BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY

QUESTION BANK

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

Program: - EJ

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

Unit 1 Fundamentals of Electronics Measurements (08 M)

2 Marks Questions

1. Define Static and Dynamic Characteristics.

2. Define Accuracy and Precision.

3. Define error and write formula for percentage error.

4. List dynamic characteristics of instruments.

5. Define the terms standard. State types of standard.

4 Marks Questions

6. Define Error. State types of error and explain any one in details.

7. Define calibration. Explain need of calibration of measuring instrument.

Unit 2 Analog and Digital Meters (14 M)

2 Marks Questions

8. Give two advantage of PMMC movement.

9. Define Accuracy with respect to digital display.

4 Marks Questions

10. Draw neat diagram and explain working principle, construction of PMMC instrument.

11. Draw the circuit of Basic DC Ammeter. Derive equation for shunt resistance.

12 . Draw the circuit of DC voltmeter and state the equation for multiplier resistor (R_S).

13. Write the calibration of series type ohm-meter

14. Differentiate digital instruments over with analog instruments.

15 . Write any four specifications of DMM.

16. A basic D' Arsonval movement is having the full scale deflection of 50 micro Ampere . Internal resistance of meter is 200 ohm. Calculate the value of multiplier to obtain the voltage range of 0 to 20 volts.

Unit 3 Oscilloscope, Function Generator and Spectrum Analyzer (14 M)

2 Marks Questions

17. List any four applications of CRO.

18. State any two requirement of signal generator.

19 . Give two application of function generator.

20. Draw block diagram of DSO with labels

4 Marks Questions.

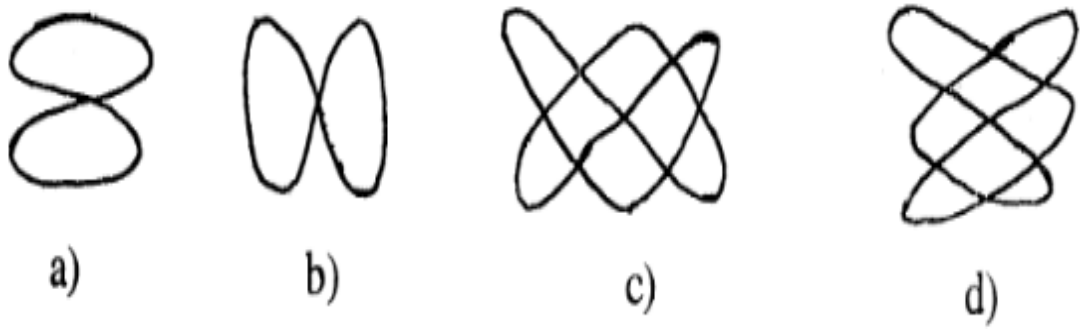
21. Draw block diagram of CRT and explain its working.

22. Draw block diagram of CRO and explain its operation.

23. Draw block diagram of vertical deflection system used in CRO and explain it.

24. Draw the block diagram of horizontal deflection system. State the role of trigger circuit and time base generator in oscilloscope.

25. Calculate ratio of vertical and horizontal frequencies for an oscilloscope which displays the following Lissajous figures shown in fig,



26. Calculate the ratio of vertical to horizontal frequencies for an oscilloscope, which displays the following Lissajous patterns shown in Fig.