juliet only in case Paaro marries Farhaad.
(d) Ranjha and Romeo married Laila and Siri, not necessarily in the same order.
(e) Majnu does not marry Juliet.

1. Which of the following is a correct married couple?
   (1) Heer – Ranjha (2) Farhaad – Paaro (3) Romeo – Juliet (4) Paaro – Majnu

2. If the condition (a) is replaced by "Heer married Romeo only if Laila married Ranjha" than who married Siri?
   (1) Ranjha (2) Romeo (3) Majnu (4) Cannot be determined

3. Who among the following married Ranjha?
   (1) Heer (2) Parro (3) Siri (4) Cannot be determined

Answer:
For Solid DI SET 45

For solving these questions, the symbol '_' means 'married' and 'x' means 'did not marry'. Let us take down the information as given below.
Either Laila - Romeo or Ranjha - Heer
Farhad - (Paaro or Heer)
Devdas - Juliet, only if Parro - Farhad
Manju X Juliet

We get the following initial arrangements :

	Heer	Laila	Juliet	Siri	Paaro
Ranjha	X	• (d)	X	• (d)	X
Manju	-	X	X (e)	X	X
Romeo	X		X	• (d)	X
Farhad	X•(d)	X	X	X	• (d)
Devdas	X	X	-	X	X

From the above, we conclude that Devdas marries Juliet, and hence Paaro marries Farhad ©. This means that Manju marries Heer. Now, Ranjha is not married to Heer. Hence Romeo must be married to Laila; hence, Ranjha must be married to Siri (d)
We get the following pairs of married couples.
Ranjha – Siri
Manju – Heer
Romeo – Laila
Farhad – Paaro
Devdas – Juliet

1. Choice (2)

2. Choice (4) We know that Ranjha and Romeo must marry Siri and Laila (not necessarily in that order). But now from the replaced condition we get only the following additional implication "if Laila did not marry Ranjha then Heer did not marry Romeo" which still is not enough to determine who among Romeo and Ranjha marries Siri.

3. Choice (3)

Solid DI Set - 46

Question

DIRECTIONS for questions 1 and 2 : These questions are based on the data given below.

In order to save the world from the hand of evil forces, eight superheroes are sitting around a circular table to plan their strategy. It was known that Batman and Robin neither sat on adjacent seats nor directly opposite to each other. Superman sits besides Flash Gordon and opposite to Heman while Mandrake sat directly opposite to Phantom who sits adjacent to Superman.

1. The eighth hero, Spiderman, must be sitting next to
   (1) Batman (2) Robin (3) Phantom (4) Heman

2. Which of the following statements must be true?
   (1) Batman sits to the left of Heman.
   (2) Robin sits to the left of Flash Gordon
   (3) Spiderman sits to the right of Phantom
   (4) None of these

Answer:

For Solid DI SET 46

It is known that :

(a) Batman neither sits adjacent nor sits opposite to Robin.

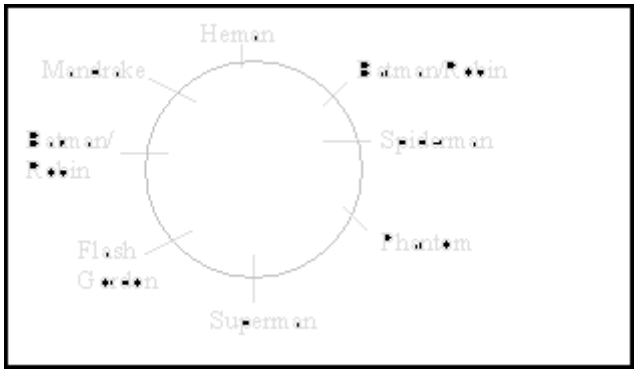
(b) Superman sits between flash Gordon and Phantom (this will give rise to two arrangements)

(c) Heman sits opposite to superman and adjacent to Mandrake, who sat directly opposite to Phantom.

Hence, we get the following arrangements.

Case – I Flash sits to the left of Superman

Case – II Phantom sits to the left of Superman



1. Choice (3) As can be observed in the above possibilities, the Spiderman must be seated adjacent to the Phantom.

2. Choice (4) The Position of Batman and Robin are not fixed, hence choices (1) and (2) cannot be correct. As in case II, Spiderman sits to the left of the Phantom; hence even choice (3) is incorrect.

Solid DI Set - 47

Question

There are five identical looking boxes having different objects in it and every box has a label indicating their contents. The following is the description of the contents and the label of each box:

Contents Label
Two Pins PP
Two Balls BB
Two Clips CC
One Pin and One Clip PC
One Ball and One Clip BC

Somebody has mischievously interchanged these labels in such a way that no box contains the label correctly explaining its contents.

1. If the first box opened contained label PP and the second box opened contained label PC and out of the combined four items, at least one item was a Ball, which of the following will be definitely true?
   1. Other three items will not contain two Balls.
   2. Other three items will not contain any Clip.
   3. Other three items will contain at least one Clip.
   4. None of the above.

