

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering - SEMESTER-III • EXAMINATION – SUMMER • 2014****Subject Code: 3335505****Date: 21-06-2014****Subject Name: Fabrication Technology - 1****Time: 10:30 am - 01:00 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 considered to be Authentic.

- Q.1** (a) Prepare a chart of commercial forms of metal & state their typical application. **07**
 (b) Find out cost & weight of following sections for 5 M length **07**
 (Take density/ sp. weight of material = 7.80 gm/ cm³ & cost of material = 70 RS./ kg) all dimension are in mm DATA FOR T-SECTION :-

Sr. No.	Dimension in MM			
	H	B	t _w	t _f
1	80	80	5	4

- Q.2** (a) 1. Classify the various types of punches. **07**
 2. Draw their neat sketch Label its element.
 3. States its typical application
 (b) Draw a neat sketch of a square frame made at 45° fit-up and set-up. Prepare a bill of material (B.O.M.) for it. Calculate the total cost of job considering cost of angle material = 90 Rs/kg, Labor cost = 20 Rs / kg, Assume other costs are negligible. **07**

OR

- (b) Explain ANY -7 structural fabrications Terminology with neat sketch. **07**
Q.3 (a) Draw a various type of roof trusses. **07**
 (b) Draw an angle without using protector ($m \angle CAB = 150^\circ$) and divide this angle in to $\theta_1 = 30^\circ$, $\theta_2 = 45^\circ$, $\theta_3 = 90^\circ$, $\theta_4 = 120^\circ$, $\theta_5 = 60^\circ$ (use theme of bisecting of Angle). Write steps for geometrical construction. **07**

OR

- Q.3** (a) Explain in brief with neat Sketch: 1. Types of Nuts 2. Types of washers **07**
 (b) Explain the advantages of low carbon steels as a construction material for structural fabrication work. **07**

- Q.4** (a) Explain types of structure based on various types of application in chart form. **07**
 (b) Explain General notes given in structural fabrication drawing **07**

OR

- Q.4** (a) Prepare list of different types of joining process. Compare riveted and welded joint. **07**
 (b) Explain procedure for fabrication of steel structure as per codes. **07**

- Q.5** (a) Classify the various standard mechanical fasteners. Explain with neat Sketch Various type of jacks used in industries. **07**
 (b) Explain oxy acetylene cutting process with neat sketch. **07**

OR

- Q.5** (a) Calculate the weight and cost of job from following data: **07**
 Cost of pipe = 75 Rs. / kg, Density of material = 7.86 gm / cm³
 Pipe O.D. = Φ 60mm , I.D. = Φ 44mm , Length of pipe = 5 meter
 (b) Explain Erection tools and tackles. **07**
