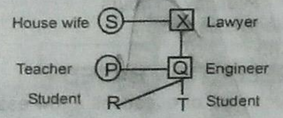
Q.1. If H and G are sitting in the same car, who are other two students sitting in the same car?
(1) B and C (2) C and D
(3) B and D (4) E and B
(5) None of these
Ans.(1)
B and C are sitting in same car in which G and H are sitting.

Q.2. If E and A are sitting in the same car, which of the following statements is true ?
(1) Five students are sitting in the same car.
(2) B is sitting in the same car.
(3) F is not sitting in the same car.
(4) G is not sitting in the same car.
(5) None of these
Ans.(4)
EXPLANATION :
CAR 1 : ADEF
CAR 2 : HGBC
G is not sitting in the car in which A and E are sitting.

5. FAMILY BASED -

In these type of questions given informations are based on family relation.
EXAMPLE-

Q.1-2. P, Q, R, S, T and X are members of a family. There are two married couples. Q is an engineer and the father of T. X is the grandfather of R and is a lawyer. S is the grandmother of T and is housewife. There are one engineer one laywer, one teacher one housewife and two student in the family.
EXPLANATION:



Q.1. How many male member are there in the family ?
(1) 4 (2) 2
(3) 6 (4) Can't be determined
(5) None of these
Ans. (4)

Q.2. Among them who is the spouse of Q ?
(1) P (2) S (3) X
(4) T (5) R
Ans. (1)

6. JUMBLED FORM -

In this type of questions related informations are written in jumbled way.
EXAMPLE -

Q.1-4. There are six foreigners 'A, B, C, D, E and F' visit in different states of India like Uttar Pradesh, Himachal Pradesh, Andhra Pradesh, Arunachal Pradesh, Punjab and Mumbai and they booked a hotel as Taj Hotel, Gemini Hotel, Avadh Clark, 5 star Hotel, Surya Hotel and Pink Panther not in a same order.
(i) Only one person visits only one state.
(ii) A visit Uttar Pradesh but not book Taj Hotel.
(iii) C does not visit either Himachal Pradesh or Andhra Pradesh and booked Surya Hotel.
(iv) E does not visit Punjab and Mumbai and booked Gemini Hotel.
(v) F visit Arunachal Pradesh but not booked Avadh Clark.
(vi) B visit only Mumbai but not booked 5 star hotel.
(vii) D, who visit Himachal Pradesh booked 5 star hotel.
EXPLANATION :

Hotels	Foreigners	States
Pink Panther	A	U.P.
Avadh Clark	B	Mumbai
Surya Hotel	C	Punjab
5 star Hotel	D	H.Pradesh
Gemini Hotel	E	An. Pradesh
Taj Hotel	F	Ar. Pradesh

Q.1. Which foreigner visit Mumbai ?
(1) A (2) D (3) C
(4) B (5) None of these
Ans.(4)

Q.2. Taj Hotel is booked by which foreigner ?
(1) F (2) E (3) A
(4) B (5) None of these
Ans.(1)

Q.3. Which hotel is booked by foreigner B ?
(1) Gemini Hotel (2) Pink Panther
(3) Avadh Clark (4) 5 star hotel
(5) None of these
Ans.(3)

Q.4. In which of the following pair is definitely True ?
(1) Avadh Clark - A - Mumbai
(2) Avadh Clark- B- Mumbai
(3) Pink Panther - E- Uttar Pradesh
(4) Surya Hotel- F- Himachal Pradesh
(5) None of these
Ans.(2)

Memorable Points

- *First of all everyone should categorize the type of puzzle.*
- *Then related information should be arranged into a sequential form.*
- *At the last the complete information should be related with given facts.*

For more detail see the volume II.

EXERCISE

PUZZLE

Q.1-5. Read the following information carefully and answer the question given below:-

There are eight members A, B, C, D, E, F, G and H, who are having their own one car of different colour viz black, pink, blue, green, yellow, red, white and grey. They are sitting around a circular table facing the opposite to the centre.

A is sitting opposite to E who has yellow coloured car. One who has the white coloured car, is an immediate neighbour of whom having blue coloured car and pink coloured car. But neither D or A nor E. C is third to right of one having black coloured car but both are not the immediate neighbour of E. One having grey coloured car is an immediate neighbour of A. F is neither the neighbour of A nor the E but he has green coloured car. C is not the neighbour of A who has black coloured car. The member who has pink coloured car is an immediate to the left of E. One who has yellow coloured car is between C and B who has pink and Red colour car respectively. G has white colour car is an immediate the neighbour of one having pink coloured car and one having blue coloured car. D is not the neighbour of person having green coloured car.

Q.1. Who is third to left of A?
(1) C (2) B (3) D (4) E (5) None of these

Q.2. What is the position of F with respect to C?
(1) Third to the left (2) Third to the right (3) Fifth to the left
(4) Either 2 or 3 (5) Both 2 or 3

Q.3. Person having which coloured car is sitting between D and C?
(1) Yellow (2) Black (3) Green (4) Gray (5) None of these

Q.4. How many members are between D and E when we count anticlockwise from D?
(1) 3 (2) 2 (3) 4 (4) 5 (5) None of these

Q.5. Which combination is incorrect among given below-
(1) C - Pink (2) G - Blue (3) D - White (4) 2 and 3 Both (5) None of these

Q.6-10. Read the following information carefully and answer the question given below:-

Eight persons Ram, Shyam, Ghanshyam, Mohan, Gulmohan, Jugmohan, Manmohan and Shudhanshu are sit in two rows facing person each other. In each row four persons are sitting. In all persons every two persons are best friends to each other and nobody can have two best friend. All pair of best friend are adjacent to each other.

Jugmohan is sitting second to the right of Mohan who is best friend of Shyam. Shudhanshu is neither facing the Jugmohan nor Mohan. The person who facing Shyam, is the best friend of Gulmohan. Manmohan is not facing the Jugmohan but best friend of Ghanshyam. Ghanshyam is not facing Mohan. Mohan and Ram are not sitting adjacent to each other but are in same row. Gulmohan is at the extreme end of the row.

Q.6. Among them who are the neighbours of Shyam?
(1) Ram and Ghanshyam (2) Gulmohan and Jugmohan
(3) Jugmohan and Mohan (4) Ghanshyam and Gulmohan
(5) None of these

Q.7. Who are at extreme ends in same row?
(1) Ram and Manmohan (2) Mohan and Gulmohan
(3) Ram and Mohan (4) Jugmohan and Ghanshyam
(5) None of these

Q.8. Who is the best friend of Ghanshyam?
(1) Manmohan (2) Jugmohan (3) Shudhanshu (4) Ram (5) None of these

Q.9. Who is facing Ram?
(1) Manmohan (2) Jugmohan (3) Shyam
(4) Can't be determined (5) None of these

Q.10. Regarding the best friend which pair is correct?
(1) Shyam - Gulmohan (2) Shyam - Shudhandhu
(3) Mohan - Gulmohan (4) Ram - Jugmohan
(5) None of these

Q.11-15. Study the following information carefully and answer the question given below-

Poonam, Pooja, Pramod, Prakash, Preetam, Preeti, Pankaj and Priya are sitting around a circle facing the centre according to English alphabet in anticlock-wise direction and they wears different coloured shirts name yellow, black, blue, white, orange, pink, green and grey not neccessary in the same order.

Pankaj wears pink-coloured shirt and sits in front of that person who wears white-coloured shirt. Poonam wears black-coloured shirt and sits in front of that person who wears green-coloured shirt. Preetam, who wears blue-coloured shirt sits to the opposite to that person who wears Grey-coloured shirt. Priya wears yellow-coloured shirt.

Q.11. Which one is wearing yellow-coloured shirt ?
(1) Pramod (2) Priya (3) Prakash (4) Poonam (5) None of these

Q.12. Which coloured shirt wearing person is sitting in front of that person who is wearing orange coloured shirt ?
(1) White (2) Blue (3) Grey (4) Green (5) None of these

Q.13. Who is sitting in front of Priya ?
(1) Prakash (2) Pooja (3) Pankaj (4) Poonam (5) None of these

Q.14. Who is third from the right of Preetam ?
(1) Black-coloured shirt wearing person (2) Orange-coloured shirt wearing person
(3) Pink-coloured shirt wearing person (4) Grey-coloured shirt wearing person
(5) White-coloured shirt wearing person

Q.15. Which of the following pairs has its second member sitting to the immediate left of the first member ?
(1) Poonam-Pooja (2) Priya-Preetam (3) Pankaj-Pooja
(4) Pramod-Priya (5) None of these

Q.31-35. Study the following information carefully and answer the questions given below .

P, Q, R, S, T, V and W are seven members in a family out of which there are three females and four males. There are two managers, two lawyers, one teacher, one engineer and one doctor. No lady is teacher or engineer. R is a lawyer and married to P who is a teacher. V, the engineer, is married to S who is neither lawyer nor doctor. No two ladies have the same profession. Q is the sister of W, who is a manager and grandson of V. P is the brother of T who is son of V. T is unmarried.

Q.16. How T is related to Q ?
(1) Father (2) Sister (3) Paternal - Uncle (4) Brother (5) None of these

Q.17-18. Four of the following five are alike in a certain way so form a group. Which is the one that does not belong to the group ?

Q.17. (1) P (2) T (3) V (4) W (5) S

Q.18. (1) Q - Doctor (2) V - Engineer (3) W - Manager (4) R - Manager (5) T - Lawyer

Q.19. Which of the following group have same profession ?
(1) PQ (2) WS (3) TV (4) VS (5) None of these

Q.20. How S is related to R ?
(1) Mother (2) Mother - in - law (3) Sister (4) Daughter-in-law (5) None of these

Q.21-25. Study the following information carefully to answer the given questions-

Six games are played in a year starting from January and ending to July of the same year. Basketball is not played in febuary or June. Football is played immediately after Hockey. In the month of May cricket is not played and there is one month gap between Cricket and Tennis game. One month prior to the schedule of Polo there is no game (as that month is the 'off' month and January is not the 'off' month).

Q.21. Which of the following is the last game scheduled?
(1) Cricket (2) Tennis (3) Football
(4) Cannot be determined (5) None of these

Q.22. If March was the 'off' month, the code would be 2-4, if April was the 'off' month, the code would be 3-3. Taking into account the 'off' month which of the following code is correct?
(1) Cannot be determined (2) 5-1 (3) 3-3
(4) 4-2 (5) None of these

Q.23. Which game will schedule in the month of May?
(1) Polo (2) Football (3) Basketball
(4) Cannot be determined (5) None of these

Q.24. How many games were scheduled between Polo and Football?
(1) One (2) Two (3) Three
(4) Cannot be determined (5) None of these

Q.25. Basketball is scheduled in which month ?
(1) January (2) March (3) April
(4) Cannot be determined (5) None of these

Q.26. Which month is the 'off' month?
(1) February (2) March (3) May
(4) Cannot be determined (5) None of these

Q.27. If someone wants to attend only two games out of Football, Tennis and Basketball, but wants the two months to be successive (one after the other) then which game - Combination may be selected?
(1) Tennis, Basketball
(2) Football, Basketball
(3) Football, Tennis
(4) Any two of the three is possible
(5) With the condition of successive month it is not possible

CHAPTER-8

DATA SUFFICIENCY

This topic covers most of the topics of reasoning i.e. alphabetical series, coding and decoding, blood relation, direction, ranking etc.

In data sufficiency we don't have to find the answer rather we have to analyze the given data and decide whether the given data is sufficient to find an answer or not.

Let us take an example make answer.

(1) If statement **I** alone is **sufficient** but statement II alone is not sufficient.

(2) If statement **II** alone is **sufficient** but statement I alone is not sufficient.

(3) If **each** statement **alone** (either I or II) is **sufficient**.

(4) If statement I and II together are **not sufficient**.

(5) If **both** statement I and II together are **sufficient**, but neither statement alone is sufficient.

There are three types of questions:

1. Two statement type
2. Three statement type
3. Redundant type

EXAMPLES-

Q.1. Who scored highest among P, Q, R, S and T ?

(I) Q scored more than S, but not as much as R.

(II) T scored more than R, but not more than P.

EXPLANATION-

Ans.(5)

According to question-

(I) R>Q>S, (II) P>T>R

So, P>T>R>Q>S

P scored the highest.

So, both statements are needed to arrive at answer.

Q.2. Five friends P, Q, R, S and T are standing in a row facing East. Who is standing at extreme left end ?

(1) R is between T and Q

(2) Only P is between S and T. R is immediately right of T.

EXPLANATION :

(I) TRQ, or QRT

(II) SPTR

According to question : S ↑ Left
P
T
R
Q ↓ Right

S is extream left end.

So, both stas are needed to arrived at answer. **Ans.(5)**

Q.3. Mahima's flat is on which floor of the five floor apartment ?

(I) Her flat is exactly above Gita's flat whose flat is exactly above Nitin's first floor.

(II) Jayash's flat, which is adjacent to Mahima's flat exactly below Ahmed's flat who is on second floor.

