**NAME :: ZAKIR ULLAH**

**ID:: 15757**

**SUBJECT :: DISCRETE STRUCTURE**

**TEACHER :: SIR ABRAR WAZIR**

***Q1) What is Venn diagram? Explain in detail the Applications of Venn Diagram .***

***Answer:***

**VENN DIAGRAM:-**

Venn Diagram uses overlapping circles or other shapes to illustrate the logical relationships between two or more set of items. Often, they serve graphically organize things, highlighting how the items are similar and different.

**APPLICATIONS OF VENN DIAGRAM:-**

Although Venn diagrams are primarily a thinking tool, they can also be used for assessment.

**WHEN WE USE:-**

Venn diagram are used to compare and contrast group of things.

They are useful tool for formative assessments because they :

* Can be used to generate discussions.
* And provide teachers with information about student’s thinking

In science they are helpful for classification.

As an accepted convention for representing similarities and differences, knowing how to use them contributes to Key Competency, Using Language, Symbols and texts.

**HOW THE STRATEGY WORKS:-**

A Venn diagram consists of overlapping circles. Each circle contains all the elements of the set. Where the circle overlap shows her elements that the set have in common. Generally there are two or three circles.

***Q.2) What is Union? Draw membership table for union using different examples.***

***Answer:***

In set theory, the union (denoted by U) of a collection of sets is the set of all elements. It is one of the fundamental operations through which sets can be combined and related to each other.

|  |  |  |
| --- | --- | --- |
| A | B | AUB |
| 1 | 1 | 1 |
| 1 | 0 | 1 |
| 0 | 1 | 1 |
| 0 | 0 | 0 |

***Q.3) What is Intersection? Draw membership table for intersection using different examples.***

***Answer:***

Intersection of two given sets is the largest set which contains all the elements that are common to both the sets.

To find the intersection of two given sets A and B which consists of all the elements which are common to both A and B

|  |  |  |
| --- | --- | --- |
| A | B | A ∩ B |
| 1 | 1 | 1 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |

***Q.4) What is Difference? Draw membership table for Difference using different examples.***

***Answer:***

If A and B are two sets, then their difference is given by A - B or B – A

* If A = {2,3,4 } and B = {4,5,6}

A – B means elements of A which are not the elements of B.

i.e. In the above example A-B ={2,3}

|  |  |  |
| --- | --- | --- |
| A | B | A - B |
| 1 | 1 | 0 |
| 1 | 0 | 1 |
| 0 | 1 | 0 |
| 0 | 0 | 0 |

***{THE END}***