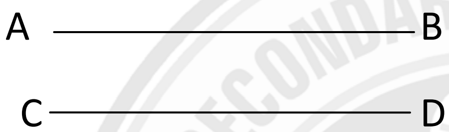
DEPARTMENT OF EDUCATION (S)
Government of Manipur

CHAPTER-7

CONGRUENCE OF TRIANGLES.

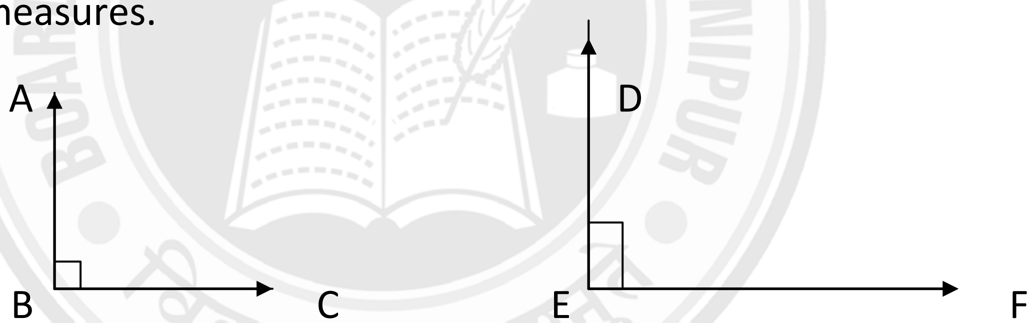
Notes:

1. **When does two line segment are said to be congruence ?**
   Ans : Two line segments are said to be congruence if they have the same length .



$\overline{AB} \cong \overline{CD}$

2. **When does two angles are said to be congruence ?**
   Ans : Two angles are said to be congruence if they have the same measures.



$\angle ABC \cong \angle DEF$ [Since both are 90^0]

3. **When does two triangles are said to be congruence ?**
   Ans : Two triangles are said to be congruence if the two have same size and shape or if one of them is a copy of the other.

$\triangle ABC \cong \triangle DEF$

On the other hands it can be say so. Two triangles are congruence if their corresponding sides and angles are equal.

CRITERIA FOR CONGRUENCE OF TRIANGLES:

1. **SSS Congurence criterion** : (Side Side Side) In two triangles the three sides of one triangles is equal to the corresponding sides of another triangle. Then the two triangles are congruent.

2.**SAS Congruence criterion**: (Side Angle Side) In two triangles the two sides and the angle included between them of a triangle are equal to two corresponding sides and the angle included between them of another triangle, then the triangle are congruent.

3. **ASA Congruence criterion** : (Angle Side Angle) In two triangles , two angles and the included side of a triangle are to two corresponding angles and the included side of another triangle, then the triangles are congruent.

4. **RHS Congruence criterion** : (Right Hypotenuse Side) In two triangles , the hypotenuse and one side of a right-angled triangle are respectively equal to the hypotenuse and one side of another right-angled triangle, then the two triangles are said to be congrue