Minor- II: Probability and Statistics

College For Integrated Studies
University of Hyderabad

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Duration: 60 minutes   **Instructor: Dharmendra Kumar**
Maximum Score: 20 points   **Course Code: MM 212**

Instructions: Answers without justification will receive a score of zero.

1. If 8 identical greenboards are to be divided among 4 classrooms.

   (a) How many divisions are possible ? Justify your answer. [4]

   (b) How many, if each classroom must receive at least 1 greenboard ? Justify your answer. [4]

2. An economic model predicts that if interest rates rise, then there is a 60 percent chance that unemployment will increase, but that if interest rates do not rise, then there is only a 30 percent chance that unemployment will increase. If the economist believes there is a 40 percent chance that interest rates will rise, what is the probability that unemployment will increase ? [4]

3. Urmi is randomly selected from the students of University of Hyderabad by the Health authorities. A laboratory test on her blood sample tells Urmi that she has tested positive for dengue. It is found that 95 percent of students with dengue test positive but 2 percent of students without the dengue will also test positive. Suppose that 1 percent of the students has the dengue. What is the probability that Urmi indeed has the dengue ? [8]

All the best !