19101089

QP CODE: 19101089

Reg No : .....

Name : .....

## B.Sc.DEGREE (CBCS) EXAMINATION, DECEMBER 2018

**First Semester**

B.Sc Physics Model II Applied Electronics

**Vocational Course - AE1VOT02 - ELECTRONICS APPLICATION**

**2017 Admission (Reappearance)**

3B66EB75

**Maximum Marks: 60** **Time: 3 Hours**

### Part A

Answer any **ten** questions.

Each question carries **1** mark.

1. List the various electrical quantities that can be measured using a Multimeter.
2. State the advantages of a DVM over an analog meter.
3. Define selectivity?
4. Draw the circuit diagram for a band stop filter.
5. Explain self-generating transducers.
6. State any two pair of the thermocouple material.
7. What is a photo diode? Draw the symbol of a photo diode.
8. Explain piezoelectric transducer.
9. What is a Father disc? How it is different from a Mother disc?
10. What is PCB?
11. How to distinguish Good and bad solder joints?
12. List out different tools used for desoldering.

(10×1=10)

### Part B

Answer any **six** questions.

Each question carries **5** marks.

13. What is the principle and explain the function of a CRT with a diagram?
14. How to display the wave by Horizontal and vertical deflection?

15. A double-tuned transformer is required to have a resonant frequency of 1MHz and a bandwidth of 1KHz. Both primary and secondary have an inductance of 200 μH. The primary has a Q of 60 and secondary of 80. Determine (i) capacitance (ii) coefficient of coupling required (iii) whether the circuit is over, under or critically-coupled.

16. Explain how a sweep can be generated by charging a capacitor through resistor directly from a source V. What are the drawbacks of this kind of sweep generators?

17. Explain the sweep circuit using Transistor switch.

18. Explain the working of a current time base generator.

19. What are the advantages and disadvantages of CD?

20. What are the advantages of Printed Circuit Board?

21. Write down the special precautions to be taken while soldering and desoldering.

(6×5=30)

**Part C**

Answer any **two** questions.

Each question carries **10** marks.

22. With the help of a neat block diagram of CRO, explain how a sine waveform is displayed on the CRO screen. Explain the functions of each electrode in it.

23. With necessary diagrams explain the working of an LVDT. List the advantages and disadvantages of an LVDT.

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

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

(2×10=20)