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**Question Paper Code: 46103**

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Sixth Semester

Civil Engineering

14UCE603- WASTE WATER ENGINEERING

(Regulation 2014)

Duration: One hour

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any six of the following questions)**

1. The pH value of fresh sewage is usually  
(a) Equal to 7 (b) More than 7 (c) Less than 7 (d) To zero
2. Traps  
(a) Are water seals which prevent the entry of foul gases  
(b) Are used to trap the rats entering sewers  
(c) Dissolve the foul gases  
(d) Create syphonic action to increase the quick disposal of sewerage.
3. The detention period for plain sedimentation water tanks, is usually  
(a) 16 to 24 hours (b) 8 to 16 hours (c) 4 to 8 hours (d) 24 to 36 hours
4. Corrosion in pipes will be less in  
(a) Plastic pipes (b) iron pipes (c) both (a) and (b) (d) none of these
5. The detention time in grit chamber is equal to  
(a) 20 sec (b) 1 min (c) 40-60 sec (d) 30 min

6. Recirculation ratio is equal to
- (a) sewage recirculated/volume of sewage
  - (b) refuse recirculated/volume of sewage
  - (c) both (a) and (b)
  - (d) none of these
7. Dilution method of disposing off sewage, is not preferred to
- (a) when sewage is fresh
  - (b) when diluting water is used for water supply near the point of sewage disposed
  - (c) when diluting water has high dissolved oxygen content
  - (d) when the diluting water is having flow currents
8. The self-cleansing velocity of water flowing through pipe lines, is
- (a) 2 metres/sec
  - (b) 1 metre/sec
  - (c) 0.5 metre/sec
  - (d) 0.25 metre/sec
9. Biogas is normally composed of
- (a) 65% methane and 35% CO<sub>2</sub>
  - (b) 35% methane and 65% CO<sub>2</sub>
  - (c) 40% methane and 60% CO<sub>2</sub>
  - (d) none of these
10. The hydraulic loading of conventional filters is
- (a) 66-88 million litres/ hectare/day
  - (b) 22-44 million litres/hectare/day
  - (c) both (a) and (b)
  - (d) none of these

**PART – B (3 x 8= 24 Marks)**

**(Answer any three of the following questions)**

11. What are the various sewer appurtenances used? Explain anyone with a neat sketch. (8)
12. Write short note on screening process in waste water treatment. (8)
13. Describe the activated sludge process with a flowchart. (8)
14. State the objectives of sewage disposal and list the methods of disposal and explain the same. (8)
15. Explain the mechanism of anaerobic digestion. (8)