23146043

QP CODE: 23146043

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, DECEMBER 2023

First Semester

B.Sc Physics Model II Applied Electronics

Vocational Course - AE1VOT02 - ELECTRONICS APPLICATION

2017 Admission Onwards

6D71A231

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. What is meant by fluorescence?
2. Determine the Q-factor of a coil for the series circuit consisting of R=10Ω, L=0.1H and C=10μF.
3. Give the expression for bandwidth of a double tuned transformer.
4. Define pass band.
5. List any four application of sweep voltage.
6. Explain passive transducers.
7. What is the function of the sensing element in a thermocouple?
8. What is a photo diode? Draw the symbol of a photo diode.
9. Write down the advantages of the compact disc.
10. What are the difference between single sided and multilayer PCB?
11. Why is cleaning the leads of dust, dirt and grease essential before soldering?
12. Write down the special precautions to be taken while soldering an IC.

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. PMMC meter is required to measure 100 V across a circuit. If the permissible current is 1 mA. Find the value of serious resistance. Resistance of the meter is 1000 Ω.

14. Discuss briefly about digital multimeter.

15. Explain about direct and indirect coupling.

16. Explain the sweep circuit using Transistor switch.

17. Discuss the working of a Miller sweep circuit.

18. Explain the working of a Linear Variable Differential transducer.

19. Explain how sound is reproduced from compact disc?

20. What are the advantages of Printed Circuit Board?

21. What is solder joint? How Dry solder joint occur?

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Describe the operation of a CRO with a suitable diagram and give applications.

23. What is piezoelectric transducer? Explain any one example of piezoelectric transducer to measure mechanical pressure. What are the merits and demerits?

24. With neat block diagrams, explain the method of fabrication of PCB. Also explain the steps to make a multilayer PCB.

25. Distinguish between soldering and desoldering. What are the different tools used for desoldering?.

(2×10=20)