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GIET UNIVERSITY, GUNUPUR – 765022
M. Tech (Second Semester Examinations) – October' 2021
MPECH2041 – WASTE WATER ENGINEERING
(Chemical Engineering)

Time: 2 hrs

Maximum: 50 Marks

(The figures in the right hand margin indicate marks)

PART – A

Q.1. Answer **ALL** questions

(2 x 10 = 20)

- What are the sources of waste water generation?
- Differentiate between fixed and suspended film systems.
- Why preliminary treatment process is required before primary treatment process?
- Write the coagulants used for coagulation process.
- What is the objective of biological treatment process?
- Differentiate between aerobic and anaerobic process.
- What is chemical oxidation process?
- Define ion-exchange process.
- Plot the chlorine demand curve.
- What do you mean by seeded micro-organism?

PART – B

(6 x 5 = 30 Marks)

Answer **ANY FIVE** questions

Marks

- Describe the different preliminary treatment process and Primary treatment process of industrial waste water. (6)
- What is water Act? Explain in details about its objectives, Pros and cons. (6)
- Dissolved wastewater contents are degraded or removed through the biological wastewater treatment. Give the appropriate biological processes for the three most important substances/substance groups: - organic carbon compounds - nitrogen compounds - phosphorous compounds. (6)
- What is the stabilization pond? Write its types and importance. (6)
- What is screening? Why is it important? Explain different types of screening for waste water treatment. (6)
- How the organic compounds from waste water are removed? Explain in details. (6)
- What do you understand by thickening (or) concentration of sludge? List the various methods of sludge thickening. Describe with the help of neat sketch gravity-sludge thickener? (6)

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