Total No. of Questions—**12**] [Total No. of Printed Pages—**4+2**

Seat No.	

[4856]-16

F.E. (I Sem.) EXAMINATION, 2015

ENGINEERING GRAPHICS—I

(2008 PATTERN)

Time : Four Hours **Maximum Marks : 100**

N.B. **:—** (*i*) Answer *three* questions from Section I and *three* questions from Section II.

(*ii*) Solve Q. No. **1** *or* Q. No. **2**, Q. No. **3** *or* Q. No. **4**, Q. No. **5** *or* Q. No. **6**, Q. No. **7** *or* Q. No. **8**, Q. No. **9** *or* Q. No. **10**, Q. No. **11** *or* Q. No. **12**.

(*iii*) Answers of two Sections should be drawn on separate drawing sheet.

(*iv*) Use half imperial size drawing sheet as answer-sheet.

(*v*) Retain all construction lines.

(*vi*) Assume suitable data, if necessary.

SECTION I

UNIT I

1. (*a*) Construct an ellipse in parallelogram 125 × 90 mm side. Take included angle of parallelogram as 110°. [7]

(*b*) An inelastic string of 125 mm length is wound around a disc of 35 mm diameter. Trace the path of the free end of a string. Draw normal and tangent to it from any point 'M' at 105 mm from the center of circle. [8]

P.T.O.

Or

2. (*a*) A vertex of the hyperbola is 65 mm from its focus. Draw two parts of the hyperbola, if the eccentricity is 5/2. [7]

(*b*) A circle of diameter 50 mm rolls horizontally without slipping. If a point 'P' is on the circumference of circle, draw a locus of a point 'P' for one revolution of 50 mm diameter circle and name the curve. Draw tangent and normal at any point on the curve. [8]

UNIT II

3. Fig. 1 shows pictorial view of an object, using first angle method of projection, draw :

(1) Sectional elevation along section A-A. [6]

(2) Plan. [6]

(3) End view from left side. [6]

Give all dimensions. [2]

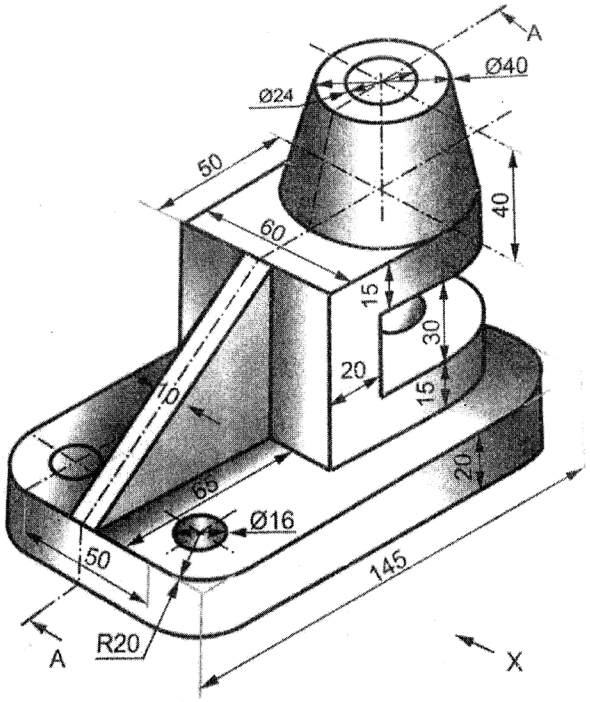

Fig. 1
(All dimensions are in mm)

Or

4. Fig. 2 shows pictorial view of an object, using first angle method of projection, draw :

(1) Sectional elevation along section A-A. [6]

(2) Top view. [6]

(3) Side view from right. [6]

Give all dimensions. [2]

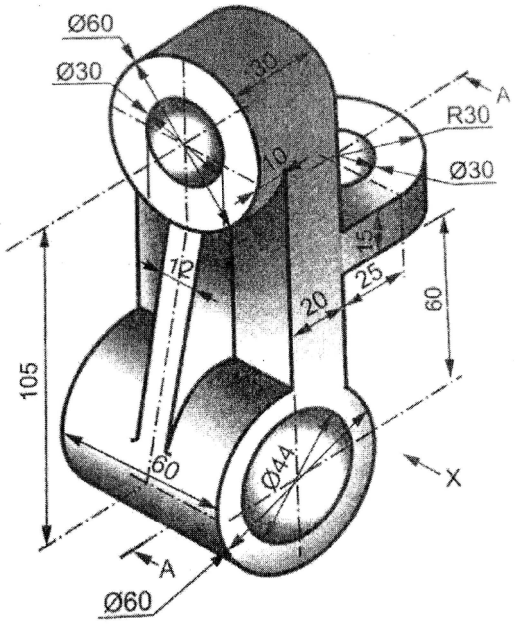

Fig. 2
(All dimensions are in mm)

