BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY

QUESTION BANK

Unit Test-II (Shift:-I & II)

Program: - EJ

Semester: - III **Course:-EMI (22333)**

Unit IV Sensors and Transducers (08 M)

2 Marks Questions

1. Define Transducer.

2. Identify following transducer as active and passive - i) Thermocouple ii) LDR iii) LVDT iv) Bellows.

4 Marks Questions

3. Explain selection criteria of transducer.

4. Sketch basic building blocks of instrumentation system and state function of each block.

5. Draw constructional diagram of LVDT. State it's working.

6. Draw and describe constructional diagram of RVDT.

7. State principle of operation of Piezo- electric transducer. State its application.

Unit V Application of Sensors and Transducers (14 M)

2 Marks Questions

8. List transducers used in level measurement.

9. Give the classification of pressure measuring.

10. State the classification of flow meters.

11. State the applications of Bourdon Tube.

4 Marks Questions

12. Draw and describe construction and working of Bourdon tube.

13. Draw Bourdon tube with LVDT setup for pressure measurement.

14. Explain working principle of orifice plate for flow measurement.

15. Draw labeled diagram of Electromagnetic flow meter and explain principle.

16. With the help of neat sketch state working principle of Rota meter.

17. State need of level measurement. Also classify level measurement methods.

18. State working principle of capacitive type level sensor with diagram.

19. Calculate the resistance of PT-100 for 40°c & 35°c.

20. Convert 1bar pressure to pascal, psi, Hg mm.

21. Convert 520 mm of Hg into bar.

Unit VI Signal Conditioning and Data Acquisition System (14 M)

2 Marks Questions

22. Define signal conditioning.

23. State need of DAS.

24. List application of Data Acquisition System.

4 Marks Questions.

25. Describe basic DAS with neat and labeled sketch.

26. Sketch the DC signal conditioning circuit for pressure measurement using strain gauge. Justify it.