

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST 1 EXAMINATION, September-2016
B. Tech. VII Semester

COURSE CODE: 10B1W CE732
COURSE NAME: **Hydropower Engineering**
COURSE CREDIT: 3

MAX. MARKS: 15
MAX. TIME: 1 hrs

Note: All questions are compulsory. Carrying of mobile phone during examination will be treated as case of unfair means. Assume suitable data if required.

- Q1. What do you mean by an intake structure? Draw the plan view & sectional view of the canal intake giving their salient features only. [3]
- Q2. When a run of river plant operates as a peak load station with a monthly load factor of 20 %, all its capacity is firm capacity. What will be the minimum flow in the river so that the station may serve as the base load station? Rated installed capacity of generator is 10000 kW and Operating head is 25 m. Also estimate the daily load factor of the plant if the stream flow is 15 cumec. Plant efficiency = 80%. [4]
- Q3. Explain major problems/constraints associated with hydro development with examples. [2.5]
- Q4. Explain the run off river hydro scheme with neat sketch. [2.5]
- Q5. Define the following: [3]
- (a) Reaction and impulse turbine.
 - (b) Hydraulic and mechanical efficiency of turbine
 - (c) Specific speed of turbine