

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI(NEW) EXAMINATION – WINTER 2022****Subject Code:2160601****Date:13-12-2022****Subject Name:Advanced Construction and Equipments****Time:02:30 PM TO 05:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

	<b>MARKS</b>
<b>Q.1</b> (a) What is a pile foundation? Where will the pile foundations used?	<b>03</b>
(b) Explain construction procedure of Raymond pile with neat sketch	<b>04</b>
(c) Explain with sketch any two cast-in-situ concrete piles.	<b>07</b>
<b>Q.2</b> (a) Define the term 1) Guide wall 2) Primary panel	<b>03</b>
(b) What is Diaphragm wall? Explain the construction procedure of diaphragm wall	<b>04</b>
(c) What is caisson sickness? How is it caused? What are the precautions to be taken to avoid caisson sickness?	<b>07</b>
<b>OR</b>	
(c) What is a cassion? write the uses with sketch well type of cassion.	<b>07</b>
<b>Q.3</b> (a) Discuss the factors affecting to construct a coffer dam.	<b>03</b>
(b) Write a short note with sketch on cellular type cofferdam.	<b>04</b>
(c) Describe method of Well point system for dewatering of foundation soils.	<b>07</b>
<b>OR</b>	
<b>Q.3</b> (a) What is cofferdam? Enlist common types of cofferdams.	<b>03</b>
(b) Draw a sketch of rock fill coffer dam.	<b>04</b>
(c) Write a short note with sketch on Electro osmosis method for dewatering.	<b>07</b>
<b>Q.4</b> (a) Define the term 1) tall structure 2) Demolition	<b>03</b>
(b) Explain the different material used for tall structure.	<b>04</b>
(c) Explain with sketch Bridge false work	<b>07</b>
<b>OR</b>	
<b>Q.4</b> (a) List out the different method use for demolition.	<b>03</b>
(b) Draw a R.C.C. Column formwork.	<b>04</b>
(c) How to execute Slip form work in chimney construction?	<b>07</b>
<b>Q.5</b> (a) Explain the term 1) Standard equipment 2) Draw bar pull	<b>03</b>
(b) Interpret the sentence “bulldozer is a versatile equipment”	<b>04</b>
(c) Explain with sketches power showel.	<b>07</b>
<b>OR</b>	
<b>Q.5</b> (a) Define the term 1) Depreciation 2) Rim pull	<b>03</b>
(b) Explain uses of Tunnel boring machine for construction of tunnel	<b>04</b>
(c) Discuss the factors affect to owning and operating cost.	<b>07</b>

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