WEEK #3: FUNDAMENTALS OF PROJECTION

1. Draw the projections of the following points on the same ground line, keeping the projectors 25 mm apart.

   A in the H.P. and 20 mm behind the V.P. **(10 min./5 marks/level 1/ -)**

   B 40 mm above the H.P. and 25 mm in front of the V.P. **(10 min./5 marks/level 1/ -)**

2. Draw the orthographic multi-view projections of the following **points**. Choose appropriate *scale*.

   a) A toy boat (point R) is floating inside a square well 3 m below H.P (floor) and 1 m behind V.P (wall). **(10 min./5 marks/ /level 2/ -)**

   b) A box (point S) is kept in the steps, which is 5 feet below H.P (floor) and 4 feet in front of V.P (wall) from the observer. **(10 min./5 marks/ /level 2/ -)**

3. Draw the multi-view projection of **straight lines inclined to only one plane.**

   a) The length of the top view of a line parallel to the V.P. and inclined at 45° to the H.P.is 50 mm. One end of the line is 12 mm above the H.P and 25 mm in front of the V.P. Draw the projections of the line and determine it's true length.

   (25 min./10 marks/ /level 1/ -)

b) The front view of a 7.5 m long lamp post (line AB) lying down measures 5.5 m. The lamp post (line AB) is parallel to the ground (H.P.) and one of its ends is in the wall (V.P.) and 25 mm above the ground (H.P.) Draw the projections of the line and determine it's inclination with the wall (V.P.) **(25 min./10 marks/ /level 2/ Gen.)**

4. Draw a free-hand (manual/ CAD) **CREATIVE** conceptual drawing of a **PROPOSED** (Modify the existing product like pen, sharpener, micro tip pencil, stapler, car, airplane, etc., **(new, presently not-existing features must be added to existing product)**. Label the parts and list out the special features of the product, an example shown below.

(60 min./5 marks/ /level 3/ General consumer applications)