Seat No.:		Enrolment No		
Subje	ect C	GUJARAT TECHNOLOGICAL BE - SEMESTER-V (NEW) - EXAMINATIO dode: 2150603		
Subject Name: Environmental Engineering Time:02:30 PM to 05:00 PM Instructions:  Total Marks: 70				
insti u	1. ( 2. N	Question No. 1 is compulsory. Attempt any four out of Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	remaining Six questions.	
Q.1		Objective Question (MCQ)		MARKS
	1.	Per capita water demand is calculated in liters.  (a) per person per day (b) per person per hour (c) per the above.	per person per year (d) None of	
	2.	Waste water from bathrooms, kitchen etc. is called	d	
	2	(a) refuse (b) sullage (c) sewage (d) garbage	. 1	
	3.	Heating the solid waste at a very high temperature (a) compositing (b) incineration (c) pyrolysis (d) l		
	4.	The colour of the water is measured on		
	5.	(a) turbidity scale (b) silica scale (c) platinum cob. Which of the following compound can harm plant		
	٥.	(a) Sulphur dioxide (b) Ozone (c) Hydrogen fluori		
	6.	Correct relationship between theoretical, biochedemand is given by  (a) TOD > BOD > COD (b) TOD > COD > BOD	emical and chemical oxygen	
	7.	(c) COD > BOD > TOD (d) BOD > COD > TOD Maximum percentage by weight of refuse for a type		
	. •	(a) ashes (b) rubbish (c) garbage (d) None of the a	bove	
	8.	If P is the population in thousands, then fire demar according to Kuichling formula is given by	•	
	9.	(a) $3182\sqrt{P}$ (b) $4640\sqrt{P}$ (c) $5663\sqrt{P}$ (d) None of Population forecasting method in which percentage constant.		
		(a) Incremental increase method (b) Decrease	•	
	10.	Arithmetic average method (d) None of the above Pipe which is installed to preserve the water seal i		
	10.	(a) waste pipe (b) vent pipe (c) anti syphonage pip	<u> </u>	
	11.	<u> </u>		
	12.	sewage matter is called	get filled up and clogged with	
	12	(a) soil sickness (b) soil blockage (c) sewage sickness (b) soil blockage (c) sewage sickness (d) soil sickness (d) soil blockage (c) sewage sickness (d) soil sickness (d) soil blockage (c) sewage sickness (d) soil blockage (c) sewage sickness (d) soil blockage (d) sewage sickness (d)		
	13.	An element play key role in process of Eutrophica (a) supphur (b) carbon dioxide (c) phosphorus (d)		
	14.	In which layer of atmosphere ozone gas is found?		
		(a) Troposphere (b) Mesosphere (c) Thermosphere	e (d) Stratosphere	
$\Omega$ 2	(a)	What are the limitations of BOD test?		03

Discuss various control measures of water borne diseases.

Write a short note on self purification of natural streams.

OR

(c) Write a short note on transfer stations. How location of transfer stations is

(b) (c)

decided?

04

**07** 

**07** 

Q.3	(a)	Which factors are considered while fixing design period for any water supply scheme?	03	
	<b>(b)</b>	Discuss domestic and public use water demand.	04	
	(c)	Enlist various parameters used to assess the quality of water. Discuss briefly turbidity and hardness.	07	
		OR		
Q.3	(a)	What are the objectives of solid waste management?		
	<b>(b)</b>	Explain growth pattern of micro organism based on number.		
	(c)	Explain various methods of disposal of sewage effluents. Discuss any one natural method of sewage disposal.		
Q.4	(a)	Write a brief note on Anglo Indian type water closet with sketch.		
	( <b>b</b> )	Write a brief note on Anglo Indian type water closet with sketch.  Discuss mechanical composting method of disposal of solid waste.		
	(c)	Which factors are considered in design of landfills? How gas movement is control in landfills?		
		OR		
Q.4	(a)	What are the characteristics of good water closet?	03	
	<b>(b)</b>	Explain trap which is provided at a junction of house sewer and public sewer line with sketch.		
	(c)	Which chemical processes are adopted to treat industrial waste water? Discuss reverse osmosis and electro dialysis method.	07	
Q.5	(a)	Discuss relationship between different components of environment.	03	
	(b)	Define air pollutant. Explain effects of air pollution on building materials/properties.	04	
	(c)	What is noise? Explain various effects and control measures used for noise pollution.	07	
		OR		
Q.5	(a)	Explain effects of air pollution on human health.		
	<b>(b)</b>	Write brief note on bag house filter used for controlling particulate matters. 0		
	(c)	What are the objectives of Environment Protection Act-1986, Explain power of central government to take measures to protect & improve environment.		

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