[Total No. of Questions: 09] MORNING 30 MAY 2019 [Total No. of Pages: 02]

Uni. Roll No. .....

Program/ Course: B. Tech. (Sem. 1st/2nd)

Name of Subject: **ENGINEERING GRAPHICS AND DESIGN**

Subject Code: **ESC-103**

Paper ID: **15931**

Time Allowed: 03hrs **Max. Marks: 60**

Note:

1. **All sections are compulsory.**
2. **Section- A** and **Section – B** are based on Part – I (Theory) of syllabus [both Traditional Engineering Graphics (TEG) and Computer Graphics (CG)
3. **Section – C** is out of part II [**Practice Drawing**] portion of syllabus (Traditional Engineering Graphics ONLY).
4. Any missing data may be assumed appropriately.

Section – A (From Part – I (Theory) both TEG and CG) **[Marks: 02 each]**

Q1.

a) Name the various dimensioning techniques.
b) What do you mean by single stroke letters?
c) What is the trace of a straight line?
d) Draw the symbol to represent 1st angle projection?
e) Describe the extrusion command.
f) What is the purpose of developing a surface?

Section – B (From Part – I (Theory) both TEG and CG) **[Marks: 04 each]**

Section – B1 (TEG ONLY)

Q2. Write "**DHAN GURU NANAK**" in height 10 mm.

Q3. A regular pentagonal lamina having base edge 30 mm is resting on one of its corner in HP with its surface inclined at 45^0 to HP. Draw its Projection.

Section – B2 (CG ONLY)

Q4. Enumerate the types of array along with its applications.

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Q5. Describe the methods to draw a circle. (Any four).

Section – C (From Part – II [Practice (Drawing) TEG ONLY] **[Marks: 08 each]**

Q6. Plan and elevation of a line AB, 60mm long, measure 50mm and 40mm respectively. End A is 15mm above HP and 20mm in front of the VP. Draw its projections and determine the true inclination with HP and VP respectively

Or

A line PQ 60 mm long having its end P 15 mm above HP and 25mm in front of VP is inclined to HP at 45^0 and 30^0 to VP. Draw its projections and locate its traces

Q7. A pentagonal pyramid of 30mm base edges and axis 70mm long, resting on its base on the HP having a side of base perpendicular to VP. It is cut by a section plane parallel to VP and 10mm away from the axis. Draw its sectional plane and elevation.

Or

A right regular pentagon prism of side 30 mm and 60 mm height is resting on its base on HP having one of its base edges perpendicular to the VP. A section plane inclined to HP at 30 and perpendicular to the VP cuts its axis at a distance of 36 mm from the base. Develop the lateral surface of the truncated prism.

Q8. A cube of 30mm side rests on the top of a cylindrical slab of 60mm diameter and 25mm thick. The axis of the solids are in the same straight line. Draw an isometric projection of the solid.

Or

A square prism of side 40mm and height 65mm is resting on ground. A vertical hole of diameter 20mm is cut through from the top face reaching bottom face of the prism. Draw the isometric projection of the prism.

Q9 A cylinder of diameter 50mm and height 60mm has a hole of diameter 30mm drilled in it such that its axis intersects that of the cylinder at the middle at right angle. Draw the development of the lateral surface.

Or

A right regular hexagonal pyramid having edge of base as 25 mm and height 70 mm is resting on one of its triangular face on HP, Draw its projections

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