| Seat No.: | Enrolment No. |
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI • EXAMINATION - WINTER 2013

| Subj | ject (| Code: 162504 Date: 04-12-2013 | |
|--------|----------------|---|----------|
| • | | Name: Allied Manufacturing Processes 2:30 pm to 05:00 pm Total Marks: 70 | |
| Instru | 1. 2. 3. | Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. | |
| Q.1 | (a) (b) | What is automation? Compare and contrast Capstan lathe and Turret lathe. State and explain transfer machines in brief. | 07 07 |
| Q.2 | (a) (b) | Define the term 'Screw thread'. Explain various forms of threads in brief. What purposes are served by the screw threads? Enumerate various methods of making threads in brief. | 07 07 |
| | (L.) | OR | 0.7 |
| | (b) | Explain: Thread grinding; Thread rolling and Screw thread inspection in brief. | 07 |
| Q.3 | (a) | What is gear? State the types of gears and their applications in brief. List the advantages and disadvantages of toothed gearing. | 07 |
| | (b) | Define: Gear grinding; Gear shaving, and Gear testing in brief. OR | 07 |
| Q.3 | (a) | What purposes are served by the gears? Enumerate various methods of | 07 |
| | (b) | making gears in brief. State how external and internal threads are manufactured? State limitations in each case. | 07 |
| Q.4 | (a) | State the reasons for various protective surface treatments done for metals. | 07 |
| | (b) | Give example in each case. What is electroplating? Explain with the help of neat sketch, the working principle of electroplating. | 07 |
| 0.4 | (0) | OR State and explain industrial applications of plactics in brief | 07 |
| Q.4 | (a) (b) | State and explain industrial applications of plastics in brief. Explain with the help of neat sketch, the working principle of injection molding. State its limitations. | 07 07 |
| Q.5 | (a) | Distinguish between conventional and unconventional manufacturing | 07 |
| | (b) | processes used in industries. Give examples in each case. Explain with the help of a neat sketch, the working principle of ECM. State its limitations | 07 |
| 0.5 | (e) | OR List the unconventional processes. State the basic factors upon which the | 07 |
| Q.5 | (a) | unconventional processes are classified. Explain. | U/ |
| | (b) | Explain with the help of a neat sketch, the working principle of EDM. State its limitations | 07 |
