Dr. Babasaheb Ambedkar Technological University, Lonere

End Semester Examination: May 2017 **(OLD)**

Class: B. Tech. First Year (Electrical/E&TC/IT/Computer)
Semester: II

Subject: Engineering Graphics

Time: 4 Hours | Max Marks: 70

Instructions to the Students:

1. **Question No 1 is compulsory and carry 10 marks whereas Question No 2 to Question 7 carries 12 marks each.**
2. **Attempt any five Questions from Question No 2 to Question No 7.**
3. **Illustrate your answers with neat sketches, diagrams etc. wherever necessary.**
4. **Necessary data is given in the respective questions. If such data is not given, it means that the knowledge of that part is a part of examination.**
5. **If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly.**

Q.1. Select an appropriate option for each of the following: (10)

i.) To draw circles and arcs of circles---------- is used.

a) Divider b) Compass c) Mini-drafter d) None

ii) Dimensions may be marked from hidden lines

a) True b) false c) None

iii) In first angle projection method, the view seen from the left is placed on

a) left of FV b) right of FV c) above FV d) below FV

iv) A hexahedron consists of

a) four equal square faces b) six equal square faces c) four equal triangular faces d) six equal triangular faces

v) The largest possible section of pentagonal prism will have

a) five edges b) six edges c) seven edges d) eight edges

vi) To obtain the true shape of the section of a solid, an auxiliary plane is set

a) inclined at an angle of 45° to a cutting plane b.) perpendicular to a cutting plane c.) parallel to a cutting plane d.) parallel to xy

vii) The theory of development is used in manufacturing of

a.) plastic moulded parts b.) cast iron parts c.) sheet metal parts

d.) electronic components

viii) Parallel line development method is not suitable for the development of a

a.) tetrahedron b.) hexahedron c.) pentagonal prism d.) cylinder

ix) The real angle made by isometric axes with each other is

a.) 120° b.) 90° c.) 60° d.) 30°

x.) Which one of the following is not a toolbar in AutoCAD

a.) draw b.) edit c.) standard d.) properties

Q.2. Attempt the following: (12)

a.) Draw a regular octagon of side 20 mm.

b.) Inscribe a regular pentagon in a circle of radious 40 mm.

Q.3. Draw the orthographic projections of the given Fig.1 (first angle projection)

a.) Front View (F.V.) (6)

b.) Top View (T.V.) (6)

Q.4 Attempt **any one** of the following: (12)

a.) A line AB, inclined at 40° to the V.P., has its ends 50 mm and 20 mm above the H.P. The length of its front view is 65 mm and its V.T. is 10 mm above the H.P. Determine the true length of AB, its inclination with the H.P. and its H.T.

b.) A square ABCD of 50 mm side has its corner A in the H.P., its diagonal AC inclined at 30° to the H.P. and the diagonal BD inclined at 45° to the V.P. and parallel to the H.P. Draw its projections.

Q.5. Attempt **any one** of the following: (12)

a.) A square pyramid of 50 mm side of base and 50 mm length of axis is resting on one of its triangular faces on the H.P. having a slant edge containing that face parallel to the V.P. Draw the projections of the pyramid.

b.) A cone, base 75 mm diameter and axis 80 mm long is resting on its base on the H.P. It is cut by a section plane perpendicular to the V.P., inclined at 45° to the H.P. and cutting the axis at a point 35 mm from the apex. Draw its front view, sectional top view, sectional side view and true shape of the section.

Q.6. Attempt the following: (12)

Draw the isometric view of the Fig. 2 (first angle projection).

Q.7. Attempt the following: (12)

A hexagonal pyramid of side of base 60 mm and length of axis 140 mm is kept on the ground on its base. It is cut by and auxiliary inclined plane inclined at 45° to the base and cutting the axis at 94 mm from the apex. Draw the development of lateral surfaces of the pyramid.

