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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII (NEW) - EXAMINATION - SUMMER 2017

Subject Code: 2171304 Date: 04/05/2017 **Subject Name: Cleaner Production & Waste Utilization** Time: 02.30 PM to 05.00 PM **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. **Q.1** (a) What is Cleaner Production? Explain in detail. 07 How CP tools are effective in pollution reduction? **07 (b)** 0.2 (a) Explain six step methodologies with 18 tasks. 07 Explain cleaner production and Environmental Management System. **(b)** 07 OR Which techniques are not considered as CP? **(b)** 07 O.3 (a) Write a short note on Good housekeeping. 07 Discuss CP in textile industry. **(b)** 07 OR Discuss CP in chemical industry. Q.3 (a) 07 Enlist and explain the benefits of CP. 07 **(b)** Q.4 (a) How waste heat is useful? Enlist the sources of waste heat from the industry. **07** What is LMTD? Draw temperature profile for parallel flow and counter flow. 07 OR Write a short note on shell and tube heat exchanger. 0.4 07 (a) **(b)** Discuss the different types of heat exchangers. 07 Write short note on heat recovery boiler with one stack and no fan. 07 Q.5 (a) Write short note on heat recovery boiler with two stack and with fan. 07 OR Q.5 (a) Explain the concept of recycling and reuse. **07** Differentiate between Energy audit and financial audit with respect to CP 07
