Registration no: ☐☐☐☐☐☐☐☐☐☐

Total Number of Pages: 01

M.Tech.
MT309

3rd Semester Back Examination 2017-18
Disaster Management and Mitigation
BRANCH(S) :
, Chemical Engg., Computer Science And Tech., Design And Dynamics, Electri & Amp; Electro Engg (Power System Engg), Enviorn Engg., Geotechnical Engg, Metallurgical And Materials Engg, Nano Tech., Power Electro, Power Systems, Production Engg, Signal Processing And Engg, structural & Foundation Engg, Structural Engg, Water Resource Engg, Water Resource Engg And Management
Time: 3 Hours
Max marks: 70
Q.CODE: B652
Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions:** **(2 x 10)**
   a) What is the difference between earthquake *intensity* and earthquake *magnitude*?
   b) Differentiate between *tsunami* and *flooding*.
   c) State various earthquake zones.
   d) What do you mean by *tropical cyclone*?
   e) Identify various damage assessment techniques.
   f) State the different stages of disaster management.
   g) Explain the term; *capacity building*.
   h) Differentiate between *repairing* and *retrofitting*.
   i) What is emergency preparedness?
   j) State the full form of GPS,GIS and PGA.

Q2 **a)** Explain the causes of global warming and climate change. **(5)**
   b) What are the various causes of earthquake? **(5)**

Q3 **a)** Distinguish between natural disaster and manmade disaster. **(5)**
   b) Explain the various applications of IT in *disaster management and preparedness*. **(5)**

Q4 Discuss the roll of panchayats, government agencies and communities in handling an emergent disaster situation subjected to earthquake. **(10)**

Q5 **a)** Explain various modes of failure of a masonry building subjected to earthquake loading. **(5)**
   b) Explain the prevention, management and preparedness strategy to be adopted at various levels for efficient earthquake hazard management. **(5)**

Q6 **a)** Describe the application of GIS and remote sensing in disaster management. **(5)**
   b) Describe the various warning systems which can be adopted for disaster preparedness. **(5)**

Q7 Describe the concept of earthquake resistant design. Explain various reinforcement detailing measures which can be applied for (a) beams and beam-column joints of a RCC framed structure and (b) masonry structures for sustaining the effect of earthquake. **(10)**

Q8 **Write short notes on the followings. (any TWO)** **(5 x 2)**
   a) seismic waves
   b) retrofitting techniques
   c) vulnerability atlas
   d) disaster mapping