

Total No. of Questions : 12]

[Total No. of Printed Pages : 8

[3461]-105

F. E. (2008 Course) Examination - 2008

ENGINEERING GRAPHICS - I

Time : 4 Hours]

[Max. Marks : 100

Instructions :

- (1) Answer **one** question from each unit. Answer **three** questions from section - I and **three** questions from section - II.
- (2) Answers to the **two** sections should be drawn on **separate drawing sheet**.
- (3) Retain all construction lines.
- (4) Use of log table, electronic pocket calculator is allowed.
- (5) Figure in bracket indicate full marks.
- (6) Assume suitable data, if necessary.

SECTION - I

UNIT - I : CURVES

- Q.1)** (A) An artificial satellite is orbiting around the earth. The major axis of the orbit is 40,000 km and the minor axis is 30,000 km. Draw the orbit of the satellite and show the position of the earth centre assuming that earth is at the focus. Draw tangent and normal when satellite is 10,000 km from earth centre. [08]
- (B) A 120 mm long link 'OA' rotates about 'O' at uniform angular velocity. A point P initially at A moves along AO at a uniform rate and reaches 'O', during one revolution of the link. Draw the locus of the point 'P' for one revolution. Name the locus. [07]

OR

Q.4) For the supporting block, shown in fig. 4, Draw to full size the following views :

- (a) Sectional elevation along the direction of arrow X and section along AA. [07]
- (b) Plan [05]
- (c) End view along the direction of arrow Y. [05]
- (d) Give all dimensions. [03]

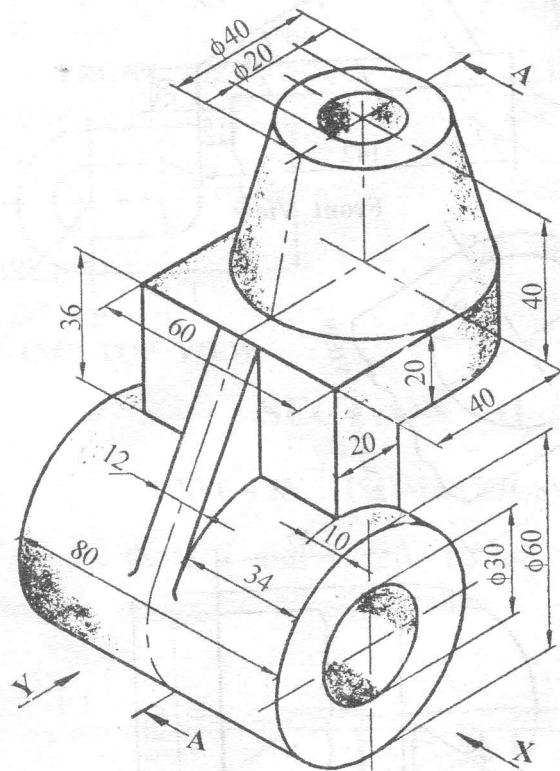


Fig. 4

Q.5) Fig. 5 shows front view, incomplete top view and partial auxiliary view of Bevel Washer.

- | | | |
|-----|--|------|
| (a) | Redraw the given views | [05] |
| (b) | Complete the Top View and Auxiliary View | [08] |
| (c) | Give all dimensions. | [02] |

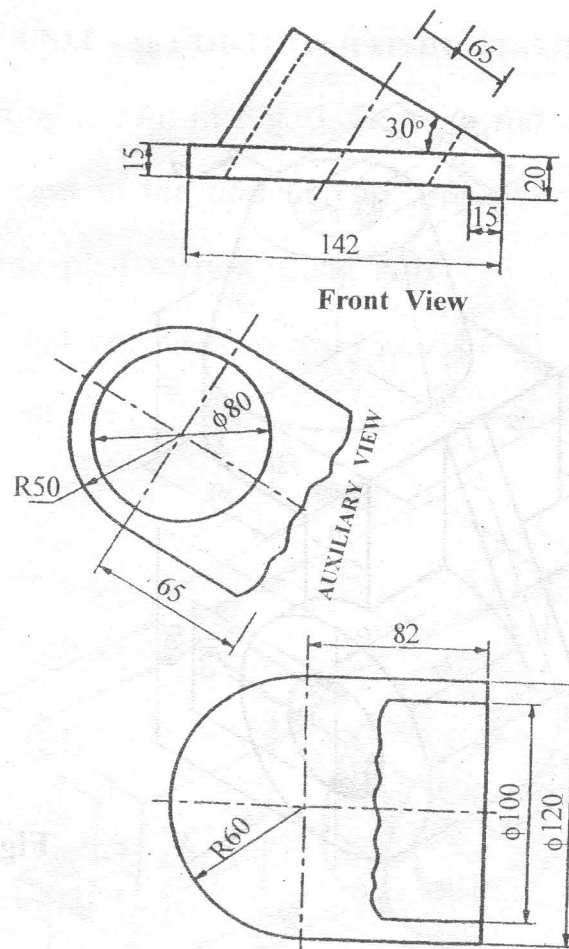


Fig. 5

INC. TOP VIEW

OR

Q.6) Fig. 6 shows front view, incomplete top view and partial auxiliary view of an angle bracket :

