Chapter 24

Syllogisms

Syllogisms

This chapter deals with venn diagrams used to solve statements to form conclusions. So, the questions will be basically of statement – conclusion type.

In some questions we might be asked to draw an inference out of the given information.

To understand this better, we follow 4 types of statements:

Statement 1 → All A are B.

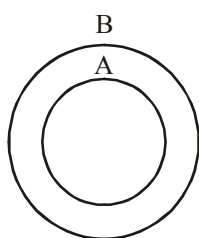This is represented by venn diagrams as follows.
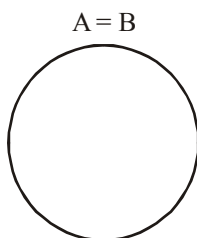

Fig. 1   Fig. 2

In Fig. 1, we see that all the particles of A are contained inside B, while, in Fig.2, we see that particles of A and that of B are same, hence the venn diagrams of both A & B overlap.

Statement 2 → No A is B

This statement means that there is no particle in A that is common in B, and thus the diagrammatic representation for this statement is
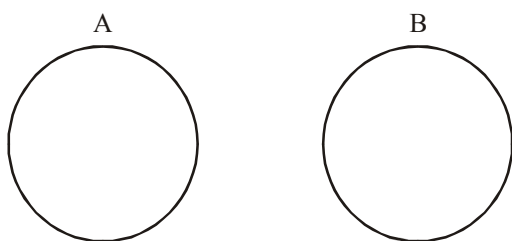

Fig. 3

Fig. 3 represent 2 groups A & B drawn distinctly because none of the particles of A are in common with that of B.

Statement 3 → Some A is B

This statement means there are some particles in A that of there in B also. We don't need the measure or number of common particles because that is of no use to us to draw a conclusion.

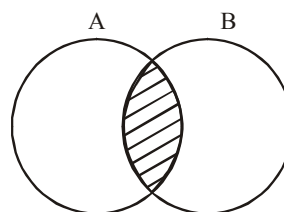**Conclusion.**

The diagrammatic representations are as follows:

Fig. 4   Fig. 5
The shaded portion shows   The shaded portion shows
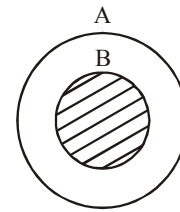that some part of A is B   that some part of A is B

Note : Fig. 4 is the representation we use to draw the diagram for the given statements while fig. 5 is the representation we use to draw the conclusion that logically follows.

We will discuss this in depth with the help of examples once we complete discussing the 4 statements.

Statement 4 → Some A is not B.

This statement means that there are some particles in A that do not exist in B.

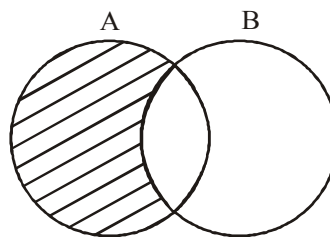So, it diagrammatic representation will be the same as statement 3, which is shown in Fig. 6 & Fig. 7.

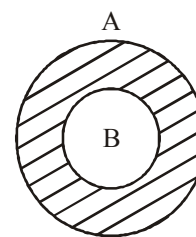Fig. 6   Fig. 7
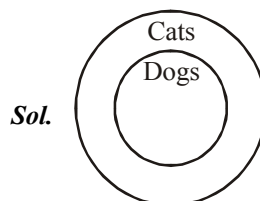The shaded portion shows   The shaded portion shows
that some A which is not B.   some A is not B.

Note : Fig. 6 is the representation for the statements, while Fig. 7 is the representation we use to draw out conclusions.

Let us see a few statements now, along with their diagramatic representation and possible conclusions.

ILLUSTRATION 1 :

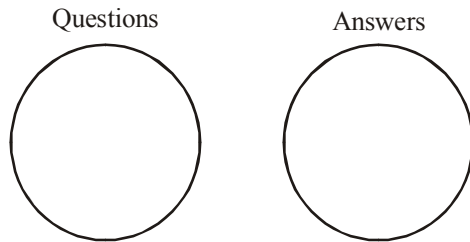**Statement:** All dogs are cats.

Sol.

Possible conclusion: Some cats are dogs.

ILLUSTRATION 2 :

Statement: None of the questions are answerable.

Sol. The statement means. No questions has an answer i.e., questions and answers are 2 different entities.
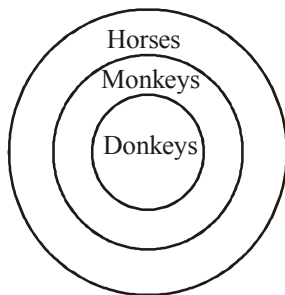
Questions   Answers

Possible conclusion: No answer is a question.

ILLUSTRATION 3 :

Statement 1: All donkeys are monkeys.
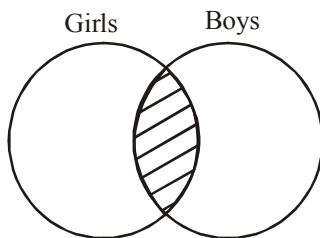**Statement 2:** All monkeys are horses.

Sol.

Horses
Monkeys
Donkeys

Possible conclusion:
(i)   All donkeys are horses.
(ii) Some horses are monkeys.
(iii) Some horses are donkeys.
(iv) Some monkeys are donkeys.

ILLUSTRATION 4 :

Statement: Some girls are boys.
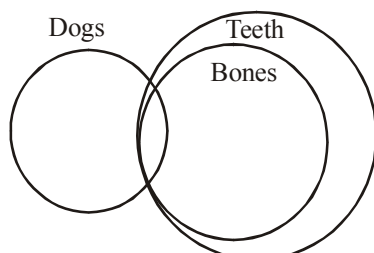
Sol.

Girls   Boys

Possible conclusions:
(i)   Some girls are not boys
(ii) Some boys are girls.
(iii) Some boys are not girls.

ILLUSTRATION 5 :

Statement 1: Some dogs are bones.
Statement 2 : All bones are teeth.

Sol.

Dogs   Teeth
Bones

Possible conclusions:
(i)   Some bones are dogs.
(ii)   Some dogs are teeth.
(iii) Some teeth are dogs.
(iv)   Some teeth are bones.
(v)   Some teeth are not bones.
(vi)   Some dogs are not bones.
(vii) Some dogs are not teeth.
(viii) Some teeth are not dogs.

Note: The possible conclusions, that follow a particular set of statement will be given as one or more choices of a given questions, after all this is what MCQ's are about.

——————————— **Quick Tips** ———————————

Tricks to solve syllogims questions:-
(i)   Always make venn diagram representations for the given set of statements in the questions.
(ii) The facts known by us are to be disregarded by us when solving questions on syllogisms.
      e.g. If the statement says – All dogs are humans, then the conclusion has to be derived from this particular statements. If the statement says – All reds are blues, then we have to consider it to be true of a particular question where this statement is given.
(iii) The conclusion should be drawn out of the 2 given statement, i.e., it must give some new information, & not state the things mentioned in it again.
(iv) To save time, we must use initials to represent items in a diagram.
      For e.g: If we are given Dogs & Cats in a statement, then we can represent them by D & C respectively.
      If we are given Dogs & Deer in a statement, we can represent & there by Dg and Dr respectively. Using just the initial alphabet in this case, i.e., 'D' will cause confusion, so we avoid using that.
      Now, lets see with the help of a few examples the kind of questions that appear in the examinations. There are 5 types of these questions.

TYPE 1: **In this type, the question has 2 or 3 statements, to which there is only one correct conclusions.**
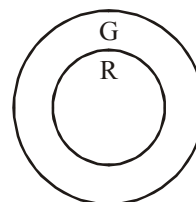
ILLUSTRATION 6 :

Statement 1: All Reds are Greens.
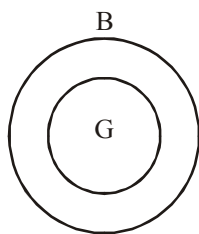**Statement 2:** All Greens are Blue.
The correct conclusion will be:
(1) No Reds are Blue   (2) All Reds are Blue
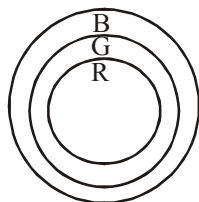(3) Some Reds are Blue   (4) All Blue are Reds.

Sol. **Statement 1**

G
R

diagrammatic representation.

Statement 2 diagrammatic representation

Combining the two statement representations

where R stands for Reds, G stands for Green and B stands for Blues.

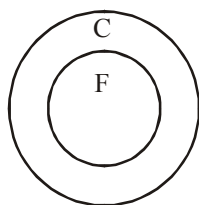Therefore, all Reds are Blue, option (2).

ILLUSTRATION 7 :

Statements: (1) All files are covers.
(2) All covers are books.

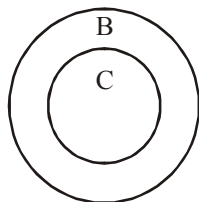Which of the following is the inference to the above statements?

(1) Some files are books   (2) All books are covers
(3) Some books are files   (4) All books are files

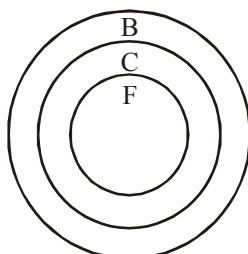*Sol.* Statement (1) is represented as

where F – Files
   C – Covers

Statement (2) is represented as

Where C – covers
   B – Books

Combining the two statements, we get

So, some of the books are files.
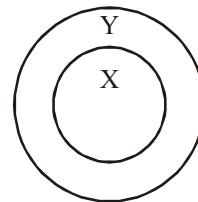
Therefore, option (3) is the correct answer.

