

GUJARAT TECHNOLOGICAL UNIVERSITY**ME - SEMESTER– I (New course)• REMEDIAL EXAMINATION – SUMMER 2015****Subject Code: 2715003****Date:16/05/2015****Subject Name: Advanced Manufacturing Processes****Time: 10:30 am to 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.

- Q.1** (a) Define the non- traditional machining process. Give example, state advantages of non- traditional machining processes. **07**
- (b) Derive the equation for interelectrode gap for equilibrium condition in ECM. **07**
- Q.2** (a) List the various seven reasons which are responsible for evolution of advanced manufacturing processes. **07**
- (b) Explain the electron beam machining process with neat sketch. **07**
- OR**
- (b) Distinguish between EDM and LBM on the basis of 1). Working principle 2). Tool used 3). Accuracy 4). Applications. **07**
- Q.3** (a) Write merit and demerit of advanced casting process over conventional casting processes. **07**
- (b) Explain vacuum mould casting process and stated its advantages. **07**
- OR**
- Q.3** (a) Explain Evaporative pattern casting process and stated its advantages. **07**
- (b) Write the short note on ceramic shell casting process and its applications. **07**
- Q.4** (a) Enlist the advantages and disadvantages of laser beam welding process? **07**
- (b) Explain the working principal of electro beam welding process. **07**
- OR**
- Q.4** (a) With the neat sketch explain Ultrasonic welding and its applications. **07**
- (b) Explain contour roll forming process with neat sketch of an application. **07**
- Q.5** (a) Explain the Electro magnetic forming. What are its characteristics and advantages? **07**
- (b) Enlist methods of stretch forming processes. Explain applicability, advantages and limitations of stretch forming processes. **07**
- OR**
- Q.5** (a) Enumerate the process of Electro hydraulic forming process and its advantages. **07**
- (b) Write a short note on Explosive forming. **07**
