| Seat No.: | Enrolment No.          |
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| Jeat 110  | <b>E</b> m officit 110 |

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER-VII (OLD) - EXAMINATION - SUMMER 2017

| Sub<br>Tin | ject       | Code: 172506 Date: 29/04/201 Name: Flexible Manufacturing Systems (Department Elective - I) 2:30 PM to 05:00 PM Total Marks: 7 |          |
|------------|------------|--|----------|
|            | 1.<br>2.   | Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.               |          |
| Q.1        | (a)        | Explain major differences between Conventional Manufacturing Systems and FMS   | 07       |
|            | <b>(b)</b> | Prepare a general layout of FMS and explain each component separately.   | 07       |
| Q.2        | (a)<br>(b) | What do you understand by Group Technology? What are its benefits? Explain any two method of grouping in group technology.  OR | 07<br>07 |
|            | <b>(b)</b> | Explain cellular manufacturing with example.   | 07       |
| Q.3        | (a)<br>(b) | Differentiate horizontal and vertical machining centre with suitable examples. Explain in detail automated turning centre.  OR | 07<br>07 |
| Q.3        | (a)        | What do you understand by AVG? Explain its practical application in modern industries.   | 07       |
|            | <b>(b)</b> | Explain usefulness of automated material handling system.  | 07       |
| Q.4        | (a)        | Explain how automated inspection is useful in industries with suitable examples.   | 07       |
|            | <b>(b)</b> | Explain working of CMM in detail.  OR  | 07       |
| Q.4        | (a)<br>(b) | Carry out tool management in a suitable industry. Explain tool strategies in detail.   | 07<br>07 |
| Q.5        | (a)<br>(b) | Explain installation and implementation procedure of FMS.  Explain working of cleaning and deburring station in detail.  OR    | 07<br>07 |
| Q.5        | (a)<br>(b) | What is the application of robot in FMS? Write merits of robots in FMS. Explain unattended machining in detail.                | 07<br>07 |
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