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Total No. of Pages : 02

Total No. of Questions : 09

**B.Sc. (Agriculture) (Sem.-5)**  
**FUNDAMENTALS OF SOIL AND**  
**WATER ENGINEERING**

**Subject Code : BSAG-501**

**M.Code : 74165**

**Date of Examination : 12-12-2022**

**Time : 3 Hrs.**

**Max. Marks : 60**

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt **ANY FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt **ANY TWO** questions.

**SECTION-A**

**Q1. Write short notes on :**

- a) Plane Surveying
- b) Bench mark
- c) Orifices
- d) Water hammer
- e) Sheet erosion
- f) Strip cropping
- g) Emitter
- h) Erosivity
- i) Check basin
- j) Hydrant

### SECTION- B

2. What is Levelling? Explain the different instruments used for levelling.
3. Discuss the classification of irrigation project.
4. Explain the working principle of Parshall flume.
5. Explain the Universal soil loss equation for predicting the soil loss.
6. Explain the different types of weirs and compute the discharge over 90° V notch under the head of 7 cm and 19 cm.

### SECTION-C

7. Explain the different types and components of sprinkler irrigation system.
8. Discuss the various types of gully and its control measures.
9. Classify the different types of pump. What is specific speed of pump? Compute the specific speed of the centrifugal pump at its best point of efficiency discharges 0.03 cubic metres of water per second against a total head of 40 m when the speed is 1450 rpm.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**