(a) Redraw the given views [05]

(b) Complete the Top View and Auxiliary View [08]

(c) Give all dimensions. [02]

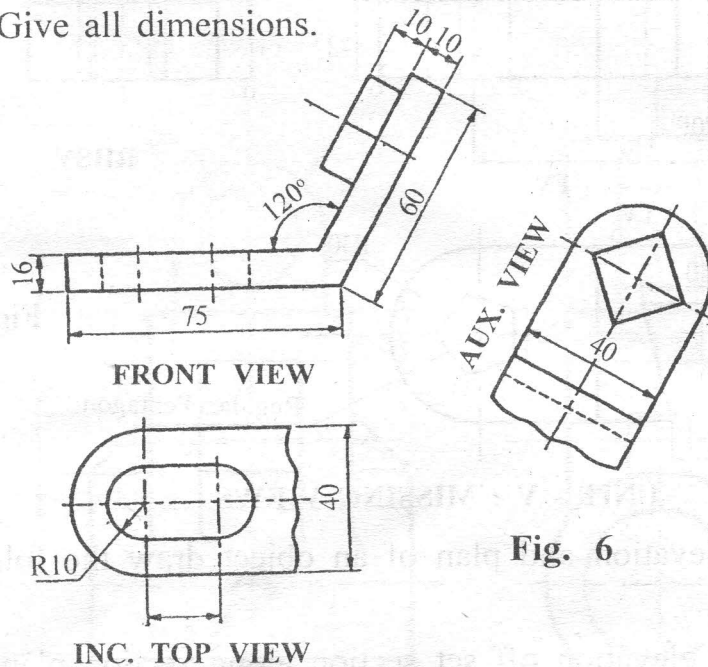


Fig. 6

SECTION - II

UNIT - IV : ISOMETRIC VIEW

Q.7) Figure 7 shows the FV and LHSV of an object draw its isometric view about 'O' and give all dimension. [16+4]

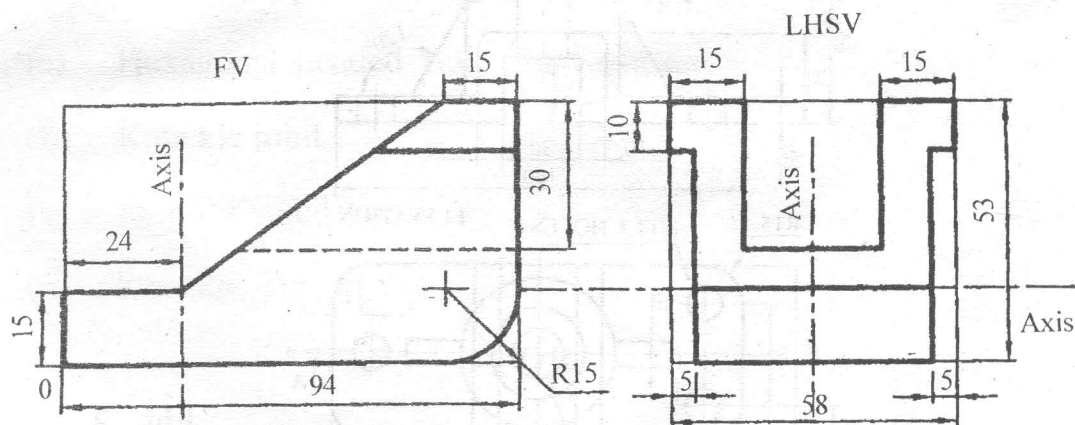


Fig. 7

OR

Q.8) Fig. 8 shows the orthographic views of an object draw its isometric view about 'O' : [20]