ILLUSTRATION 8 :

Statement: (1) All X are Y.
(2) All Y are Z

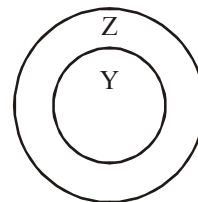**Conclusion will be:**

(1) All X are Y   (2) All Y are X
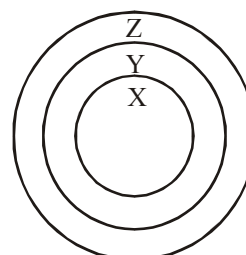(3) All Y are Z   (4) Some Z are X

Sol. (4) The diagrammatic representation of statement (1) is:-

Diagrammatic representation of statement (2) is:

Combined representation of the two statements.

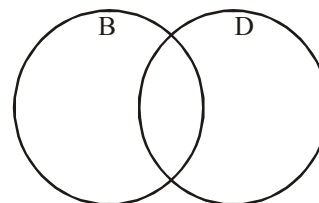Therefore, some Z are X. Option (4) is the correct answer.

ILLUSTRATION 9 :

Statements : (1) Some bottles are drinks
(2) All drinks are cups.
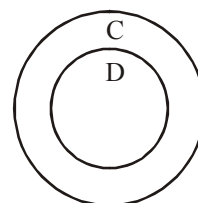
Conclusion:

(1) All cups are bottles
(2) All bottles are cups.
(3) All cups are drinks
(4) Some bottles are cups.
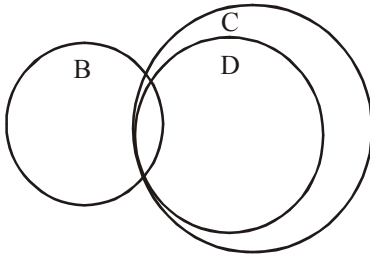
Sol. Statement 1–

where B = Bottles and D = Drinks

Statement 2 –

where C = Cups

Therefore, combining both statements, we get–

Thus, some bottles are cups, option (4) is correct.

ILLUSTRATION 10 :

**Statements:** (1) All balls are locks.
(2) Some locks are keys.

Conclusions:
(1) All locks are keys.
(2) Some balls are locks
(3) Some balls are keys
(4) Some balls may be keys.

Sol. (4) In this example, the statements are not numbered but one follows the other in the form of a sentence but that does not change the meaning of the question or the statements.

So, now we draw the statements as we have been drawing in the above examples, but this time, a combined diagram directly.

But, there are 2 cases to the given set of statements.
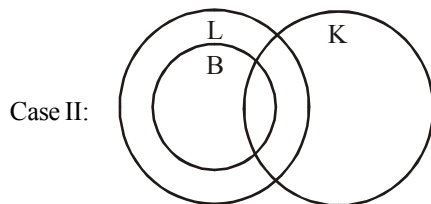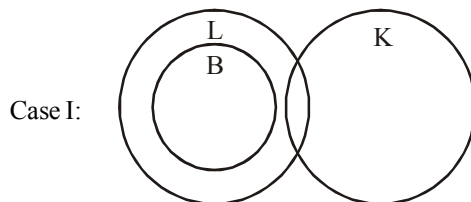
Since, there are 2 cases, case I shows that no balls are keys while case II shows that some balls are keys. Therefore, the conclusion is some balls may or may not be keys. Thus option (4) some balls may be keys in the correct conclusion of all given options.

TYPE 2: This type talks about the questions that have more than one logically correct conclusions to its set of statements.
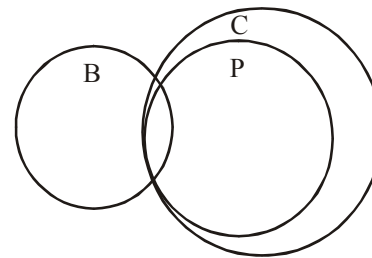
ILLUSTRATION 11 :

Statement : (1) Some bags are purses.
(2) All purses are containers.

Conclusions: I. Some bags are containers.
II. Some purses are not bags.
III. No purses are containers.
IV. All bags are containers.

Which of the given conclusions logically follow the given statements?
(1) Only I
(2) Only II
(3) Both I & II
(4) I, II and IV

Sol. (3) The given statements can be diagrammatically represented as follows:

where B = Bags, P = Purses and C = Containers
Thus the possible conclusions are I. Some bags are containers and II. Some purses are not bags.
Therefore, option (3) Both I & II is the correct answer.

DIRECTIONS (ILLUSTRATION 12-15) :

In each of the following questions, three statements are given followed by four conclusions numbered I, II, III and IV. You have to take the given statements into consideration to answer which of the given conclusion logically follow from the given statements disregarding the commonly known facts.

ILLUSTRATION 12 :

Statements: (1) Some bags are purses.
(2) All purses are containers.
(3) All containers are suitcases.

Conclusions: I. Some suitcases are bags
II. All purses are bags
III. All purses are suitcases
IV. Some containers are purses

(1) Only I, II and III follow
(2) Only II and III follow
(3) Only I and III follow
(4) Only I, III and IV follow

Sol. (4) The diagrammatic representation for the given set of statements is:
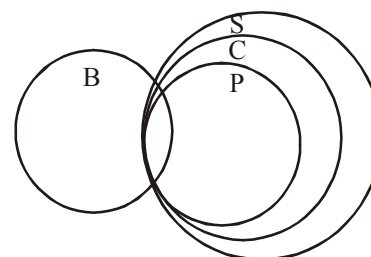
Where B = Bags, P = Purses C = Containers and
S = Suitcases
Out of the given 4 conclusions, conclusion I. Some suitcase are bags, III. All purses are suitcases and IV. Some containers are purses follow.
Therefore, option (4) only I, III and IV follow is the correct answer.

ILLUSTRATION 13 :

Statements: (1) All buildings are rains.
(2) All papers are buildings. All dogs are papers.

Conclusion: I. All dogs are rains.
II. Some papers are rains
III. Some rains are buildings.
IV. Some rains are papers.

(1) Only I and II follow
(2) Only I, III and IV follow
(3) Only II and III follow
(4) None of these

Sol. (2) From the given statements, we can draw the diagram.
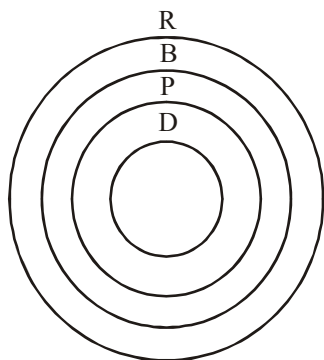
where R = Rains, B = Buildings, P = Papers, D = Dogs

──────────────────── **Quick Tip** ────────────────────

Always draw big circles for the representation because you might come across questions like illusttation. 13 where in you start by drawing the outermost circle first and the innermost circle last. Thus we see that conclusions I, III and IV follow the given set of statements logically.
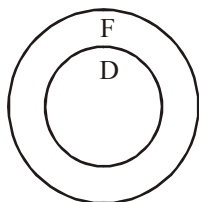
Therefore option (2) is the correct answer.

ILLUSTRATION 14 :

Statements: All dogs are fruits.
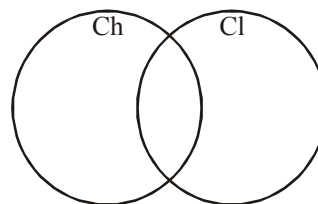No chair is a fruit.
Some chairs are clowns.

Conclusions: I. Some clowns are dogs
II. Some chairs are dogs
III. No chairs is a dog
IV. No dog is clown

(1) None follows
(2) Only either I or II and IV follow
(3) Only III follows
(4) Only II follows

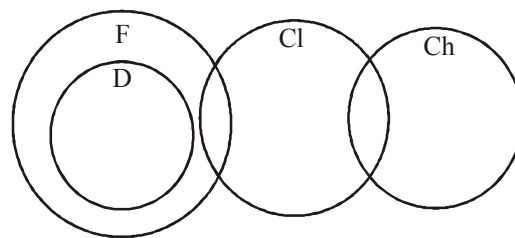*Sol.* (3) The statements can be represented as:
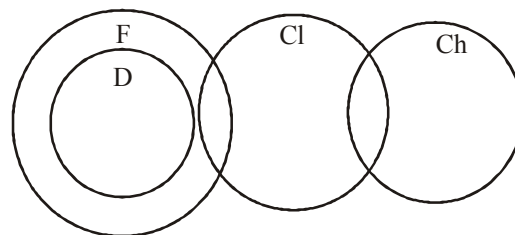
Case I:

where F = Fruits, D = Dog, Ch = Chair and Cl = Clown

Case II:

Case III:

In all the 3 cases, conclusion III. No chair is a dog follows correctly.
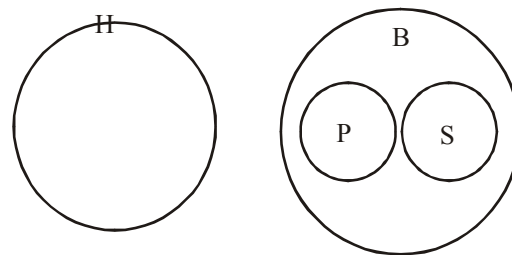
Therefore, option (3) is the correct answer.

