## INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY Department of Mechanical Engineering

ME119 – Engineering Drawing and Graphics

2014-2015 Semester 1

## **Orthographic Projections**

## Instructions:

- 1. Do not erase any construction lines
- 2. Clearly show all the required dimensions
- 3. Mention the scale used for each problem
- 4. For each problem, draw the symbol indicating whether first or third angle projection method is used
- 1. Figure 1 shows the orthographic projections of a solid using the first angle method of projection. Draw the three view (FV, TV, LHSV) using the third angle method of projection.
- 2. Figure 2 shows the orthographic projections of a solid using the third angle method of projection. Draw the three view (FV, TV, LHSV) using the first angle method of projection.
- 3. Using first angle method of projection, draw the front view, top view and the left hand side view of the object shown in Figure 3. The arrow indicates the direction from which the front view should be observed.
- 4. Using **third** angle method of projection, draw the front view, top view and the left hand side view of the object shown in Figure 4. The arrow indicates the direction from which the front view should be observed.
- 5. Using first angle method of projection, draw the front view, top view and the left hand side view of the object shown in Figure 5. The arrow indicates the direction from which the front view should be observed.
- 6. Using first angle method of projection, draw the front view, top view and the right hand side view of the object shown in Figure 6. The arrow indicates the direction from which the front view should be observed.
- 7. Using first angle method of projection, draw the front view, top view and the right hand side view of the object shown in Figure 7. The arrow indicates the direction from which the front view should be observed.
- 8. Using **third** angle method of projection, draw the front view, top view and the left hand side view of the object shown in Figure 8. The arrow indicates the direction from which the front view should be observed.
- 9. Using first angle method of projection, draw the front view, top view and the left hand side view of the object shown in Figure 9. The arrow indicates the direction from which the front view should be observed.
- 10. Using first angle method of projection, draw the front view, top view and the right hand side view of the object shown in Figure 10. The arrow indicates the direction from which the front view should be observed.
- 11. Using first angle method of projection, draw the front view, top view and the right hand side view of the object shown in Figure 11. The arrow indicates the direction from which the front view should be observed.
- 12. Using **third** angle method of projection, draw the front view, top view and the right hand side view of the object shown in Figure 12. The arrow indicates the direction from which the front view should be observed.
- 13. Figure 13 shows the orthographic projections of a solid using the first angle method of projection. Draw the three view (FV, TV, LHSV) using the third angle method of projection.

- 14. Figure 14 shows the orthographic projections of a solid using the third angle method of projection. Draw the three view (FV, TV, LHSV) using the first angle method of projection.
- 15. Using **third** angle method of projection, draw the front view, top view and the left hand side view of the object shown in Figure 15. The arrow indicates the direction from which the front view should be observed.
- 16. Using first angle method of projection, draw the front view, top view and the right hand side view of the object shown in Figure 16. The arrow indicates the direction from which the front view should be observed.
- 17. Using first angle method of projection, draw the front view, top view and the right hand side view of the object shown in Figure 17. The arrow indicates the direction from which the front view should be observed.
- 18. Using first angle method of projection, draw the front view, top view and the right hand side view of the object shown in Figure 18. The arrow indicates the direction from which the front view should be observed.





