Total No. of Questions : 5 Total No. of Printed Pages : 4

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EI-181

B.E. (IInd Sem.) (CGPA) Civil Engg. Exam.-2015

ENGINEERING GRAPHICS

Paper : CE-205

Time Allowed : Three Hours
Maximum Marks : 60

Note : Attempt all questions.
Draw answers on drawing sheet. Use both sides of the sheet.

Q.I The distance between two stations by road is 200 km and it is represented on a map by a 5 cm long time. Find the R.F. and construct a diagonal scale showing a single kilometre and long enough to measure upto 600 km. Show a distance of 389 km on the scale.

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A circle having 50mm diameter rolls within a circle with 150 mm diameter with internal contact. Draw the locus of a point lying on the circumference of the rolling circle for one complete turn. Draw a normal and a tangent to the curve at a point 40 mm from the centre of bigger circle.

Q.II The projectors of the ends of a line AB are 5 cm apart. The end A is 2 cm above the HP and 3 cm infront of the VP. The end B is 1 cm below the HP and 4 cm behind the VP. Determine the true length and traces of AB, and its inclinations with the two reference planes.

or

The top view of a 75 mm long line AB measures 65 mm while the length of its front view is 50 mm. Its one end A is in the HP and 12 mm in front of VP. Determine true length and traces of AB, and its inclinations with the reference planes.

Q.III Draw the projections of a rhombus having diagonals 125m and 50mm long, the smaller diagonal of which is parallel to both the principal planes, while the other is inclined at 30^0 with the HP.

Contd. .....

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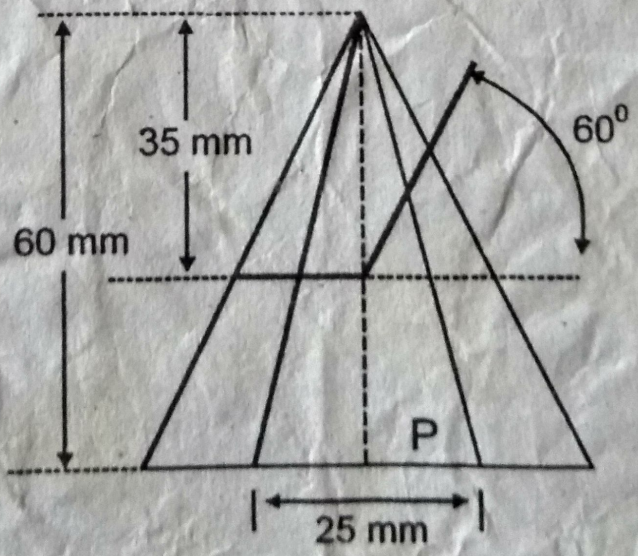
or

Draw the projections of a cone, base 70 mm diameter and axis 90 mm long, lying on HP on one of its generators with the axis inclined at 30° to the VP.

Q.IV A cone base 70 mm diameter and axis 80 mm long is resting on its base on the ground. It is cut by a section plane perpendicular to the VP, inclined at 45° to the HP and cutting the axis at a point 35 mm from the apex. Draw its front view, sectional top view and time shape of the section.

or

Draw the development of the lateral surface of the part P of the hexagonal pyramid show in figure—



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Q.V A sphere with a 25 mm diameter is cut by a section plane at a distance of 15 mm from its centre. It is surmounted with its cut surface at the top, over a frustum of a square pyramid with 70 mm base side, 50 mm top side and 40 mm height. Draw isometric view of the arrangement.

or

Draw isometric views of a cylinder, base 50 mm diameter and axis 70 mm long, when—

(a) Base is on the HP

(b) One of the generators on the HP

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