EXPLANATION :

Ans.(3)

(I) Mahima 3 floor, Gita 2 floor, Nitin - 1 floor

(II) Jayesh 4 floor, Mahima 3 floor, Ahmed 2 floor

So, any one statement is sufficient to give answer.

Q.4. Who among A, B, C, D and E read the book at last ?

(I) F, who gave the book to B after reading, was third to read to same.

(II) C, who read the book after A, but before D and it is the persons it is the third person to read B is not the first person.

EXPLANATION :

Ans.(2) Only IInd statement is sufficient.

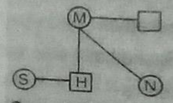
Q.5. How is Sarita related to Nirmala ?

(I) Sarita's Husband is the only son of Nirmala's mother

(II) Sarita's brother and husband are cousin.

EXPLANATION -

Ans.(1)



So, only first statement is sufficient to given the answer but second statement is not sufficient.

EXERCISE

DATA SUFFICIENCY

Q.1-5. Each of the questions below consists of a question and two statements numbered **I** and **II** given below it. You have to decide whether the data provided in the statements are sufficient or not sufficient to answer the question. Read both the statements and give answer

(1) If the data in statement **I** alone are sufficient to answer the question while the data in statement **II** alone are not sufficient to answer the question.

(2) If the data in statement **II** alone are sufficient to answer the question while the data in statement **I** alone are not sufficient to answer the question.

(3) If the data **either** in statement **I** alone or in statement **II** alone are sufficient to answer the question.

(4) If the data even in **both** statement **I** and **II** together are **not** sufficient to answer the question.

(5) If the data in both statements **I** and **II** together are necessary to answer the question.

Q.1. How many students are there in the row ?

I. Rohan is 9th from left end and Sohan is 10th from right end.

II. There are 8 students between them.

Q.2. On which date in January is Pankaj's mother birthday ?

I. Pankaj remembers that his mother's birthday is after 16th but befor 23th January.

II. Pankaj's brother correctly remembers that his mother's birthday is after 20th but before 27th January.

Q.3. How is A related to B ?

I. B is the only son of D who is the daughter of A's father.

II. B is the father of C and is the only son of A's mother.

Q.4. Who is the tallest among Chandan, Pankaj, Kanchan and Ranjan ?

I. Chandan is taller than Pankaj, who is as tall as kanchan.

II. Kanchan is shorter than Ranjan.

Q.5. Which city has the lowest population?

I. Bareilly has 20 lakh population, which is less than the population of Banaras.

II. Patna has population equal to that of Banaras and more than that of Allahabad.

Q.6-8. Each of the questions below consists of a question and two statements numbered **I** and **II** given below it. You have to decide whether the data provided in the statements are sufficient or not sufficient to answer the question. Read both the statements and give answer.

(1) If the data in statement **I** alone are sufficient to answer the question while the data in statement **II** alone are not sufficient to answer the question.

(2) If the data in statement **II** alone are sufficient to answer the question while the data in statement **I** alone are not sufficient to answer the question.

(3) If the data **either** in statement **I** alone or in statement **II** alone are sufficient to answer the question.

(4) If the data even in **both** statement **I** and **II** together are **not** sufficient to answer the question.

(5) If the data in both statements **I** and **II** together are necessary to answer the question.

Q.6. What is the cost of flooring a room?

I. The length and breadth of the room is 9 m and 6 m respectively.

II. The cost of the tiles is Rs. 6 per cm^2.

Q.7. Who among Binod, Krishna, Shakeb, Nalin and Govind is shortest?

I. Nalin is taller than Shakeb and Krishna but not as tall as Govind.

II. Govind is taller than Binod.

Q.8. Which word in the code language means **'they'**?

I. **'ras pak leun'** means **'I have pens'** and **'pak ras tap'** means **'they have pens'**.

II. **'kip ras tun'** means **'boys have cow'** and **'sin tap ras'** means **'they have egg.'**

Q.9-13. Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient or not sufficient to answer the question. Read both the statements and give answer

(1) If the data in statement I alone are sufficient to answer the question while the data in statement II alone are not sufficient to answer the question.

(2) If the data in statement II alone are sufficientto answer the question while the data in statement I alone are not sufficient to answer the question.

(3) If the data either in statement I alone or in statement II alone are sufficient to answer the question

(4) If the data even in both statements I and II together are not sufficient to answer the question

(5) If the data in both statements I and II together are necessary to answer the question.

Q.9. In a class of 40 students what is the postion of Hemant ?

I. Sudha is 5 position below to Hemant in the class.

II. Suresh who is 10 place ahead to Sudha is 25 from bottom in the class.

Q.10. What is the date of birth of Deepti ?

I. She was born 20 years ago.

II. She was completed her 19 years on 13 April 2009.

Q.11. What is the age of Mohan ?

I. Raju is 2 years older than Mohan.

II. Raju's elder sister was born in September 2006.

Q.12. Who is sister of B ?

I. A is brother of B.

II. B's father is A's mother's husband.

Q.13. How is P related with M.

I. P is brother of K and T.

II. T is daughter of Q and is sister of M's daughter.

Q.46-50. Below is given a question followed by four statements numbered I, II, III and IV. The question may (or may not) be answered using any or more of the given statements. You have to decide which of these statements are sufficient to answer the given question. Pick out the appropriate choices.

Q.14. What was the profit of NHX group this year ?

I. Last year the profit of NHXwas Rs 692 cr.

II. There are three units of the NHX group.

III. The average profit of the units this year was Rs 253.7 cr.

IV. NHX has witnessed a 10% growth in profit over that last year.

(1) Either I and IV, or II and III sufficient
(2) Either I and III, or II and IV sufficient
(3) All the four are needed
(4) Only I and IV sufficient
(5) None of these

Q.15. How many colleges have banned women from wearing jeans ?

I. There are 86 colleges in all.

II. 36 of them are co-ed colleges.

III. Only women's colleges have imposed the ban.

IV. Among women's colleges 20% are against the ban.

(1) Only I, II and IV sufficient
(2) Only III and IV sufficient
(3) Only II, III and IV sufficient
(4) All the four are required
(5) None of these

Q.16. At which position will Basu speak ?

I. There are four speakers before Basu.

II. There are four speakers after Basu.

III. Basu precedes the female speakers.

IV. There are seven speakers in all.

(1) Only II, III and IV sufficient
(2) Either I or II sufficient
(3) Either I, or II and IV sufficient
(4) Only III and IV sufficient
(5) None of these

Q.17. Will Madhu go to the US?

I. The ORE is a prequisite for the US-goers.

II. Madhu's parents are millionnaires.

III. Madhu has not qualified the ORE.

IV. Going to the US is not expensive.

(I) Only I and III sufficient
(2) Only IV sufficient
(3)Either I and III, or II and IV sufficient
(4) All the four are required
(5) The four even together do not sufficient

Q.18. What will be the code for **'sleep'** ?

I. **'Nod phi sigma'** means **"I need sleep"**.

II. **Phi sip dud'** means **"You love sleep"**.

III. **Nod sip phi'** means **" I love sleep"**.

IV. **Nod sigma dud'** means **"I need you"**.

(1) Only I and IV sufficient
(2) Only I, II and IV sufficient
(3) All the four are needed
(4) Either I and III, or I and IV sufficient
(5) None of these

CHAPTER-9

SYLLOGISM

These questions are totally based upon the logic. If we solve these questions with the help of venn diagram then we can get the conclusion easily.

Remember that these venn diagrams are just a medium to solve such questions.

A question can have lots of diagrams which mean we can draw several figures by a statement but we have to draw the easiest figure first because it will enable us to solve the question in minimum time. Like we have many routes to go home but we always take the shortest possible route.

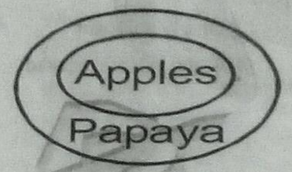
We have four types of statement in which two are positive and two are negative.

+ve [(i) All Apple are Papaya
(ii) Some Apples are Papaya

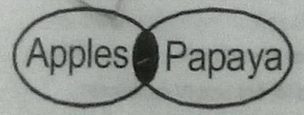
-ve [(iii) No Apples is Papaya
(iv) Some Apples are not Papaya

HOW TO DRAW THE FIGURES-

(I) All apples are papaya

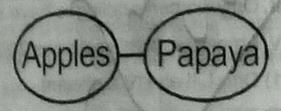


(II) Some Apples are papaya



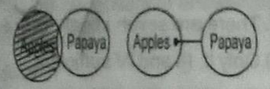
Shaded portion shows that some portion of Apples are papaya.

(III) No Apples is papaya



This line shows the negative relation between subject (Apple) & predicate (papaya) which means any part of Apple can not be Papaya.

(IV) Some Apples are not papaya



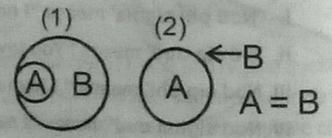
In the above figure shaded portion shows that those apples are not papaya.

EXCEPTIONS :

The above mentioned figures are the simplest digramatic representation of the statements but we can also describe the above statements through some more diagrams.

i.e.-

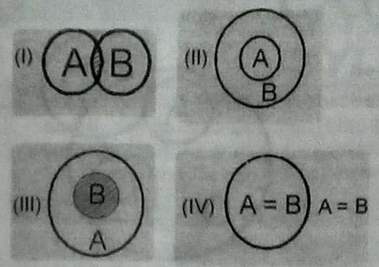
Like - All A are B -



Where A = B its possible figures are ↑

Some A are B

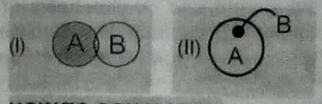
The possible figure are given below.



(I) No A are B - (A)—(B)

(II) (A)×(A)

(IV) Some A are not B.



HOW TO CONCLUDE :

The trend shows that basically there are two kinds of conclusions. One requires definite case as a conclusion and another requires case of possibility.

DEFINITE CASE-

(1) If only conclusion I follows.
(2) If only conclusion II follows.
(3) If either conclusion I or II follows.
(4) If neither conclusion I nor II follows.
(5) If both conclusion I and II are follow.

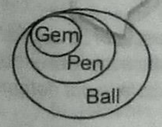
EXAMPLES -

Q.1. **Statement :** All gems are pens
All pens are balls

Conclusions :

I. All gems are balls.

II. Some gems are balls.



Ans.(5) Both conclusions will follow.

EXPLANATION :-

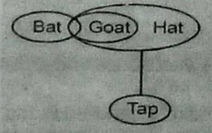
2. If all Gems are Pens and all Pens are Balls then all Gems will surely be a part of Ball.

3. 2nd follow because if full parts of gems are pens then some part of gems will definitely be a part of it.

Q.2. **Statement :** Some Bats are Goats.
All Goats are Hats.
No Hat is Tap.

Conclusions : I. Some Bats are Hat.
II. No Goat is Tap

EXPLANATION : Both conclusions will follow.



Ist follows because the part of goat which is bat is also a part of hat because all Goat are hat.

2nd follows because any hat can never be Tap and Goat is a part of Hat so any goat can never be tap.

Note : ***Both above questions are related to direct - figures those can easily be concluded.***

Q.3. **Statements :** Some Mats are Boats.
Some Boats are Grains.
All Grains are pebbels.
No pebble are tap.

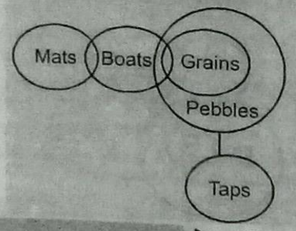
Conclusions

I. Some Mats are Grains.

II. No pebbles are tap.

Ans.2

EXPLANATION : Only conclusion II follows.



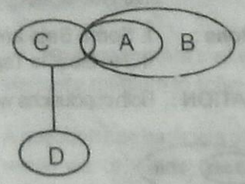
According to the above statement there is no relation between subject and predicate in any of the given conclusion.

Q.4. **Statement :** All A are B
Some B are C
No C are D

Conclusions : I. Some D are A
II. No D are A

Ans. 3 Either I or II is follows

EXPLANATION :



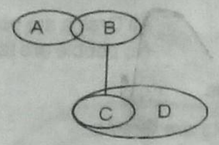
(I) Subject & predicate are same in conclusion Ist and IInd.
(II) Relation is indirect between D and A.
(III) Ist relation is positive and another is negative.

Case of possibilities.

In most of the questions the case of possibility is applicable whenever we find the indirect relation between subject & predicate.

Q.5. **Statement :** Some A are B.
No B are C.
All C are D.

Conclusions :
I. Some A being D is a possibility
II. All A being D is a possibility

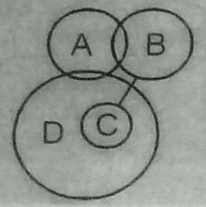


Ans. 5. Both conclusions I and II are follow

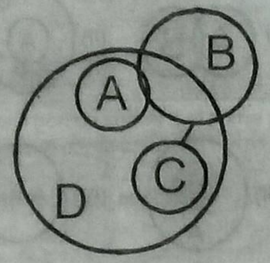
EXPLANATION :

Both conclusion will follow because in both conclusions question is asked about their possibilities instead of surity.

