

GUJARAT TECHNOLOGICAL UNIVERSITY
Diploma Engineering Semester –IV Examination Dec. - 2011

Subject code: 345502

Date: 07/12/2011

Subject Name: Sheet Metal Fabrication

Time: 10.30 am – 1.00 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.

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|-------------|--|-----------|
| Q.1 | (a) Make sheet metal pattern development of Hopper made in workshop. | 07 |
| | (b) Explain profile of sheet metal shop supervisor | 07 |
| Q.2 | (a) Explain mechanism of shearing action in press tool. | 07 |
| | (b) Explain die clearance. Discuss effect of too little clearance and correct clearance on fracture with neat sketch | 07 |
| OR | | |
| | (b) Draw neat sketch of press tool assembly and label its parts. | 07 |
| Q.3 | (a) List different sheet metal shearing operations and explain any five with neat sketch. | 07 |
| | (b) Explain sheet metal pattern lay out with neat sketch. | 07 |
| OR | | |
| Q.3 | (a) Explain soldering process with neat sketch, write advantages, limitations and application of it. | 07 |
| | (b) Explain different safety precautions to be taken in gas welding shop | 07 |
| Q.4 | (a) Explain gas welding techniques with neat sketch. | 07 |
| | (b) Explain definition, procedure, advantages, limitation and application with neat sketch of Seam welding. | 07 |
| OR | | |
| Q. 4 | (a) Explain different types of gas welding flames with neat sketch. | 07 |
| | (b) Explain definition, procedure, advantages, limitation and application with neat sketch of Upset butt welding. | 07 |
| Q.5 | (a) Draw neat sketch of different riveted joints, | 07 |
| | 1. Single strip butt joint (single riveted and double riveted.) | |
| | 2. Double strip butt joint (single riveted and double riveted.) | |
| | 3. Lap joint. | |
| | (b) Explain sheet metal application in following area | 07 |
| | 1. Domestic appliances | |
| | 2. Coolers, chillers, visi cooler / duct | |
| | 3. Air craft industries | |
| | 4. Food processing industries | |
| OR | | |
| Q.5 | (a) Explain advantages and limitations of welded joint over riveted joints. | 07 |
| | (b) Explain sheet metal application in following area | 07 |
| | 1. Vehicle body building | |
| | 2. Refrigeration and air conditioning | |
| | 3. Furniture fabrication | |