ILLUSTRATION 15 :

Statements: No humans breathe.
Peter breathes.
Sam breathes.

Conclusions: I. Sam is human
II. Peter is human
III. Some human breathe
IV. Peter is Sam

(1) Only I follows
(2) Only II follows
(3) II and III follow
(4) None of these follows

Sol. (4) The representation of the statements is–

where H = humans, B = breathe, P = Peter, S = Sam

Therefore, humans and people who breathe are 2 different venn diagrams. As Sam and Peter both breathe, their venn diagrams are drawn inside people who breathe.

Thus none of the given conclusions follow. Therefore, option (4) is the correct answer.

ILLUSTRATION 16 :

Statements: (1) Some flowers are rods.
  (2) Some rods are doors.
 (3) Some doors are house.

Conclusions: I. Some houses are flowers.
  II. Some doors are flowers.
  III. Some flowers are doors.
  IV. No house is flower.

(1) Only I & II follow. (2) Only I & IV follow.
(3) Only II & IV follow (4) None of these.

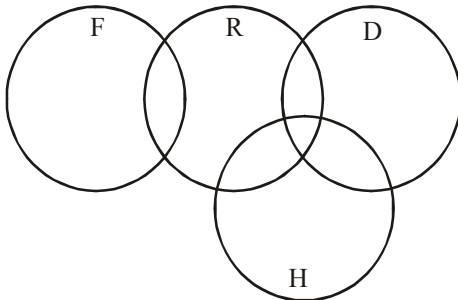*Sol.* (4) Since there are more than just 2 or 3 cases this question, the answer should be none of these as in no 2 cases which give us the same conclusion.

The various diagrammatic representations of the cases are:-

Case I:
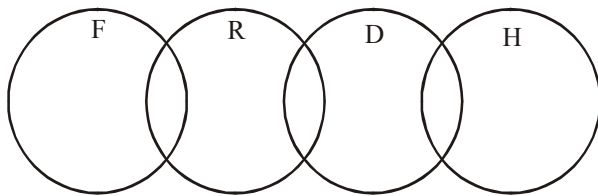
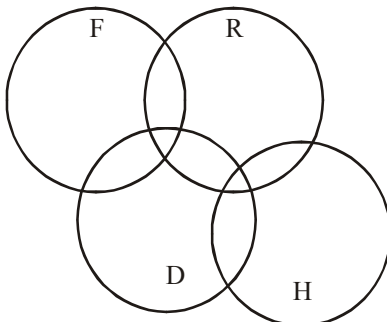Where F = Flowers, R = Rods, D = Doors, H = Houses.
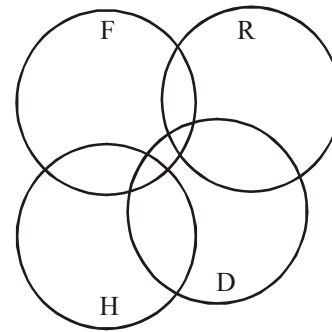
Case II:

Case III:
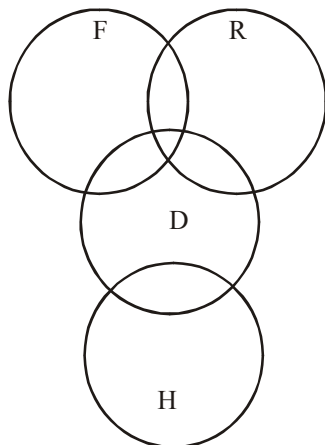
Case IV:

Case V:

and many more. So, option (4) is the correct answer.

TYPE 3: **This type talks about questions in which we are given a set of statements, usually 3 statements. In these, out of the 3 statements 2 are the actual statements while the third is the conclusion that logically follows the given two statements. This type is further explained by the given examples.**

DIRECTIONS (ILLUSTRATION 17-19) :
Choose the option where the third statement can be drawn from the preceding two statements.

ILLUSTRATION 17 :

A. All cows are dogs. All dogs are wolves. All cows are wolves.
B. Some people are professors. All professors are bags. Some people are bags.
C. No humans breathe. Manik breathes. Manik is a human.
D. Some cows are crows. Some crows are coals. All coals are cows.

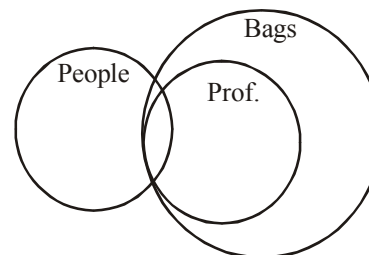(1) Only A (2) Only B and C
(3) Only A and B (4) Only B, C, and D
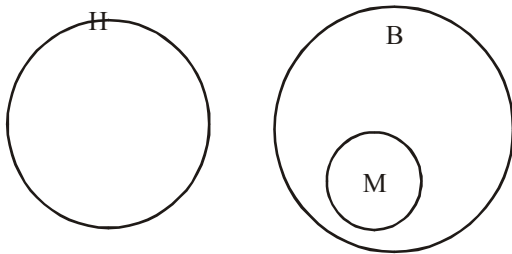
Sol. Statement A is represented as:
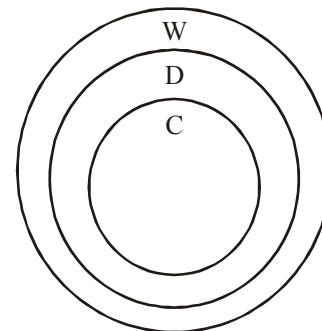
⇒ All cows are wolves
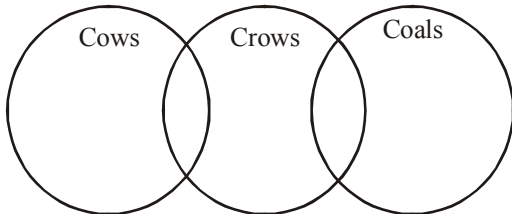Hence this follows.
Statement B is represented as;

⇒ Some people are bags.
Hence this also follows.
Statement C can be represented as:

⇒ Manik is not a human.
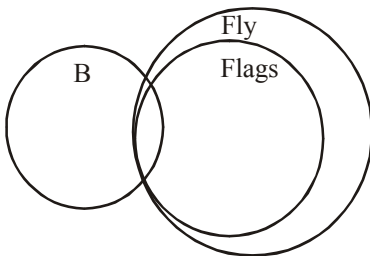This does not follow.
Statement D can be represented as:

⇒ No fixed conclusion because there can be many cases.
Thus this also does not follow.
Therefore, option (3) only A & B is the correct answer.

ILLUSTRATION 18 :

A. Some banners are flags. All flags fly. All flags are birds.
B. No animals are mammals. Only Kangaroos are mammals. Kangaroos are not mammals.
C. All factories are mills. All mills have workers. All factories have workers.

(1) Only A   (2) Only B
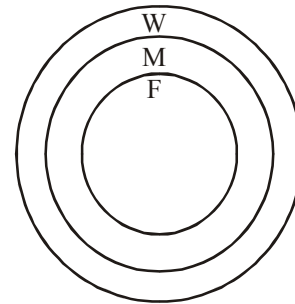(3) Only C   (4) None of these

Sol. **(3)** Statement A representation:

We are no where talking about the birds. Therefore, this does not follow.
Statement B representation:
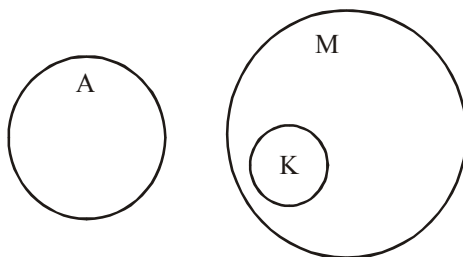
When Kangaroos are mammals, how is it possible that they are also not mammals.
Thus this also does not follow.
Statement C representation:

Since, all mills have workers & all factories are mills, therefore, all factories have workers.
Thus this follows.
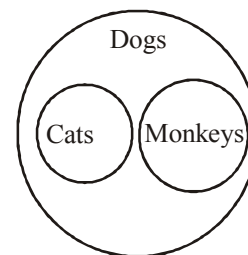Hence, option (3) is the correct answer.

ILLUSTRATION 19 :

A. All cows are domestic animals. Domestic animals are good.
All cows are good.
B. All cats are dogs. All monkeys are dogs. Some cats are monkeys.
C. All phones are computers. All laptops are computers. All phones are laptops.

(1) Only B   (2) Only A and B
(3) Only A and C   (4) Only A
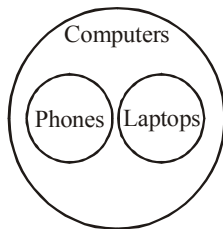
Sol. **(4)** Statement A representation:
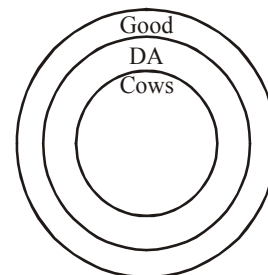
⇒ All cows are good.
Therefore, this follow
Statement B representation

⇒ The conclusion — some cats are monkeys may or may not be true.
Therefore, this does not follow
Statement C representation

⇒ The conclusion – all phones are laptops is not definitely true.

Therefore, this does not follow.

Thus option (4) only statement A is correct.

