

GUJARAT TECHNOLOGICAL UNIVERSITY
Diploma Engineering Semester –III Examination Dec. 2011

Subject code: 335504

Date: 29/12/2011

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 Authentic.

- Q.1 (a)** Estimate the COST & weight of following sections and filling gaps in given table for 1 Meter / unit length (Assume density / sp. Weight of material = 7.85 gm/ cm^3 , Cost of raw-material = 50 RS./ kg)

DATA FOR T-SECTION :-

04

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	65	65	8	8				

DATA FOR ANGLE :-

04

SR NO	DIMENSION IN MM			X-Sec AREA	VOLUME	WEIGH T	Total cost
	H	B	T	Cm^2	Cm^3	Kg/M	Rs.
1	75	75	8				

DATA FOR I - SECTION :-

06

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	220	80	4	5				

Q.2

- (a) Draw any one typical structural fabrication drawing and explain in brief. **07**
- (b) Prepare a geometrical construction under following condition by using compass & ruler but without protector. Write the steps of construction for them. Draw an angle without using protector ($m\angle PQR=150^\circ$) and divide this angle in to $\theta_1=30^\circ$, $\theta_2=45^\circ$, $\theta_3=90^\circ$, $\theta_5=60^\circ$ (use theme of bisecting of Angle). **07**

OR

- (b) Explain the method of Erection & installation of steel structural :- Multi storage building **07**

Q.3

- (a) 1) Define the term “cutting “ with respect to fabrication **07**
 2) Classify the methods of cutting and explain OXY- ACCETYLENE - gas cutting process In brief with neat sketch.
- (b) Draw a neat sketch of a square frame made by following methods **07**
 45° fit-up and set-up prepare a bill of material (B. O. M.) for them also write the sequence of operation performed on it.

OR

- Q.3 (a)** Classify the Hammers in chart form. Label its various parts / elements. Give its specification. States its typical application **07**
- (b) Compare the welded fabrication method over other method of 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) List out the marking and measuring tools. **07**
2) Draw ANY ONE neat sketch Label its element.
3) States its typical application.
4) Classify the various types of punches.

OR

- Q. 4** (a) Explain the file with neat sketch label their various elements of file. **07**
I) Classify the files based on
1. Sections / Shape of files.
2. Number of teeth.
3. Number of cuts.
II) Wright specification of file.
- (b) Classify fabrication structure in chart form. Explain in brief Fabrication process 1) Straightening 2) Bending **07**

Q.5

- (a) Need of attitudes, knowledge, skill required for shop floor supervisor in structural fabrication industries. **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 = 90 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	40				

OR

- Q.5** (a) Explain in brief : codes & standards used structural fabrication industries **07**
- (b) 1) List out the names Third party inspection agencies with their abbreviation. Explain their importance in fabrication industries **07**
2) List the application of product of structural fabrication work
