JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION-MAY-2023

COURSE CODE (CREDITS): 21B1WCE831   MAX. MARKS: 35

COURSE NAME: Disaster Risk Analysis and Management

COURSE INSTRUCTORS: Dr. Saurav/ Dr. Saurabh Srivastava   MAX. TIME: 2 Hrs

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q1. Landslides hazard is an important types of natural disaster. List various characteristics landslides hazards.   **[5, CO4]**

Q2. Define mitigation? With the help of a diagram, explain the disaster management cycle.

[6, CO4]

Q3. Discuss Disaster Risk Reduction (DRR) in detail. Numerate various DRR measures that can be adopted into their planning and policy.   **[6, CO4]**

Q4. Consider a system of two fire pumps, FP₁ and FP₂, The fire pumps are driven by a common engine, EG. The water flow is opened by a valve "V". Draw a fault tree illustrating the potential causes of the TOP event: **"No water from the fire pump system"** in the case of a demand. Also discuss advantages and disadvantages of FTA   **[6, CO3]**

Q5. The average height of professional basketball players is around 6 feet 7 inches, and the standard deviation is 3.89 inches. Assuming Normal distribution of heights within this group,

    (a) What percent of professional basketball players are taller than 7 feet?

    (b) If your favourite player is within the tallest 20% of all players, what can his height be?   **[3M+3M, CO1]**

Q6. Raw material used in the production of a synthetic fibre is stored in a place that has no humidity control. Measurements of the relative humidity and the moisture content of samples of the raw material (both in percentages) on 12 days yielded the following results:

Humidity	46	53	37	42	34	29	60	44	41	48	33	40
Moisture content	12	14	11	13	10	8	17	12	10	15	9	13

Fit a least squares line that will enable us to predict the moisture content in terms of the relative humidity.   **[6M, CO1]**