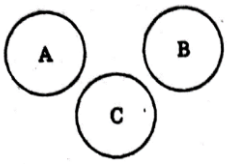
LOGICAL VENN DIAGRAMES

This section deals with questions which aim at analysing a candidate's ability to relate a certain given group of items and illustrate it diagrammatically.

RULE-1. If the items evidently belong to three different groups, the Venn diagram representing it would be as shown alongside.

Ex. **Doctors, Engineers, Lawyers**

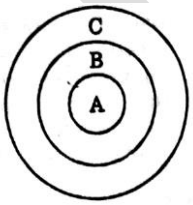
These three items bear no relationship to each other. So they are represented by 3 disjoint figures as shown.



RLE-2. If one item belong to the class of the second and the second belong to the class of the third, then the representation is in the form of three consecutive circles.

Ex. Seconds, Minutes, Hours

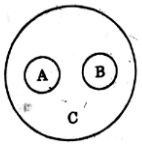
Clearly, seconds are a part of minutes and minutes are a part of hours. So, the Venn diagram would be as shown in the adjoining figure with circle A representing **Seconds** , circle B represent **Minutes** and circle C represents **Hours.**



RULR-3. If two separate items belong to the class of the third, they are represented by two disjoint circles inside a bigger circle.

Ex. Table, Chair, Furniture

Clearly, table and chair are separate items but both are items of furniture. So, they would be represented as in the adjoining figure with circle A representing **Table**, circle B representing **Chair** and circle C representing **Furniture**.

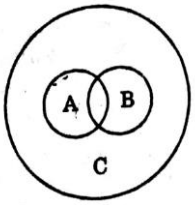


RULE-4. If two items belong to the class of the third such that some items of each of these two groups are common in relationship. Then they are represented by two interesting circles enclosed with in a bigger

Circle.

Ex. Males, Fathers, Brothers

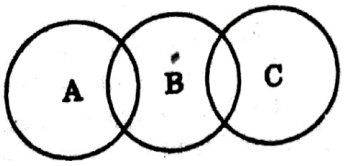
Clearly, some fathers may be brothers and vice-versa. So, fathers and brothers would be represented by two interesting circle. Also both fathers and brothers are males. So, the diagrammatic representation would be as shown in Fig. with circle A represent **Fathers**, circle B represent **Brothers** and circle C representing **Males.**



RULE-5. If two items are partly related to the third, and are themselves independent of each other they are represented by three interesting circles in a line.

Ex. Dogs, Pets, cats

Clearly, some dogs and some cats are pets. But all the pets are not dogs or cats. Also, dogs and cats are not related to each other. So, the given items would be represented as shown in Fig. with circle A representing **Dogs**, circle B representing **Pets** and circle c representing **Cats**.



RULE-6. If the three items are partly related to each other, they are represented as shown in the fig.

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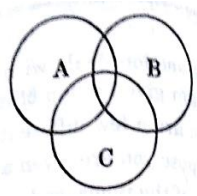
Ex. Clerks, Government Employees, Educated Persons.

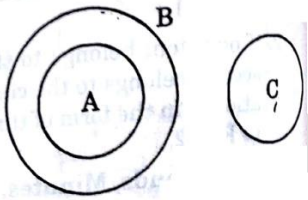
Clearly, some clerks may be government employees and some may be educated. Similarly, some government employees may be clerks and some may be educated. Also, some educated persons may be clerks some may be government employees. So, the given items may be represented as shown in fig. with three intersecting circles denoting the three classes.



RULE-7. If one item belongs to the class of second while third item is entirely different from the two, then they may be represented as shown in fig.

Ex. Engineers, Human Beings, Rats.

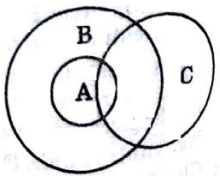
Clearly, all engineers are human beings. This would be represented by two concentric circles. But the class of rats is entirely different from these two. Thus, these items would be represented as shown in fig. with circle A representing **Engineers,** circle b representing **Human Beings** and circle C representing **Rats.**



RULE-8. If one item belong to the class of second and the third item is partly related to these two, they are represented as shown in fig.

Ex. Females, mothers, doctors.

