

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)**

**CLASS: B ARCH
BRANCH: ARCHIECTURE**

**SEMESTER : VIII
SESSION : SP/19**

SUBJECT: AR8307 DISASTER MANAGEMENT

TIME: 3 Hours

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
 2. Candidates may attempt any 5 questions maximum of 60 marks.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Discuss the terms vulnerability, hazard and disaster. [2]
(b) Discuss the social and political implications of disaster. [4]
(c) Vulnerability is the progression of three stages. Discuss it giving suitable examples. [6]
- Q.2(a) What was the aim of UN International Decade for Natural Disaster Reduction (IDNDR)? [2]
(b) Elaborate on the terms risk, risk assessment, risk evaluation and risk perception? What do you understand by 'acceptable levels of risk'? [4]
(c) List the three essential components considered in the determination of risk and discuss them. Discuss any one method of risk assessment. [6]
- Q.3(a) State the aim of disaster preparedness. [2]
(b) Considering any disaster type suggest disaster mitigation strategies for the same. [4]
(c) Discuss the necessary actions to be considered during the reconstruction and mitigation phases of Disaster management. Explain with the help of examples. [6]
- Q.4(a) List the causes of an earthquake. What seismic effects can be seen on built structures during an earthquake? [2]
(b) Discuss why building ductility is significant for 'Good Seismic Performance'. Which are the building elements whose ductile performance enhanced. Suggest how it can be done. [4]
(c) Identify the different factors that affects the severity of shaking of a building during an earthquake. Discuss their effects. [6]
- Q.5(a) Differentiate between magnitude and intensity of an earthquake. How are they measured? [2]
(b) Discuss the three types of inter-plate interactions observed in tectonic plates during earthquakes, and what impact it has on buildings. [4]
(c) What is the Fundamental Natural Period T of the building in relation to earthquakes. How does it affect the performance of buildings during a seismic activity? [6]
- Q.6(a) Discuss why capacity building is important for effective disaster management. [2]
(b) Highlight upon the need of preparation of a disaster or vulnerability atlas of India. [4]
(c) Discuss the aspects to be assessed by a local planning authority for carrying out a project in the case of a cyclone prone area. [6]
- Q.7(a) Discuss the role of media in disaster management. [2]
(b) Should 'School Awareness and Safety Programmes' be considered an important component of capacity building for Disaster Management. Discuss. [4]
(c) Discuss the role of GIS and Remote Sensing Application in disaster monitoring, prevention and rehabilitation. [6]

:::24/04/2019 M:::