

INDIAN INSTITUTE OF TECHNOLOGY PATNA
CE 111: Engineering Drawing
End Semester Examination 2017-18

Maximum Time: 180 Minutes

Maximum Marks: 100

Instructions

- Read the questions carefully before answering.
- Drawing should be only on one side of the page.
- All students should bring their own drawing equipment.
- Numbers in the parenthesis at the end of each question indicate maximum marks.
- All dimensions are in **mm** (unless specified otherwise).
- Solution of each question should be demarked by thick continuous lines.
- First sheet should have border line, standard sized title block. Write your name and roll number and other details clearly in it.
- All sheets should have border line.
- Students may use more than one sheet only if necessary.
- Answer the questions on the provided drawing sheet itself.

Questions

1. Draw the orthographic projection (plan and elevation) of a regular hexagonal pyramid of side 30 mm and height 70mm. The pyramid is kept on the HP on one of its triangular face such that the projection of the axis of the pyramid on HP makes an angle of 30° with the XY line. **(20)**
2. A 60 mm diameter spherical paper weight has a 45 mm diameter flat base at the bottom. It is placed on HP on its flat bottom. Draw the isometric projection of the paper weight. **(20)**
3. A right circular cone of base diameter 50 mm and height of 60 mm rests on the HP. The cone is cut by a plane which makes an angle of 45° to the HP and is perpendicular to the VP. The plane cuts the base at a distance of 15 mm from the center. Draw a) the sectional view b) draw the true shape of the cut section c) draw the development of the curved surface only. **(30)**
4. Draw the missing RSV and isometric view using the views given in the figure below in first angle projection. **(30)**

