

Question Bank(G scheme)

Name of subject: **Process Control System**

Subject code: **17663**

Semester: **VI (SIXTH)**

Branch: - **IS6G**

UNIT –TEST II

Chapter 4: Unit Operations (20 Marks)

3 Marks Question:

- 1) Describe the concept of co-current and counter current in heat exchanger.
- 2) Compare batch process & continuous process (Six Points).
- 3) State the working of single effect evaporator with neat diagram.
- 4) Explain the Three element control is used to control boiler drum level.
- 5) Draw neat diagram of cascade control scheme used for distillation column process.

4 Marks Question:

- 6) Draw Feed forward control scheme for drum level of boiler and write its working in brief.
- 7) Explain the interlocks used in boilers.
- 8) Describe the working of distillation column with neat diagram.
- 9) Enlist types of drying processes. Describe any one drying process with neat diagram.
- 10) Draw and explain the Cascade control in two effect evaporator.
- 11) Explain the Cascade controlscheme in heat Exchanger.

Chapter 5:Project Engineering (12 Marks)

3 Marks Question:

- 12) State the need of Instrument Data Sheet.
- 13) Draw P & ID symbol for i) Temperature transmitter ii) Rota meter
iii) Orifice meter
- 14) State the need of Instrument Index Sheet.

4 Marks Question:

- 15) Draw and explain P and ID symbol diagram for any one unit operation.
- 16) Draw physical diagram and P& I Diagram for single element and double element boiler process control.
- 17) Enlist the document required for instrumentation in project engineering. State the role of instrumentation engineer in project engineering.

Chapter 6:Distributed Control System (24 Marks)

3 Marks Question:

- 18) Enlist different process displays. State the functions of any two displays.
- 19) State selection criteria for DCS system (Six points).
- 20) State the advantages of DCS System(Six Points).
- 21) Name the different DCS Communication methods. Describe any one.

4 Marks Question:

- 22) Draw the Architecture of DCS System. State functions of all components in it.
- 23) Draw the diagram of trend display used in DCS. State its significance with respect to any process one parameter.
- 24) Enlist types of drying processes. Describe any one drying process with neat diagram.
- 25) List the feature of typical DCS (Eight Points).
- 26) Enlist different process displays. Draw the schematic diagram of DCS in cement industry. Write the steps to control process operation in cement industry.
- 27) State the functionality of Modbus and profibus in DCS.