

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) - EXAMINATION – SUMMER 2016****Subject Code:2150206****Date:13/05/2016****Subject Name:Automotive manufacturing****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.

- Q.1** (a) What are the advantages and disadvantages of hot working and cold working of metals? **07**
- (b) Mention the causes and remedies of following sand casting defects. **07**
(1) Blow holes (2) hot tears (3) misruns
- Q.2** (a) Explain briefly the procedure of manual metal-arc welding process. **07**
- (b) Name the pattern allowance which can be quantitative specified, write a brief note on each of them. **07**
- OR**
- (b) Explain desirable characteristics of any core in sand casting. Also give list of normal binder used in core sand. **07**
- Q.3** (a) Describe oxy-acetylene gas welding with neat sketch diagram. **07**
- (b) Explain important function of flux coating of electrodes used in manual metal arc welding. **07**
- OR**
- Q.3** (a) Explain different types of flame obtained in oxy-acetylene gas welding process and give application of each. **07**
- (b) Explain briefly the procedure of the manual metal-arc welding process. **07**
- Q.4** (a) Explain with sketches the difference between forward and backward extrusion. **07**
- (b) What do mean jigs and fixtures? Explain uses of jigs and fixtures. **07**
- OR**
- Q.4** (a) What do mean by “hear balance” in welding process? Explain its relevance. **07**
- (b) What are the difference between TIG and metal arc welding? **07**
- Q.5** (a) Explain locating principles and method in jigs and fixtures with neat sketch diagram. **07**
- (b) What are the various types of forging methods available to automotive manufacturing? Explain any one process with sketch and their application. **07**
- OR**
- Q.5** (a) What do you mean by super finishing processes? Give list of different types of super finishing processes also explain any one with neat sketch diagram. **07**
- (b) Discuss forging defects and their remedies. **07**
