

August 2021

FOOD INDUSTRIES WASTE MANAGEMENT*Time Allowed: 1.5 Hours**Full Marks: 70***Answer to Question No. 1 is compulsory and Answer any two questions from the rest.**

1. Answer the following questions (any twenty): 2x20
- i) Write the full form of BOD.
 - ii) Write the full form of COD.
 - iii) Define Ultimate BOD.
 - iv) What is MLVSS?
 - v) Define TSS.
 - vi) What is the unit of turbidity?
 - vii) What is the function of grit chamber?
 - viii) What is the role of screening chamber?
 - ix) Give an example of coagulant.
 - x) Write an example of biological treatment Process.
 - xi) Write the full form of DAF unit.
 - xii) Write the full form of RBC.
 - xiii) Which device is used for removal of oil & grease?
 - xiv) Write the full form of DOSC.
 - xv) What is SVI?
 - xvi) What is DO?
 - xvii) Potassium dichromate is used to determine which parameter?
 - xviii) What is fixed solid?
 - xix) What is suspended solid?
 - xx) What is sedimentation?
 - xxi) Define discrete settling.
 - xxii) Define hindered settling.
 - xxiii) Define solid waste.
 - xxiv) Give an example of biodegradable solid waste.
 - xxv) Write the full form of ThOD.
2. Discuss the factors responsible for DO level in water. Discuss the dissolve oxygen sag curve in relation to stream 7+8
3. Why COD value is always greater than BOD value of same waste water sample? Define carbonaceous & nitrogenous BOD. Why BOD test is conducted for 5 days? 5+5+5
4. What are the objectives of physical treatment? Discuss about different type of sedimentation process. Define Stoke's law. 4+8+3
5. Define anaerobic digestion. What are the advantages & disadvantages anaerobic digestion? What is sludge? 4+8+3
6. Write short note on the followings (any two): 7.5x2
- a) Biological nitrification, b) Chemical Coagulation, c) Eutrophication.
7. With a neat sketch explain the operation of a trickling filter. What are the advantages & disadvantages trickling? 8+7

8. Define activated sludge process. What are advantages of activated sludge process? With a neat sketch explain the operation of rotating biological contractor. 3+5+7
 9. Write the various sources of waste water generated from mango pulp preparation and tomato processing plant. 7+8
 10. What are the objectives of sludge thickening? Discuss about the different method of sludge thickening operation used in waste water treatment. 7+8
-