

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering - SEMESTER-III • EXAMINATION – WINTER • 2014****Subject Code: 335504****Date: 03-12-2014****Subject Name: Fabrication Technology - I****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) Draw a chart for classification of fabrication structure based on various types of application. **07**
- (b) Prepare a chart of commercial forms of metal for (Any -7) & state their typical application. **07**

- Q.2** (a) Find out COST & weight of following sections for 2 M length **07**
 (Take density/ sp. weight of material = 7.85 gm/ cm³)
 (Take cost of material = 75 RS./ kg)
 DATA FOR T-SECTION :-

SR. NO	DIMENSION IN MM			
	H	B	t _w	t _f
1	80	80	6	5

- (b) Describe the method of erection of Industrial shade steel structures **07**
 OR
- (b) 1. Classify the various types of punches. **07**
 2. Draw their neat sketch Label its element.
 States its typical application

- Q.3** (a) Describe in brief : **07**
 The General notes given / use in structural fabrication drawing
- (b) List / classify the different types of fabrication/ joining process **07**
 Compare Welding and other manufacturing process

OR

- Q.3** (a) Prepare a geometrical construction under following condition by using compass, ruler but without protector. Write the steps of construction for it. **07**

Draw an angle without using protector (m  CAB=150°) and divide this angle in to $\phi_1=30^\circ$, $\phi_2=45^\circ$, $\phi_3=90^\circ$, $\phi_4=120^\circ$, $\phi_5=60^\circ$

(use theme of bisecting of Angle).

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

- Q.4** (a) Draw a neat sketch of a 200 mm square frame made 25x25x5 from by following methods 90° fit-up and set-up prepare a bill of material (B. O. M.) for them. **07**

Calculate the total cost of job if the material
 Cost of angle material = 80Rs /kg , labour cost=20 Rs / kg ,
 Assume other cost are negligible.

- (b) Describe the Plasma gas cutting process in detail with neat sketch and label its elements. **07**
- OR
- Q.4** (a) Explain in brief introduction of structural fabrication codes **07**
- (b) List out the various Mechanical fasteners / standard fastener items Describe the n brief with their neat sketch and state their B.I.S. NO. Bolts and washers **07**
- Q.5** (a) Calculate the area of hexagon by dividing hexagon in (size of A/F = 60) Various types geometrical shape and also compare the result of area. **07**
- (b) List out the fabrication operation performed in structural fabrication & Describe the Straightening , bending and rolling operation of a various section / profile **07**
- OR
- Q.5** (a) Describe the the role of quality control department in structural fabrication industry. **07**
- (b) Describe in brief : Column fabrication & assembly **07**