2. If the box PP contained two Clips, the box CC contained two Pins and the box BB contained at least one Ball, which of the following will definitely not be true?
   1. The box BC contains one Pin and one Clip.
   2. The box BB contains one Ball and one Clip.

3. The box BC contains two Balls.
4. The box PC contains two Balls.

3. If the information is available that box PC does not contain either any Pin or any Clip and box PP does not contain any Pin and box CC contains one Clip and one Ball, which of the following will definitely be true if only one of the remaining boxes is opened?
1. It will have one Pin and one Clip.
2. It will have at least one Clip.
3. It will have two Pins.
4. It will have at least one Pin.

4. If the first box, containing the label BC was opened and it was found that one item is a Ball, which of the following would be definitely true?
1. The other item may either be a Ball or a Clip.
2. The other box with BB label will contain a Ball and a Clip.
3. The other item will not be a Ball.
4. None of the above.

Answer:
For Solid DI SET 47
1. 4 : If the first box label was PP then it could be any one of the other four and if the second box was PC, it could be any one of the other four. The union of the two indicates that the two boxes opened could be any two of the five and hence none of the statements can be DEFINITELY true.

2. 3 : From the given data, PP is CC, BB is BC and CC is PP. That leaves BB and PC to be allocated to PC and BC. Hence PC is BB and BC is PC. Thus the only statement that is DEFINITELY NOT true is that BC contains two balls.

3. 4 : From the given data, CC is BC, PC is BB and PP is CC. That leaves behind PC and PP, hence statement 3 is definitely true.

4. 4 : If one item is a Ball, the other one can be either a Ball or a Pin or a Clip. Hence none of the statements are true.

Solid DI Set - 48
Question

The table shown below is a board on which a counter is moving from cell to cell. Initially, the value of the counter is the value of the cell it is in. Follow the rules given below to answer the questions.

Cell No.	1	2	3	4	5
A	2	6	7	3	1
B	3	-3	-2	2	1
C	-4	-2	-1	6	7
D	5	-5	3	1	2
E	-3	-4	-5	-2	1

Rule 1: If the counter moves from cell 1 to cell 2, its value will be the value of cell 1 multiplied by the value of cell 2. For example, if the counter is moving from cell (A, 1) to cell (D, 5), its value will be 2 x 2 = 4. Next time if it moves from (D, 5) to (D, 3), its value will be 4 x 3 = 12.
Rule 2: If the counter moves from cell 1 to cell 2 and the value of cell 1 is greater than that of cell 2, then the counter value is the value of cell 2, else the counter value will be the value of cell 1.

1. Rule 1: If the counter moves from (B, 3) to (D, 4) to (A, 1), its value will be:
   a) 4 b) 8 c) –2 d) –4

2. Rule 1: If the counter moves from (A, 2), to (B, 2) to (C, 2) to (D, 3) to (E, 4), its value will be
   a) 1 b) – 226 c) 0 d) -216

3. If the counter moves from (A, 1) to (C, 3) to (E, 5) to (D, 4), its value according to rule 2 is
   a) 1 b) – 4 c) 2 d) – 1

4. If rule 1 supersedes rule 2 for the value of counter > 0, but not for the value of the counter < 0, and the counter moves from (B, 3) to (D, 1) to (C, 3) to (B, 4), what will be its value?
   a) 2 b) – 1 c) – 2 d) 1

Answer:

For Solid DI SET 48

1. d Value of counter = (-2) x (1) x (2) = -4

2. d Value of counter = (6) x (-3) x (-2) x (3) x (-2) = -216 220.

3. a Value of counter = Value (4, 4) = 1

4. a (B, 3) to (D, 1) = 5, (D, 1) to (C, 3) = -5, (C, 3) to (B< 4) = 2

Solid DI Set - 49

Question

There exists a 10 digit number such that the 1st digit from left represents the number of 0's in the number, the 2nd digit from left represents the number of 1's occurring in the number and so on until the 10th digit represents the number of 9's in the number.

1. The sum of the digits of the number is:
   1. 8 2. 9 3. 10 4. 19

2. The number of 0s in the number is:
   1. 9 2. 8 3. 7 4. 6

3. The number of 1s occurring in the number is:
   1. 0 2. 1 3. 2 4. 3

Answer:

For Solid DI SET 49

Since each digit represents the number of that particular digits representing in that number, the total sum is 10, as only 10 digits exist in the number. That is the sum of digits is equal to the total digits by the property given. All the counting is done from the left side of the number. To find the number of 0's note that you cannot have 9, 8 or 7. For the place which gives the number of 7 clearly it can at maximum be one since the sum of digits is equal to 10, suppose the value is 1 then clearly the 7 which occurs can only be in the first digit otherwise again the sum will exceed 10. Suppose 7 is the first digit and 1 is the 8th digit then the ones digit must have at least 2 since there is already one 1 occuring in 8th digit, suppose the second digit is 2, then the 3rd digit has to be 1, since we have one 2 occuring in the number.

