

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- V(OLD) EXAMINATION – SUMMER 2019

Subject Code:150602

Date:17/06/2019

Subject Name:Hydrology & Water Resources Engineering

Time:02:30 PM TO 05:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What is hydrology? Explain various practical applications of hydrology. **07**
(b) Describe historical development of hydrology and global water budget. **07**
- Q.2** (a) Explain measurement of rainfall by radar. **07**
(b) Describe various methods to measure evaporation in brief. **07**
- OR**
- (b) What is difference between hyetograph and hydrograph? Explain unit hydrograph theory. **07**
- Q.3** (a) What is S curve hydrograph? Explain procedure to develop unit hydrograph for various duration using S curve hydrograph. **07**
(b) Write short note on well hydraulics. **07**
- OR**
- Q.3** (a) What is yield of aquifer? Explain pumping test and recuperation test to estimate the aquifer yield. **07**
(b) Classify the different types of reservoir based on purposes served and explain each in brief. **07**
- Q.4** (a) Describe mass inflow curve to determine storage capacity of the reservoir for specified yield. **07**
(b) Write short note on reservoir sedimentation and control. **07**
- OR**
- Q.4** (a) Write technical information about major dams and reservoirs of our Country. **07**
(b) Classify the different types of spillway based on most prominent features and explain any one with sketch. **07**
- Q.5** (a) What are the various causes of flood? Describe flood damage analysis. **07**
(b) What is flood routing? Describe the graphical method of flood routing. **07**
- OR**
- Q.5** (a) Write short note on water harvesting. **07**
(b) Explain causes of draught. Describe the various measures require to be taken against drought. **07**
