

FACULTY OF ENGINEERING & INFORMATICS

**B.E. 4/4 (CE/EE/Inst./ECE/CSE/IT) II - Semester (Main & Baclog) Examination,
May / June 2018**

**Subject : Disaster Mitigation and Management
(Elective – II, III & V)**

Time : 3 Hours

Max. Marks: 75

Note: Answer all questions from Part-A. Answer any five questions from Part-B.

PART – A (25 Marks)

- 1 What are the objectives and strategies of HFA? (3)
- 2 What is the role of NIDM in disaster management? (3)
- 3 Write short notes on intensity of earthquakes? (2)
- 4 State the significance of cyclone shelters. (3)
- 5 What are the implications of major power break downs? (2)
- 6 What are the different types of chemical / industrial hazards? Explain the characteristics. (3)
- 7 Write short notes on EMR. (2)
- 8 What are the components of GIS? (2)
- 9 What are the different types of vulnerability define them? (3)
- 10 List the factors that contribute to risk during earthquake. (2)

PART – B (50 Marks)

- 11 (a) Draw and explain the disaster management cycle with suitable examples. (6)
(b) What is the role of state government and international agencies in disaster management? (4)
- 12 (a) Describe the reasons behind the occurrence of earth quakes. Mention some of the earthquakes that have hit India and the damages caused. (6)
(b) Explain the link between drought and desertification. Use appropriate case studies. (4)
- 13 (a) "Bomb blasting has become order of the day". Discuss the detection, prevention and main mitigation strategies. (5)
(b) List some of the cases of aviation hazards in the recent times. Present any recent case study. Also, explain the mitigation measures that can be taken upto prevent such accidents. (5)
- 14 "Integration of remote sensing and GIS is essential for proper mitigation and management of disaster". Substantiate the statement with good reasoning and illustrations. (10)
- 15 (a) What is risk mapping and vulnerability analysis? Explain the role of GIS in the above. (4)
(b) Formulate and explain the types of warning systems that are available to alert the people in the case of predicted disasters such as floods, cyclones etc. (6)
- 16(a) Analyse the reasons and ill effects of Chernobyl disaster and Bhopal gas tragedy.(6)
(b) Explain India's key vulnerability to various types of disasters. (4)
- 17 Write short notes on the following: (10)
 - (a) Landslide remediation structures
 - (b) Oil spills
 - (c) Geostationary and polar orbiting satellite
 - (d) Types of natural and human made disaster

FACULTY OF ENGINEERING

B.E. 4/4 (M/P/AE) II - Semester (Main & Backlog) Examination, May / June 2018

Subject : Rapid Prototyping Technologies (Elective-III)

Time : 3 Hours

Max. Marks: 75

Note: Answer all questions from Part-A & any five questions from Part-B.

Part-A (10x2.5=25 Marks)

- 1) Distinguish between virtual prototyping and rapid prototyping
- 2) Classify different types of R.P Process
- 3) Explain Laser Technology
- 4) Distinguish between SGC and SLA Processes.
- 5) List the advantages of FDM Process in RPI.
- 6) List LOM specifications
- 7) Name the applications of 3D printing
- 8) Enumerate the applications of SLS process.
- 9) Write the biomedical applications of RPT.
- 10) List ART models.

Part-B (5X10=50 Marks)

- 11) a) Explain the role 3D Modelling in RPT
b) Explain RP Process chain with neat sketches.
- 12) With a neat sketch explain the working principle of SLA RP Processes, mentioning its advantages and limitations.
- 13) a) What is 3DP ? Explain the models, specifications and working principle of 3DP with case studies.
b) List various FDM models and its limitations.
- 14) Explain RP software features for magic and Rhino .
- 15) What is 3DP? Explain the models, specifications and working principle of 3DP with case studies.
- 16) a) Explain various patterns for investment and vacuum casting.
b) Explain LOM RP Process
- 17) Write short notes on the following:
 - a) Engineering Analysis Models.
 - b) Applications of RP in Aerospace Industry
 - c) Various RP Data Formats