International Institute of Information Technology Hyderabad
(Deemed to be University)

Spring 2020
CES442 Disaster Management

Assignment7
Dynamic Resource Allocation and Extreme Event Modelling

Due: 26 April 2020, 11.55 PM   **Max. Marks: 30**

Q1. Consider the following scenario:

A stampede happened in a religious congregation of about 2000 people injuring 200 people. At the location, 100 policemen with wireless phones are deployed for crowd management, and 4 ambulances, 4 doctors & 6 medical assistants for handling emergencies. There is a government hospital 5 kms away from the site with 6 ambulances, 15 doctors, 60 medical assistants, one operation theatre, and three triage rooms. Mobile phones were allowed in the congregation.

(a) Is this a *dynamic resource allocation* scenario? Why?
(b) Identify *tasks* and *assets* in the scenario.
(c) Suggest pointers for effective dynamic resource allocation to handle the disaster. Can these pointers be used to develop a dynamic resource allocation algorithm to manage similar future disaster?

Note: Assume any other suitable information required to answer questions above.

Q2. Explain with real time example how primary, reinsurance and retro market works?

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