Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING – SEMESTER – III • EXAMINATION – SUMMER- 2017

Subject Code: 3335505 **Date: 05-05 -2017**

Subject Name: Fabrication Technology - 1

Time: 02:30 PM TO 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. **Use of programmable & Communication aids are strictly prohibited.**
5. **Use of only simple calculator is permitted in Mathematics.**
6. **English version is authentic.**

Q.1 (a) Describe the gas cutting process in detail with neat sketch and label its elements **07**

(b) Prepare chart of 7 -Commercial forms of metal in a table format. **07**

Q.2 (a) Draw a chart for classification of fabrication structure based on various types of application. **07**

(b) Find Out COST & Weight Of Following T-Sections For 5 M Length **07**
(Take Density/ Sp. Weight Of Material = 7.80 gm / Cm^3)
(Take Cost Of Material = 50 RS./ Kg)
All Dimensions' are in m m

SR. NO.	DIMENSION IN MM			
	H	B	T_w	T_f
1	80	80	5	4

OR

(b) Described in brief : with neat sketch a elements / parts of roof truss. **07**

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 $\angle$ CAB=180◦) and divide this angle in to
$\theta_1=15^\circ$, $\theta_2=45^\circ$, $\theta_3=90^\circ$, $\theta_4=150^0$,

(b) List out the fabrication operation work performed in structural fabrication work shop Describe any one of them **07**

OR

Q.3 (a) Define and Describe the process of 1) leveling, 2) plumbing **07**

(b) Draw neat sketch of work holding device as a **"vise"** and Describe them in brief. **07**

Cont…2

Q.4 (a) Compare various fabrications methods / process over welding process. **07**

(b) List out the various name of Third party inspection agencies with their abbreviation. Describe in brief their Field or Area of working /operations /servicing rendering. **07**

OR

Q. 4 (a) 1. Classify the various types of punches. **07**
2. Draw their neat sketch Label its element.
3 States its typical application

(b) Estimate the COST & weight of 5 m HEXAGONAL BAR sections **07**
(Assume Density / Sp. Weight of material = 7.85 gm/ cm^3
Cost of raw-material = 70 RS./ kg)
DATA FOR HEXAGONAL BAR :-

SR. NO.	DIMENSION A/F (ACROSSFLATE)	AREA	VOL.	WEIGHT	Total Cost of 5m
	MM	Cm^2	Cm^3	KG/M	Rs
1	120				

Q.5 (a) Describe the advantages ferrous materials / (low carbon steels) as a construction material for structural steel fabrication work. **07**

(b) Described in brief : - Column fabrication & assembly **07**

OR

Q.5 (a) Describe in brief with neat Sketch terminology of bolts. Classify Types of bolts **07**

(b) Describe in brief the general notes given / use in structural fabrication drawing **07**

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