Code No: 09A60103 **R09**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD
B. Tech III Year II Semester Examinations, November/December-2013
WATER RESOURCES ENGINEERING - II
(Civil Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks

1.a) What are the different pool levels in a reservoir? Explain with a neat sketch.
b) How can water be lost from a reservoir? How can the losses are controlled?[7+8]

2.a) How can a gravity dam fail?
b) What precautions should be taken against the factors leading to the failure?[7+8]

3.a) What are different types of embankment dams? Discuss in brief.
b) Discuss the Swedish circle method for checking the stability of d/s slope under steady-seepage condition. [7+8]

4.a) What is meant by priming and depriming element of siphon? Discuss the devices used for early priming in a saddle siphon spillway.
b) Define spillway gate. Discuss various methods used for energy dissipation.[7+8]

5.a) Draw the layout of a diversion head work. Explain the various components and their functions.
b) Describe silt excluder with the help of a neat sketch. [7+8]

6.a) Dicuss the corrections to be applied while determining the uplift pressure by Khosla's theory.
b) Bring out the differences between Bligh's and Khosla's theories. [7+8]

7.a) Explain the canal head regulator with the help of a neat sketch.
b) Discuss the design principles of Sarda type fall. [7+8]

8.a) Explain the design principles of Type II aqueduct.
b) Explain Mitras design of hyperbolic transition, when depth of water remains constant. [7+8]

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