ILLUSTRATION 20 :

A. All red are blue. All green are blue. Some red may be green.
B. Death is a part of life. Life is beautiful. Death is beautiful.
C. Humans are Clever. Dog is human. Dog is Clever.
(1) Only A   (2) Only B and C
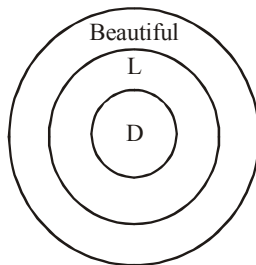(3) Only A and C   (4) All the above

Sol. **(4)** Statement A representation has all red as well as all green as blue. Out of these, some red **may** be green as well.

No red is green   Some red are green
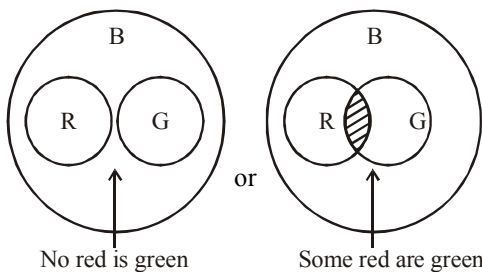
Since, one of the case is some red are green. Therefore, we can conclude some red **may be** green.
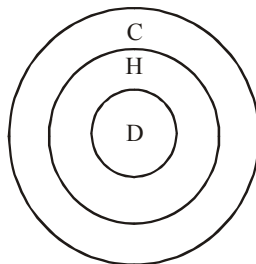
Therefore, this follows.

Statement B representation:

⇒ Death is also beautiful

Therefore, this follow.

⇒ Dog is also clever

Therefore, this follows

Hence, all the 3 statements follow. So, option (4) is the correct answer.

TYPE 4 *:* **Under this type, the options to the given equations will contain a set of 3 statements, out of which, the third sentence/ statement has to be a logically derived conclusion from the preceding two statements.**

DIRECTIONS (ILLUSTRATION 21-22) :
Choose the set of sentences where the third sentence can be logically derived from both the preceding sentences.

ILLUSTRATION 21 :

A. Some people are clowns.
B. All professors are clowns
C. Some wise people are professors.
D. Some people are professors
E. Some people are wise
F. Some wise people are clowns
(1) BCD   (2) FED
(3) BCF   (4) None of these

Sol. **(3)** In questions like these, we are required to draw a representation for all the given options. Let start with option (1)
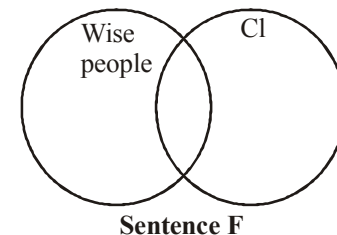
BCD – where B & C should be the statements for which C is the valid conclusion.
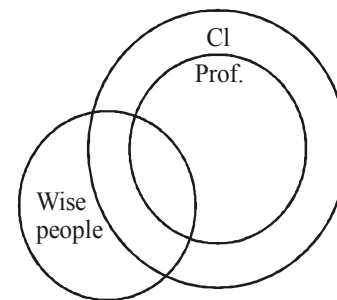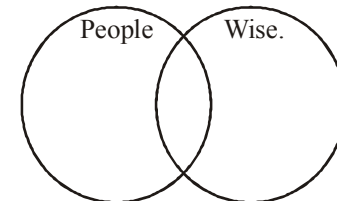

⇒ Some people are professors cannot be a conclusion, because it is mentioned no where in the statements. Thus this option is incorrect.

(2) FED – where F & E should be the statements for which D is the valid conclusion.
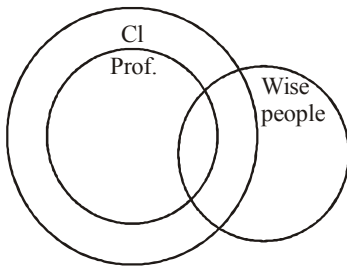

Sentence F

Sentence E

⇒ There is no relation between the 2 sentences. Thus this option is incorrect.

(3) BCF – where B & C should be the statements for which F is the valid conclusion.
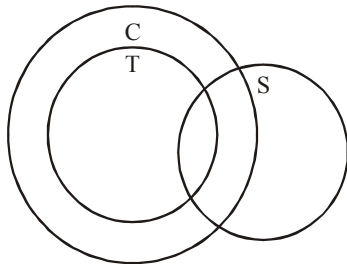
⇒ Some wise people are clowns is a logical conclusion.
Thus option (3) is the correct answer.

ILLUSTRATION 22 :

A.   Some squares are triangles.
B.   All squares are triangles.
C.   All triangles are circles.
D.   All circles are triangles.
E.   All circles are squares.
F.   Some triangles are circles.
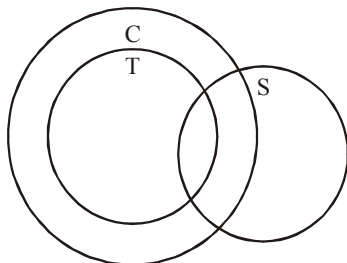
(1)   C A B   (2)   C A D
(3)   C E A   (4)   C F E

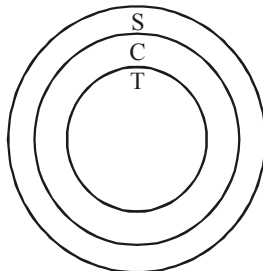***Sol.*** **(3)**   Option (1) representation: **CAB**

⇒ All squares are not triangles.
Thus this is incorrect.
Option (2) representation **: C A D**

⇒ Some circles are triangles, not all.
Thus this is incorrect representation.
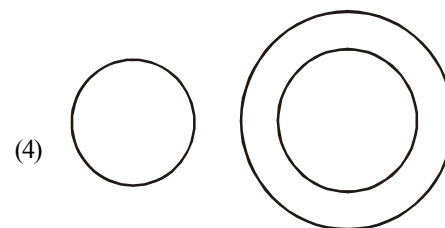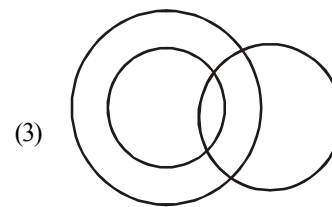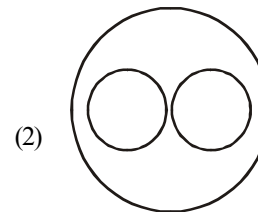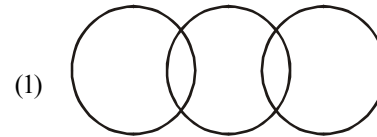Option (3) representation **: C E A**

⇒ Some squares are triangles.
Thus this is the correct representation.
Hence, Option (3) is the correct answer.

TYPE 5: In this type, we have to make analogies, i.e., there will be a statement given and you'll be asked the relationship between a given set of things and the options will be their diagrammatic representation. Thus we'll have to analyze which diagram is the most appropriate representation of the given set of things.

ILLUSTRATION 23 :

Which of the following diagrams correctly represents elephants, wolves and animals.

(1)

(2)

(3)

(4)

Sol. **(2)**   Since, elephants and wolves both are animals but of different type (as we know from out prior knowledge), therefore, option (2) gives us the most appropriate representations.
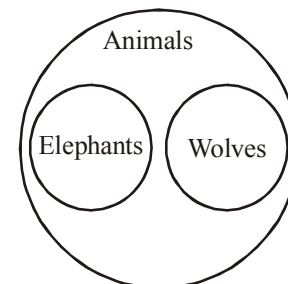
Exercise 1

DIRECTIONS (Q. 1 & 2) : In each of the following questions, two statements are given followed by three or four conclusions numbered I, II, III & IV. You have to take the given statements to be true even if they seem to be at variance from the commonly known facts & then decide which of the following conclusions logically follows from the given statements disregarding commonly known facts.

1. **Statements:** Some bottles are drinks.
   All drinks are cups.
   Conclusions:
   I.   Some bottles are cups
   II. Some cups are drinks
   III. All drinks are bottles
   IV. All cups are drinks.
   (1) Only I & II follow   (2) Only II & III follow
   (3) Only II & IV follow   (4) Only III & IV follow
   (5) Only I & IV follow

2. **Statements:** Some books are pens.
   No pen is pencil.
   Conclusions:
   I.   Some pens are books
   II. Some pencils are books
   III. Some books are not pencils
   IV. All pencils are books
   (1) Only I follow   (2) Only II & III follow
   (3) Only I & III follow   (4) Only I & II follow

DIRECTIONS (Question 3-8) : In each question below are given two statements followed by 2 conclusions numbered I & II. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusion and then decide which of the given conclusions logically follows from the two 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 follows
(5) If both conclusion I & II follows.

3. **Statements:** All huts are mansions. All mansions temples.
   Conclusion:
   I.   Some temples are huts.
   II. Some temples are mansion.

4. **Statements:** Some hens are cows. All cows are horse.
   Conclusion:
   I.   Some horses are hens.
   II. Some hens are horses.

5. **Statements:** All trucks fly. Some scooters fly.
   Conclusion:
   I.   All trucks are scooters.
   II. Some scooters do not fly.

6. **Statements:** Some adults are boys. Some boys are old.
   Conclusions:
   I.   Some adults are not adult
   II. Some boys are not old.

7. **Statements:** No women teacher can play. Some women teachers are athletes.
   Conclusions:
   I.   Male athletes can play.
   II. Some athletes can play.

