Roll No.	1	6	0	2	-	2	0	-	7	3	3	-			

	VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS-CBCS) DEPARTMENT OF MECHANICAL ENGINEERING **B.E. I – SEMESTER, 2020-21** **UI21ES030CE :: BASIC ENGINEERING DRAWING**	**CSE-A** **2020-21**
SHEET 2	**PROJECTIONS OF POINTS**	**5 Marks**

1 Draw the *projections* of the following points on the *same ground line*, keeping the projectors *30 mm* apart:

(a) **A**, *in* the HP and *20 mm behind* the VP

(b) **B**, *40 mm above* the HP and *25 mm in-front* of the VP

(c) **C**, *in* the VP and *40 mm above* the HP

(d) **D**, *25 mm below* the HP and *25 mm behind* the VP

(e) **E**, *15 mm above* the HP and *50 mm behind* the VP

(f) **F**, *40 mm below* the HP and *25 mm in-front* of the VP

(g) **G**, *in* both the HP and the VP

2 A point **P** is *50 mm* from both the reference planes. Draw its *projections* in all possible positions.

3 Draw the *projections* & state the *quadrants* in which the following points are situated:
(a) point **P**, its top view is *40 mm above* ***xy*** & front view *20 mm below* the top view
(b) point **Q**, its projections coincide with each other *40 mm below* ***xy***

4 A point **P** is *15 mm above* the HP and *20 mm in-front* of the VP. Another point **Q** is *25 mm behind* the VP and *40 mm below* the HP. The distance between their projectors is *90 mm*. Draw (i) the *projections* of **P** and **Q** and (ii) the *straight lines* joining their top views and front views.

5 Projections of various points are given in Fig. 6-5 (*dimensions in cm*). State the *position* of each point w.r.t. the planes of projection giving the distances in *mm*.

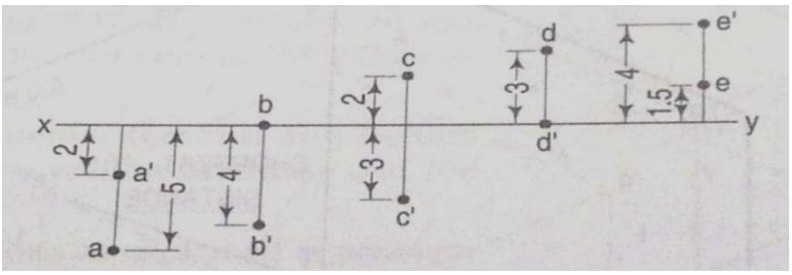

Fig.3.5

6 Two points **A** and **B** are in the HP. The point **A** is *30 mm in-front* of the VP, while **B** is *behind* the VP. The distance between their projectors is *75 mm* and the line joining their top views makes an angle of *45º* with ***xy***. Find the *distance* of the point **B** from the VP.

7 A point **P** is *30 mm below* the HP and lies in the *third-quadrant*. Its shortest distance from ***xy*** is *60 mm*. Draw its *projections*.

8 A point **A** is situated in the *first-quadrant*. It is *equidistant* from the principal planes and its shortest distance from the intersection point of HP, VP and the auxiliary plane is *60 mm*. Draw the *projections* of the point and determine its *distance* from the principal planes.

9 A point *30 mm above xy* line is the *plan-view* of two points **P** and **Q**. The elevation of **P** is *45 mm above* the HP while that of the point **Q** is *35 mm* below the HP. Draw the *projections* of the points and state their *position* with reference to the principal planes and the *quadrant* in which they lie.

10 A point **Q** is *40 mm above* the HP and *30 mm in-front* of the VP. Draw its *projections* and find its *shortest distance* from the intersection of HP and VP.

Note: The final solution to be drawn with HB grade pencil
All construction lines to be drawn with 2H grade pencil
Dimensioning to be done using H grade pencil

Source: Engineering Drawing – N. D. Bhatt
Exercise **9**