I. Possibility of Ist conclusion :



II. Possibility of IInd conclusion :



KEY FACTORS

- *In case you change its figure and such change should not influence statements.*
- *We have only to draw the figure of the statement and on the basis of these statements we have to determine which conclusion follows and which does not follow.*

For complementary conclusions

- *Require same subject and predicate in two different conclusion*
- *Relation must not be clear (according to statement) between subject & predicate.*
- *One conclusion must be positive and another must be negative.*
- *Complimentory condition will not be allowed between 'All' type 'No' type sentence.*
- *Complimentory conclusions can easily be identified if we focus specially upon those objects which are same.*
- *Keep this thing in mind that if the relation between 2 objects is not clear then we can not come to any conclusion and in case the relation between 2 objects is clear then we can directly come to the conclusion without any problem.*
- *Complimentory case can be applied only in indirect relations where the relations between subject and predicate is not determined.*

EXERCISE

SYLLOGISM

Q.1-6. In each question given below **Three statements** are followed by **Two conclusions** numbered **I and II**. You have to take the Three given statements to be true even if they seem to be at variance from the commonly known facts. Read the conclusions and decide which logically follows from the Three given statements disregarding commonly known facts.

Give answer-
(1) If only conclusion I follows. (2) If only conclusion II follows.
(3) If either conclusion I or II follows. (4) If neither conclusion I nor II follow.
(5) If both conclusion I and II follow.

Q.1. **Statements -** Some stamps are ticket. All ticket are envelopes. Some envelopes are offices.
Conclusions - (I) Some stamps are envelopes. (II) Some tickets are envelopes.

Q.2. **Statements -** Some spectacles are goggles. Some goggles are bracelets.
All goggles are footprints.
Conclusions - (I) Some spectacles are footprints. (II) Some spectacles are bracelets.

Q.3. **Statements -** All actors are actresses. Some actress are leaders. No header are professors.
Conclusions - (I) Some professors are actresses. (II) All actresses are actors.

Q.4. **Statements -** All books are note books. No note book is magazine.
All magazines are newspapers.
Conclusions - (I) No newspaper is note book. (II) No book is magazine.

Q.5. **Statements -** All doctors are professors. All professors are leaders. No leader is scientist.
Conclusions - (I) No scientist is doctor. (II) No scientist is professor.

Q.6. **Statements -** No frame is brain. Some frame are game. No game is badminton.
Conclusions - (I) Some game are frame. (II) No badminton is brain.

Q.7-14. In each question given below **Three statements** are followed by **Three conclusions** numbered **I, II and III**. You have to take the Three given statements to be true even if they seem to be at variance from the commonly known facts. Read the conclusions and decide which logically follows from the Three given statements disregarding commonly known facts.

Give answer-
(1) If only conclusion I and II or III follow.
(2) If only conclusion I and II follow.
(3) If only conclusion I and III follow.
(4) If only conclusion II and III follow.
(5) None of these.

Q.7. **Statements -** Some indians are americans. No american is australian. All australians gentleman.
Conclusions - (I) No gentleman is american (II) No american is indian.
(III) No australian is indian.

Q.8. **Statements -** All indians are intelligent. Some intelligents are smart. Some smarts are wise.
Conclusions - (I) Some intelligent are indian. (II) No wise is intelligent.
(III) Intelligent can be wise.

Q.9. **Statements -** All tea are coffee. Some coffee are cold-drinks. All cold-drinks are thums-up.
Conclusions - (I) All coffee are tea. (II) Some cold-drink can be thumsup.
(III) Atleast some thumsup are cold-drinks.

Q.10. **Statements -** No pen is pencil. Some pencils are boxes. All pencil and boxes are staplers.
Conclusions - Some staplers are boxes. All pencil are staplers. No box is pencil.

Q.11. **Statements -** Some newspaper are magazine. No newspaper is mica.
Some magazines are mica.
Conclusions - (I) Some magazines are newspaper. (II) All newspaper are magazine.
(III) There is a possibility that, all newspaper are magazine.

Q.12. **Statements -** Some trousers are shirts. Some shirts are tie. All shirts are lowers.
Conclusions - (I) Some lowers are tie. (II) Some lowers are trouser.
(III) Those shirts are lower are also tie.

Q.13. **Statements -** Some watches are wrist watches.All wrist watches are stones.
Some stones as well as watch are phones.
Conclusions - (I) Some phones are wrist watches. (II) Some stones are wrist watches.
(III) All stones being wristwatches is a possibility.

Q.14. **Statements -** All sunday are mondays. No mondays is tuesday.All sunday are wednesday.
Conclusions - (I) Some wednesday are monday. (II) Some tuesday are wednesday.
(III) No tuesday are wednesday.

Q.15-18. In each question given below **Four statements** are followed by **Three conclusions** numbered **I, II and III**. You have to take the Four given statements to be true even if they seem to be at variance from the commonly known facts. Read the conclusions and decide which logically follows from the Four given statements disregarding commonly known facts :

Statements - All footballers are music Lover. All footballers are dancer.
No dancer is cricketer. No cricketer is player.

Q.15. **Conclusions -** (I) Some players can be music lover.
(II) 25% of footballers are music lover.
(III) No footballers is cricketer.
(1) Both II and III follow (2) Only III follows (3) Only II follows
(4) Only II and either I or III follow (5) None of these

Q.16. **Conclusions -** (I) Some cricketer are music lover.
(II) There is a possibility that any cricketer can be music lover.
(III) No music lover are cricketer.
(1) Either I or II follows (2) Only I follows (3) Only II follows
(4) Only II and either I or III follow (5) None of these

Q.17. **Conclusions -** (I) Some dancers being player is a possibility.
(II) All those dancers are footballers are also music lovers.
(III) Any cricketer can never be player.
(1) None follow (2) All follow (3) Only I follows
(4) Both I and II follow (5) None of these

Q.18. **Conclusions -** (I) All cricketer can be music lover. (II) Some player are footballers.
(III) At least some footballers are cricketer.
(1) Only I follows (2) Only I and III follow (3) Only II and III follow
(4) None follows (5) None of these

Q.19-22. In each question given below **Four statements** are followed by **three conclusions** numbered **I, II and III**. You have to take the Four given statements to be true even if they seem to be at variance from the commonly known facts. Read the conclusions and decide which logically follows from the Four given statements disregarding commonly known facts :

Statements - All boys are intelligent. Very few girls are intelligent.
None girl is leader. Some professor are leader as well as boys.

Q.19. **Conclusions -** (I) 36% of girls are intelligent.
(II) 2% girls are intelligent.
(III) Some boys can never be a girl.
(1) Only II follows (2) Only III follows (3) Both I and II follow
(4) None follows (5) All follow

Q.20. **Conclusions -** (I) Some professor can be girls
(II) All professor being intelligent is a possibility
(III) All intelligent can be boys
(1) Only I follows (2) Both I and III follow (3) Both II and II follow
(4) None follows (5) None of these

Q.21. **Conclusions -** (I) All leaders are professors.
(II) Every girls being professors is a posibilty
(1) None follows (2) Only II follows (3) Both II and III follow
(4) Only III follows (5) None of these

Q.22. **Conclusions -** (I) At least some professors are girls.
(II) No professors is intelligent.
(III) 5% professors are leader.
(1) Only I follows (2) Only II follows (3) Only III follows
(4) Both II and III follow (5) None of these

Q.23-24. In each question given below **Five statements** are followed by **Three conclusions** numbered **I, II and III**. You have to take the Five given statements to be true even if they seem to be at variance from the commonly known facts. Read the conclusions and decide which logically follows from the Five given statements disregarding commonly known facts :

Statements - No apple is ball. No ball is cat. No cat is dog.
No dog is apple. No apple is elephant.

Q.23. **Conclusions -** (I) No cat is apple. (II) No dog is ball.
(III) No elephant is cat.
(1) None follows (2) All follow (3) Both I and III follow
(4) Both I and II follow (5) None of these

Q.24. **Conclusions -** (I) All elephant can be ball.
(II) There is a possibility that some cat can be elephant .
(III) All ball can be dog.
(1) None follows (2) All follow (3) Both II and III follow
(4) Both I and II follow (5) None of these

Q.25-28. In each question given below **Three statements** are followed by **Two conclusions** numbered **I and II**. You have to take the three given statements to be true even if they seem to be at variance from the commonly known facts. Read the conclusions and decide which logically follows from the Three given statements disregarding commonly known facts :
Give answer-
(1) If only conclusion I is follows.
(2) If only conclusion II is follows.
(3) If either conclusion I or II is follows.
(4) If neither conclusion I nor II is follow.
(5) If both conclusion I and II are follow.

Statements - All leaders are corrupt. All professors are also corrupt.
All professors are intelligent.

Q.25. **Conclusions -** (I) All leaders are not intelligent.
(II) Some intelligent are not corrupt.

Q.26. **Conclusions -** (I) Some professors are leader.
(II) Any professors can never be leader.

Q.27. **Conclusions -** (I) Some students think that all intelligents are also corrupt. Are these students correct.
(II) 23% professor can be leader.

Q.28. **Conclusions -** (I) It is possible that some professor are leader but not intelligent.
(II) Those part of intelligent which are professor are also corrupt.

Q.29-30. In each question given below **Three statements** are followed by **Two conclusions** numbered **I and II**. You have to take the Three given statements to be true even if they seem to be at variance from the commonly known facts. Read the conclusions and decide which logically follows from the Three given statements disregarding commonly known facts :

Statements - All villages are cities Some cities are tehseel .
No tehseel is state.

Q.29. **Conclusions -** (I) Some states being cities is a possibility.
(II) All cities being villages is a Possibility.
(1) Only I follows (2) Only II follows (3) Either I or II follows
(4) None follows (5) Both follow

Q.30. **Conclusions -** (I) Some states can never be tehseels.
(II) All villages being Cities as well as tehseels is a possibility.
(1) Only I follows (2) Only II follows (3) Either I or II follow
(4) None follow (5) Both follow

Q.31-35. In each question given below are **two statements** followed by **two conclusion** numbered **I** and **II**. You have to take the given two statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follows from the given statements, disregarding commonly known facts. Give answer.

(1) If only conclusion I follows.
(2) If only conclusion II follow.
(3) If either conclusion I or II follow.
(4) If neither conclusion I nor II follow.
(5) If both conclusion I and II follow.

Q.31. **Statements -** All volcanoes are craters. No crater is a mountain.
Conclusions - (I) Some volcanoes are mountains.
(II) No mountain is a volcano.

Q.32. **Statements -** Some lines are circles. All circles are balls.
Conclusions - (I) All balls being lines is a possibility.
(II) There is a possibility that some balls are neither circles nor lines.

Q.33. **Statements -** All cats are dogs. Some dogs are elephants.
Conclusions - (I) All elephants being cats is a possibility.
(I) All elephants can never be dogs.

Q.34. **Statements -** No air is wind. All winds are typhoons.
Conclusions - (I) No air is typhoon.
(II) All air being typhoons is a possibility.

Q.35. **Statements -** Some diamonds are stones. All rocks are stones.
Conclusions - (I) No rock is a diamond.
(II) All diamonds being stones is a possibility.

Q.36-40. In each question given below are **Three statements** followed by **two conclusion** numbered **I** and **II**. You have to take the given Three statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follows the given statements, disregarding commonly known facts. Give answer.

(1) If only conclusion I follows.
(2) If only conclusion II follow.
(3) If either conclusion I or II follow.
(4) If neither conclusion I nor II follow.
(5) If both conclusion I and II follow.

Q.36. **Statements -** All rings are circles. All squares are rings.
No ellipse is a circle.
Conclusions - (I) Some rings being ellipses is possibility.
(II) At least some circles are squares.

Q.37. **Statements -** No house is an apartment. Some bungalows are apartments.
Conclusions - (I) No house is a bungalow.
(II) All bungalows are houses.

Q.38. **Statementss -** Some gases are liquids. All liquids are water.
Conclusions - (I) All gases being water is a possibility.
(II) All gases which are not water can never be liquids.

Q.39. **Statements -** All minutes are seconds. All seconds are hours.
No second is a day.
Conclusions - (I) No day is an hour.
(II) At least some hours are minutes.

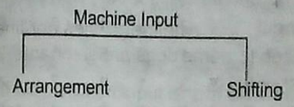
Q.40. **Statements -** Some teachers are professors. Some lecturers are teachres.
Conclusions - (I) All teachers as well as professors being lecturers is a possibility.
(II) All those teachers who are lecturers also professors.