8. **Statements:** All educated people read newspapers. Rahul does not read newspaper.
   Conclusions:
   I.   Rahul is not educated
   II. Reading newspaper is not essential to be educated.

DIRECTIONS (Q. 9 to 14) : Each question given below consists of 5 or 6 statements followed by options consisting of 3 statements put together in a specific order. Choose the option which indicates a valid argument containing logically related statements that is, where the third statement is a conclusion drawn from the preceding two statements.

9. A. All balls are locks
    B. All keys are locks
    C. All keys are balls
    D. Some keys are locks
    E. Some locks are balls
    F. No balls is lock
    (1) A C B   (2) B E F
    (3) C D B   (4) C E F

10. A. All cushions are pillows.
    B. Some pillows are sheets.
    C. Some pillows are cushions.
    D. Some pillows are not cushions.
    E. All pillows are sheets.
    F. No pillows are sheets.
    (1) A B E   (2) B C D
    (3) E A C   (4) E D C

11. A. All heroines are pretty.
    B. Some heroines are popular girls.
    C. Shweta is pretty.
    D. Shweta is a popular heroine.
    E. Some popular girls are pretty.
    (1) A B E   (2) A C D
    (3) D C A   (4) E D C

12. A. Some abra are dabra.
    B. All abra are cobra.
    C. All dabra are abra.
    D. All dabra are not abra.
    E. Some cobra are abra.
    F. Some cobra are dabra.
    (1) A B D   (2) A E F
    (3) B C F   (4) B C F

13. A. Some women are smart.
    B. All smart women are good looking.
    C. Monika is a woman.
    D. Monika is a smart woman.
    E. Monika is good looking.
    F. All women are good looking.
    (1) A F C   (2) B D E
    (3) D C B   (4) F B E
14. A. All contacts hurt the eyes
    B. No specs are contacts
    C. No specs hurt the eyes
    D. All specs hurt the eyes.
    E. No contact hurt the eyes
    F. All contacts are specs
    (1) B C E   (2) C E B
    (3) D B E   (4) F C E

DIRECTIONS (Qs. 15-20) : In each of the following questions below are given 3 statements followed by three conclusions numbered I, II & III. You have to take the given statements to be true even if they seem to be at variance from the commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follow from the given statements disregarding commonly known facts.

15. **Statements :** All fruits are vegetables. All pens are vegetables.
    All vegetables are rains.
    Conclusions:
    I. All fruits are rains.
    II. All pens are rains.
    III. Some rains are vegetables.
    (1) None follows   (2) Only I & II follows
    (3) Only II & III follows   (4) Only I & III follows
    (5) All follows
16. **Statements:** Some hills are rivers.
    Some rivers deserts.
    All deserts are roads.
    Conclusions:
    I. Some roads are rivers
    II. Some roads are hills
    III. Some deserts are hills
    (1) None follows   (2) Only I follows
    (3) Only I & II follows   (4) Only II & III follows
    (5) All follow
17. **Statements:** All tree are flowers. No flower is fruit. All branches are fruit.
    Conclusions:
    I. Some branches are trees
    II. No fruit is tree.
    III. No tree is branch
    (1) None follows
    (2) Only either I or III follows.
    (3) Only II follows
    (4) Only either I or III, and II follows
    (5) Both II & III follows.
18. **Statements:** All tigers are jungles. No jungle is bird. Some birds are rains.
    Conclusions:
    I. No rain is jungle.
    II. Some rains are jungle.
    III. No bird is tiger.

(1) Only I & II follows.
(2) Only III follows
(3) Only either I or II, and III follows
(4) All follows
(5) None of these

19. **Statements:** Some mountains are hillocks.
    Some mountains are rivers.
    Some mountains are valleys.
    Conclusion:
    I. All mountains are either hillocks or rivers or valleys
    II. No valley is river
    III. Some river are valleys
    (1) None follows
    (2) Only I follows
    (3) Only either II or III follows.
    (4) Only III follows
    (5) None of these
20. **Statements:** Some picture are frames.
    Some frames are idols.
    All idols are curtains.
    Conclusions:
    I. Some curtains are pictures.
    II. Some curtains are pictures.
    III. Some idols are frames.
    (1) Only I & II follow   (2) Only II & III follow
    (3) Only I & III follow   (4) All follow
    (5) None of these

DIRECTIONS (Q. 21) : In each question below, there are two or three statements followed by four conclusions numbered I, II, III & IV. You have to take the given statements to be true even if they seem to be at variance with commonly known facts & then decide which of the given conclusions logically follow(s) from the given statements.

21. **Statements:** Some singers are rockers.
    Rockers are westerners.
    Conclusions:
    I. Some rockers are singers.
    II. Some Westerners are rockers.
    III. Some singers are westerners.
    IV. Some singers are not westerners.
    (1) I, II & III follow   (2) II, III & IV follow
    (3) I, III & IV follow   (4) All follow
    (5) None of these

DIRECTION (Qs. 22-27) : In each question below are given two statements followed by two conclusions numbers I & II. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the two 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 follows
    (5) If both conclusions I and II follow

22. **Statements:** Sohan is a sportman.
    Sportsmen are healthy.

Conclusions:
I. All healthy persons are sportsmen
II. Sohan is healthy.

23. **Statements:**
All students in my class are intelligent.
Rohit is not intelligent.
Conclusions:
I. Rohit is not a student of my class.
II. Rohit must work hard.

24. **Statements:**
All pens are roads.
All roads are houses.
Conclusions:
I. All houses are pens.
II Some houses are pens.

25. **Statements:** All huts are mansions.
All mansions are temples.
Conclusions:
I. Some temples are huts
II. Some temples are mansions.

26. **Statements:** All pens are chalks.
All chalks are chairs.
Conclusions:
I. Some pens are chairs.
II. Some chalks are pens.

27. **Statements:** Every minister is a student.
Every student is inexperienced.
Conclusions:
I. Every minister is inexperienced
II. Some inexperienced are students.

DIRECTIONS (Qs. 28-31) : Each question given below consists of five or six statements followed by options consisting of three statements put together in a specific order. Choose the option which indicates a valid argument containing logically related statements that is, where the third statement is a conclusion drawn from the preceding two statements.

28. A: All synopses are poets.
    B: Some synopses are mentors
    C: Some X are not mentors
    D: All X are poets
    E: All synopses are mentors
    F: All synopses are X.
    (1) A B C   (2) A E C
    (3) F E C   (4) D F A

29. A: Apples are not sweets
    B: Some apples are sweet
    C. All sweets are tasty.
    D. Some apples are not tasty.
    E. No apple is tasty.
    (1) E A C   (2) C E A
    (3) B D C   (4) C B D

30. A: No patriot is a criminal.
    B: Ramdas is not a criminal
    C: Ramdas is a patriot
    D: Mohandas is not a patriot
    E: Mohandas is a criminal
    (1) A B C   (2) A C B
    (3) A B E   (4) A D E

31. A: Lizards are birds.
    B: Some birds are ants.
    C: Lizards are ants.
    D: Some lizards are ants.
    E: Some lizards are not ants.
    F: No lizard is ant.
    (1) A C E   (2) A D B
    (3) B A C   (4) E D C

DIRECTIONS (Qs. 32-34) : In each of the question below, there are two or three statements given followed by four conclusions numbered I, II, III & IV. You have to take the given statements to be true even if they seem to be at variance with commonly known facts & then decide which of the given conclusion(s) logically follow(s) from the given statements.

32. **Statements:**
    1. Some drums are baskets.
    2. All baskets are gaskets.
    Conclusion:
    I. All gaskets are drums
    II. Some gaskets are drums.
    III. Some gaskets are baskets
    IV. Some gaskets are not baskets.
    (1) Either II or IV follows   (2) Either II or I follows
    (3) I & II follows   (4) Only II follows
    (5) II & III follows.

33. **Statements:**
    1. No paper is a graper.
    2. All grapes are takers.
    Conclusions:
    I. Some papers are not takers.
    II. Some papers are takers
    III. Some takers are not papers.
    IV. All takers are papers.
    (1) Either I or II follows   (2) Only I follows
    (3) Either III or IV follows   (4) Only III follows
    (5) Either I or II, and III follows.

34. **Statements:**
    I. Some blankets are pillows.
    II. All pillows are books.
    Conclusions:
    I. Some books are blankets.
    II. Some books are pillows.
    III. No book is a pillow.
    IV. Some blankets are not books.
    (1) Only I & IV follow   (2) Only I & II follow
    (3) I & either II or III follow (4) Either I or IV and II
    (5) Either I or IV or II or III follows.

DIRECTIONS (Qs. 35-39): Which of the following diagrams represent correctly the relation between the following:-

35. Dogs, humans and animals.

(1)

(2)

(3)

(4)
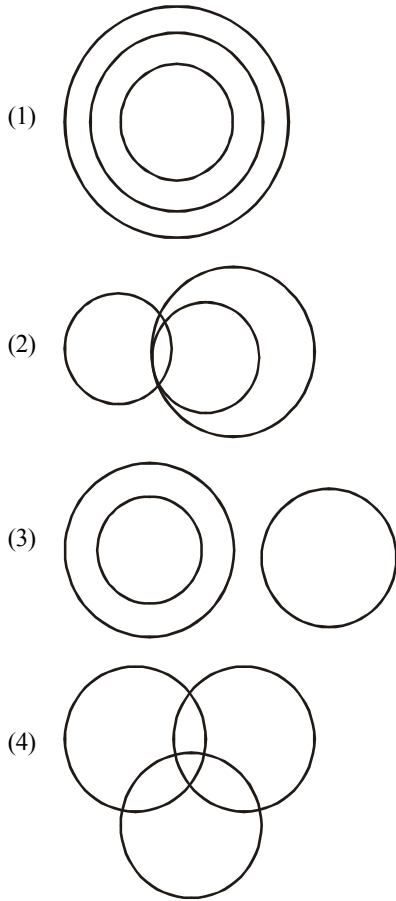
36. Carrots, vegetables and fruits.