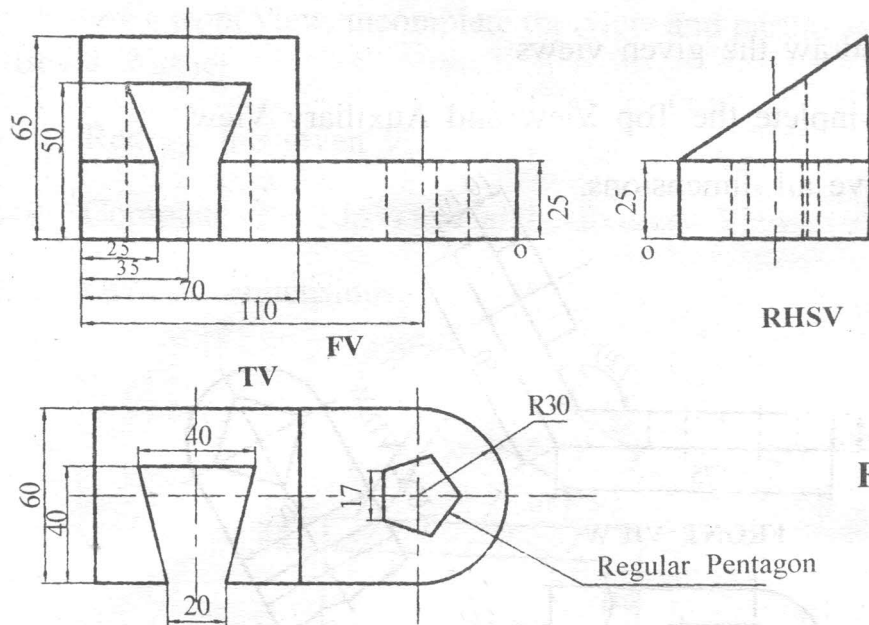


Fig. 8

UNIT - V : MISSING VIEWS

Q.9) Fig. 9 shows elevation and plan of an object draw the following views :

- Sectional elevation off set section along section plane AA [07]
- Plan [03]
- Left hand side view [10]

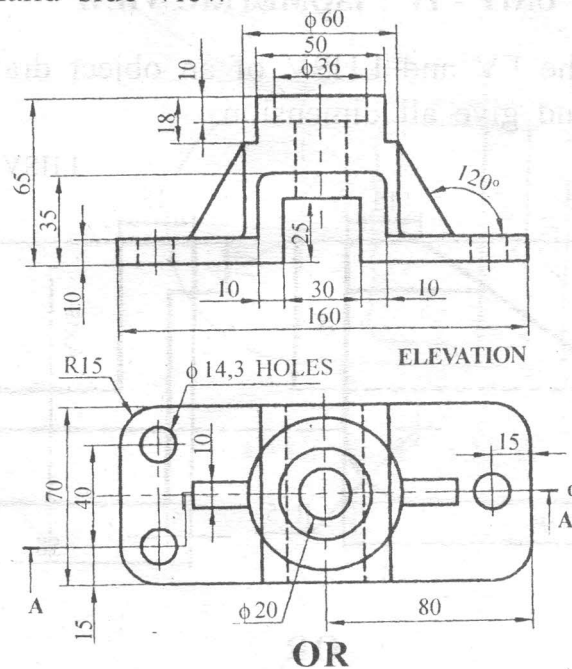


Fig. 9

Q.10) Fig. 10 shows elevation and left hand side view of an object draw the following views :

- (a) Sectional elevation section along AA [07]
- (b) Plan [10]
- (c) End view from left [03]

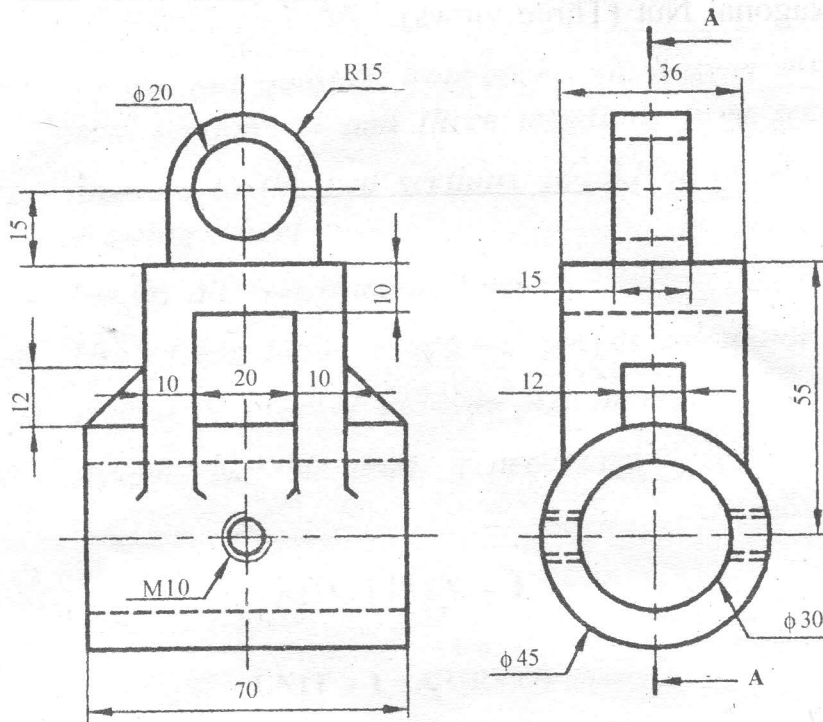


Fig. 10

UNIT - VI

Q.11) Draw to the proportion free hand sketches of **any two** : [05+05]

- (a) Hexagonal headed Bolt (Two views)
- (b) Knuckle joint
- (c) Single riveted lap joining
- (d) Knuckle Thread

OR

Q.12) Draw to the proportion free hand sketches of **any two** : [05+05]

- (a) Protected type flange coupling
- (b) Compression Helical Spring
- (c) Wing nut
- (d) Hexagonal Nut (Three views)