CHAPTER-10

MACHINE INPUT

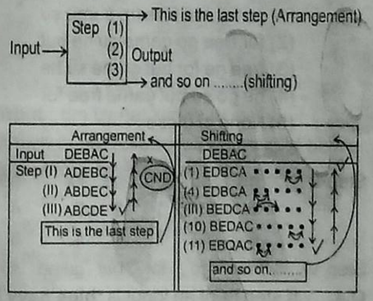
In this chapter you are asked to read the process done by a machine. You have to analyze the arrangements and as per the analysis you have to sort out the next problems given below.

- Two types questions are asked from this chapter.



Arrangement : In this type of questions arrangement is based on increasing or decreasing order of number and sequence of words, letter according to the alphabetical series. etc

Shifting : In this type of question all questions are based on interchanging position of elements.



EXAMPLE :

Q.1-2. **Input -** 23 65 21 39 48 56 45
Step I - 21 23 65 39 48 56 45
Step II -21 23 39 65 48 56 45
Step III-21 23 39 45 65 48 56
Step IV -21 23 39 45 48 65 56
Step V -21 23 39 45 48 56 65

Step V is the final step of the above arrangement.

As per the above arrangement solve the following question.

Q.1. Input - 35 96 28 36 16 29 33

How many steps will it take to complete the rearrangement ?

EXPLANATION:

If we focus on above arrangement's output we analyse that numbers are arranged in ascending order. Finally it is clear that we have to arrange all these numbers in ascending order but if we analyze each step then we find that only one number is arranged in each step.

That means the solution must be -

Input - 35 96 28 36 16 29 33
Step I - 16 35 96 28 36 29 33
Step II- 16 28 35 96 36 29 33
Step III - 16 28 29 35 96 36 33
Step IV -16 28 29 33 35 96 36
Step V- 16 28 29 33 35 36 96

Step Vth will be the answer.

EXAMPLE :

Input - Ram fell 26 35 In 62 23 well.
Step I - 62 Ram fell 26 35 In 23 well.
Step II - 62 fell Ram 26 35 In 23 well.
Step III - 62 fell 35 Ram 26 In 23 well.
Step IV- 62 fell 35 In Ram 26 23 well.
Step V - 62 fell 35 In 26 Ram 23 well.

Step Vth is the final step of the Input .

As per the above arrangement solve the following questions carefully.

Q.2. Input - Orange Banana 35 32 61 Axe Zoo 18 In.

How many steps are required to complete the above arrangement ?

EXPLANATION:

If we focus upon the last step of arrangement we find that numbers and words are arranged in alternative order and numbers are arranged in descending order and words are arranged in alphabetical order where number starts first as in step Ist and, when we focus on each step we find that each element is arrange step by step.

Input - Orange Banana 35 32 61 Axe Zoo 18

Step I- 61 Orange Banana 35 32 Axe Zoo 18

Step II- 61 Axe Orange Banana 35 32 Zoo 18

Step III- 61 Axe 35 Orange Banana 32 Zoo 18

Step IV- 61 Axe 35 Banana Orange 32 Zoo 18

Step IV - 61 Axe 35 Banana 32 Orange Zoo 18

Step VI - 61 Axe 35 Banana 32 Orange 18 Zoo

Finally we focus that step VI is the last step of above arrangement.

Remember is step No. IV we found that the word Orrange arrange itself.

In above cases we found that input are arranged from the left side only. Now a-days, the Exams are also giving arrangements from both the sides. Let us try it.

EXAMPLE :

Input - making 14 19 carefully is 13 10 good.

Step I - carefully making 14 is 13 10 good 19

Step II- carefully good making is 13 10 14 19

Step III - carefully good is making 10 13 14 19

Step IIIrd is the final step.

As per the above arrangement solve the following question.

Q.3. Input - Book Sell US 35 28 16 please 29.

EXPLANATION:

In the final step of the arrangement It is clear that words are in alphabetical order from left side and numbers are in descending order from right side. And now if we focus on each step we can see that words are being arranged from the left side as well as numbers are being arranged from right side and both are arranged in each step simultaneously.

For more questions prefer to volume II.

Input - Book Sell US 35 28 16 please 29.

Step I - Book please sell us 28 16 29 35

Step II- Book please sell us 16 28 29 35

Q.3-7. EXAMPLE OF SHIFTING

Study the following information to answer the given questions.

A word rearrangement machine rearranges the given an input line of words with the following particular rule in each step. The following is an illustration of input and the steps or rearrangement.

Input : over you pat me crow easy to

Step I : pat over you crow easy to me

Step II : crow pat over you to me easy

Step III : over crow pat to me easy you

Step IV : to over crow pat easy you me

and so on, ...

As per the rule followed in the above steps, find out in the given questions the appropriate step for the given point.

Input :	1	2	3	4	5	6	7
Step I :	3	1	2	5	6	7	4
Step II :	5	3	1	2	7	4	6
Step III :	1	5	3	7	4	6	2
Step IV :	7	1	5	3	6	2	4
Step V :	5	7	1	6	2	4	3
Step VI :	6	5	7	1	4	3	2
Step VII :	7	6	5	4	3	2	1
Step VIII :	4	7	6	5	2	1	3

Q.3. If step II of an input is **'go su but he for game free'**, what would be the step VI ?

(1) go for hut free he game su

(2) for free go game su he but

(3) free ge for but game su he

(4) he go su but game free for

(5) None of these

Ans.(3)

Step-II :	go	su	but	he	for	game	free
	5	3	1	2	7	4	6
	6	5	7	1	4	3	2
Step VI :	free	go	for	but	game	su	he

Q.4. If step IV of an input is **'blue navy kit lime se get out'**, which of the following would **definitely** be the **input ?**

(1) navy get lime out kit se blue

(2) lime navy get kit se blue out

(3) lime blue navy kit get out se

(4) kit blue navy se get out lime

(5) None of these

Ans.(1)

Step IV :	blue	navy	kit	lime	se	get	out
	7	1	5	3	6	2	4
	1	2	3	4	5	6	7
Input :	navy	get	lime	out	kit	se	blue

Q.5. **Input**: but calm free are so not eat

Which of the the following be the **IIIrd step** for this input ?

(1) so free but calm eat are not

(2) but calm are free not so eat

(3) are but calm free not eat so

(4) but so free eat are not calm

(5) None of these

Ans.(4)

Input :	but	calm	free	are	so	not	eat
	1	2	3	4	5	6	7

For the sake of convenience, assign numbers to each word of the input.

Step III :	1	5	3	7	4	6	2
	but	so	free	eat	are	not	calm

Q.6. If step V of an input is **'put down col in as much sa'**, what would be the **step VIIth ?**

(1) down in put much sa as col

(2) in put down col sa as much

(3) much in put down sa as col

(4) col put down as much sa in

(5) None of these

Ans.(1)

Step V :	put	down	col	in	as	much	sa
	5	7	1	6	2	4	3
	7	6	5	4	3	2	1
Step VII :	down	in	put	much	sa	as	col

Q.7. **Input** : rim by eat klin fe to low

Which of the following steps would be **'fe low rim to by klin eat** ?

(1) VIth (2) Vth

(3) IVth (4) IIIrd

(5) None of these

Ans.(2)

Input :	rim	by	eat	klin	fe	to	low
	1	2	3	4	5	6	7
	5	7	1	6	2	4	3
Step V :	fe	low	rim	to	by	klin	eat

In step II, the fourth word from the previous step comes at the begining while the fifth word goes at the end and the remaining words are pushed left words.

These steps are repeated there after.

For convenience we plot the movement of each word in each step assigning to them by the number in the input.

Now, in step I, the third word comes at the beginning and first and second words are pushed rightwards. Also, the fourths word ones the end and the remaining words are pused left wards.

Q.8-15. A word arrangement machine when rearrange a given particular input it following a particular rule.

The following is illustration of the input and the steps of arrangement

Input : sui me ato fe zen u no.

Step I : sui ato zen no me fe u

Stop II : u fe me no zen ato sui

Step III : u me zen sui fe no ato

Step IV : ato no fe sui zon me u

Step V : ato fe zen u no sui me.

and so on .....

Input :	sui	me	ato	fe	zen	u	no
	1	2	3	4	5	6	7
Step I :	1	3	5	7	2	4	6
Step II :	6	4	2	7	5	3	1
Step III :	6	2	5	1	4	7	3
Step IV :	3	7	4	1	5	2	6
Step V :	3	4	5	6	7	1	2
Step VI :	2	1	7	6	5	4	3
Step VII :	2	7	5	3	1	6	4
Step VIII :	4	6	1	3	5	7	2
Step IX :	4	1	5	2	6	3	7
Step X :	7	3	6	2	5	1	4
Step XI :	7	6	5	4	3	2	1
Xtep XII :	1	2	3	4	5	6	7

Q.8. If input is **"Say not you are only wise yet"** then which Step would read as **"are Say only not wise you** yet' ?

(1) III (2) XI (3) IX

(4) VII (5) None of these

Ans.(3)

Input :	say	not	you	are	only	wise	yet
	1	2	3	4	5	6	7
Step IX :	are	say	only	not	wise	you	yet
	4	1	5	2	6	3	7

Q.9. If input is **"may son to cry if not hell"** then which step will be **"hell not if cry to son may"** ?

(1) X (2) XII

(3) XI (4) Cannot determined

(5) None of these

Ans. (3)

Input : may son to cry if not hell
1 2 3 4 5 6 7

Step XI : hell not if cry to son may
7 6 5 4 3 2 1

Q.10. If step V is **'lo men chi from yet as know'** then what will be step VIII ?
(1) from as lo chi yet know men
(2) from as lo chi yet men know
(3) men know yet chi lo as from
(4) men lo know as yet from chi.
(5) None of these
Ans. (5)

Step V : lo men chi from yet as know
3 4 5 6 7 1 2

StepVIII: 4 6 1 3 5 7 2
men from as lo chi yet know

Q.11. If step VI is **"They have done their best to dig"** then definetily what will be the input?
(1) have They to dig best done their.
(2) have They to dig done their best.
(3) have They dig to best done their.
(4) have They dig to best their done.
(5) None of these.
Ans. (4)

StepVI: They have done their best to dig
2 1 7 6 5 4 3

Input : 1 2 3 4 5 6 7
have They dig to best their done

Q.12. If input is **"Do you have state Bank Cash Card"** then which step will same as this input ?
(1) XII (2) IX
(3) VIII (4) No such Step
(5) Cannot be determined
Ans. (1)
Step XII will be same as input

Q.13. If step III is **"Yes I have what you not have"** then step I will be-
(1) what I have you not have Yes
(2) what have have not I you Yes
(3) what have not have you I Yes
(4) have not have you Yes I what
(5) None of these
Ans. (2)

Step III: Yes I have what you not have
6 2 5 1 4 7 3

1 3 5 7 2 4 6

Step I: what have have not I you yes

Q.14. If input is **"Drink pepsi it is the best Cola"**, then which step would read as - **"pepsi Drink Cola best the is it"** ?
(1) V (2) VIII
(3) VI (4) IV
(5) None of these
Ans. (3)

Input : Drink pepsi it is the best cola
1 2 3 4 5 6 7

Step VI: pepsi Drink cola best the is it
2 1 7 6 5 4 3

Q.15. If input is **"You are the best in this world"**, then Step IV is -
(1) the world best You in this are.
(2) the world best You in are this
(3) world the best in You are this
(4) You are the best in this world.
(5) None of these
Ans. (2)

Input : you are the best in this world
1 2 3 4 5 6 7

3 7 4 1 5 2 6

StepIV: the world best you in are this

KEY FACTOR-
It becomes very easy to solve this type of problems if you are able to understand the arrangements of the input.
- *It is important to understand above arrangement to solve the question of machine input.*
- *Mostly it can be easily understood by last step/final output.*
- *If we go directly towards the final step of an input we find that all numbers/ words are arranged systematically.*
The systems can be.
- *Numbers - ascending, descending, etc.*
- *Words - Alphabetically, opposite alphabetically, alphabetically in vowels/ consonants etc.*
- *In mixed form - if numbers and words both are given in arrangement mostly words are only related to next word and number to number.*

EXERCISE

MACHINE INPUT

Q.1-05. A word arrangement machine when given a particulars input, rearrangement it following a particular rule. The following is illustration of the input and the steps of arrangement.
Input : Sui me ato fe zen U no.
Step I : Sui ato zen no me fe U
Step II : U fe me no zen ato Sui.
Step III : U me zen Sui fe no ato.
Step IV : ato no fe Sui zen me U.
Step V : ato fe zen U no Sui me.
and so on .....

Q.1. If input is **"Say not you are only wise yet"** then which Step would read as **"are Say only not wise you yet'** ?
(1) III (2) XI (3) IX (4) VII (5) None of these

Q.2. If input is **"may sen to cry if not hell"** then which step will be **"hell not if cry to sen may"** ?
(1) X (2) XII (3) XI (4) Cannot determined (5) None of these

Q.3. If step V is-**'lo men chi from yet as know'** then what will be step VIII.
(1) from as lo chi yet know men (2) from as lo chi yet men know
(3) men know yet chi lo as from (4) men lo know as yet from chi.
(5) None of these

Q.4. If step VI is **"They have done their best to dig"** then definetily what will be the input ?
(1) have They to dig best done their. (2) have They to dig done their best.
(3) have They dig to best done their. (4) have They dig to best their done.
(5) None of these.

