**COURSE PLAN**

**6CE3A: ENVIRONMENTAL ENGINEERING –II (L-3)**

**B.Tech. (Civil) 6th Semester Max. Marks: 80**

**Exam Hours: 3**

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| **LECTURE NO.** | **CONTENT** | **CONTACT HOURS** |
| **1** | **General:** Terms: Sewerage, Domestic Sewage | **8 HRS** |
| **2** | Sewage Treatment, Disposal Scope, |
| **3** | Role Of An Environmental Engineer, Historical Overview |
| **4** | **Sewage Characteristics:** Quality Parameters: BOD,COD,TOC, |
| **5** | Solids, DO, |
| **6** | Nitrogen, Phosphorus, |
| **7** | Standards Of Disposal Into Natural Watercourses |
| **8** | And On Land, Indian Standards |
| **9** | **Collection Of Sewage:** Systems Of Sewerage, Separate, Combined, And Partially Separate, | **8 HRS** |
| **10** | Components Of Sewerage Systems, Systems Of Layout, |
| **11** | Quantity Of Sanitary Sewage And Variations, |
| **12** | Quantity Of Storms Water, Rational Method, |
| **13** | Shapes Of Sewer, Hydraulic Design Of Sewers: Diameter Self Cleansing Velocity And Slopes, |
| **14** | Construction And Testing Of Sewer Line, Sewer Materials, |
| **15** | Joints And Appurtenances, |
| **16** | Sewage Pumping And Pumping Stations, Maintenance Of Sewerage System. |
| **17** | **Sewage Treatment:** Various Units: Their Purpose, Sequence And Efficiencies | **8 HRS** |
| **18** | Preliminary Treatment, Screening And Grit Removal Units, |
| **19** | Oil And Grease Removal |
| **20** | Primary Treatment, Secondary Treatment, |
| **21** | Activated Sludge Process, Trickling Filter, |
| **22** | Sludge Digestion And Drying Beds |
| **23** | Stabilization Pond, Septic Tank, Soakage Systems, |
| **24** | Recent Trends In Sewage Treatment, Wastewater Treatment :Nutrient Removal, Solids Removal |
| **25** | **Wastewater Disposal And Reuse:** Disposal Of Sewage By Dilution, | **8 HRS** |
| **26** | Self Purification Of Streams, |
| **27** | Sewage Disposal By Irrigation Sewage Farming, |
| **28** | **Plumbing For Design Of Buildings:** Various Systems Of Plumbing – |
| **29** | Single Stack, Traps |  |
| **30** | Layout Of House Drainage. |
| **31** | Wastewater Reuse. |
| **32** | One Pipe,Two Pipes |
| **33** | **Air And Noise Pollution:** Air Quality, Emission Standards, | **8 HRS** |
| **34** | Vehicular Pollution, |
| **35** | Effect Of Air Pollution On Human Health, |
| **36** | Noise Pollution, |
| **37** | Global Effect Of Air |
| **38** | And Noise Pollution, |
| **39** | Green House Effect, |
| **40** | Acid Rain Etc. |