| Seat No.: | Enrolment No. |
|-----------|---------------|
| Deat 110 | Emonition 10. |

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER IV (NEW) – • EXAMINATION – WINTER 2016

| Subject Code: 2743301 | | | Date: 26/10/2016 | |
|--|------------|---|------------------|--|
| Subject Name: Flood Management Time:02:30 pm to 05:00 pm Instructions: | | 2:30 pm to 05:00 pm Total Marks: | Total Marks: 70 | |
| | 1. 2. | Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. | | |
| Q.1 | (a) | Discuss relationship between monsoons, floods and agriculture in India. | 07 | |
| | (b) | How integrated catchment management practices reduce flood risks? | 07 | |
| Q.2 | (a) (b) | What are the chief causes of flooding? Elaborate with suitable examples. Discuss flood routing in channels. | 07 07 | |
| | | OR | | |
| | (b) | Discuss flood routing in reservoirs. | 07 | |
| Q.3 | (a) | How non- structural measures are becoming more effective flood management tools in present day scenario? | 07 | |
| | (b) | Discuss various structural measures for flood management. OR | 07 | |
| Q.3 | (a) | What is watershed management? Write watershed measures to reduce peak flooding. | 07 | |
| | (b) | Explain real-time flood warning and flood forecasting. | 07 | |
| Q.4 | (a) (b) | Explain flood plain mapping and flood zoning. Describe the socio-political response of flood and flood protection. | 07 07 | |
| | | OR | | |
| Q.4 | (a) (b) | Discuss role of GIS in flood assessment. Describe urban flooding and its management. | 07 07 | |
| Q.5 | (a) | "HEC-RAS is a good option for evaluation of the flood area" justify this statement. | 07 | |
| | (b) | Write a note on the flood protection measures taken on river Sabarmati. OR | 07 | |
| Q.5 | (a) | Explain the peak flow calculation module of the SWAT model. | 07 | |
| | (b) | Write a note on flooding of river Tapi. | 07 | |