UNIT III

5. Fig. 3 shows front view, auxiliary top view of an object :

(1) Redraw the given views and dimension it. [5]

(2) Add top view. [10]

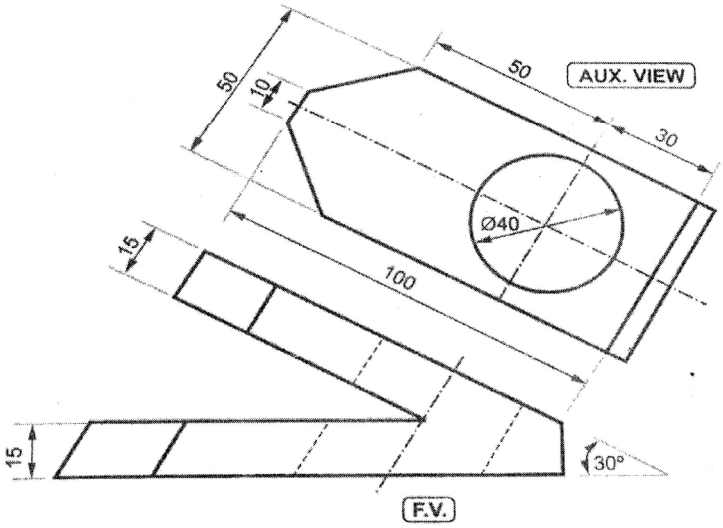

Fig. 3
(All dimensions are in mm)

Or

6. Fig. 4 shows front view, partial L.H.S. view and partial auxiliary view of an object :

(1) Redraw the given view and dimension it. [3]

(2) Complete L.H.S. view. [5]

(3) Draw its top view. [7]

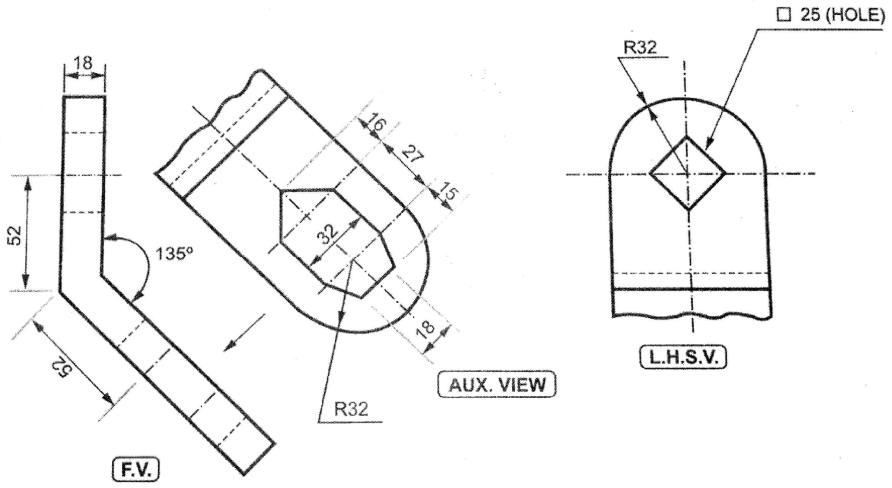

Fig. 4
(All dimensions are in mm)

SECTION II
UNIT IV

7. Fig. 5 shows two views of an object. Draw its isometric view and show overall dimensions. [20]

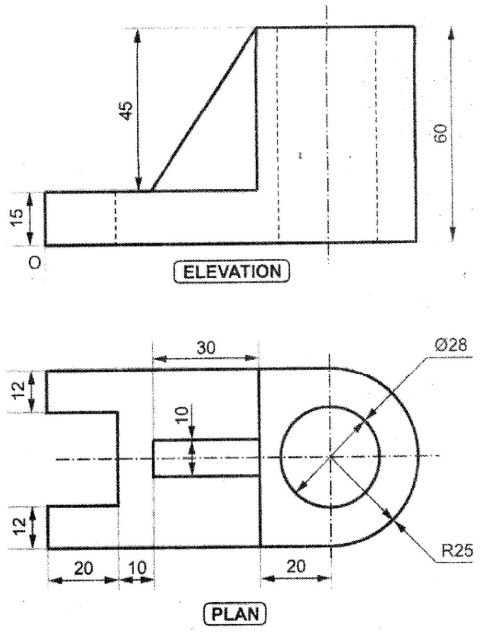

Fig. 5
(All dimensions are in mm)

