Seat No.: _____ Enrolment No._____

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/ cm^3 & 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∠CAB=150°) and divide this angle in to θ_1=30°, θ_2=45°, θ_3=90°, θ_4=120°, θ_5=60°(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 / cm^3
Pipe O.D . = Φ 60mm , I.D. = Φ 44mm , Length of pipe = 5 meter

(b) Explain Erection tools and tackles. **07**

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