Total No. of Printed Pages:2

SUBJECT CODE NO:- K-218
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E.(CIVIL) Examination Oct/Nov 2016
Water Resources Engineering-II
(Revised)

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Question No.1 and 6 are compulsory.
ii) Solve any two questions from the remaining questions from each section.
iii) Figures to the right indicate full marks.
iv) Assume suitable data if necessary.

Section A

Q.1 Solve any five 10

1) What is meant by a dam and a reservoir?
2) Classify the types of reservoirs.
3) What do you mean by reservoirs capacity, what are methods of determining the reservoir capacity?
4) What is a gravity dam? Draw a typical cross section of such a dam?
5) Differentiate between low and high gravity dam.
6) What are earthen dams and in what circumstances are they preferred.
7) What are spell ways and where are they provided?
8) What are arch and buttress dams?

Q.2 a) What is meant by flood routing through reservoirs? Discuss the modified Pul's method. 08
b) Explain the mass curve method to determine the capacity of a reservoir in detail. 07

Q.3 a) Write detail notes on 08
i) Forces acting on gravity dams.
ii) Stability analysis of gravity dams.
b) Explain in detail 07
i) Drainage gallery
ii) Construction joints in gravity dams

Q.4 a) Explain 08
i) Seepage failures in earthen dams.
ii) Pore pressure and its significance in relation to earthen dam construction.
b) Define & explain phreatic line in earthen dams. 07

Q.5 Write short notes 15

i) Energy dissipation below spillways
ii) Ogee spillway
iii) Best central angle of an arch dam.

Section B

Q.6 Solve any five 10

1) What do you mean by “Afflux”?
2) What are the functions of canal head regulator?
3) What are divide walls?
4) What is meant by piping in hydraulic structures?
5) What are the different types of weirs?
6) What are canal falls and where they are located?
7) Draw a neat sketch of super passage.
8) Explain the function of cross regulator.

Q.7 a) Enumerate and explain briefly the different method for control of entry of silt into canals. 08

b) Discuss the use of ‘guide banks’ and marginal bunds in a river regulating scheme. 07

Q.8 a) Write a note on Bligh’s creep theory. 07

b) Explain the design procedure of a vertical drop weir on Bligh’s theory. 08

Q.9 a) Write short notes on 08

i) Sarda type fall
ii) Roughening devices

b) What are canal escapes, explain in detail? 07

Q.10 Write short notes 15

1) Modules and their importance in canal irrigation system
2) Syphon aqueduct
3) Types of cross drainage works.