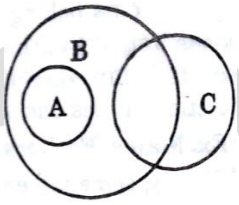
Clearly, all mothers are females. This would be represented by two concentric circles. But, some females and some mothers can be doctors. So, the circle representing doctors would intersect each of the two concentric circles. Thus, the diagram becomes as shown in fig. with circle A representing **Mothers**, circle b representing **Females** and the circle c representing **Doctors.**



RULE-9. If one item belong to the class of second and the third item is partly related to the second, they are represented as shown in fig.

Ex. Males, fathers, children

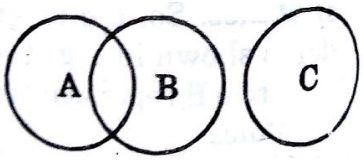
Clearly, all fathers are males. This would be represented by two concentric circles. But some males are children. But, children cannot be fathers. Thus, the diagram becomes as shown in fig. with circle a representing **Fathers**, circle b representing **Males** and circle C representing **Children.**



RULE-10. If two items are partly related to each other and the third item is entirely different from the two, they are represented as shown in fig.

Ex. Professors, Author, children

Clearly, some professors can be authors and vice versa. This would be represented by the two intersecting circles. But the class of children would be entirely different from these two. Thus, the Venn diagram would be as shown in fig. with circle A representing **Professors**, circle B representing **Authors** and circle c representing **Children.**



Directions (Questions 1 to 10): Each of the questions below contains three elements. These three elements may or may not have some linkage. Each groups of the elements may fit into one of the diagrams at (a), (b), (c), (d) and (e). you have to indicate groups of elements in each of the questions fit into which of the diagram given below. The letter indicating the diagram is the answer.

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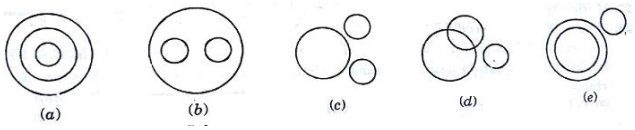
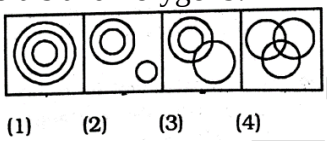


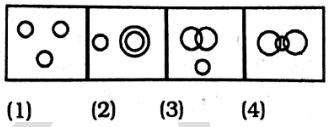
1. Vegetables, Potato, Cabbage (b)
2. Table, Chair, Furniture (b)
3. Week, Day, Year (a)
4. Judge, Thief, Criminal (e)
5. Husband, Wife, Family (b)
6. Square, Rectangle, Polygon (a)
7. Bus, Car, Vehicle (b)
8. Anxiety, Intelligence, Strength (c)
9. House, Bedroom, Bathroom (b)
10. Mustard, Barley, Potato (c)

TYPE-1

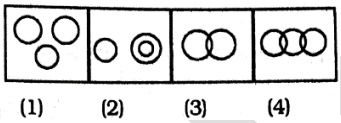
Q1. Which figure represents Rhombus, Quadrilaterals and Polygons?



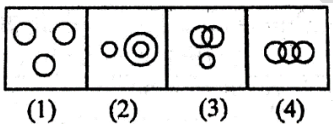
Q2. Which of the following diagrams represents smokers, lawyers, non-smokers?



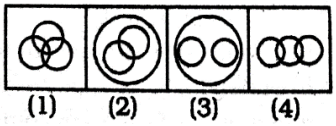
Q3. Which of the following diagrams represents Mammals, Cows and Crows?



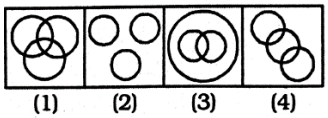
Q4. Which of the following diagrams represents the relationship among Shirts, Bed sheets and Towels?



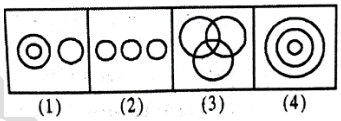
Q5. Which of the following diagrams represents family, sons and daughters?



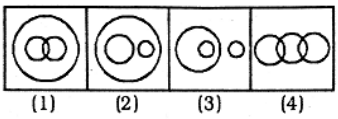
Q6. Which of the following diagrams represents Politicians, Poets and Women?



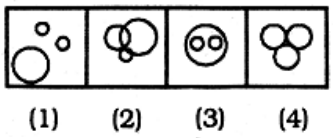
Q7. Which of the following diagrams represents Pigeons, Birds and Dogs?



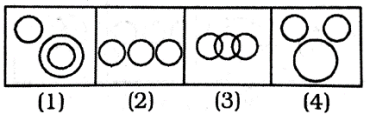
Q8. Which of the following diagrams represents animals, vegetables and potatoes?



