

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III(New) • EXAMINATION – WINTER 2016****Subject Code:2132001****Date:02/01/2017****Subject Name:Industrial Drafting****Time:10:30 AM to 01:30 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 Short Questions.**14**

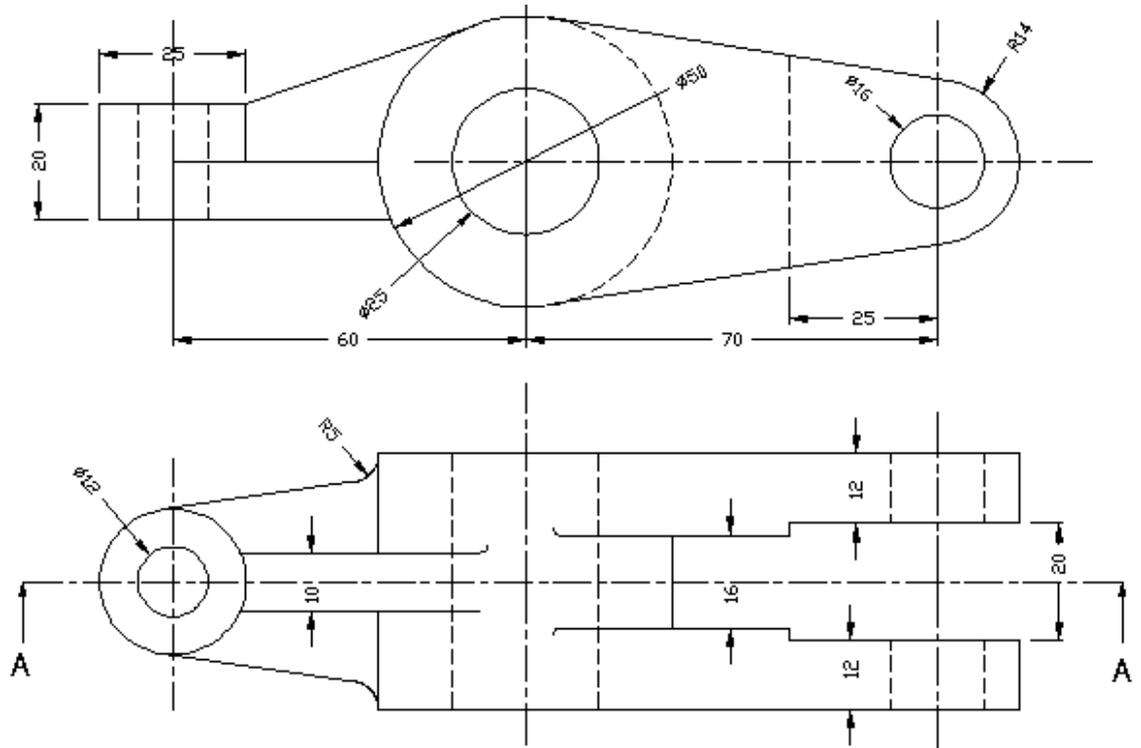
- 1 Explain the left hand threads.
- 2 What is the use of ACME thread?
- 3 What is the Minor Diameter?
- 4 What are multi start threads?
- 5 What is hole basis system?
- 6 Explain the bilateral tolerance.
- 7 What do you mean by flank?
- 8 Draw the conventional representation of bearing?
- 9 Draw the conventional representation of wood?
- 10 What is fit?
- 11 Draw the conventional representation of bevel gear?
- 12 Draw the conventional representation of worm wheel?
- 13 Explain the use of dome nut?
- 14 Why split pins are used?

Q.2 (a) What do you mean by fast and loose pulley?**03****(b) Why bush-pin type of couplings is required?****04****(c) A vertical square prism, base 80 mm side is completely penetrated by a horizontal square prism, base 35 mm side so that their axes are 8 mm apart. The axis of the horizontal prism is parallel to V.P. while the faces of both prisms are equally inclined to the V.P. Draw the projections of the prisms showing the line of intersection.****07****OR****(c) Differentiate between machine drawing and production drawing.****07****Q.3 (a) Enlist various applications of intersection of surfaces.****03****(b) What is the conventional representation for indicating the sections of glass, marble, interrupted views and spur gear?****04****(c) Draw a neat sketch of knuckle joint.****07****OR****Q.3 (a) Calculate the fundamental tolerance for a shaft of 90 mm and grade 10. Use geometrical mean D=100 mm and following table:****03**

Grade	IT7	IT8	IT9	IT10	IT11	IT12
Tolerance Value	16i	25i	40i	64i	100i	160i

(b) With a schematic diagram explain socket and spigot joint.**04****(c) Draw according to first angel projection method:****07**

- Sectional front view along A-A
- Side view from the left



- Q.4** (a) Explain the revolved section with examples. 03
 (b) Draw conventionally, internal and external threads by indicating two views. 04
 (c) Why locking of the nuts are required? Enlist various locking arrangement for nuts. Explain any one of them with rough sketch. 07

OR

- Q.4** (a) Classify various types of keys. 03
 (b) Explain the use of rag foundation bolt with rough sketch. 04
 (c) Draw two views of a hexagonal headed bolt, 30 mm diameter and 120 mm long, with a hexagonal nut and a washer. 07
- Q.5** (a) Explain the interference fit. 03
 (b) What is woodruff key? Explain its application with diagram. 04
 (c) Enlist the various conventional symbols for Geometric dimensioning and tolerancing. 07

OR

- Q.5** (a) Explain the use of buttress thread with suitable example. 03
 (b) Why geometrical tolerances are required during assembly process? Explain it with suitable drawing. 04
 (c) Explain the various commands in the draw tool box of AUTO CAD. 07
