Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Semester -III Regular / Remedial Examination December - 2010

Subject code: 335504 Subject Name: Fabrication Technology - I

Date: 30 /12 /2010 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 Authentic**
5. **Assume suitable data if necessary**

Q.1 (a) Estimate the COST & weight of following sections and filling gaps in given table for 1 Meter / unit length **14**

(Assume -- Density / sp. Weight of material = 7.85 gm/ cm^3
Cost of raw-material = 80 RS./ kg)

1. DATA FOR T-SECTION :-

SR NO	DIMENSION IN MM				X-Sec AREA	VOLUME	WEIGHT	Total cost
	H	B	T_w	T_f	Cm^2	Cm^3	Kg/M	Rs.
1	50	50	6	6				

2. DATA FOR ANGLE :-

SR NO	DIMENSION IN MM			X-Sec AREA	VOLUME	WEIGHT	Total cost
	H	B	T	Cm^2	Cm^3	Kg/M	Rs.
1	40	40	6				

3. DATA FOR I- SECTION :-

SR. NO.	DIMENSION IN MM				X-Sec AREA	VOLUME	WEIGHT	Total cost
	H	B	T_w	T_f	Cm^2	Cm^3	Kg /M	Rs.
1	200	60	4	5				

Q.2

(a) 1. Classify the various types of punches. **07**
2. Draw their neat sketch Label its element.
3. States its typical application.
4. List out the marking and measuring tools

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

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

OR

(b) Explain the method of Erection & installation of column with foundation base plate at site **07**

Q.3

(a) 1) Define the term "cutting " with respect to fabrication **07**
2) Classify the methods of cutting and explain Plasma gas cutting process In brief with neat sketch.

(b) Explain in brief Assembly operation in fabrication industries. **07**

OR

Q.3 (a) Compare the welded fabrication method over other method of fabrication. **07**

(b) List the fastening items and explain the bolt and washers as fastening items for structural fabrication. **07**

Q.4

(a) 1) Define the term ‘ Erection ‘ **07**

2) Explain erection tools tackle in brief

3) Explain in brief precautions at erection site for fabrication work.

(b) 1) Explain in brief advantages of steel as a fabrication material**.** **07**

2) State the advantages of adhesive bonding over other methods of fabrication.

OR

Q. 4 (a) 1) Draw a chart for classification of fabrication structure. Explain them in brief. **07**

2) List the fabrication operation work performed in structural fabrication workshop

(b) A) Explain the file with neat sketch label their various elements of file. **07**

I) Classify the files based on

1 Sections of files.

2 Number of teeth.

3 Number of cuts.

4 Shape.

II) Wright specification of file.

Q.5

(a) Draw a neat sketch of Roof truss & explain their structural fabrication Terminology. (Any seven) **07**

(b) Estimate the COST & weight of following sections and filling gaps in given table for 1 Meter / unit length **07**

(Assume Density / Sp. Weight of material = 7.85 gm/ cm^3

Cost of raw-material = 80 RS./ kg)

DATA FOR HEXAGONAL BAR :-

SR NO	DIMENSION A/F (ACROSS FLATE)	AREA	VOLUME	WEIGHT	Total cost
	MM	Cm^2	Cm^3	KG/M	Rs
1	60				

OR

Q.5 (a) Explain in brief : BIS – 800 **07**

(b) Need of attitudes, knowledge, skill required for shop floor supervisor in structural fabrication industries. **07**

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