

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
Diploma Engineering - SEMESTER-III • EXAMINATION – SUMMER 2013

Subject Code: 335504

Date: 15-06-2013

Subject Name: Fabrication Technology - I

Time: 02:30 pm - 05:00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is Authentic.
5. Write your seat no. and enrolment no. in the above given space.
6. Answer with neat sketch and to the point.

- Q.1** (a) Draw a different type of roof trusses and prepare a list various types of trusses. **07**
(b) 1) List out the various fabrication operation /work performed in structural fabrication workshop **07**
2) Explain in brief:
Straightening, bending and rolling operation of a various sections

- Q.2** (a) Draw a chart for classification of fabrication structure based on various types of application. Explain them in brief. **07**
(b) 1) Estimate / Calculate the weight and cost of job if the job having following dimensions and data. **07**
(Assume If the cost of Profile / Commercial forms of metals = 75 Rs. / kg)
(Assume weight density of material = 7.86 gm / cm³)
Pipe with
O.D . = Φ 80mm ,
I.D. = Φ 70mm
Length of pipe = 3m
2) A pole stands vertically on the ground. If the angle of elevation of the top of the pole from a point 60 m away from the pole is 30°, find the height of the pole.

OR

- (b) Define and explain the process of **07**
1) Lining, 2) Leveling, 3) Plumbing,
4) Alignment , 5) Erection tolerance

- Q.3** (a) Explain in brief :- Characteristics of skilled structural fabrication supervisor as a leader. **07**
(b) Explain in brief : The General notes given / use in structural fabrication drawing **07**

OR

- Q.3** (a) List / classify the different types of joining process Compare **07**
1. Welding and riveted
(b) Explain in brief with neat Sketch **07**
1. Types of Nuts,
2 Types of washers

- Q.4** (a) Explain the advantages ferrous materials /(low carbon steels) as a construction material for structural steel fabrication work. **07**
(b) Classify the various standard Mechanical fasteners / fastening item. **07**

Explain in brief with neat Sketch
: various type of jacks used in industries .

OR

Q.4 (a) Explain the file with neat sketch label their various elements of file. **07**
Classify the files bases on various criteria .

(b) Classify the Hammers in chart form. **07**

1. Draw their neat sketches.
2. Label its various parts / elements.
3. state it's specification.

States its typical application

Q.5 (a) Explain the procedure of fabrication of steel structure as per IS – 800 with their salient features. **07**

(b) Explain the method of erection of Industrial shade steel structures. **07**

OR

Q.5 (a) Calculate the area of hexagon by dividing hexagon in (size of A/F = 120) **07**
Various types geometrical shape and also compare the result of area.

(b) Explain in brief : - **07**
Erection tools and tackles
