

Code No: RT22012

R13**SET - 2**

II B. Tech II Semester Supplementary Examinations, November - 2018
HYDRAULICS AND HYDRAULIC MACHINERY
(Civil 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 **THREE** Questions from **Part-B**

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**PART -A**

1. a) Write Chezy's, and Manning's formula
- b) What is the difference between model and prototype
- c) Classify different types of turbines according to flow
- d) Explain the purpose of centrifugal pump
- e) Discuss about Cavitation
- f) How to Estimate hydropower potential

**PART -B**

2. a) Differentiate between open channel flow and pipe flow, show the 'energy grade line and the, hydraulic grade line in both cases.
- b) Discuss velocity distribution in an open channel.
3. a) Explain about Angular momentum principle
- b) Derive the expression for stationary and moving flat plate with sketch
4. Derive unit quantity ,unit power and unit speed
5. What is draft tube? What are the functions of draft tube? Explain different types with figures and draft tube theory
6. What is reciprocating pump? Describe the principle and working of a reciprocating pump with a neat sketch
7. a) Differentiate between micro hydro power and storage hydro power plants
- b) What is load prediction? What is its necessity? What are the different methods of load prediction?