Q.5. If input is **"Do you have state Bank Cash Card"** then which step will same as this input ?
(1) XII (2) IX (3) VIII
(4) No such step (5) Cannot be determined

Q.6-10. Study the following information carefully and answer the given questions :
A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.
Input : in 15 story 19 for 83 around 92 on 10 was 46.
Step I : 10 in 15 story 19 for 83 92 on was 46 around.
Step II : 10 15 story 19 for 83 92 on was 46 around in.
Step III : 10 15 19 story for 83 92 was 46 around in on.
Step IV : 10 15 19 46 story 83 92 was around in on for.
Step V : 10 15 19 46 83 92 was around in on for story.
Step VI : 10 15 19 46 83 92 around in on for story was.
Step VI is the last step of the rearrangment of the above input.
As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the given input
Input - 18 an and 5 9 every 20 51 to for 86.

Q.6. What is the position of **'to'** in step III ?
(1) Sixth from the left (2) Seventh from the left
(3) Fifth from the right (4) Fourth from the left
(5) None of these

Q.7. Which of the following is fifth from the right end in step V in the above arrangement ?
(1) 86 (2) an (3) 51 (4) to (5) None of these

Q.8. How many steps are needed to complete this arrangement ?
(1) Five (2) Six (3) Four (4) Seven (5) None of these

Q.9. Which of the following will be IV step of the above arrangement ?
(1) 5 9 18 20 51 86 to an and every for.
(2) 5 9 18 20 51 86 an and every for to.
(3) 5 9 18 20 51 to 86 an and every for
(4) 5 9 18 every 20 51 to for 86 an and.
(5) None of these

Q.10. What is the position of **'for'** in step II ?
(1) Third from the right (2) Second from the right
(3) Seventh from the left (4) Fifth from the left
(5) None of these

Q.11-15. Study the following information carefully and answer the given questions :
A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input : go now 52 38 17 for again 65
Step I : 65 go now 52 38 17 for again
Step II : 65 again go now 52 38 17 for
Step III : 65 again 52 go now 38 17 for
Step IV : 65 again 52 for go now 38 17
Step V : 65 again 52 for 38 go now 17
Step VI : 65 again 52 for 38 go 17 now

Step VI is the last step of the rearrangment of the above input.
As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the given input.

Q.11. Input - home turf 39 24 86 44 roll over .
Which of the following step will be the last ?
(1) X (2) IX (3) VIII (4) VII (5) None of these

Q.12. Step III of input is : 94 car 86 windo shut 52 31 house.
Which of the following is definitly the input ?
(1) 94 car window 86 shut 52 31 house (2) 86 window 94 car shut 52 31 house
(3) car shut window 86 52 31 house 94 (4) Can not be determined
(5) None of these

Q.13. Step IV of an input is : 58 box 47 dew 15 21 town pot.
Which of the following step will be last ?
(1) V (2) VI (3) VIII (4) IX (5) None of these

Q.14. Input : show 51 36 new far 81 46 goal .
Which of the following will be the last but one step ?
(1) VII (2) VIII (3) VI (4) V (5) None of these

Q.15. Input : buy win task 52 38 43 door 12.
Which of the following step will be the step IV ?
(1) 52 buy 43 door 38 task 12 win (2) 52 buy 43 door 38 task win 12
(3) 52 buy 43 door task win 38 12 (4) There will be no such step
(5) None of these

Q.16-20. Study the following information carefully and answer the given questions :
A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input : trek 73 31 high 15 cold 46 freeze snow 91 peak 52
Step I : 15 73 31 high cold 46 freeze show 91 peak 52 trek
Step II : 15 31 73 high cold 46 freeze 91 peak 52 trek snow
Step III : 15 31 46 73 high cold freeze 91 52 trek snow peak
Step IV : 15 31 46 52 73 cold freeze 91 trek snow peak high
Step V : 15 31 46 52 73 91 cold trek snow peak high freeze
Step VI : 15 31 46 52 73 91 trek snow peak high freeze cold

Step VI is the last step of the rearrangment of the above input.
As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the given input.

Q.16. Input - 37 cut ace 49 ice 83 best 19 sun hot 67.
How many steps would be needed to complete the arrangement ?
(1) Ten (2) Eight (3) Seven (4) Six (5) None of these

Q.17. Which step number would be the following output ?
19 37 49 67 83 ace sun ice hot cut best
(1) V (2) VI (3) IV (4) III (5) None of these

Q.18. Which of the following would be the step III ?
(1) 19 37 cut ace 49 ice 83 best hot 67 sun
(2) 19 37 cut ace 49 83 best hot 67 sun ice
(3) 19 37 49 cut ace 83 best 67 sun ice hot
(4) 19 37 49 67 ace 83 best sun ice hot cut
(5) None of these

Q.19. Which of the following would be the final arrangement ?
(1) 19 37 49 67 83 sun ice hot cut best ace
(2) 19 37 49 67 83 ace sun ice hot cut best
(3) 19 37 49 67 ace 83 best sun ice hot cut
(4) 19 37 cut ace 49 ice 83 best hot 67 sun
(5) None of these

Q.20. In step IV, which of the following word/number would be on seventh position from the left ?
(1) 83 (2) best (3) sun (4) ice (5) None of these

Q.21-25. Study the following information carefully and answer the given questions :
A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input : car and home loan borrowers are being addressed.
Step I : addressed car and home borrowers are being loan.
Step II : addressed and car borrowers are being loan home.
Step III : addressed and are borrowers being loan home car.
Step IV : addressed and are being loan home car borrowers.
Step V : addressed and are loan home car borrowers being.

Step V is the last step of the rearrangment of the above input.
As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the given input.

Input - each of the five questions has only one distinct answer.

Q.21. Which of the following would be the step III ?
(1) answer each of one five has only distinct the questions.
(2) answer each of one only five distinct the question has.
(3) answer each of the one only question has five distinct.
(4) answer each of one only distinct the questions has five.
(5) None of these

Q.22. Which word would be on fourth position from left in step II ?
(1) one (2) only (3) has (4) five (5) None of these

Q.23. How many steps would be needed to complete the arrangement ?
(1) Four (2) Six (3) Five (4) Seven (5) None of these

Q.24. Which step number would be the following output ?
answer each of one only the question has five distinct.
(1) IV (2) V (3) VI (4) VII (5) None of these

Q.25. In step IV, which of the following would be on eighth position from right ?
(1) one (2) of (3) the (4) has (5) None of these

Q.26-30. Study the following information carefully and answer the given questions :
A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input : Said only raise when trail legal after union into July forced behind
Step I: after said only raise when trail legal union July forced behind into
Step II: only after said raise when trail legal July forced behind into union
Step III: behind only after said raise when trail legal July into union forced
Step IV : July behind only after said raise when trail into union forced legal
Step V : raise july behind only after when trail into union forced legal said
Step VI : trail raise july behind only after into union forced legal said when

Step VII :	20	18	10	2	15	1	9	21	6	12	19	23
Step VIII :	23	21	20	19	18	15	12	10	9	6	2	1

Step VIII is the last step of the rearrangment of the above input.
As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the given input.
Input : read inter called added show essar money with open player law grant

Q.26. How many steps would be needed to complete the arrangement ?
(1) Six (2) Seven (3) Eight (4) Nine (5) Ten

Q.27. Which step number would be the following output ?
player law called inter added show with essar open grant money read
(1) V (2) VI (3) VII (4) IV (5) VIII

Q.28. Which of the following would be the step II ?
(1) added read inter called show money with open player law grant essar.
(2) added read inter show called money with open player law grant essar.
(3) inter added read called show money with law player grant essar open
(4) inter added read called show money with player law grant essar open.
(5) inter added read law show money with player called grant essar open.

Q.29. In step VI, which of the following word/number would be on the eighth position from the right ?
(1) open (2) essar (3) added (4) 9 (5) inter

Q.30. Which of the following would be the last arrangement ?
(1) 19 16 12 2 9 1 5 15 7 13 18 23 (2) 23 19 18 16 15 13 12 9 7 5 2 1
(3) 23 19 18 16 13 15 12 9 7 5 2 1 (4) 9 16 12 2 9 5 1 15 7 13 18 23
(5) None of these

CHAPTER-11

INEQUALITIES

Equality and Inequality

larger > smaller

=	equal	>	greater than	≥	greater than or equal
≠	not equal	<	less than	≤	less than or equal

To understand an inequality we should keep in mind equality means equal and inequality means there are four possibilities between elements or objects.

- First is greater than second A>B
- Second is greater than first A<B
- First is greater than or equal to second A≥B
- Second is greater than or equal to first A≤B
- Some times there is an uncertain condition which is also seen by us - either first is greater or second is greater A≶B or A ≠ B

TYPE OF QUESTIONS

Three types of questions are asked in the examination -

1. Direct from

Inequalities questions are based on direct relation between two elements.
(1) If only conclusion I is true.
(2) If only conclusion II is true.
(3) If either conclusion I or II is true.
(4) If neither conclusion I nor II is true.
(5) If both conclusion I and II are true.

EXAMPLE :

Q.1. **Statements :** A = B > C < D = E < F
Conclusions : I. F > B
II. B > D

EXPLANATION :
According to the statement both are false.

Q.2. **Statements :** P > M > Q, Q > Z > N
Conclusions : I. M > Z
II. N < P

EXPLANATION :
According to the statement both are true.

Q.3. **Statements :** X > Y, Y > Z, Z = V, V < W
Conclusions : I. Y = V
II. Y > V

EXPLANATION :
According to the statement second is true

Q.4. **Statements :** D>B, C > K, K < N, B<C, N<B
Conclusions : I. D > N
II. C > K

EXPLANATION :
According to the statement both are true

Q.5. **Statements :** B < C, D > B, C > K, K < N, N< B
Conclusions : I. C > N
II. B > K

EXPLANATION :
According to the statement second is true.

2. Coding Form -

In this type of inequality relations are defined as symbolic form. First you have to solve coded form then solve the question.

EXAMPLE -

Q.6-9. In the questions given below, certain symbols are used with the following meanings.

P*Q means, P is neither equal to nor smaller than Q.

P⊕Q means, P is not smaller than Q.

P$Q means, P is neither greater than nor smaller Q.

P£Q means, P is neither greater than nor equal than Q.

P@Q means, P is not greater than Q.

Q.6. **Statements :** E£F, O⊕F, P$R

Conclusions: I. O$P

II. E⊕R

III. P£O

(1) Only I is true (2) Only II is true

(3) Either I or II is true (4) Only III is true.

(5) None of these

EXPLANATION : Ans.(5)

Statement : O≥F>E, P = R

Conclusions :

(I) O$P → O=P (False)

(II) E⊕R → E≥R (False)

(III) P£O → O>P (False)

Q.7. **Statements:** A*B, B@C, A$D, D£E

Conclusions: I. E*B

II. C$A

III. D@E

(1) Only I is true (2) Only I and III are true

(3) Only III is true. (4) None is true

(5) None of these

EXPLANATION : Ans.(1)

Statement : E>D=A>B≤C

Conclusions :

(I) E*B → E>B (True)

(II) C$A → C=A (False)

(III) D@E → E≥D (False)

Q.8. **Statements:** I⊕H, H$T, S£T, S@R

Conclusions: I. I*T

II. I$T

III. S*H

(1) All are true.

(2) Either I or II and III are true

(3) Only III is true.

(4) Only II is true

(5) None of these

EXPLANATION : Ans.(5)

Statement : R≥S<T=H≤I

Conclusion :

(I) I*T →I>T either case

(II) I$T → I=T

(III) S#H → S>H False

Q.9. **Statements:** S@T, Q$N, T£N, Q*O

Conclusions : I.S$N

II. N⊕O

III. N*O

(1) None is true (2) Either I or III are true

(3) Only I is true (4) Only II is true

(5) None of these

EXPLANATION : Ans.(5)

Statement : O<Q=N>T≥S

Conclusion : **(I)** S$N →S=N (False)

(II) N⊕→ N≥O (False)

(III) N*O → N>O (True)

Memorable Points -

- *The question itself tells you which code stands for which Arithmetic Experation so firstly evaluate the value.*
- *Take one conclusion at a time and decide which statements are relevant for evaluating the conclusions.*
- *Check the conclusions which are directly or indirectly related to the question.*
- *Some times conclusions are not directly related with the question then they may be complementry pairs as the relation between them -*

(I) A≥B **(II)** A<B

(I) A≤B **(II)** A>B

(I) A≠B **(II)** A = B

3. Missing Relation Type-

In this type of inequality one relation is missing, and we have to find out the symbol which makes the relation correct.

EXAMPLE -

Q.10. Which of the following symbols should replace question mark in the given expression in order to make expression **'A > D'** as well as **'F ≥ C'** definitely true?

