

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Engineering - SEMESTER-III • EXAMINATION – SUMMER • 2015

**Subject Code: 335504**

**Date: 14-05-2015**

**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 considered to be Authentic.

**Q.1 (a)** Prepare a chart of commercial forms of metal for (Any -7) & state their typical application. **07**

**(b)** Find out COST & weight of following sections for 1 M length **07**  
( Take density/ sp. weight of material = 7.85 gm/ cm<sup>3</sup> )  
( Take cost of material = 90 RS./ kg)

ALL DIMENSION ARE IN MM

DATA FOR T-SECTION

SR. NO.	DIMENSION IN MM			
	H	B	t <sub>w</sub>	t <sub>f</sub>
1	80	80	5	5

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**Q.2**

**(a)** Draw a neat sketch of typical Roof truss & Describe their structural fabrication Terminology **07**

**(b)** Prepare a geometrical construction under following condition by using compass, ruler but without protector. Write the steps of construction for it. **07**

1) Draw an angle without using protector (m CAB=120° ) 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 ).

**OR**

**(b)** List out the various Mechanical fasteners / standard fastener items Describe in brief with their neat sketch and state their B.I.S. NO. Bolts and washers **07**

- (a) Draw a neat sketch of a square frame made by following methods 90° fit-up and set-up prepare a bill of material ( B. O. M.) for them. Calculate the total cost of job if the material Cost of angle material = 80Rs/kg , labour cost=10 Rs / kg , Assume other cost are negligible. **07**
- (b) List the application of product of structural fabrication work. Describe in brief : - Storing , Handling & Stacking **07**
- OR**
- Q.3** (a) Define and Describe the process of  
1) Lining, 2) leveling, 3) plumbing, 4) Alignment, **07**
- (b) List the fabrication operation work performed in structural fabrication workshop Describe any one **07**
- Q.4** (a) Describe the Plasma gas cutting process in detail with neat sketch and label its elements. **07**
- (b) Describe in brief with neat sketch : steps followed for fabrication of job **07**
- OR**
- Q.4** (a) Describe in brief :  
Straightening , bending and rolling operation of a various section / profile **07**
- (b) 1. Classify the various types of punches.  
2. Draw their neat sketch Label its element. **07**  
3. States its typical application
- Q.5** (a) Compare various fabrications methods /process over welding process. **07**
- (b) Describe in brief with neat sketch the right and wrong working of file & Hand hacksaw cutting operation. **07**
- OR**
- Q.5** (a) Describe advantages limitation of str. Steel fabrication material . **07**
- (b) Describe in brief : Column fabrication & assembly **07**

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