Roll No. ....   Total Pages : 03

BT-7/D-18   37166
MEASUREMENT AND CONTROL
ME-401-N

Time : Three Hours]   [Maximum Marks : 75

Note : There are eight questions in this paper. Attempt *Five* questions in all, selecting at least *one* question from each Section. Each question carry 15 marks.

Section A

1. Differentiate the following :
   (i) Dead band and hysteresis
   (ii) Sensitivity and Linearity
   (iii) Backlash and Drift
   (iv) Accuracy and Precision
   (v) Mechanical and Electrical Loading.   **15**

2. (a) Describe in brief various functional elements of generalized measurement system.   **7.5**
   (b) Write a technical note on Chauvlet's criteria.   **7.5**

Section B

3. (a) Explain in detail hydraulic and pneumatic load cell.   **7.5**

(b) Write short note on vibration pick-ups and decibel meters.   **7.5**

4. (a) With neat sketch explain in detail Moore Fringe.   **7.5**
   (b) Define Gauge factor of a strian gauge. Also discuss Pirani gauge.   **7.5**

Section C

5. (a) How variable flow meters different from variable area meters ? Explain in detail.   **7.5**
   (b) Discuss in detail drag force and turbine flow meters.   **7.5**

6. (a) Explain in detail high pressure and low pressure measurement. http://www.kuonline.in   **7.5**
   (b) Write a technical note on pyrometer. Also explain total radiation and selection radiation pyrometers. **7.5**

Section D

7. (a) What is Servomechanism ? Discuss in detail the process, control and regulators with regards to control systems.   **8**
   (b) Differentiate with the help of examples manual and automatic control system.   **7**

8. (a) State the following with regards to control system :

    (i) Forward Path   (ii) Summing Point

    (iii) Take off point   (iv) Loop

    (v) Transfer Function (vi) Stability.   6

  (b) Write the various rules of block diagram reduction technique for predicting transfer function.   9