**REGISTRATION NUMBER**

# SRINIX COLLEGE OF ENGINEERING

## 1ST INTERNAL EXAMINATION-2020-21

Subject-**WRE**                    Semester-**7TH**                    Branch-**CIVIL**

Full Marks-**60**                                                                Time-**2.00Hrs**

**PART-A :**                    **ANSWER ALL QUESTIONS**                    **[2X10=20]**

1. What are the factors affecting infiltration?
2. What do you mean by a unit hydrograph?
3. What are the factors affecting runoff?
4. Define Ø-index and explain.
5. Draw and describe with neat sketch of hydrological cycle.
6. Explain the flood hydrograph.
7. Write the differential equation of storage.
8. Differentiate between direct runoff and base flow.
9. What is conveyance of a channel?
10. An open channel carries water with a velocity of 0.5m/sec. if the average bed shear stress is 1.0 N/m$^2$. The Chezzy coefficient is?

**PART-B :**                    **ANSWER ALL QUESTIONS**                    **[5X4=20]**

1. Find the discharge through a trapezoidal channel of width 8m and side slope of 1 horizontal to 3 vertical. The depth of flow of water is 2.4m and value of Chezy's constant C=50. The slope of the bed of the channel is given 1 in 4000.
2. Explain specific energy with the help of a diagram.
3. What is flood routing? Explain the basic equations used for flood routing.
4. Differentiate between reservoir routing and channel routing.

**PART-C :**                    **ANSWER ALL QUESTIONS**                    **[10X2=20]**

1. A flow of water of 100 litres per second flows down in a rectangular flume of width 600mm and having adjustable bottom slope. If Chezy's constant C is 56, find the bottom slope necessary for uniform flow with a depth of flow of 300mm. Also find the conveyance K of the flume.
2. Explain the different methods to estimate evapotranspiration.