Menoufia University

Faculty of Engineering, Shebin El-Kom

Civil Engineering Department

Second Semester Examination, 2019-2020

Date of Exam: 24 / 8/ 2020



Subject: Hydraulic Structure

Code: CVE 552 Year : Diploma

Time Allowed: 3 hours Total Marks: 100 marks

Answer the following questions

Question 1 (30 marks)

1. What are the main types of retaining wall?

2. Differentiate between different categories of lateral earth pressure.

3. Differentiate between restrained and anchored retaining walls

4. What are the modes of failure of retaining wall?

5. Discuss the needs and types of drainage systems behind retaining walls.

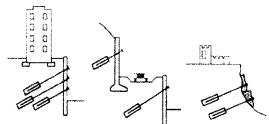
6. Explain briefly, design procedures, loads, and straining actions of Anchored walls.

Question 2 (20 marks)

Discuss without calculations the following:

1- Type, loads, design of the retaining walls

[10Marks]





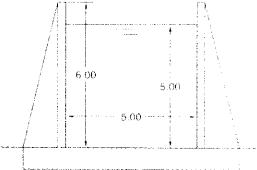
2- The modes of failure of retaining walls[10Marks]

Question (3) [50 Marks]

It is required to construct a channel rested on soil to pass water. The proposed channel layout is as shown. Design all elements of the channel and check it's stability. $\gamma_{\text{soil}} = 1.70 \text{ t/m}^3$, $\emptyset = 30^\circ$, Soil bearing capacity = 1.25 kg/cm²

It is required to:-

- Design all elements of the structure.
- Draw all possible details.



With my best wishes D

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	Skills		:	4		2	2	1	2			
	Knowledge &Understanding Skills					Intellectual Skills				Professional Skills		