JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- FEB-2023

B.Tech IV Semester

COURSE CODE (CREDITS): 18B11CE414 (3)   MAX. MARKS: 15

COURSE NAME: WATER RESOURCE ENGINEERING

COURSE CREDITS: 3   MAX. TIME: 1 HR

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Assume suitable data if required.

1. Give a brief description of various phenomenon responsible for causing precipitation.[4] (CO1)

2. In a certain river basin, there are 4 rain gauge stations with their normal annual precipitations amounting to 800, 520, 440 and 400 mm respectively. Determine the optimum no. of rain gauge stations required limiting the error in calculation of mean precipitation to 12%.[3] (CO2, CO6)

3. The annual peak flood discharges recorded at a stream gauging site for a period between 1961 to 1979 were 3950, 6190, 7660, 4220, 2820, 5600, 7050, 5280, 5200, 4360, 6970, 6240, 4960, 5890, 5980, 3590, 6860, 7210 and 5270 m^3/s respectively. Construct the frequency curve and estimate the peak flood for a return period of 50 years and 100 years. [5] (CO2, CO6)

4. Describe with figure, the working of anyone automatic recording rain gauge.[3] (CO2)