DIPLOMA EXAMINATION – JAN 2009

DIT

PROCESS CONTROL INSTURMENTATION - I

(For Candidates Admitted from Calendar 2007 Onwards)

Time: 3 Hours **Max marks: 75**

Section – A

Answer all the Questions: **15 X 1=15**

1. What is an instrument?

2. What do you mean by the term process control?

3. Define transducer?

4. Name at least two types of sensors?

5. What do you mean by the term hysterics?

6. What are the classifications of instruments?

7. Name the basic methods for pressure measurement?

8. Define thermo couple?

9. What is RTD?

10. State the use of magnetic level gage meter?

11. Draw the block diagram of basic reader set?

12. Define Bernoulli's theorem?

13. What are the basics of data transmission?

14. What do you mean by the term 'telemetry'?

15. State the use of feed back system is instruments?

Section – B

Answer any Five Questions: **5 X 6 = 30**

16. a) Briefly, explain the role of instruments is process control system?

(Or)

b) What are the functional elements of instruments explain Them briefly?

17. a) With neat diagram, explain the working of barometer?

(Or)

b) With neat sketch, explain thermocouple?

18. a) What is the basic principle of level measurement; explain them briefly with necessary diagrams?

(Or)

b) Explain briefly, about ultra sonic level sensory give Necessary diagrams?

19. a) Draw the diagram for vibration sensor discuss some of its application industry?

(Or)

b) Explain Bernoulli's theorem?

20. a) Draw the block diagram of mechanical flow meter and explain the various blocks?

(Or)

b) Explain briefly the head flow meter?

Section – C

Answer any Two Questions: **2 X 15 = 30**

21. What are the classification of instruments explain them is detail give necessary diagrams?

22. Draw and explain elastic type pressure transducer?

23. Explain, with neat diagram the resistance temperature detector?

24. Explain the construction and working of photo electric cell?

25. Discuss is detail about the effect of temperature and pressure on density?