

PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE (AUTONOMOUS) III B.TECH I SEMESTER END SUUPPLEMENTARY EXAMINATIONS, MARCH/APRIL - 2022 WATER RESOURCE ENGINEERING-II (CE BRANCH)

Time: 3 hours

Max. Marks: 60

Note: Question Paper consists of Two parts (Part-A and Part-B) <u>PART-A</u>

Answer all the questions in Part-A (5X2=10M)_

Q.No.		Questions	Marks	CO	KL
1.	a)	Write down the classification of canals	[2M]	1	1
	b)	Differentiate between sensitivity and flexibility	[2M]	2	2
	c)	Writ any two points of failures of weirs on permeable foundations	[2M]	3	1
	d)	Distinguish clearly between rigid and non-rigid dams?	[2M]	4	2
	e)	Explain briefly Forebay and Penstock	[2M]	5	2

<u>PART-B</u> Answer One Question from each UNIT (5X10=50M)

Q.No.		Questions	Marks	CO	KL		
UNIT-I							
2.	a)	Design a regime channel for a discharge of 60 comics and silt factor 1.1, using Lacey's theory	[5M]	1	4		
	b)	Discuss design principles of a channel using Kennedy's silt theory?	[5M]	1	3		
OR							
3.		Explain Flood routing and also discuss about Muskingum method?	[10M]	1	3		
UNIT-II4							
4.	a)	Discuss in detail about three types of canal falls with neat sketches?	[5M]	2	3		
	b)	Describe with the help of neat sketches various types of cross-drainage works	[5M]	2	3		
OR							
5.		Write the necessity of canal falls and describe with the help of neat sketches various types of canal falls	[10M]	2	3		
UNIT-III							
6.		Draw a diversion head work and label its components and explain about the silt regulation works	[10M]	3	5		
		OR					
7.		A weir has got a horizontal floor laid on permeable foundation the length of the floor is 31m and an intermediate pile of depth 8m at a distance of 12m from the upstream end. The depth of water on the upstream side is 6m and Determine the uplift pressure at key points of the intermediate pile using Bligh's creep method?	[10M]	3	4		
UNIT-IV							
8.		What do you understand by demand curve? Explain the method of calculating reservoir capacity for a specified yield from the mass inflow curve?	[10M]	4	4		
OR							

Code No: P18CET14]		
9.	a)	What are the modes of failure and criteria for stability requirements for a gravity dam?	[5M]	4	4		
	b)	What are the main points to be considered while selecting a site for a gravity dam construction?	[5M]	4	3		
UNIT-V							
10.	a)	Explain different types of Earth dams with neat sketches.	[5M]	5	3		
	b)	Explain various methods for the control of seepage through the foundation of the earth dam	[5M]	5	3		
		OR					
11.	a)	Describe with help of neat sketch ogee-shaped spillway and straight drop spillway.	[6M]	5	3		
	b)	Estimate the discharge over an ogee spillway with coefficient of discharge is 2.2 and head is 4.2m. The effective length of spillway is 120.m. The weir crest is 8m above the bottom of approach and consider velocity of approach.	[4M]	5	4		
