CONTINUOUS INTERNAL EVALUATION- 1

Dept: Civil Engg	Sem / Div: 5	Sub: MWWE	S Code: 18CV55
Date:21-10-2020	Time: 9:30-11:00 am	Max Marks: 50	Elective: N
Note: Answer any 2 full questions, choosing one full question from each part.			

QN		Questions	Marks	RBT	COs
		PART A			
1	a	Briefly explain the essential requirements of a good sewer material.	10	L1	CO1
	b	Explain what you mean by sewerage system and discuss relative merits and demerits of: i) Separate system of sewerage ii) Combined system of sewer	10	L1	CO1
	c	Briefly explain how the sewers are tested for leakage after laying.	5	L2	CO1
		OR			
2	a	Design the section of a combined circular sewer from the following data, Area to be served =150 hectares, Population of the locality= 50,000, Maximum permissibility velocity=3.2m/sec, Time to carry= 5min, Time of Flow= 20 min, Rate of water supply=270 l/c/d, Impermeability factor=0.45, i= $\frac{760}{t+20}$	10	L3	CO1
	b	Define Dry Weather flow. And explain the various factors effecting the dry weather flow.	10	L2	CO1
	c	Explain self-purification velocity and Non- Scouring velocity.	5	L1	CO1
		PART B			
3	a	Design a sewer to serve a population of 36,000 the rate of water supply being 135 litres per capita per day of which 80% finds its way into sewer. The sewer is laid at a slope of 1 in 625 and sewer should be designed to carry three times dry weather flow when running full, N=0.012.	8	L3	CO1
	b	Write the flow diagram employed to treat municipal waste water and indicate its importance.	10	L3	CO3
	c	What are traps with the help neat sketch, explain different types of traps classified based on their shape.	7	L2	CO3
		OR			
4	a	Explain the concept of Aerobic aand Anaerobic activity with respect to sewage treatment	5	L2	CO3
	b	Define BOD and COD. Determine ultimate BOD for a sewage having 5-day BOD at 20'C as 160 mg/l. Assume deoxygenation content as 0.2 per day.	10	L3	CO3
	c	With neat sketches, explain the-following sewer appurtenances: i) Deep manhole ii) Automatic flushing tank	10	L2	CO1

Prepared by: Prashantha

HOD