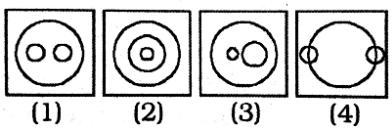
Q9. Which of the following diagrams represents dogs, carnivore and tiger?



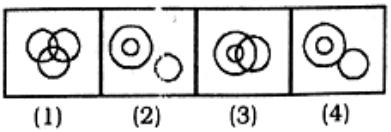
Q10. Which of the following diagrams represents Police, Thief and Criminal?



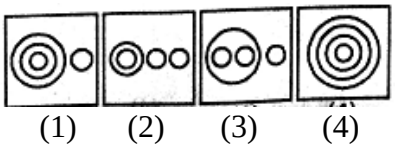
Q11. Which of the following diagrams represents Nation, States and Districts?



Q12. Which of the following diagrams represents Boys, Students and Athletes?



Q13. Which of the following diagrams represents milk, goat, cow and hen?



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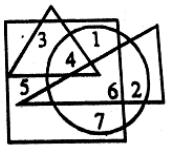
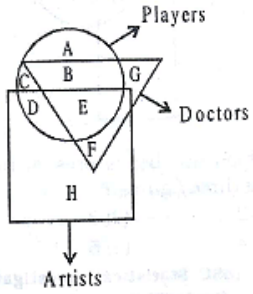
TYPE-2

Q1. Which number is present only in one figure?



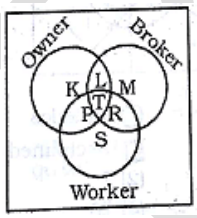
(a) 1 (b) 3 (c) 5 (d) 7

Q2. In the following Venn diagram identify the letter which donates players who are also doctors but, not artists?



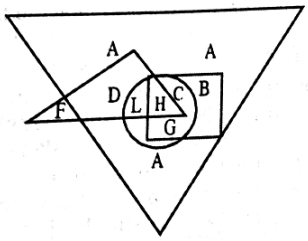
(a) B + E (b) E (c) B (d) A

Q3. The diagram given bellow represents owner, broker and worker. Identify the region which represents all the three i.e. owner, broker and worker.



(a) L (b) T (c) P (d) R

Directions (4 to 8): The following questions, are based on the following figure. Study the figure carefully and answer the questions.



Here
(1) Big triangle represents Artists.
(2) Small triangle represents Scientists.
(3) Rectangle represents Dancers.
(4) Circle represents Doctors.

Q4. Which letter represents the Artists who are Doctors and dancers?
(a) H (b) G (c) D (d) A

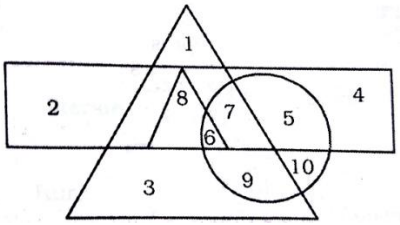
Q5. Which letter represents the Artists who are neither Scientists nor Doctors?
(a) A & B (b) A & L (c) B & G (d) L & H

Q6. Which letter represents the Artists who are Dancers as well as doctors?
a) A & D b) A & C c) H & G d) C & D

Q7. Which letter represents the Artists who are neither Scientists nor Doctors nor Dancers?
(a) D (b) F (c) A (d) G

Q8. Which letter represents the Scientists who are not Artists?
(a) B (b) D (c) L (d) F

Directions (4 to 8): The following questions, are based on the following figure. Study the figure carefully and answer the questions.



(1) Big triangle represents Authors.
(2) Small triangle represents dramatists.
(3) Rectangle represents poets.
(4) Circle represents essayists.

Q9. Which number represents the Poets who are also essayists, dramatists and authors?
(a) 7 (b) 5 (c) 6 (d) 8

Q10. Which number represents Dramatists who are not essayists?
(a) 8 (b) 7 (c) 5 (d) 1

Q11. Which number represents the Poets who are also Essayists but not authors or Dramatists?
(a) 5 (b) 6 (c) 7 (d) 8

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Q12. Which number represents only authors who are neither poets nor dramatists or essayists?
a) 2 & 3 b) 1 & 3 c) 4 & 5 d) 8 & 6

Q13. Which number represents the Poets who are neither authors nor essayists or Dramatists?
a) 2 & 4 b) 8 & 3 c) 7 & 9 d) 5 & 1

***** END *****

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