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Code No. : 41013

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (Civil) IV Year I-Semester Main Examinations, December-2017

Water Resources Engineering-II

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. Differentiate between Cross regulator & Head regulator.
2. What is a canal fall?
3. List two components of a weir.
4. What is creep length?
5. Discuss the properties of good lining material.
6. Discuss the remedial measures for water logging in irrigated soils.
7. List the hydraulic causes of failures of earth dam.
8. Define phreatic line.
9. Differentiate between Storage & Pondage.
10. What is load factor?

Part-B (5 × 10 = 50 Marks)

(All bits carry equal marks)

11. a) Explain in detail with the help of a neat sketch the design of a trapezoidal notch fall.
b) Choose the provision of various outlets depending on the requirement.
12. a) Explain the causes of failures of weirs on permeable foundations.
b) Write a note on Bligh's Creep theory.
13. a) Discuss the advantage of lined canals.
b) Explain the reasons for irrigated soils getting either saline or alkaline.
14. a) Explain the method of plotting the Phreatic line for a homogenous earthen dam with horizontal filter at downstream.
b) Discuss the methods of construction of earthen dams.
15. a) Explain the functions of surge tanks.
b) Discuss the selection process of suitable type of turbine for a Hydroelectric scheme.
16. a) Explain the suitability of various types of cross drainage works.
b) Discuss the criteria for correction of slope in method of independent variables.
17. Answer any *two* of the following.
 - i) Economics of canal lining.
 - ii) Seepage control devices through embankment.
 - iii) Penstocks.

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