But if this happens then the sum of digit exceeds 10 thus there can be no 0 in 8th, 9th or 10th digit. Suppose the 7th digit is 1, i.e. there is one 6 in the number, then the 6 can only be in the 1st digit otherwise the sum of the digits will exceed 10, so if the 6 is in 1st digit, then, at least one 1 is present, (because the 7th digit already has 1), now the number of 1 has to be greater than 1 as you cannot have the second digit as 1 (then two 1's will be present in the number).

Thus the 2nd digit is 2 and the third digit which represents the number of 2's has to be 1 as the second digit is 2, thus the number is 6210001000. And the remaining solutions follow.

1. **Choice 3**
2. **Choice 4**
3. **Choice 3**

Solid DI Set - 50

Question

Subhart, a mathematics wizard, develops a coded language. He converts all words in some number series in the following manner:

All vowels (and no other consonant) are represented by prime numbers.
For all consonants, whose positions in the alphabet series are prime numbers, they are represented by a number which is twice the number giving their positions in the alphabet series. For example: The letter “C” being the 3rd alphabet. Will be denoted by 3 ´ 2 = 6.
If the position of any consonant in the alphabet series is a number, half of which is a prime number, it is represented by adding a 5 at the end of that number. For example, The letter “Z” being the 26th alphabet, will be represented by 265.
All remaining consonants will be represented by a number giving their position in the alphabet series.

1. The word coded as “22 17 12 17 38 8 145 11 22 23 225” is-
   a) PATAMXNEPUR b) FEGTSHNJKID c) KALASHNIKOV d) TUTUPHENKO

2. The word coded as “38 145 11 16 7 18” is:
   a) WEAKER b) STRIKE c) SNIPER d) TAURUS

3. The world “CALCUTTA” will be coded as:
   a) 6 29 8 9 16 18 18 29 b) 20 17 10 20 295 4 4 12
   c) 6 17 12 6 29 20 20 17 d) 12 11 15 12 29 20 20 31

Answer:

For Solid DI SET 50

Write down all the letters as per the given rules.

1. c We get K = 22, L = 17, S = 38, hence (c).

2. c S = 38, N = 145, P = 16, hence SNIPER.

3. c C = 6, L = 12, C = 6, hence (c).

Solid DI Set - 51

Question

These questions are based on the following pie chart and the table, which gives the details of expenses of an Excellent Management Training Institute in India (EMTI)

EXPENSES OF EMTI FOR 1995 – 96

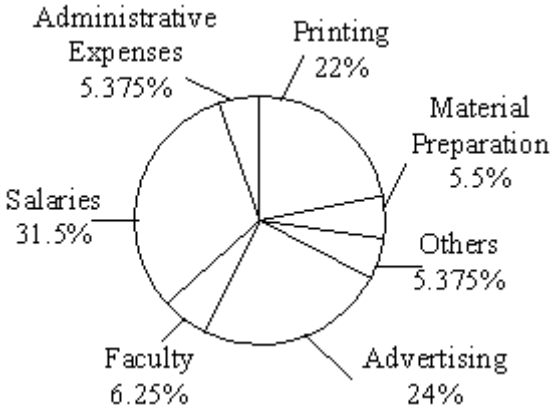


Table shows INCREASE IN EXPENSES FROM 1994–95 TO 1995-96

Faculty	25%
Advertising	20%
Material Preparation	10%
Printing	25%
Administrative expenses	7.5%
Salaries	5%
Others	7.5%

1. If it cost EMTI Rs.4.4 lakhs for printing in 1995-96, salaries in 1994-95 are closest to (in Rs.lakhs)

(1) 6.0 (2) 4.8
(3) 3.0 (4) Insufficient data

2. If a pie-chart were to be drawn for the expenses in 1994-95 also, which expense would show the maximum drop in the angle from 1994-95 to 1995-96?

(1) Others (2) Administrative expenses (3) Salaries (4) Insufficient data

3. If the profits were 20% of total turnover in 1995-96, and total expenses in 1995-96 are the same as the turnover of 1994-95, profit as a percentage of turnover in 1994-95 is how many percentage points less than that in 1995-96?

(1) 6.4 (2) 7.6
(3) 12.6 (4) Insufficient data

4. If the total expenses of EMTI in 1995-96 are Rs.16 lakhs, the total expenses in 1994-95 are closest to (in Rs. lacs).

(1) 12 (2) 13
(3) 14 (4) 15

5. If the total expenses of EMTI in 1995-96 was Rs.22 lacs and the profit that year stood at 10% of the total expenses, the turnover of EMTI in 1994-95 was closest to which of the following?

(1) Rs.19 lacs (2) Rs.20 lacs
(3) Rs.21 lacs (4) Insufficient data