

GUJARAT TECHNOLOGICAL UNIVERSITY
Diploma Engineering - SEMESTER – III • EXAMINATION – WINTER 2012

Subject code: 335504

Date: 05/01/2013

Subject Name: Fabrication Technology - I

Time: 02.30 pm - 05.00 pm

Total Marks: 70

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.
5. Answer with neat sketch and to the point.

- Q.1** (a) Need of attitudes, knowledge, skill required for shop floor supervisor in structural fabrication industries. **07**
- (b) A ladder leans against a wall making an angle of measure 60° with the ground. The foot (base) of the ladder is 4 m away from the wall. Find the length of the ladder. **03**
- Find out COST & weight of following sections for 1 m. / unit **04**
length (Take density/ sp. weight of material = 7.85 gm/ cm^3)
(Take cost of material = 90 RS./ kg)
ALL DIMENSION ARE IN MM
DATA FOR T-SECTION :-

SR. NO.	DIMENSION IN MM			
	H	B	t_w	t_f
1	60	60	6	5

- Q.2** (a) Draw a chart for classification of fabrication structure. Explain them in brief. **07**
- (b) List the fabrication operation work performed in structural fabrication workshop **07**
Explain in brief: Truss fabrication & assembly **OR**
- (b) Draw a neat sketch of a square frame made from $25 \times 25 \times 5$ by 90° fit-up and set-up **07**
Prepare a bill of material (B. O. M.) for them also write the sequence of operation performed on it.
Calculate the cost of job if The material cost of angle = 80 Rs. /kg , labor cost = 30Rs/kg , Assume other costs are negligible.
- Q.3** (a) Draw neat sketch of a elements / parts of roof truss **07**
- (b) Explain in brief with neat sketch. **07**
The steps involved in a gas-welding / cutting work.
OR
- Q.3** (a) Write BIS number, application and classification with neat Sketch of Nuts **07**
- (b) Explain Fit-up and Set-up Of structural steel Rolled section **07**
Structural Fit-up & Set-up Of Channel (C - section)
- Q.4** (a) Classify the of various standard Mechanical fasteners / Fastening **07**
Prepare a list of recommend size of Bolts AND nuts
- (b) Draw neat sketch and explain them in brief : **07**
the right [correct] and wrong working [in-correct] of files.
OR
- Q. 4** (a) Draw neat sketch and explain them in brief : **07**
the right [correct] and wrong working [in-correct] of files.
- (b) Draw neat sketch and explain them in brief : **07**
and state their applications / practical use
Trammels
Wire gauge
- Q.5** (a) List out the names Third party inspection agencies with their abbreviation. Explain in brief their Field or Area of working /operations /servicing rendering. **07**
- (b) Explain in brief inspection documentation. **07**
Explain in brief inspection procedure
OR
- Q.5** (a) Explain in brief : - **07**
Erection tools and tackles
- (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 (ACROSS FLATE)
	MM
1	150