

Reg.No. _____



Karunya UNIVERSITY

(Karunya Institute of Technology & Sciences)
(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

End Semester Examination – Nov/Dec – 2016

Code : **14CE3016**
Sub. Name : **DESIGN OF OFFSHORE STRUCTURES**

Semester : **2016-17 ODD**
Duration : **3hrs**
Max. marks : **100**

ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)

Q. No.	Sub Div.	Questions	Course Outcome	Marks
1.	a.	Explain in detail the offshore platforms and its types.	CO1	20
		(OR)		
2.	a.	With the aid of flow chart, explain the Fixed offshore platform design procedure	CO1	20
	b.	Explain the effect of breaking waves on piling		
3.	a.	Briefly explain the natural and artificial shore protection works	CO1	20
		(OR)		
4.	a.	Explain the functional aspects and design of pier	CO1	10
	b.	'To begin with the design, a structural engineer should know the type of soil on which the structure is to be built'. Elaborate on the soil investigation techniques adopted for an offshore structure like pier	CO1	10
5.	a.	Define rubble mound structures. Explain the design and functional aspect of rubble mound structures.	CO1	10
	b.	Explain the functional aspects and design of docks	CO1	10
		(OR)		
6.	a.	Explain the offshore platforms. Write its types, parts, installation procedure, benefits and design concepts to be considered in detail. Draw sketches wherever needed.	CO1	20
7.	a.	What is a buoy and mooring buoy? What is the concept of using buoy? Explain about the method adopted mostly in Asia	CO1	5
	b.	Explain the six types of mooring methods commonly adopted with sketches.	CO1	10
		(OR)		
8.	a.	Explain fender and fender system.	CO1	5
	b.	Explain the factors to be considered for design and durability of a fender system.	CO1	10
		<u>Compulsory:</u>		
9.	a.	Write a short note on corrosion	CO1	5
	b.	Explain the types of corrosion	CO1	5
	c.	What are the factors that influence corrosion of offshore structures	CO1	5
	d.	Briefly explain the precautionary methods adopted to prevent corrosion of offshore structures.	CO1	5

Course Outcome:

CO1: Analyse and design offshore structures

ALL THE BEST