A > B ≥ C ? D ≤ E = F

(1) > (2) < (3) ≤

(4) = *(5) Either = or ≥*

EXPLANATION : Ans. (4)

A > B ≥ C = D ≤ E = F

(I) A > D (True) (II) F ≥ C (True)

EXERCISE

INEQUALITIES

Q.1-5. In the following question @, #, %,* and $ are used according to following meaning:-

'P@Q' means, 'P is not smaller than Q.'

'P#Q' means, 'P is not greater than Q.'

'P%Q' means, 'P is neither greater nor equal to Q.'

'P*Q' means, 'P is neither smaller nor greater than Q.'

'P$Q' means, 'P is is neither smaller nor equal to Q.'

Now according to the following statement if they are ture, judge their conclusion (I), (II) and (III) follow definiately true.

Q.1. **Statement :** M%R, R#T, T*N

Conclusions: I. N*R II. N$R III. N$M

(1) All are true. (2) Only either I or II is true.

(3) Only either I or II and III is true. (4) Only either I or III and II is true.

(5) None of these

Q.2. **Statement :** J#N, K@N, T$K

Conclusions : I. J%T II. T$N III. N@J

(1) None is true. (2) Only I and II is true

(3) Only II and III is true. (4) Only II and III is true.

(5) All is true.

Q.3. **Statement :** B*D, D@H, H%F

Conclusions : I. B*F II. B$F III. D$F

(1) None is true. (2) Only either I or II is true.

(3) Only either I or II and III is true. (4) Only III is true.

(5) All are true.

Q.4. **Statement :** T$K, K#R, R*M

Conclusions : I. M*K II. M%T III. M$K

(1) All are true. (2) Only either I or III is true

(3) Only either I or II is true. (4) Only either II or III is true.

(5) None of these

Q.5. **Statement :** V@M, A$M, R#V

Conclusions : I. R#A II. V@A III. R$M

(1) Only I is true. (2) Only II is true. (3) Only III is true.

(4) None is true. (5) All are true.

Q.6-12. In the following question *, ⊕, $,£ and @ are used according to following meaning:-

'P*Q' means, 'P is neither equal nor smaller than Q.'

'P⊕Q' means, 'P is not smaller than Q.'

'P$Q' means, 'P is neither greater nor smaller than Q.'

'P£Q' means, 'P is neither greater nor equal to Q.'

'P@Q' means, 'P is not greater than Q.'

Now according to the following statement if they are ture, judge their conclusion (I), (II) and (III) follow definiately true.

Q.6. **Statement :** E@F, O⊕F, P@E, P$R

Conclusions : I. O$P II. E⊕R III. P£O

(1) Only I is true. (2) Only II is true. (3) Either I or II is true.

(4) Only III is true. (5) None of these

Q.7. **Statement :** A*B, B@C, A$D, D£E

Conclusions : I. E*B II. C$A III. D@E

(1) Only I is true. (2) Only I and II are true. (3) Only III is true.

(4) No one is ture. (5) None of these

Q.8. **Statement** : I⊕H, H$T, S£T, S@R
Conclusions : I. I*T II. I$T III. S*H
(1) All are true. (2) Either I or III is true. (3) Only I is true.
(4) Only II is true (5) None of these

Q.9. **Statement** : S@T, Q$N, T£N, Q*O
Conclusions : I. S$N II. N⊕O III. N*O
(1) None is true. (2) Either I or III is true. (3) Only I is true.
(4) Only II is true (5) None of these

Q.10. **Statement** H⊕J, J*K, L$K, K@M
Conclusions I. K£M II. L$J III. H⊕L
(1) Only I and III are true. (2) Only II is true. (3) Only III is true.
(4) None is true. (5) None of these

Q.11. **Statement** : P⊕Q, Q*R, V*R, R@S
Conclusions I. R£P II. V*R III. S$Q
(1) Only I is true. (2) Only I and II are true. (3) Only III is true.
(4) None is true. (5) None of these

Q.12. **Statement** : P$M, M*N, N$O, Z£O
Conclusions : I. P*Z II. M*O III. N£P
(1) All are true. (2) Only I and II are true. (3) Only III is true.
(4) Only I is true (5) None of these

Q.13-17. In the following question all symbols are used according to their meaning.
'A ⊔ B' means, 'A is neither greater nor smaller than B.'
'A ⋎ B' means, 'A is neither equal nor smaller than B.'
'A ⋗ B' means, 'A is neither greater than nor equal to B.'
'A ⊓ B' means, 'A is either greater than or equal to B.'
'A ⋠ B' means, 'A is not greater than B.'
Now according to the following statement if they are true, judge their conclusion (I) and (II) and follow definately true.
Give Answer:-
(1) If only conclusion I is true. (2) If only conclusion II is true.
(3) If either conclusion I or II is true. (4) If neither conclusion I nor II is true.
(5) If conclusion I and II both are true.

Q.13. **Statement** : C ⊔ D, D ⋠ M, M ⋗ N
Conclusions : I. M ⋠ C II. D ⊔ M

Q.14. **Statement** : K ⋠ M, M ⋎ B, K ⊔ C
Conclusions : I. M ⋎ K II. K ⋗ M

Q.15. **Statement** : F ⊓ G, G ⋗ P, P ⋎ H
Conclusions : I. F ⊓ H II. H ⋎ G

Q.16. **Statement** : M ⊓ T, T ⋎ R, R ⋠ Q
Conclusions : I. M ⋗ R II. M ⋗ Q

Q.17. **Statement** : D ⋎ G, G ⊓ K, K ⊔ M
Conclusions : I. M ⊔ G II. D ⋎ K

Q.18-21. In the following question statement have different relations between different element. Now according to statement their are two conclusion are give:-
Give Answer:-
(1) If only conclusion I is are true. (2) If only conclusion II is are true.
(3) If either conclusion I or II is are true. (4) If neither conclusion I nor II is are true.
(5) If conclusion I and II both are is true.

Q.18. **Statement** : P≥Q>R<S=T>G
Conclusions : I. R<P II. T>R

Q.19. **Statement** : S>T>Q>V=W
Conclusions : I. Q>W II. S>W

Q.20. **Statement** : P≤Q=F<S=R
Conclusions : I. F>P II. S=Q

Q.21. **Statement** : A>B≥C=D<E≤F
Conclusions : I. A≥D II. D<F

Q.22-25. In the following questions, all the statements are true and find out if the given conclusion I and II are true/or not.
Give Answer:-
(1) If only conclusion I is true. (2) If only conclusion II is true.
(3) If either conclusion I or II is true. (4) If neither conclusion I nor II are true.
(5) If both conclusion I and II are true.

Q.22. **Statement** : D≥B>C, C<F>I, I=Q>P
Conclusions : I. C=P II. D>F

Q.23. **Statement** : A=C<B, B>D≥H, E≥A
Conclusions : I. E<B II. H>C

Q.24. **Statement** : I=K>F<J, J≥Q
Conclusions : I. F>Q II. F=Q

Q.25. **Statement** : K≥P, P<Q=T, T>R
Conclusions : I. K<Q II. P<T

Q.26-30. In the following question, if all the statement are true. Find the true conclusion among given three conclusion and then further give your answers:-

Q.26. **Statement** : K=N, N≥D, D>W
Conclusions : I. D<K II. W≤N III. W>K
(1) Only I is true. (2) Only I and II are true.
(3) Only I and III are true. (4) Only II and III are true.
(5) None of these

Q.27. **Statement** : H=M, M≤T, T>D
Conclusions : I. D<M II. T≥H III. D<H
(1) Only I is true. (2) Only III is true.
(3) Only I and III are true. (4) Only II and III are true.
(5) None of these

Q.28. **Statement** : F≤T, T>E, E<R
Conclusions : I. R>T II. R≤T III. F<E
(1) Only I is true. (2) Only either I or II is true.
(3) Only either II or III is true. (4) Only II is true.
(5) None of these

Q.29. **Statement** : M<R, R>T, T≤J
Conclusions : I. J>R II. M<T III. M<J
(1) None is true. (2) Only I is true. (3) Only II is true.
(4) Only II and III are true. (5) Only I and II are true.

Q.30. **Statement** : J≥M, M<B, B=K
Conclusions : I. J>B II. J>K III. K>M
(1) Only I is true. (2) Only II is true.
(3) Only I and II are true. (4) Only III is true.
(5) None of these

CHAPTER-12

DECISION-MAKING

It is also known as recruitment process or statement & condition. In different -different books all these three names are given to this chapter.

It is expected from an officer that he has proper knowledge about the process of recruitment with in an organization then and he/she will definitely perform his/her job efficiently. An officer is expected to be a part of the recruitment process at some point during his professional life.

HOW TO SOLVE SUCH PROBLEMS-

In such type of questions we are given some conditions and as per these conditions we have to analyse the information given in question in the form of a paragraph consisting of 4 to 5 lines and as per these informations we have to make sure that the candidate would be selected or not.

Five options are provided in the question these are -

OPTION :

Give Answer-

(1) If selected
(2) If not selected
(3) If data is not sufficient for the answer
(4) Facts depends on the sub-condition given in the question
(5) Facts depends on the sub-condition given in the question.

Let us take an example-

EXAMPLE-

Study the following information carefully and answer the questions given below-

A bank wishes to recruit a management trainee through a reality based T.V. show the candidate must fulfill the conditions given below.

CONDITIONS :

(1) Age not more than 35 years as on 01.03.2009
(2) Have secured at least 60% marks in the graduation.
(3) Have a P.G. degree in management from Grade A Institute.
(4) Have secured 55% marks in interview.
(5) Have atleast 5 years of managerial experience.

In case of a candidate who satisfies all the conditions except-

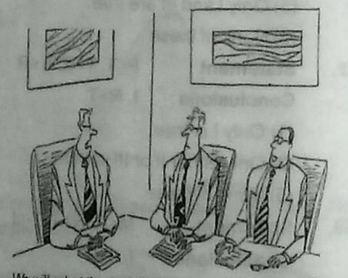
(A) At (1) above but has 7 years of experience in management. So this case will be referred to board of directors.

(B) At (4) above but is willing to pay a fine for breaking the agreement case will be referred to the channel board.

In each of the following question details of a candidate is given. You have to find out wheather the candidate will get the selection or not.

Mark answer-

(1) If candidate is to be selected.
(2) If the case should be referred to the channel board.
(3) If the case should be referred to the company's Board of Directors.
(4) If the candidate is not to be selected.
(5) If the data provided is inadequate to take a decision.



We will select the candidate who would fulfil our conditions.

TYPE I

EXAMPLE :

Saif has completed his graduation with 77% marks in 1996. He obtain 68% marks in interview and has been working as marketing manager in a software company

for six years. He has done P.G. in management from the top ranked management Insitute in 2002. He was born on 31st of December 1975.

EXPLANATION :

	1	2	3	4	5	Sub Condition 1	4
Date S. No.	Age 35 4x	G=60%	P.G. in man.	Interview = 55%<	Exp = 5 yrs	Exp 7 yrs B.O.Dr	Fine Channel Board
1	✓	✓	✓	✓	✓		

EXPLANATION of above table :

If we focus on above question and as per above condition this candidate is covering all the conditions which is marked in the above the table. So answer must be (1). means selection.

EXAMPLE

Q.1-5. Study the following information carefully and answer the questions given below:

Following are the conditions for selecting Senior Manager-General Banking in a bank: The candidate must ——

(i) have secured at least 60 percent marks in Std. XII.
(ii) have secured at least 55 percent marks in Graduation in any discipline.
(iii) have secured at least 60 percent marks in Post-graduate degree/diploma in Management/ Economics/Statistics.
(iv) be at least 25 years and not be more than 35 years as on 1.3.2010.
(v) have work experience of at least 2 years as General Banking Officer in a bank.
(vi) have secured at least 60 percent marks in written examination,
(vii) have secured at least 45 percent marks in Personal Interview.

In the case of a candidate who satisfies all the above conditions except ——

(A)at (iii) above, but has secured at least 60 percent marks in CA or ICWA, the case is to be referred to VP-Recruitment.

(B) at (vii) above, but have secured at least 65 percent marks in the written examination and at least 35 percent marks in the personal interview, the case is to be referred to President- Recruitment.

In each question below are given details of one candidate. You have to take one of the following courses of actions based on the information provided and the conditions and sub-conditions given above and mark the number of that course of action as your answer. You are not to assume anything other than the information provided in each question. All these cases are given to you as on 1.3.2010.

Mark answer (1) if the data provided are inadequate to take a decision.

Mark answer (2) if the case is to be referred to VP-Recruitment.

Mark answer (3) if the case is to be referred to President-Recruitment.

Mark answer (4) if the candidate is to be selected.

Mark answer (5) if the candidate is not to be selected.

Q.1. Sandeep Kumar has secured 65 percent marks in B.Sc. and 70 percent marks in M.Sc Statistics. He has been working in a bank as General banking officer for the past three years after completing his post-graduation. He has secured 65 percent marks in the written examination and 50 percent marks in the personal interview. He was born on 8th July 1982.

