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ET-536(B)

B.Tech. Civil (Water Resources Engineering)

00937

Term-End Examination

June, 2014

ET-536(B) : HYDRAULIC STRUCTURES – II

Time : 3 hours *Maximum Marks : 70*

Note : *Answer any* ***five*** *questions. All questions carry equal marks.*

1. (a) Discuss in detail how inundation canals are effective. 7

(b) Draw a typical cross-section of a canal in cutting. 7

2. (a) Describe the Level Crossing with the help of a neat sketch. 7

(b) Explain the salient features of design of unlined channel by Kennedy's theory. 7

3. (a) Discuss the characteristics of good lining material. 7

(b) What do you mean by Sensitivity of an outlet ? 7
Show that Sensitivity and Flexibility can be expressed as S = nF.

4. (a) Describe various measures to control and remove silt from a water course. 7

(b) What do you mean by Canal Falls ? Discuss in brief the design criteria of Sarda Type Fall. 7

5. (a) What do you understand by Silt Excluder ? Explain the functions served by it, with the help of a neat sketch. 7

(b) Describe the design criteria of a Venturi Head Regulator. 7

6. (a) What is a Navigation Lock ? Draw its typical plan and longitudinal section. 7

(b) Describe the particular river training measures required for Navigation. 7

7. Write short notes on the following : $4 \times 3\frac{1}{2} = 14$

(a) Berms

(b) Drainage Behind Lining

(c) Bank Protection

(d) Economics of canal lining

8. Differentiate between the following : $4 \times 3\frac{1}{2} = 14$

(a) Superpassage and Aqueduct

(b) Initial and Final Regime

(c) Repelling and Attracting Spurs

(d) Lined and Unlined Canal