(1)

(2)

(3)

(4)
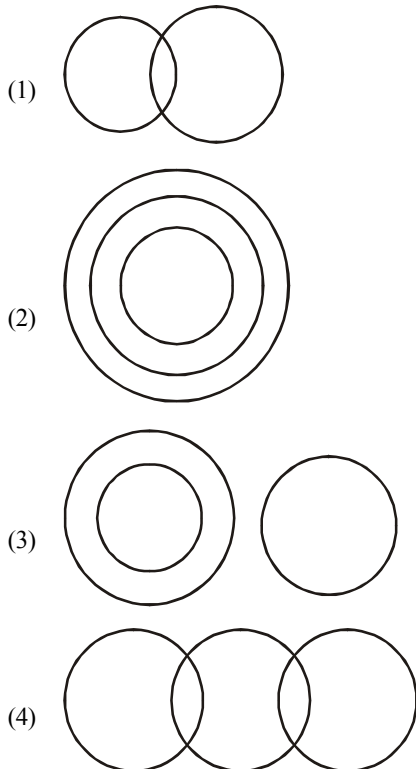
37. Roses, Jasmine, fruits and pomegranate.

(1)

(2)

(3)

(4)
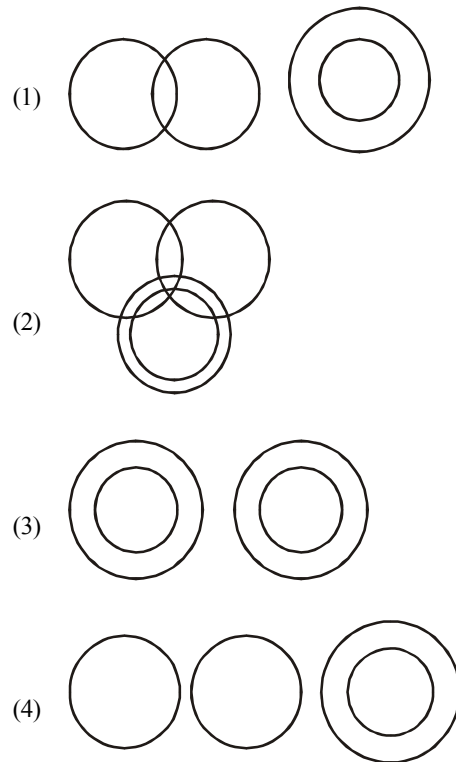
38. Wood, door, window and chair.

(1)

(2)

(3)

(4)
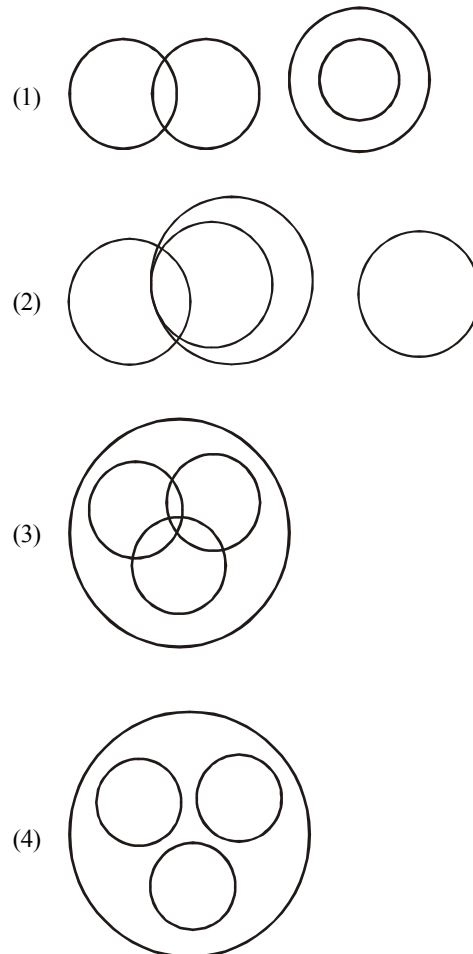
39. Water, river, sea and ocean.

(1)

(2)

(3)

(4)
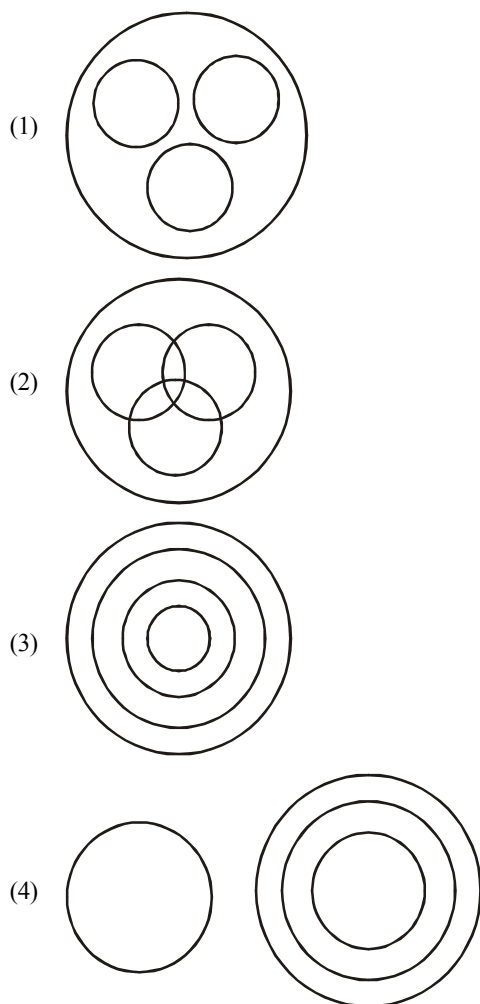
DIRECTIONS (Q. 40 to 41) (NTSE) : Take the given statement as true & decide which of the conclusions logically follows from the statement.

40. **Statements** 1. All pens are pencils.
2. No pencil is a monkey.

Conclusions:

I.   No pen is a monkey
II. Some pens are monkeys.
III. All monkeys are pens.

(1) Only I follow   (2) Only I & II follows
(3) Only II & III follows (4) I, II & III all follows

41. **Statement:** (1) All buses are trees.
(2) All trees are windows.

Conclusions: I. All buses are windows.
II. All windows are buses.
III. All trees are buses.

(1) Only I & II follow
(2) Only I follow.
(3) Only II & III follow
(4) Conclusion I, II & III all follows

42. Consider these three **statements** to be true:
- All birds fly
- Hyla is a reptile.
- Some reptile fly.

Which of these inferences is correct?

(1) Hyla flies.   (2) Hyla may fly.
(3) Hyla is a bird.   (4) Reptiles and birds fly.

43. Consider these 2 statements to be true:
- All ministers are low graduates.
- Some ministers are ladies.

Which of the inferences is correct?

(1) All lady ministers are law graduate.
(2) All lady minister is a law graduate.
(3) No male ministers is a law graduate.
(4) All law graduate ministers will be ladies.

44. **Statements:** – (1) Some clocks are calculators.
(2) All calculators are devices.

Which of the following conclusions is correct?

(1) All calculators are clocks.
(2) Some clocks are devices.
(3) All clocks are calculators.
(4) All clocks are devices.

Hints & SOLUTIONS

1. (1)
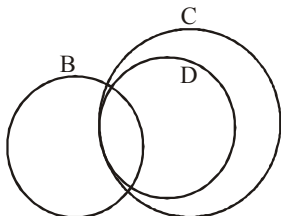
where B = Bottles, D = Drinks and C = Cups
Therefore, some bottles are cups & some cups are drinks.
So, option (1) only I & II follow is the correct answer.

2. (1)
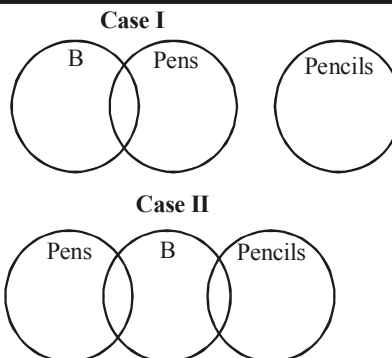
Case I

Case II

In both the cases, some pens are books. Thus only conclusion (1) follows. Option (1) is the correct answer.

3. **(e)** Both I & II follow
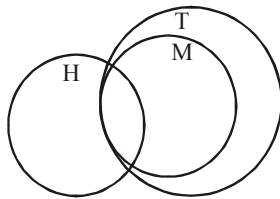
where H = Huts, T = Temples and M = Mansions.