Q.2. Namita Jaiswal was born on 2nd June 1980. She has been working in a bank as general officer for the past four years after completing her post-graduate degree in Economics with 60 percent marks. She has secured 68 percent marks in HSC and 58 percent marks in B.Com. She has also secured 60 percent marks in both the written examination and personal interview.

Q.3. Ankit Ghosh has been working in a bank as general officer for the past three years after completing his post-graduate diploma in management with 60 percent marks. He has secured 60 percent marks in the written examination and 45 percent marks in the personal interview. He has also secured 70 percent marks in Std. XII. He was born on 25th March 1975.

Q.4. Kamal Vora was born on 8th November 1978. He has secured 65 percent marks in Std. XII and 60 percent marks in Graduation. He has secured 58 percent marks in M.A. Economics and 60 percent marks in ICWA. He has been working in a bank as general officer for the past two years after completing his education. He has also secured 60 percent marks in the written examination and 55 percent marks in personal interview.

Q.5. Nikita Verma has been working in a bank as general officer for the past four years after completing her post-graduate degree in Economics with 60 percent marks. She has secured 60 percent marks in both graduation and Std. XII. She was born on 24th August 1979. She has secured 70 percent marks in the written examination and 42 percent marks in the personal interview.

Q.1-5. EXPLANATION:

	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)/b
Q.1.(1)	–	√	√	√	√	√	√
Q.2.(4)	√	√	√	√	√	√	√
Q.3.(1)	√	–	√	√	√	√	√
Q.4.(2)	√	√	(√)	√	√	√	√
Q.5.(3)	√	√	√	√	√	√	(√)

KEY FACTORS-

- *It will become very easy to solve the problem if you read the conditions given in the question first.*
- *Make small table and divide it into rows and columns where number of columns = total number of main condition + sub-condition. And mark all condition as the heading of this.*
- *As you start to study the question mark the tricks (√) below those conditions which are given in the question.*
- *Finally as per the tick (√) mark by you decide the answer.*

Lets see example with the help of shortricks-

Saif has completed his graduation with 77% marks in 1996. He obtain 68% marks in interview and has been working as marketing manager in a software company from six years. He has done P.G. in management from the Top ranked management Insitute in 2002. He was born on 31st of December 1975.

EXPLANATION :

GENERAL METHOD-

	1	2	3	4	5	Sub Condition 5	Sub Condition 4
Date S. No.	Age 35 4>	G=60%	P.G. in man.	Interview = 55%<	Exp. = 5 yrs	Exp 7 yrs B.O.Dir	Fine Channel Board
1	√	√		√	√		

TYPE II

If you don't want to make the above table then mark these ticks (√) where the situation has been given and as per the number of ticks (√) we can reach to the answer. Five ticks means the candidate is selected and less than five ticks indicates that there is any data not given which means the answer will be insufficient (option no. 5)

Short tricks :

Saif has completed his graduation with 77% marks in 1996. He obtain 68% marks in interview and has been working as marketing manager in a software company from six years. He has done P.G. in management from the Top ranked management Institute in 2002. He was born on 31st of December 1975.

TYPE III

You can also solve these question with given them number according to the condition or sub conditions number as condition (1) then no. is (1).

Short trick :

Saif has completed his graduation with 77% marks in 1996. He obtain 68% marks in interview and has been working as marketing manager in a software company from six years. He has done P.G. in management from the Top ranked management Institute in 2002. He was born on 31st of December 1975.

For More Questions Refer Volume-II

EXERCISE

DECISION MAKING

Q.1-10. Study the following information carefully and answer the questions given below:
Following are the conditions for selecting Chief Manager - Sales in an organization. The candidate must_
(i) be graduate in any discipline with at least 60 percent marks.
(ii) have secured at least 55 percent marks in the selection process.
(iii) be at least 30 years and not more than 40 years as on 1.5.2009.
(iv) be a post graduate degree/diploma holder in Marketing/Sales Management.
(v) have post qualification work experience of at least eight years in the Sales/Marketing division of an organisation.
If the case of a candidate who satisfies all the conditions **EXCEPT-**
(A) at (ii) above but has secured more than 65 percent marks in graduation, the case is to be referred to GM-Sales.
(B) at (v) above but has post qualification work experience of at least five years as Manager - Sales in an organization, the case is to be referred to VP-Sales.
In each of the questions below, information of one candidate is given. You have to take one of the following five decisions based on the information provided and the criterion and conditions given above. You are not to assume anything other than the information provided in each question. All these cases are given to you as on 1.5.2009. You have to indicate your decision by marking answers to each question as follows ———
Mark answer (1) if the case is to be referred to GM-Sales.
Mark answer (2) if the case is to be referred to VP-Sales.
Mark answer (3) if the data in the statement is not adequate to take a decision.
Mark answer (4) if the candidate is to be selected.
Mark answer (5) if the candidate is not to be selected.

Q.1. Mohan Das was born on 25th March 1976. He has secured 60 percent marks in both graduation and the selection process. He is a first class post graduate degree holder in Management. He has been working for the last eight years in the sales division of an organization.

Q.2. Joseph D'Souza was born on 18th February 1979. He has secured 60 percent marks in graduation and 55 percent marks in the selection process. He has been working for the past six years as Manager-Sales in an organization after completing his post graduate diploma in Sales Management.

Q.3. Mita Keswani has been working in the marketing division of an organisation for the past eleven years after completing her post graduation. She has secured 62 percent marks in the selection process and 70 percent marks in graduation. She was born on 2nd November 1978.

Q.4. Pravin Vohra was born on 2nd July 1 972. He has been working in the sales division of an organization for the past ten years after completing his postgraduate degree in Sales Management with 50 percent marks. He has secured 68 percent marks in graduation and 50 percent marks in the selection process.

Q.5. Meena Srivastava has been working in the Sales division of an organization for the past twelve years after completing her postgraduate degree in sales management with 65 percent marks. She has secured 58 percent marks in graduation and 57 percent marks in the selection process. She was born on 12th May 1976.

Q.6. Kalpesh Mehta was born on 16th February 1970. He has secured 68 percent marks in graduation and 58 percent marks in the selection process. He has been working for the past six years as Manager-Sales in an organization after completing his post graduate diploma in Sales.

Q.7. Abhinav Shukla has secured 62 percent marks in graduation and 58 percent marks in the selection process. He has been working in the marketing division of a company for the past nine years after completing his post graduate diploma in Marketing with 55 percent marks. He was born on 5th August 1974.

Q.8. Akash Malhotra was born on 6th April 1975. He has been working in the sales division of a company for the past ten years after completing his post graduate diploma in Marketing Management. He has secured 65 percent marks in graduation and 56 percent marks in the selection process.

Q.9. Seema Mahajan was born on 12th July 1973. She has secured 56 percent marks in the selection process. She has been working in the sales division of an organisation for the past thirteen years after completing her post graduate degree in Sales Management. She has secured 59 percent marks in graduation.

Q.10. Jayant Sahu has secured 52 percent marks in the selection process and 72 percent marks in graduation. He has been working for the past twelve years in the marketing division of a company after completing his post graduation in Marketing Management. He was born on 19th March 1972.

Q.11-15. Study the following information carefully and answer the questions given below:

An organization wants to recruit Trainee Officers, Following are the criterion. The candidate must——

(i) be not less than 21 years of age and not more than 28 years of age as on 1.2.2009
(ii) be a graduate in any discipline with atleast 55% marks.
(iii) have secured at least 50% marks in selection test.
(iv) have secured at least 45% marks in interview.
(v) be willing to work anywhere in India.

However, if the candidate satisfies all the above mentioned criterion except———

(a) at (ii) above but is a postgraduate, the case is to be referred to the Executive Director.
(b) at (i) above but has working experience of at least one year the case is to be referred to The Vice President.

In each of the questions below, information of one candidate is given. You have to take one of the following five decisions based on the information provided and the criterion and conditions given above. You are not to assume anything other than the information provided in each question. All these cases are given to you as on 1.2.2009. You have to indicate your decision by marking answers to each question as follows ———

Mark answer (1) if the case is to be referred to Executive Director
Mark answer (2) if the case is to be referred to Vice President
Mark answer (3) if the data in the statement is not adequate to take a decision.
Mark answer (4) if the candidate is to be selected.
Mark answer (5) if the candidate is not to be selected.

Q.11. Vijay Kumar is a Commerce graduate passed in 2007 at the age of 22 years with 58% marks. He is willing to work anywhere in India. He has secured 48% marks in selection test and 52% marks in interview.

Q.12. Avinash is a Science graduate passed in first class with 63% marks. He has secured 53% and 51% marks in selection test and interview respectively. He is willing to work anywhere in India. He has been working in the Marketing department of a private organization since July 2007. He was born on 11.6.1980.

Q.13. Sunil Makwana is a graduate in Science passed with 72% marks. His date of birth is 13.10.1978.He is working for past two years as a clerk. He has secured 58% marks in selection test as well as in interview. He is willing to work anywhere in India.

Q.14. Nisha Sharma has passed B.Com with 57% marks in July 2008. She has secured 48% marks in interview and 56% marks in selection test. She is willing to work anywhere in India She has completed 25 years of age in November 2008.

Q.15. Rajan Vaze is a graduate with 45% marks and a post graduate with 52% marks. His date of birth is 17.6.1982 He is willing to work anywhere in India. He has secured 56% marks in interview and 63% marks in selection test.

Q.16-25. Study the following information carefully and answer the questions given below:

Following are the conditions for selecting Accounts Manager in an organization.

The candidate must -

(i) be a graduate Commerce with minimum 55 percent marks.
(ii) be a post graduate in Commerce minimum 50 percent marks.
(iii) have post qualification work experience of atleast three years in the account department in an organization.

(iv) not be less than 25 years and not more than 35 years old as on 1.5.2008.
(v) have secured at least 40 percent marks in the selection process.

In the case if a candidate satisfies all other criteria except -

(A) at (ii) above but has work experience of at least four years as Assistant Accounts Manager in an organization. His/her case is to be referred to GM -Accounts of the organization.
(B) at (iii) above but has successfully completed CA/ICWA, the case is to be referred to Director Finance.

In each question below details of one candidate is given. You have to take one of the following courses of action in each case based on the information provided and the conditions and sub-conditions given above and mark the number of that course of action as your answer. You are not to assume anything other than the information provided in each case. All the cases are given to you as on 1.5.2008.

Mark answer (1) if the data provided are not adequate to take a decision.
Mark answer (2) if the case is to be referred to GM-Accounts.
Mark answer (3) if the case is to be referred to Director- Finance.
Mark answer (4) if the candidate is not to be selected.
Mark answer (5) if the candidate is to be selected.

Q.16. Abhinav Chaturvedi is a Commerce graduate with 60 percent marks. He has been working in the accounts department of an organization for the past four years after completing his post graduation in Commerce with 55 percent marks. He was born on 8th July 1980. He has secured 45 percent marks in the selection process.

Q.17. Vaibhav Sinha was born on 12th April 1979. He has been working as Assistant Accounts Manager in an organization for the past five years after completing his post graduation in Commerce with 40 percent marks. He has secured 55 percent marks in both the selection process and graduation in commerce.

Q.18. Seema Bhasin has secured 60 percent marks in graduation in Commerce and 55 percent marks in post graduation in Commerce. She has secured 50 percent marks in the selection process. She was born on 20th August 1978. She has also successfully completed her CA. She does not have any work experience.

Q.19. Nirmala Sawant was born on 4th July 1981. She has been working in the accounts department in an organization after completing her post graduation in Commerce with 65 percent marks. She has secured 50 percent marks in the selection process.

Q.20. AshokPradhan was born on 3rd May 1979. He has secured 42 percent marks in the selection process. He has been working in the accounts department of an organization for the past four years after completing his post graduation in Commerce with 62 percent marks. He has secured 54 percent marks in his graduation in Commerce.

Q.21. Prabir Mazumdar has secured 58 percent marks in his graduation in Commerce and 53 percent marks in post graduation in Commerce.He has been working as Assistant Accounts Manager in an organization for the past four years after completing his post graduation. He has secured 44 percent marks in the selection process. He was born on 14th November 1977.

Q.22. Neha Dev was born on 8th February 1976. She has been working in the accounts department of an organization for the past three years after completing her post graduation in Commerce with 53 percent marks. She has secured 57 percent marks in graduation in Commerce. She appeared in selection process.

Q.23. Sudha Goswami was born on 19th October 1982. She has been working as Assistant Accounts Manager in an organization for the past five years after completing her graduation in Commerce with 60 percent marks. She has secured 50 percent marks in the selection process.

Q.24. Francis D'costa has secured 60 percent marks in both graduation and post graduation in Commerce. He has also secured 45 percent marks in the selection process. He was born on 6th December 1980. He has successfully completed ICWA after her graduation. He has been working in the Accounts department of an organization for last one year.

