KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Agri. Engg) 2016 Admission
VI Semester Final Examination-June 2019

Iden. 3209

Ground water, Wells and Pumps (2+1)

Marks: 50
Time: 2 hours
(10x1=10)

I   **Fill up the blanks**

1 The well water level rises above the aquifer water level in a _____.
2 Practically the suction lift of a centrifugal pump is _____
3 The pump used for high discharge and low head is _____
4 Storage coefficient is the same as the specific yield for _____
5 _____ is provided at the entrance of suction pipe during centrifugal pump installation.

State True or False

6 Leakage factor is the property of semi confined aquifer
7 Occurrence of groundwater can be detected by resistivity meter
8 The water level stands in the well before pumping is static water level
9 A submersible pump is required when delivery head is too high
10 The specific yield of a formation may be more than its porosity

II   **Write Short notes on any FIVE of the following**   (5x2=10)

1 Different types of flow condition
2 Darcy's law and its limitation
3 Assumptions of Thiem's Equation.
4 Slip
5 Pump troubles and remedies
6 Components of reciprocating pumps
7 Calculate the water horse power of a centrifugal pump of 10 litres/ second capacity and 38 metre total head.

III **Answer any FIVE of the following.**   (5x4=20)

1 Fully penetrating tube wells
2 Installation of well screen
3 Well interference
4 Archimedean screw
5 Variable displacement pumps
6 Air lift pumps
7 Pump characteristic curves

IV   **Answer any ONE of the following**   (1x10=10)

1 Derive an equation for discharge through a confined aquifer with all assumptions.
2 Explain centrifugal pumps components, principles and working with a neat sketch.

****