

(OR)

- b) (i) Explain in detail about the various MATH instructions used in PLC. (7)
- (ii) Illustrate with an example the operation of Up/Down Counter program used to provide continuous monitoring of items in process. (7)

24. a) Elaborate the various displays used in DCS with a neat diagram.

(OR)

- b) Write in detail about the low level and high level operator interface of DCS with neat sketch.

25. a) Describe in detail about the HART Protocol

(OR)

- b) (i) Explain the architecture of field bus communication (10)
- (ii) List the topologies used in field bus communication (4)