4. **(e)** Both I & II follow.
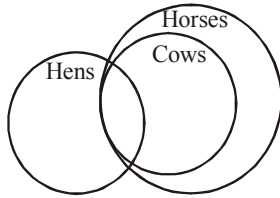
Case I
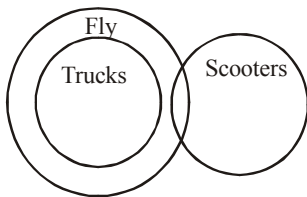
5. **(2)**

Case II
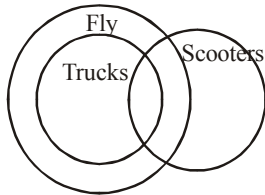
Case I
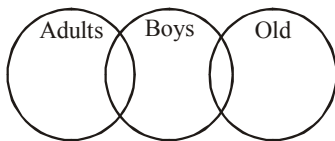
6. **(4)**

Case II
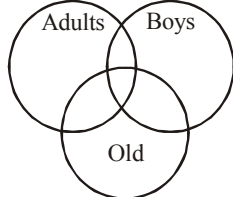
Therefore, neither of the conclusions follow. Thus option (4) is the answer.

Case I
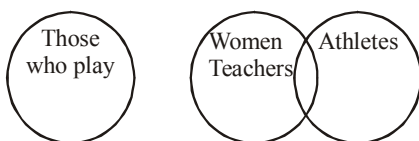
7. **(4)**

Case II
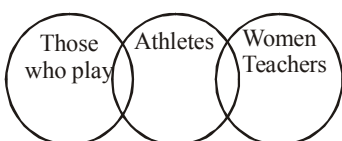
8. **(1)**
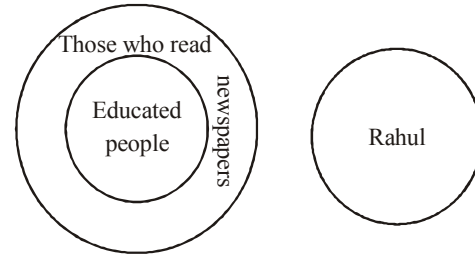
Therefore, Rahul is not an educated person. Option (1) stands correct.

9. **(1)** Option (1) – A C B
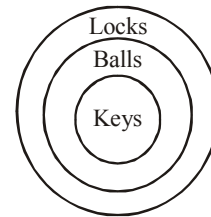
⇒ All keys are balls and all balls are locks. Therefore, all balls are locks.

Therefore, option (1) is the correct answer, where B logically follows the 2 sentence A and C as the conclusion.

10. **(3)** Option (1) – A B C
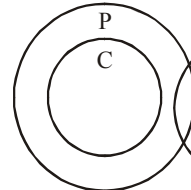
Case I	**Case II**
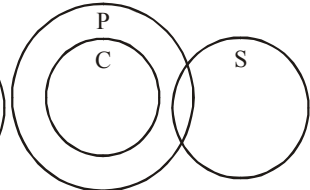
Sentence C – some sheets are cushions may no may not be true. Thus this option is incorrect.

Option (2) – B C D
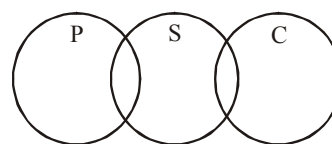
Case I	**Case II**
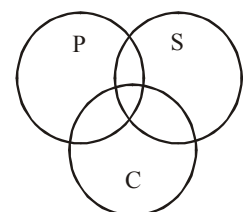
Pillows and cushions may or may not be related. Thus option (2) is not the correct conclusion.

Option (3)
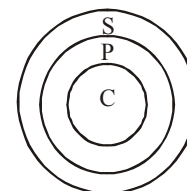
⇒ Some sheets are cushions.

Thus option (3) is the correct answer where sentence C follows the 2 sentences E and A.

11. **(1)** Option (1) – A B E
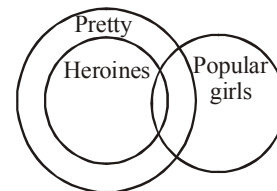
⇒ Some popular girls are pretty. Thus this is the correct answer.

12. **(3)** Option (1) – A B D
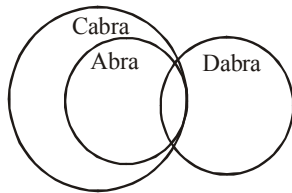
⇒ Sentence D (conclusion) does not follow the preceding 2 sentences.

Option (2) – A E F

Case II

Case I
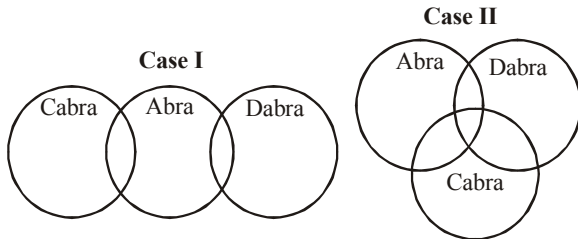
Sentence F (conclusion) may or may not be true. Therefore, option (2) is not correct.

Option (3) – B C E
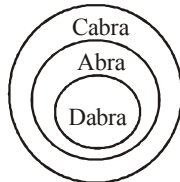
⇒ Some cabra are dabra, is the correct conclusion. Thus option (3) is the correct answer.

13. **(2)** Option (1) – A F C

Where G L = Good looking

W = Women and S = Smart
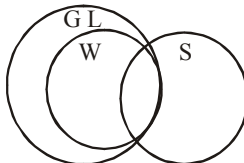
⇒ There is no relevance of Monika in the statements so there cannot be a conclusion that talks about Monika.

Option (2) – B D E
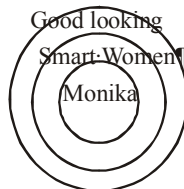
⇒ Monika is good looking. Therefore, option (2) is the correct answer.

14. **(4)** F C E is the correct answer.
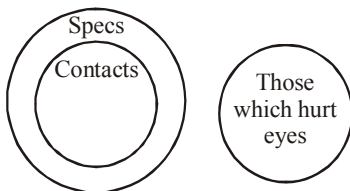
⇒ No contacts hurt eyes is the conclusion that logically follows. Thus option (4) is the correct answer.

15. **(e)**
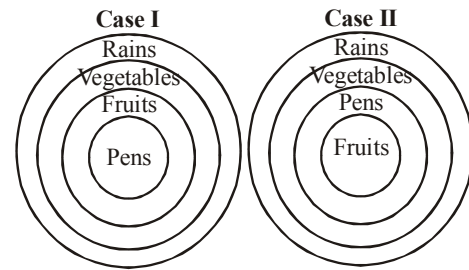
Case I   **Case II**

All 3 conclusions are correct in both the cases. Thus option (e) is the correct answer.

Case I

16. **(2)**
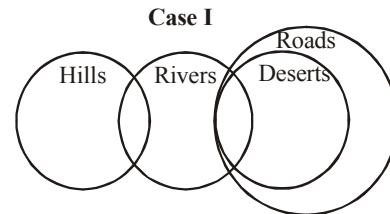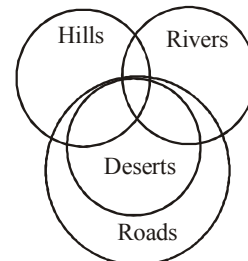
Case II

In both the cases only conclusion I follows. Thus option (2) is the correct answer.

17. **(e)** Both statement II & III are true.
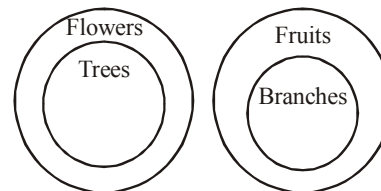
Case I
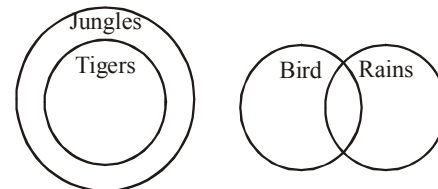
18. **(2)**

Case II
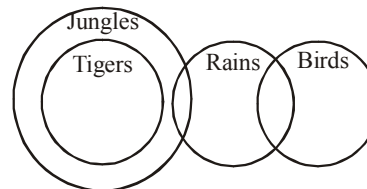
Case III
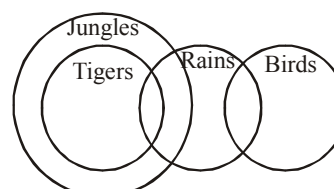
In all the 3 cases, no bird is a tiger (conclusion III) follows. Option (2).

Case I

19. **(e)**
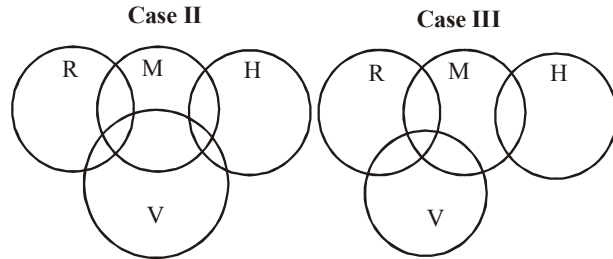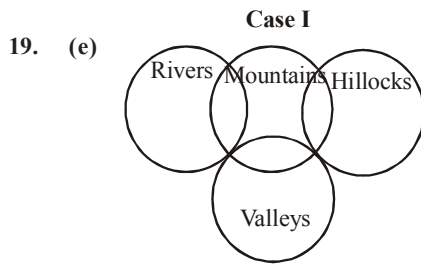
Case II   **Case III**

Since there are so many cases and there is no fixed conclusion that follows the given statements. Hence, option (e) None follows is the answer.