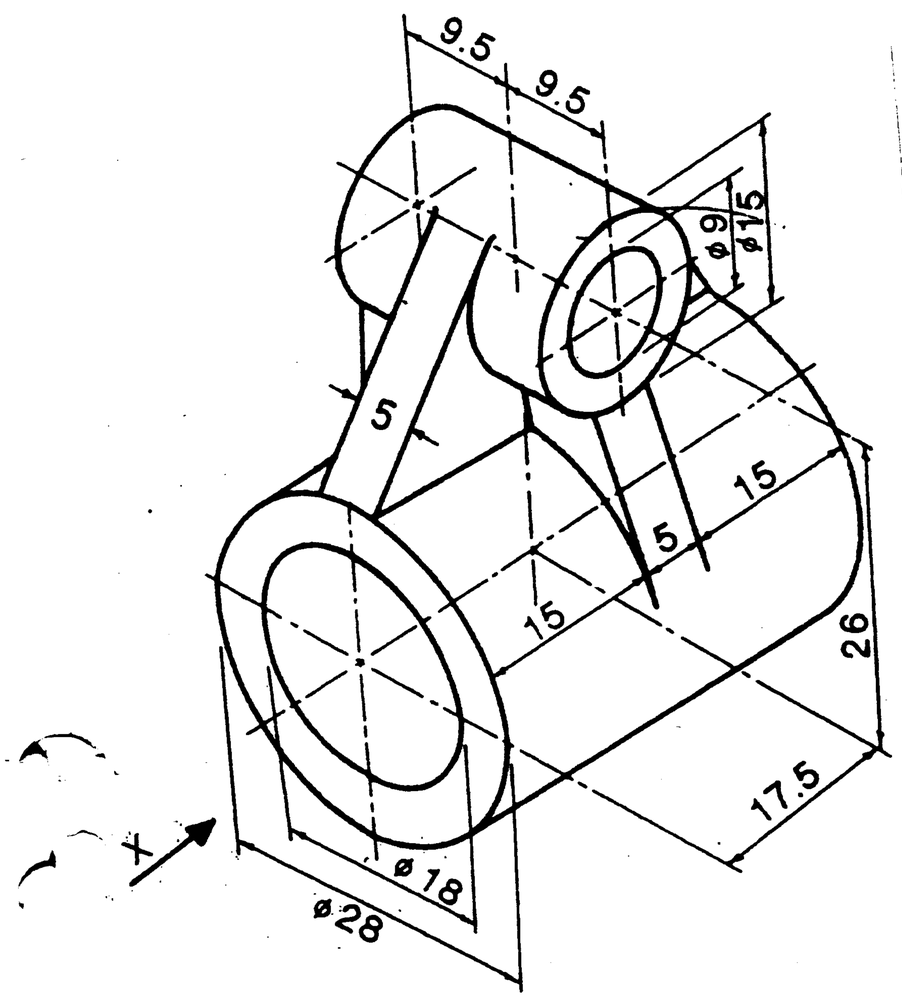

Fig. 1

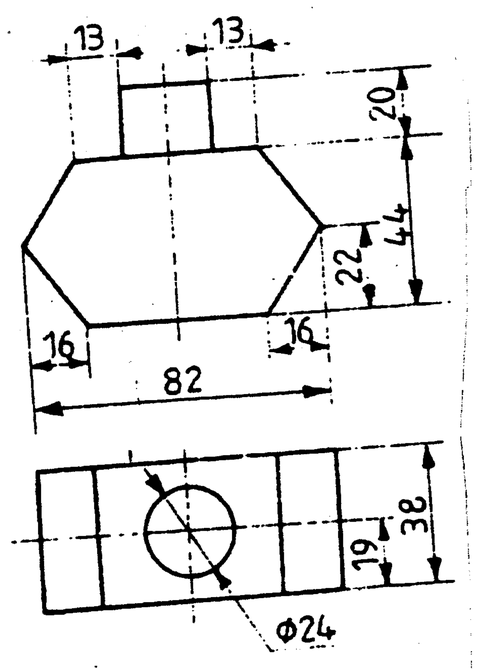

Fig. 2