Dr Sayan

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- OCT- 2019

B.TECH 7th Sem/ M.Tech 1st Sem

COURSE CODE: **11M1WCE113** MAX. MARKS: **25**

COURSE NAME: **DESIGN OF REINFORCED CONCRETE STRUCTURES**

COURSE CREDITS: **3** MAX. TIME: **1.5 Hrs**

Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.* **Use of IS 3370 (I to IV) and IS456:2000 are allowed.**

Q1. Design an isolated rectangular footing for a column of size 300mm×500mm subjected to a load of 1200kN. Safe bearing capacity of soil is 100kN/m^2. Use M25/ Fe415. Use LSM of design. **[CO4, 8]**

Q2. Using IS Code method design a circular water tank of height 4m and diameter 7m. The tank is fixed at the base and resting on the ground. Sketch the details. Use M30/ Fe415. **[CO3, 7]**

Q3. What are the methods of design of water tanks? Give the names of various codes used for design of tanks. Explain various kinds of joints used in water tanks. **[CO3, 5]**

Q4. Determine the collapse load for a square slab fixed all around the edges with following data using yield line theory **[CO2, 5]**

Size	5m×5m
reinforcement	8mm diameter@150mm c/c in both direction
Total depth	130mm
Effective cover	30mm
Grade	M20/Fe415