B.E. Civil Engineering Seven Semester CE712 - Elective-II : Advance Design of Hydraulic Structures

P. Pages: 2

Time : Three Hours

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GUG/W/18/1745

Max. Marks: 80

	Notes	 All questions carry equal marks. Answer all questions. Due credit will be given to neatness and adequate dimensions. 	_		
		 Assume suitable data wherever necessary. Illustrate your answers wherever necessary with the help of neat sketches. Use of electronic calculator is allowed. 			
1.	a)	How does Khosla's theory differ from Bligh's theory with regard to the design of weir an permeable foundations?			
	b)	Explain gradient and its importance.	7		
		OR			
2.	a)	Explain factor's governing the design of Wier.	8		
	b)	How does lane's theory differ from Bligh's creep theory?	8		
3.	a)	What are the different kind of spillways and how are they selected for individual condition?	10		
	b)	Sketch an ogee profile and Mark in it the different course.	6		
		OR			
4.	a)	Write short note on energy dissipation below spillways.	8		
	b)	Explain with neat sketch Volute Siphon Spillway.	8		
5.	a)	Design an irrigation outlet for the following data. FSQ Sout/sec FSC in Distributory on $n/s - 200.00M$ side of outlet FSL in water course on $d/s - 199.92M$ side of outlet FSD in distributary on $n/s - 1.05M$ side of outlet	10		
	b)	Explain submerged pipe outlet.	6		
		OR			
6.	a)	 Design a pipe outlet for the following data. 1) Full supply discharge all – 90 lit/sec the head of water course. 2) FSL in distributary – 205.00M 3) FSL in water course – 204.00M 	8		
	b)	What is meant by "canal regulation" and What are the different 'Canal regulation load?	8		

7.

Write a short note on **any four.**

- i) Canal wings ii) Water wings
- iii) Level crossing iv) Fluming of canal
- v) Super passage

OR

8.	a)	Explain Mitra's Hyperbolic Transition.	10
	b)	Name the different type of cross drainage work and explain any one.	6
9.	a)	Explain sardar type fall.	7
	b)	Explain hydraulics of outlet works.	9
		OR	
10.	a)	Explain Trash Racks.	8
	b)	Write short note on wet intake towers.	8

16