	ADAMAS UNIVERSITY **END SEMESTER EXAMINATION** (Academic Session: 2020 – 21)		
Name of the Program:	M. Tech (Construction Engineering & Management)	**Semester:**	II
Paper Title:	Advanced Construction Techniques	**Paper Code:**	CEM21014
Maximum Marks:	50	**Time Duration:**	3 Hrs
Total No. of Questions:	17	**Total No of Pages:**	3
(Any other information for the student may be mentioned here)	**1.** At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam. **2.** All parts of a Question should be answered consecutively. Each Answer should start from a fresh page. **3.** Assumptions made if any, should be stated clearly at the beginning of your answer.		

	Group A **Answer All the Questions (5 x 1 = 5)**		
1	A square pit, known as ----------with side as about 1.50 m, is excavated upto a depth at which sufficiently hard soil is available. a) Test pits b) Probing c) Test piles d) Deep boring	**R**	**CO1**
2	-------- is the practice of assembling components of a structure in a factory or other manufacturing site, and transporting complete assemblies or sub-assemblies to the construction site where the structure is to be located. (a) fabrication (b) Prefabrication (c) Damping (d) Scaffolding	**R**	**CO2**
3	---------- is a technique used to reinforce and strengthen the existing ground. a) Soil Nailing b) Reinforcing c) Acoustic d) Wire mesh	**R**	**CO3**
4	The parabolic profile of the cables in the edge beam counteracts the _____. a) Tension b) Compression c) Deflection d) Torsion	**R**	**CO4**

5	A semi-sub offshore platform is permanently stationed in the deep ocean employing a/an _____ . (a) seismic system (b) automatic pilot (c) dynamic positioning system (d) anchor system	**R**	**CO5**
Group B Answer All the Questions (5 x 2 = 10)			
6 a)	Recommend suitable tunnelling techniques which can be adopted in soft rock.	**U**	**CO1**
(OR)			
6 b)	Explain in brief factors affecting selection of type of pile.	**Evaluating**	**CO1**
7 a)	Enumerate any slip form usages.	**Ap.**	**CO2**
(OR)			
7 b)	What is meant by dewatering?	**R**	**CO2**
8 a)	Discuss about effects of cover thickness and cracking related to corrosion.	**Evaluating**	**CO3**
(OR)			
8 b)	Depict the uses of Water proofing material.	**Ap.**	**CO3**
9 a)	Define Dome structure.	**R**	**CO4**
(OR)			
9 b)	Define Articulated structure.	**R**	**CO4**
10 a)	Write shortnotes on rigging of transmission line.	**R**	**CO5**
(OR)			
10 b)	Define demolition.	**R**	**CO5**
Group C Answer All the Questions (7 x 5 = 35)			
11 a)	Explain in detail pneumatic caissons.	**Evaluating**	**CO1**
(OR)			
11 b)	Describe the design features of Cofferdam.	**Evaluating**	**CO1**
12 a)	Explain the technology involved in concrete paving technology.	**Evaluating**	**CO2**
(OR)			
12 b)	Evaluate the advantages of Vacuum dewatering concrete with explanation.	**Evaluating**	**CO2**
13 a)	Explain the corrosion mechanism assumed in structure.	**Evaluating**	**CO3**
(OR)			
13 b)	Describe strengthening (retrofication) of Reinforced Concrete members.	**Evaluating**	**CO3**
14 a)	State the design factor to be considered for Shell.	**Ap.**	**CO4**
(OR)			
14 b)	Discuss the construction sequence & techniques adopted for Cooling tower.	**Evaluating**	**CO4**
15 a)	State the design factor to be considered for cable stayed bridge.	**Ap.**	**CO4**
(OR)			
15 b)	State the design factor to be considered for Articulated structure.	**Ap.**	**CO4**
16 a)	Depict the techniques used for erection of the tall building?	**Ap.**	**CO5**
(OR)			

16 b)	Discuss the construction sequence & techniques adopted for Offshore construction.	**Evaluating**	**CO5**
17 a)	Discuss the importance of support structure for heavy equipment.	**Evaluating**	**CO5**
(OR)			
17 b)	Explain the factors for aerial transferring of structural elements.	**Evaluating**	**CO5**