sem-V / INST/CSC/CBGS / 11-05-16

Control system components.

QP Code : 31052

(3 Hours) [Total Marks : 80]

N.B. : (1) Question **No.1** is compulsory

(2) Attempt any **three** questions from remaining five questions.

(3) Draw neat diagrams wherever required.

(4) Assume suitable data if required.

Q 1. Solve any **Five**. 20

A) Write a short note on pneumatic pressure regulating valve. 4
B) Give a difference between pump and compressor. 4
C) Define transmitter and discuss need of transmitter and standardization of signals. 4
D) Draw flow characteristics of globe valve. 4
E) Explain need of square root extractor. 4
F) List out various technologies in-house and outdoor RFID system. 4

Q2. A) Explain air distribution system with neat diagram. 10

B) Give classification of pumps and explain reciprocating pump in details. 10

Q3. A) Explain pneumatic differential pressure transmitter with diagram. Also write its calibration process. 10

B) Write a note on control valve actuators. 10

Q4. A) Give classification of feeders. Explain any one of them in detail. 10

B) Give limitations of flapper nozzle system. Explain volume booster in detail. 10

Q5. A) Give broad classification of switches with construction, symbol, working and applications. 10

B) Compare: pneumatic, hydraulic and electric systems. 10

Q6. Write short notes on: 20

A) Selection considerations for a control valve.
B) Electrical to pneumatic converter.
C) Synchros.
D) Solid state relays.

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