

- Q.19 What is the criteria of selecting pumps for irrigation. (CO4)
- Q.20 Explain pollution associated with poor quality of irrigation water. (CO2)
- Q.21 What are different systems of irrigation? (CO2)
- Q.22 Write a short note on water table, isobaths and isobar lines. (CO6)

#### **SECTION-D**

**Note:** Long answer questions. Attempt any two questions out of three Questions. (2x8=16)

- Q.23 Under what circumstances pumps are required? What are the main classifications of pumps? (CO4)
- Q.24 Show with the help of sketches various types of wells. (CO5)
- Q.25 What do you understand by Evapo-transpiration. What are the factors affecting duty? (CO3)

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**3rd Sem.**  
**Branch : Agriculture**  
**Sub.: Farm Irrigation Engineering**

**Time : 3 Hrs.**

**M.M. : 60**

#### **SECTION-A**

**Note: Multiple type Questions. All Questions are compulsory. (6x1=6)**

- Q.1 The artesian aquifer is the one where; (CO5)
- Water surface under the ground is at atmospheric pressure.
  - Water table serves as upper surface to the zone of saturation.
  - Water is under pressure between two impervious strata
  - None of these
- Q.2 In a single acting reciprocating pump, the acceleration head; (CO4)
- Is at maximum at the middle of suction stroke.
  - Is affecting by length of pipe
  - Is zero at the beginning of the delivery stroke
  - Affect the work done during a cycle

- Q.3 The maximum efficiency of centrifugal pump is?  
 a) 50%                      b) 70%  
 c) 85%                      d) 100%
- Q.4 The actual area irrigated in a year from outlet is; (CO2)  
 a) Irrigation period        b) Intensity of irrigation  
 c) Irrigation frequency    d) None of these
- Q.5 Which type of motor is typically used in submersible pumps to ensure reliable underwater operation. (CO4)  
 a) Synchronous motor      b) Induction motor  
 c) Universal motor         d) Slipper motor
- Q.6 Which type of irrigation is based merely on gravitation?  
 a) Flow irrigation          b) Direct irrigation  
 c) Lift irrigation          d) Storage irrigation

### **SECTION-B**

**Note:** Objective/Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 \_\_\_\_\_ irrigation method is effective for growing vegetables. (CO1)
- Q.8 Area to be irrigated = C.C.A. X \_\_\_\_\_. (CO2)

- Q.9 Full form of G.C.A. (CO3)
- Q.10 Write the formula of Darcy's Law. (CO3)
- Q.11 The two famous methods of irrigation in the field are \_\_\_\_\_ and \_\_\_\_\_ irrigation methods. (CO3)
- Q.12 The area served by a canal system through supply of water for irrigation and other purposes are called a \_\_\_\_\_ (CO6)

### **SECTION-C**

- Note:** Short answer type Questions. Attempt any eight questions out of ten Questions. (8x4=32)
- Q.13 What are the various quality parameters for irrigation water and their importance. (CO6)
- Q.14 Explain border, check and furrow irrigation methods. (CO6)
- Q.15 Write a short note on irrigation frequency and gross irrigation requirements. (CO6)
- Q.16 Write the formula for discharge of well in a homogeneous Artesian aquifer. (CO5)
- Q.17 Explain any two benefits of drip irrigation system. (CO3)
- Q.18 Write a short note on advantage and disadvantage of pumps. (CO4)