DF-1446
M. Sc. (Tech.) (Sem. III) (Instrumentation)
Examination
March / April - 2016
INS - 534 : Process Instrumentation - III

Time : 3 Hours] [Total Marks : 70

Instruction :

1 Attempt any TWO

A) Explain the block diagram for Dynamic Control Elements.
B) What is Time Response? Explain the First order time Response and Draw the o/p transient generated for it.
C) What is narrow band and wide band proportional action? Explain offset in detail.
D) Describe two types of Floating Control Modes in detail and give its application.

2 Attempt any TWO

A) Draw the Symbols For:
   a) Pneumatic symbol  b) Air Trap  c) Venturi-meter  d) Check Valve
e) Boiler  f) Coil Heater  g) Angel Valve
B) Explain Feed Forward Control in details.
C) Explain PD Controller Mode.
D) Write a short note on uses of Logical Symbol.

3 Attempt any TWO

A) What is neutral zone? Explain ON-OFF control mode with its application.
C) Show the difference between Reciprocating and Dynamic Compressors in details.
D) Explain offset in details for a proportional Controller mode.

DF-1446] 1 [Contd...
4 Attempt any TWO

A) Brief rules for tag-numbering system for instrumentation systems.
B) What is Process Equation? Explain with suitable example.
C) Give the difference between feedback and Feed Forward Control System.
D) Explain Integral Controller Mode in detail.

5 Attempt any TWO

A) Explain two types of single variable Control System.
B) Give the symbols for the following:
   1. Level Switch   2. Flow Switch   3. Solenoid
C) Draw symbols for:
   a) Pressure gauge mounted in field   b) Pneumatic supply line
   c) Transmitter - Level    d) Safety Level
   e) Control value with positioned    f) Condenser (any type)
   g) Controller mounted in control room
D) Explain in brief

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