DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD – 402 103
Summer Semester Supplementary Examination, May 2018

Branch: B. Tech   **Semester: I**
Subject with Subject Code: Engineering Graphics [ME104]   **Marks: 60**
**Date: 11 / 05 / 2018**   **Time: 4 Hrs**

Instructions to the Students:
1. Each question carries 12 marks.
2. Attempt **any five** questions of the following.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.

Q.1. a) Identify the mistakes made, if any, while showing the dimensions in the following figure and redraw the figure. (4)
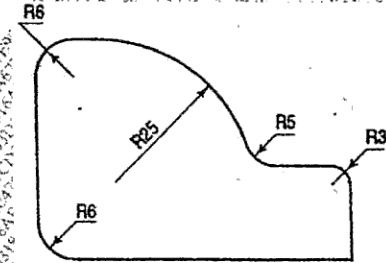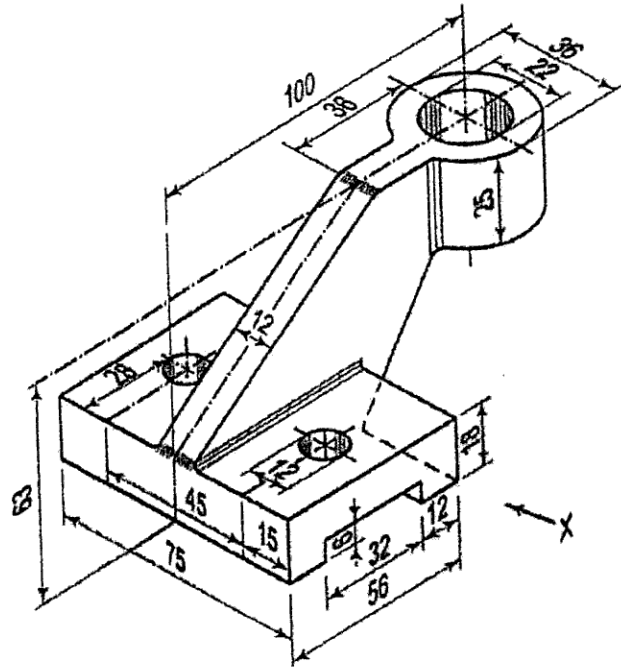

b) Redraw the figure showing a lever as shown in the following figure. (8)
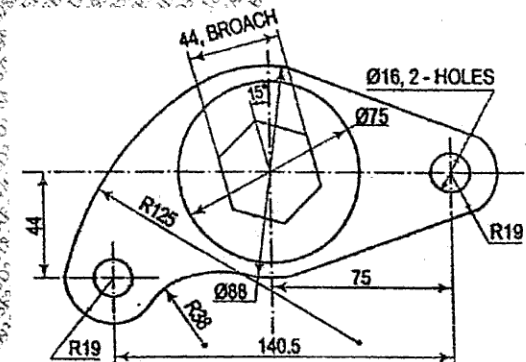
Q.2. a) Draw the projection of points P and T, when point P is 25 mm above H.P. and 20 mm behind V.P. and point T is in H.P. and 25 mm in front of V.P. **(4)**

b) Draw the following views of the object shown in the following figure in X direction. **(4)**
   i) Front view **(4)**
   ii) Top view

Q.3. a) A line AB 90 mm long is inclined at 30° to HP. Its end A is 12 mm above HP and 20 mm in front of the VP. Its front view measures 65 mm. Draw the Top View of AB and determine its inclination with VP. Also locate the traces. **(6)**

b) Draw the projections of a regular hexagon of 30 mm side, having one of its sides in the HP and its surface making an angle of 45° with the HP. **(6)**

Q.4. A right hexagonal prism of side 25 mm and 20 mm thick with one side of the base is perpendicular to V.P. resting on the ground. A vertical frustum of square pyramid of base side 30 mm and height 50 mm is resting on the prism such that 20 mm sides and top face side 30 mm. Assume that axis of both the solids are one side of square makes 45° with the V.P. Assume that axis of both the solids are coinciding. Draw the projections of combined solids when top corner of the square pyramid is 70 mm above the ground (H.P.) **(12)**

Q.5. Solve **any one** of the following questions **(12)**
A square pyramid with a base side of 45 mm and slant height of 70 mm is resting on the base on the HP with two base sides perpendicular to the VP. It is cut by two AIPs, sloping in opposite directions, such that the true shape of the section is
i) a trapezium with parallel sides of 30 mm and 14 mm
ii) a trapezium with smaller sides of 20 mm and the distance between parallel sides being 36 mm.
Locate the cutting planes and draw FV and sectional TV. Also draw the true shapes of both the sections.

OR

Following figure shows Front View (FV) and Top View (TV) of an object. Draw its isometric view.
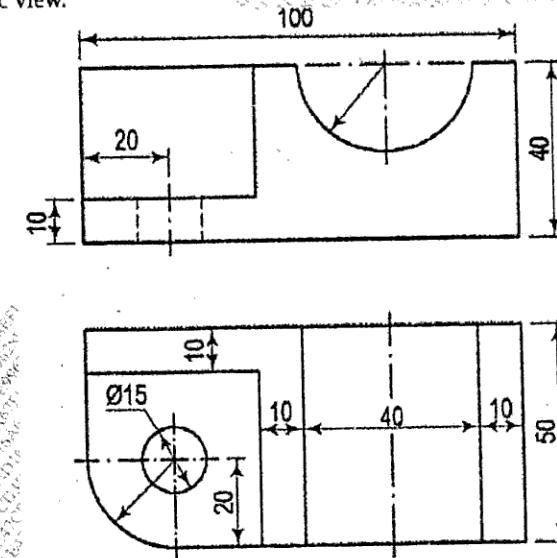
Q.6. A pentagonal pyramid, base side 56 mm and length of axis 90 mm, has a corner of base in the VP. The slant edge through that corner is inclined to the VP at 60° and parallel to the HP. The solid is cut by an Auxiliary Vertical Plane inclined at 30° to the VP and passing through the midpoint of axis. Develop the remaining portion of the pyramid. **(12)**

99628EFED935P3D318AE47CD3D10A07E