No. of Printed Pages : 3

ET-535(B)

B.Tech. Civil (Construction Management)

Term-End Examination

00027

December, 2017

ET-535(B) : HYDRAULIC STRUCTURES

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt any* ***five*** *questions. All questions carry equal marks. Use of scientific calculator is permissible.*

1. (a) Explain Mass Curve. Describe the use of mass curve to determine the possible yield from a reservoir of specific capacity. 7

(b) Explain different types of reservoirs in brief. 7

2. (a) Explain in detail as to how you will test the stability of an earth dam constructed with cohesive soils. 7

(b) Discuss in brief, the causes of failure of an earth dam. 7

3. (a) Describe the various considerations for selecting the site of a headwork. 7

(b) What is a Divide Wall ? Explain its function. 7

4. (a) Classify canals based on the nature of source of supply. 7

(b) Describe the Kennedy's method of channel design when Q, N, m and S are given. 7

5. (a) Explain the various purposes served by lining an irrigation canal. 7

(b) Discuss the various design parameters of an outlet. 7

6. (a) Describe the design of Sarda Type fall when the discharge is less than 14 cumecs. 7

(b) Discuss the purpose of canal head regulators. Where is a canal head regulator located ? 7

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

(a) Storage Zones of a Reservoir

(b) Forces Acting on a Gravity Dam

(c) Bligh's Creep Theory

(d) Level Crossing

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

(a) Single and Multipurpose Reservoirs

(b) Diversion Works and Storage Works

(c) Exit Gradient and Safe Exit Gradient

(d) Main and Branch Canals