20. **(2)   Case I**
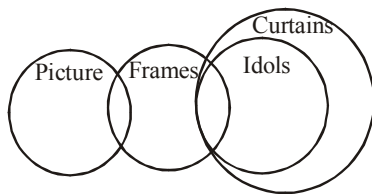
Case II
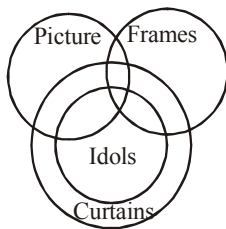
In both the cases, conclusion II & III follow. Hence option (2) is the answer.

21. **(4)**
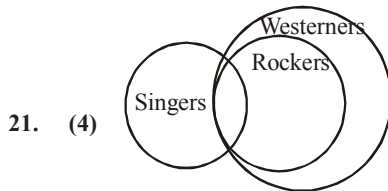
⇒ All the conclusions follow.

22. **(2)**
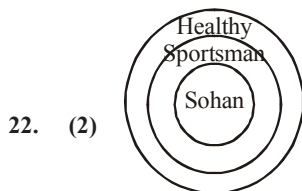
⇒ Sohan is healthy. Option (2).

23. **(1)**
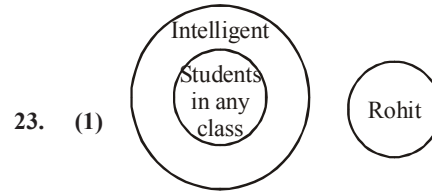
⇒ Only conclusion I is correct.

24. **(2)**
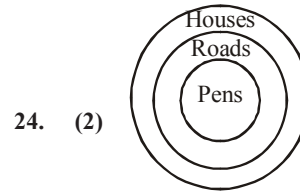
⇒ II conclusion follows, therefore, option (2).

25. **(e)**
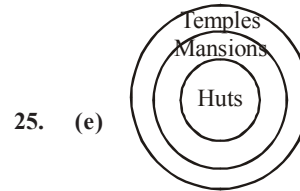
⇒ Both I and II follow.
So, option (e) is the correct answer.

26. **(2)**

⇒ Only conclusion II follows.

27. **(e)**
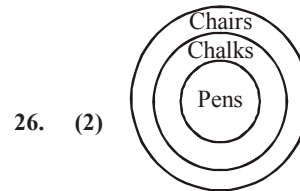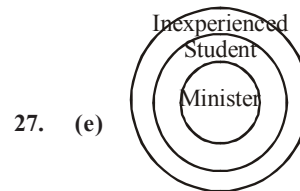
⇒ Both I & II follow.

28. **(4)   Option (1) – A C B**
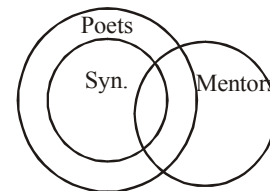
⇒ Irrelevant
Option (2) – A E C

Case I :

Case II :
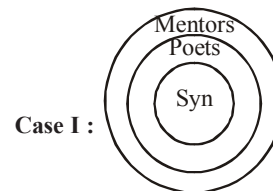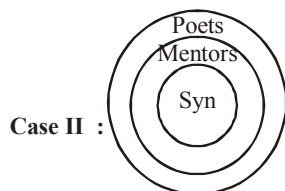
⇒ Irrelevant
Option (3) – F E C

Case I :

Case II :
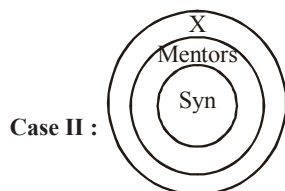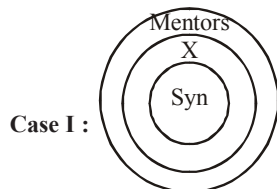
⇒ Conclusion may or may not be true
⇒ Option (4) – D F A
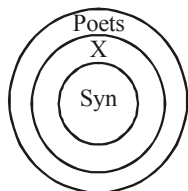
⇒ All synopses are poets. Option (4) is the correct answer.
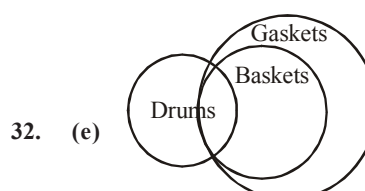
29. (2) Option (2) – C E A
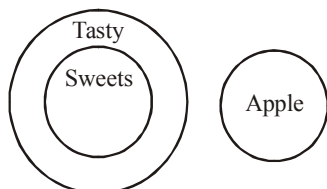
⇒ Apples are not sweets is the correct conclusion.
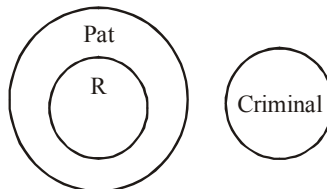
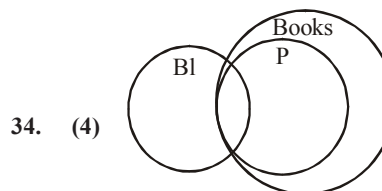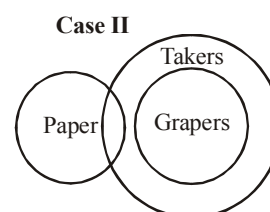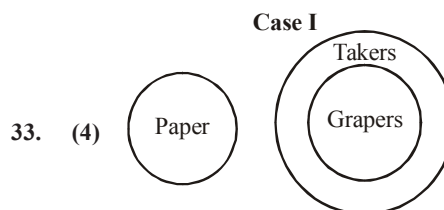**30. (2)** Option (2) – A C B

⇒ Ramdas is not a criminal.

31. (2) Option (2) – A D B

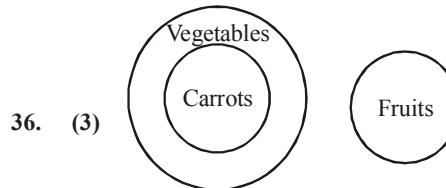⇒ Some birds are ants.

32. (e)
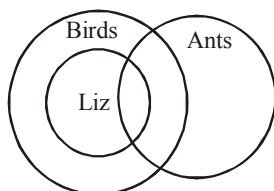
⇒ Both II and III follow.

Case I

33. (4)

Case II

34. (4)

⇒ Either I or IV is correct and II also follows.

35. (3)
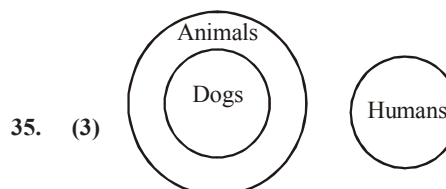
⇒ Dogs fall under animal category & humans are separate.
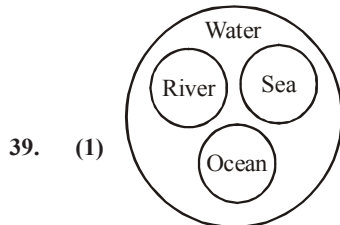
36. (3)

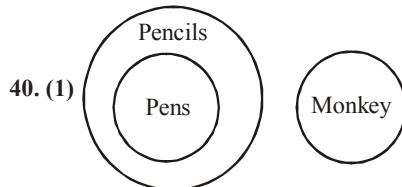⇒ Carrots are vegetables & fruits is a different category.

37. (4)

⇒ Roses and Jasmines are different from each other while pomegranate is a fruit.
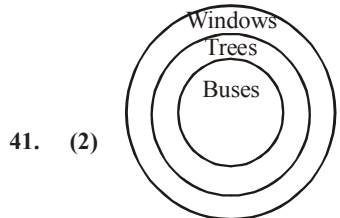
38. (4)
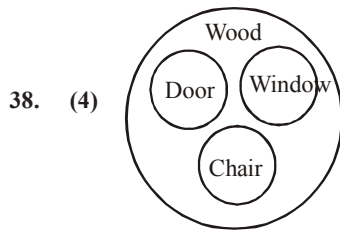
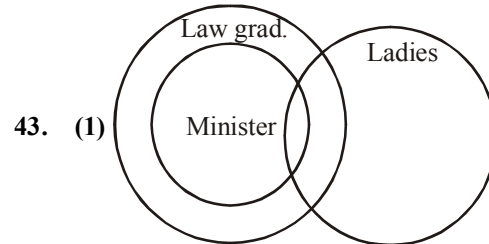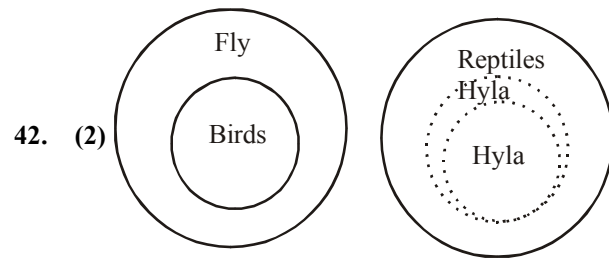⇒ Door, window & Chair although different things but are all made of wood.

39. (1)

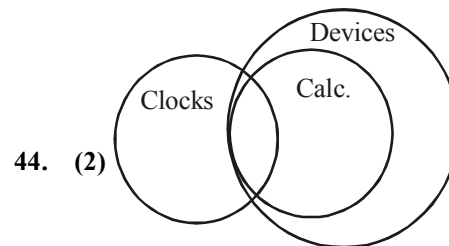⇒ Rivers, seas and oceans although different water bodies, all have water in them.

40. (1)

No pen is a monkey.

41. (2)

All buses are windows.

42. (2)

43. (1)

⇒ All lady ministers are law graduates.

44. (2)

⇒ Some clocks are devices.