

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV(NEW) EXAMINATION – WINTER 2022****Subject Code:3140204****Date:17-12-2022****Subject Name:Automotive Manufacturing Processes and Technology****Time:10:30 AM TO 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. Simple and non-programmable scientific calculators are allowed.

MARKS

- Q.1** (a) Explain any three super finishing process. **03**
(b) Explain Up Milling & Down Milling operations. **04**
(c) Explain working principle of Drilling machine with neat sketch. **07**

- Q.2** (a) Explain difference between planer, shaper and slotter. **03**
(b) Describe any four operations that can be carried out on Lathe machine along with neat sketches. **04**
(c) Explain USM process for manufacturing of automobile parts. **07**

OR

- (c) Discuss the defects, causes and remedies of forging defects. **07**

- Q.3** (a) Write functions of riser and runner in casting. **03**
(b) Explain Abrasive Jet machining process. **04**
(c) What is pattern? List different types of patterns and explain any two with neat sketch. **07**

OR

- Q.3** (a) Explain any three types of patterns used in casting. **03**
(b) Explain the steps involved in sand casting process. **04**
(c) Discuss various types of allowances provided in casting & why? **07**

- Q.4** (a) Name a few inert gases and their functions in welding. **03**
(b) Give difference between hot working & cold working processes. **04**
(c) Explain steps involved in Investment casting process with neat sketch. **07**

OR

- Q.4** (a) State the material properties which are important in metal forming. **03**
(b) Explain drop forging and roll forging processes. **04**
(c) What is extrusion? Explain direct and indirect extrusion process with neat sketch. **07**

- Q.5** (a) What are the main advantages of gas welding over arc welding? **03**
(b) Explain difference between TIG & MIG process. **04**
(c) Describe Oxy-acetylene gas welding with neat sketch. **07**

OR

- Q.5** (a) Explain Classification of Plastics in detailed. **03**
(b) Enlist General Properties of Plastics & explain any two. **04**
(c) Explain Injection moulding process for Plastic part manufacturing. **07**
