

NOV-2016

Q.P. Code : 635500

(3 Hours)



[ Total Marks : 80

- N.B. :** (1) Question No.1 is **compulsory**.  
(2) Answer any **three** questions from Question Nos. 2 to 6.  
(3) Assume suitable data if necessary.

1. Answer any **four** of the following questions:-

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|---|----|
| (a) Explain Crystallization curve and its significance.   | 5  |
| (b) Discuss baffle flue pass for temperature control with respect to boilers.                                       | 5  |
| (c) Explain bypass control in rotary compressor.  | 5  |
| (d) Draw and explain hazard triangle.   | 5  |
| (e) Discuss the control strategies for startup heater.  | 5  |
| 2. (a) Draw and explain P & I for reaction crystallizer.  | 10 |
| (b) Discuss the control scheme for tray dryer.  | 10 |
| 3. (a) Draw the process flow diagram for refinery and explain FCCU.   | 10 |
| (b) List the classifications of evaporator and derive its steady state model.                                       | 10 |
| 4. (a) Explain the process of distillation and discuss different packaging used in distillation column.             | 10 |
| (b) With the help of diagram explain any three control strategies for heat exchanger.                               | 10 |
| 5 (a) Comment on objectives of combustion control system in Boiler and explain various types of control strategies. | 10 |
| (b) Explain different control parameters considered in Gas Turbine.   | 10 |
| 6. (a) Explain cascade control scheme for reactor.  | 5  |
| (b) Explain different sensors, analyzers and valves used in Iron and Steel industry.                                | 10 |
| (c) Discuss in detail IEC classification of Hazardous areas.  | 5  |