| Seat No.: | Enrolment No. |
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GUJARAT TECHNOLOGICAL UNIVERSITY

| · · · · · · | | E - SEMESTER-IV (OLD) - EXAMINATION – SUMMER 2017 Code: 141303 Date: 14/06/20 | 17 |
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| | | ks: 70 | |
| 1113 | | Attempt all questions. Make suitable assumptions wherever necessary. | |
| Q.1 | (a) | Draw flow diagram and explain manufacturing process of nitric acid with safety hazards. | 07 |
| | (b) | Short note: i) Heat Exchanger. | 07 |
| Q.2 | (a) (b) | Discuss manufacturing process of aniline with flow diagram and its uses. Explain in detail manufacturing process of monochloroacetic acid. Discuss major engineering problems. | 07 07 |
| | (b) | OR Briefly explain following unit operation with a neat diagram. i) Distillation. | 07 |
| Q.3 | (a) | With the help of a flow sheet describe manufacturing process of ethanol from ethylene by sulfonation. | 07 |
| | (b) | State detail explanation on membrane processes. OR | 07 |
| Q.3 | (a) | Describe manufacturing process of urea. Discuss toxicity and health hazards related to urea. | 07 |
| | (b) | Short note: Drying | 07 |
| Q.4 | (a) | Write manufacturing process of acetic acid by oxidation with a neat flow sheet and related safety aspects. | 07 |
| | (b) | Detail note on magnetic separator. | 07 |
| 0.4 | (a) | OR List the major pollution aspects and explain manufacturing process of | 07 |
| ζ | (44) | hydrogenation of cotton seed oil. | |
| | (b) | Froth Flotation - Short note. | 07 |
| Q.5 | (a) | Give uses of vinyl acetate and briefly explain manufacturing process with a flow sheet. | 07 |
| | (b) | Detail explanation on crushing and grinding operations. | 07 |
| Q.5 | (a) | OR Enlist uses of furfural and explain manufacturing process by hydrolysis. | 07 |

(b) Introduce electrostatic precipitator with neat sketch and process.

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