

Code No: R1621353

R16**SET - 1****II B. Tech I Semester Regular Examinations, October/November - 2017****GROUND WATER HYDROLOGY, WELLS AND PUMPS**

(Agricultural Engineering)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)

2. Answer **ALL** the question in **Part-A**3. Answer any **FOUR** Questions from **Part-B**

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**PART -A**

1. a) Distinguish between aquifer and aquifuge. (2M)
- b) Distinguish between artesian well and flowing well. (2M)
- c) Explain steady and unsteady radial flow to wells. (3M)
- d) Describe the classification of indigenous pumps. (3M)
- e) Explain the difference in working principles of centrifugal and reciprocating pumps. (2M)
- f) What is priming? What is meant by auto priming system? (2M)

**PART -B**

2. a) Discuss the occurrence and movement of ground water in detail. (7M)
- b) With a neat diagram distinguish between confined and unconfined aquifer. (7M)
3. a) Discuss different types of well construction along with their suitability. (7M)
- b) What is meant by well development? Explain in detail, different well development procedures. (7M)
4. a) Describe with neat sketches, radial flow to wells in both confined and unconfined aquifers. (7M)
- b) Explain in brief the determination of different aquifer parameters. (7M)
5. Discuss the necessity, concept and different methods of artificial recharge of ground water. (14M)
6. a) What are pump troubles and remedies? Explain. (7M)
- b) Describe different performance characteristic curves of pumps with neat sketches. (7M)
7. Describe the principle and working of Propeller pumps and submersible pumps with neat sketches (14M)