Or

8. Fig. 6 shows two views of an object. Draw its isometric view and show overall dimensions. [20]

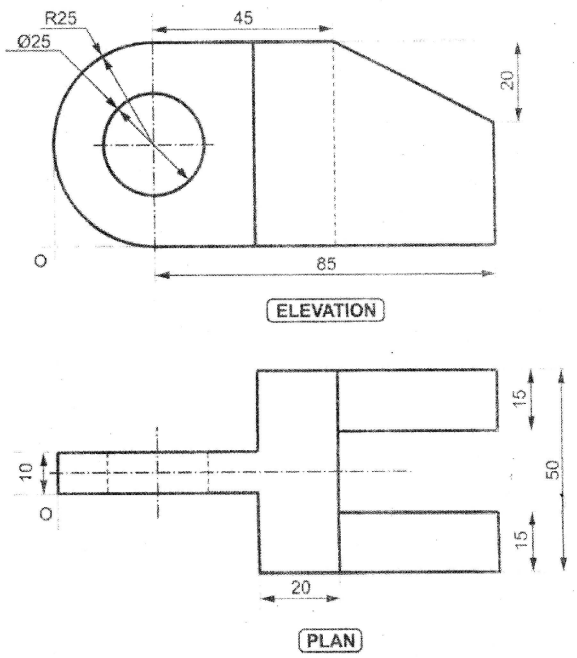

Fig. 6
(All dimensions are in mm)

UNIT V

9. Fig. 7 shows elevation and LHSV of a machine part. Draw :

(1) Sectional elevation, along section A-A [7]

(2) Plan [7]

(3) Left Hand Side View [3]

(4) Dimensioning. [3]

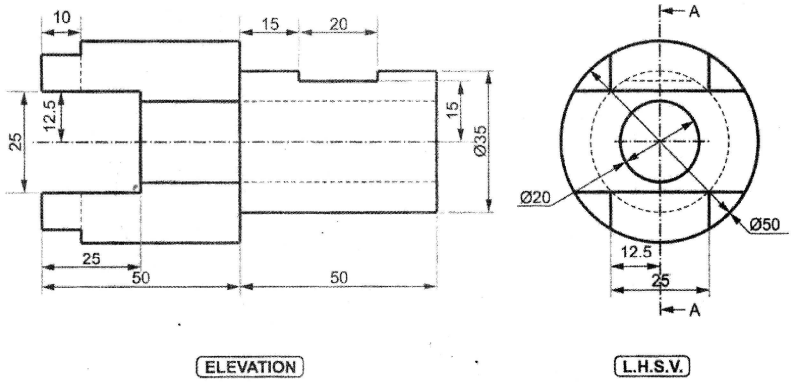

Fig. 7
(All dimensions are in mm)

Or

10. Fig. 8 shows elevation and RHSV of a machine part. Draw : [7]

(1) Sectional RHSV, along section A-A [7]

(2) Elevation [3]

(3) Plan [7]

(4) Dimensioning. [3]

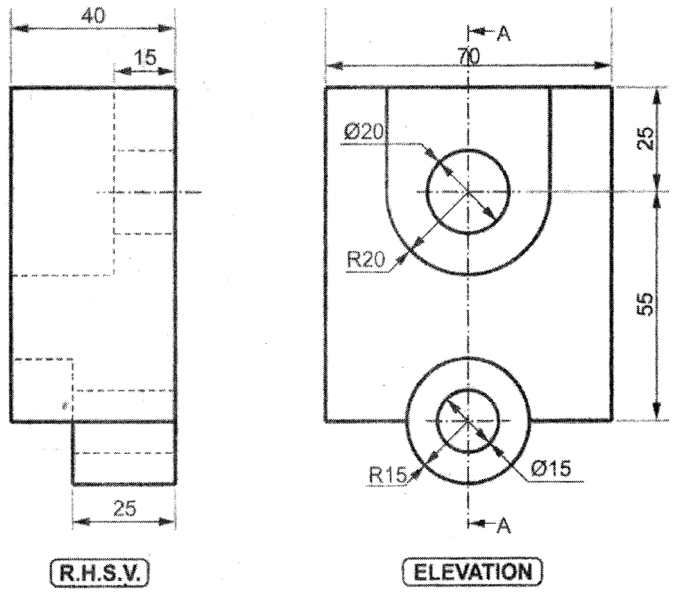

Fig. 8

(All dimensions are in mm)

UNIT VI

11. Draw proportionate sketch of : [10]

(1) Assembly of hollow saddle key,

(2) Rag foundation bolt.

Or

12. Draw proportionate sketch of : [10]

(1) Lewis foundation bolt,

(2) Box or muff coupling.