Q.25. Prathama Sengupta has secured 55 percent marks in post graduation in Commerce and 45 percent marks in the selection process. She was born on 11 th April 1981. She has been working in the accounts department of an organization for the past four years after completing her post graduation. She has secured 50 percent marks in graduation in Commerce.

CHAPTER-13

SERIES (NON-VERBAL)

INTRODUCTION

Non-verbal reasoning tests consist of those tests in which figures, digits, letters and symbols are used. The instruction or direction given before the questions need careful understanding. In these tests, your power of logical reasoning, speed of thinking and the ability to differentiate or find co-relations between given objects/figures/patterns will be tested. Non-verbal tests make use of diagrams, figures or designs to evaluate your mental ability, speed of reasoning and differentiation etc., rather than academic knowledge. Most non-verbal reasoning tests can be classified under the following categories.

Type 1: Completion of series (sequence/order)

Type 2: Classification (odd man out)

Type 3: Analogical Non-Verbal Reasoning

SERIES

This chapter deals with the problems based upon the continuation of figures. There are various types of problems on series. However, the fundamental concept for each type is the same. There is a sequence of figures depicting a change step by step. Either one of these figures is out of order and has to be omitted or figure has to be selected from a separate set of figures which would continue the series.

SERIES

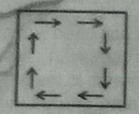
Four Figures | Five Figures | Missing Figures | Incorrect Order | Wrong Figures

There are two directions mostly used in the figures.

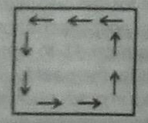
(I) Clock-wise direction

(II) Anticlock-wise direction

(I) a. Clock-wise direction movement will be as in a square boundary.



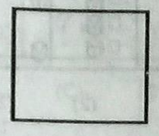
(II) b. Anticlock-wise direction moves like this in a square boundary will be as:



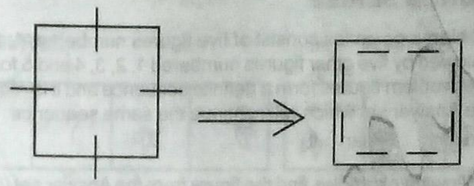
or opposite of clockwise direction.

Note :-

In a square boundary means a square box.



First of all we divide the four sides of the box into two equal parts, thus the box get divided into eight parts -



(I) 45° means $\frac{1}{2}$ step CW or ACW.

(II) 90° means 1 step CW or ACW.

(III) 135° means $1\frac{1}{2}$ step CW or ACW.

(IV) 180° means 2 step CW or ACW.

or opposite movement of symbols/number/letter means 180° movement CW/ACW.

1. FOUR FIGURES SERIES

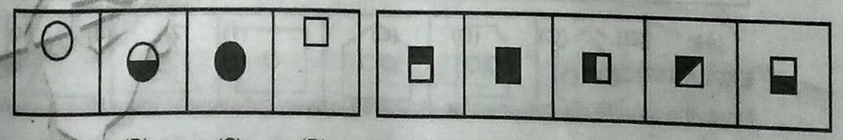
In this case the series or the sequence is indicated by four problem figures and it is required to select a figure from amongst the answer figures, which would be fifth figure to continue the series.

DIRECTION:-

Select a figure from the answer set (1, 2, 3, 4 and 5) which would continue the series indicated by the four figures of the problem set (A, B, C and D).

EXAMPLE

PROBLEM FIGURES ANSWER FIGURES



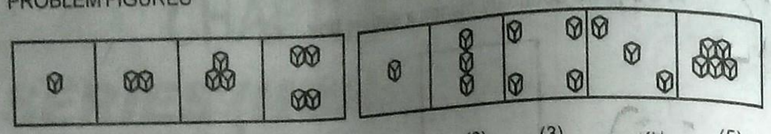
(A) (B) (C) (D) (1) (2) (3) (4) (5)

EXPLANATION :

The white figure gets its lower half shaded in first step, gets shaded completely in the second step and gets replaced by a new white figure in the third step and then the above steps are repeated. Hence answer is 5.

EXAMPLE -

PROBLEM FIGURES



ANSWER FIGURES

(A) (B) (C) (D) (1) (2) (3) (4) (5)

EXPLANATION :

Number of cubes increase by one in every subsequent figure. Hence answer is 5.

2. FIVE FIGURES SERIES

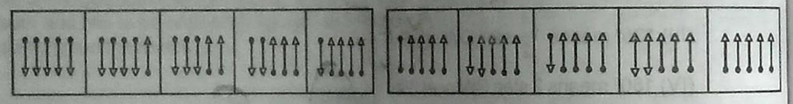
This type of problems on series consist of five figures numbered. A, B, C, D and E forming the problem set, followed by five other figures numbered 1, 2, 3, 4 and 5 forming the Answer set. The five consecutive problem figures form a definite sequence and it is required to choose one of the figures from the Answer set which will continue the same sequence.

DIRECTION :

In each of the following examples find the figure from the Answer set (i.e. figures 1, 2, 3, 4 and 5) which will continue the series given in the Problem set (i.e. figures A, B, C, D and E).

EXAMPLE

PROBLEM FIGURES



ANSWER FIGURES

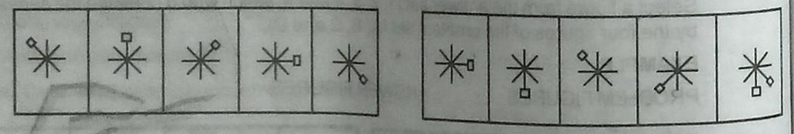
(A) (B) (C) (D) (E) (1) (2) (3) (4) (5)

EXPLANATION:

One of the pins gets inverted in each step.Hence answer is 5.

EXAMPLE

PROBLEM FIGURES



ANSWER FIGURES

(A) (B) (C) (D) (E) (1) (2) (3) (4) (5)

EXPLANATION:

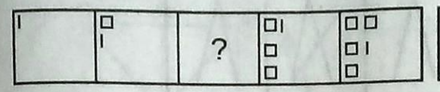
Here, the square rotates one step clockwise in every subsequent figure.Hence answer is 2.

3. CHOOSING THE MISSING FIGURE IN A SERIES

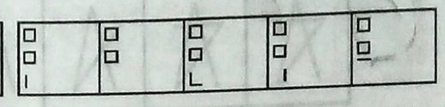
In this type of series, you are given a set of four or five figures (labelled A, B, C, D and E) following a certain sequence and hence forming a series. However, the figure at C is missing. The candidate is required to choose this figure from the alternatives 1, 2, 3, 4 and 5.

EXAMPLE

PROBLEM FIGURES



ANSWER FIGURES



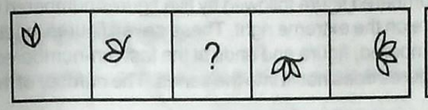
(A) (B) (C) (D) (E) (1) (2) (3) (4) (5)

EXPLANATION :

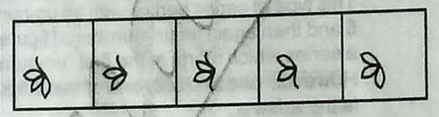
In each step the existing straight line is replaced by a square and an extra straight line is introduced. Hence answer is 1.

EXAMPLE

PROBLEM FIGURES



ANSWER FIGURES



(A) (B) (C) (D) (E) (1) (2) (3) (4) (5)

EXPLANATION :

The figure is rotated 45° ACW and 90° ACW alternately. Also, half a leaf is added CW to the figure in each step. Hence answer is 5.

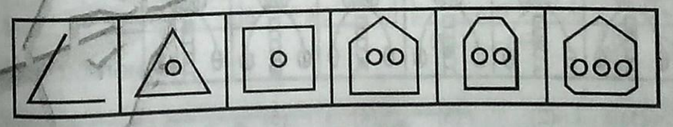
4. DETECTING THE INCORRECT ORDER IN A SERIES

The third type of questions on series consists of an un-numbered figure followed by five other figures numbered as 1, 2, 3, 4 and 5. All the six figures together form a series. The un-numbered figure marks the beginning of the series and so its position is fixed. However, the positions of two of the figures in the series are incorrect and the series would be complete if these figures are interchanged. The earlier of the two numbered figures whose positions are interchanged is the answer. In case, the positions of no two figures is to be interchanged, then the answer is 5.

DIRECTION :

Each of the following problems consists of a set of six figures, the first of which is un-numbered and marks the beginning of series continued in the successive figures numbered from 1 to 5. However, the series will be established only if the positions of two of the numbered figures are interchanged. The number of the earlier of the two figures is the answer. If no two figures,need to be interchanged, then the answer is 5.

EXAMPLE

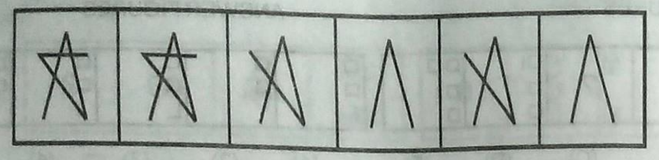


(1) (2) (3) (4) (5)

EXPLANATION :

The number of sides of the outer figure increases by one, each time. Also an extra small circle is added in every two steps. For this, no two figures need to be interchanged. Hence answer is 5.

EXAMPLE



(1) (2) (3) (4) (5)

EXPLANATION :

One line is removed from the figure after every two steps. So, figures (3) and (4) have to be interchanged. Hence answer is 3.

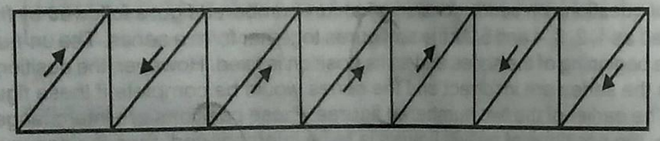
5. DETECTING THE WRONG FIGURE IN A SERIES

This type of series begins with an un-numbered figure followed by five figures numbered from 1 to 5 and then again an un-numbered figure on the extreme right. These seven figures together form a series which starts at the first (un-numbered) figure and ends at the last (un-numbered) figure. However, one and only one of these figures does not fit into the series. The number of that figure is the answer.

DIRECTION :

In each of the following questions, there are five numbered figures and two un-numbered figures on the extremes. These seven figures form a series. However, one of the five numbered figures does not fit into the series. The number of that figure is the answer.

EXAMPLE

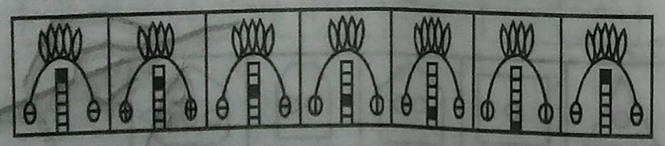


(1) (2) (3) (4) (5)

EXPLANATION :

The arrow reverses its direction in one step and moves to the other side of the central line in the next step. In figure (2), the direction of the arrow should be opposite. Hence answer is 2.

EXAMPLE -

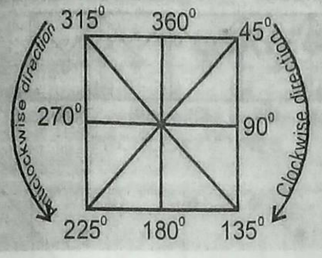


(1) (2) (3) (4) (5)

EXPLANATION:

The number of leaves is four and five alternately. The diameters in the circles rotates through 90° in each step. The shading descends in every step and once in the lowest position it reaches to the top in the next step. In figure (1) the occurrence of two diameters in each circle is incorrect. Hence answer is 1.

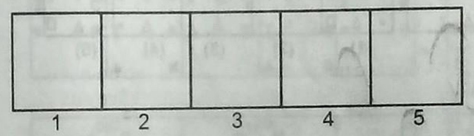
MEMORABLE POINTS :



In nonverbal 45° = 1/2 place, 90° = 1 place, 135° = $1\frac{1}{2}$ and so on.

PREFERENCE ORDER

Non verbal can easily solve with the help of these preference order of the series.



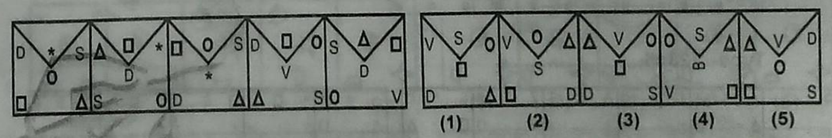
1 2 3 4 5

- 1, 2, 3, 4, 5, 6, --------
- 1 2, 1 2, 1 2, -------
- 1 2 3, 1 2 3, 1 2 3, -------
- 1 3, 2 5, 4 6, -------
- 1 3 5, 2 4 6, -------
- 1 2 3 4, 1 2 -------
- 1 2 3 4 5, 1 -------

Lets see with examples-

Type- 1, 2, 3,.....

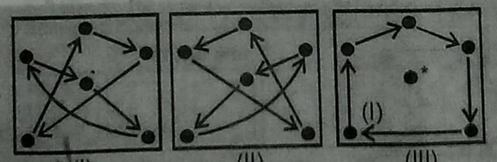
Q.1.



(1) (2) (3) (4) (5)

EXPLANATION :

Ans.(3)



(I) (II) (III)

*** new figure**