E 8951 (Pages : 2) Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2019

First Semester

Vocational Course—ELECTRONIC APPLICATIONS

(For Applied Electronics of B.Sc. Physics Model II)

[2013–2016 Admissions]

Time : Three Hours Maximum Marks : 60

Candidates can use Clark's tables and Scientific Non-programmable Calculators.

Part A (Very Short Answer Type Questions)

Answer **all** *questions briefly.*

Each question carries 1 *mark.*

1. What is a tuning circuit?
2. What is a pulse generator?
3. What is Q-factor?
4. What is the impedance of a series LCR network?
5. List the different types of PCBs.
6. What is a father disc?
7. What is a phototransistor?
8. State the basic idea behind the compact disc.

(8 × 1 = 8)

Part B (Short Answer Type Questions)

Answer any **six** *questions.*

Each question carries 2 *marks.*

9. Explain the basic principle of a PMMC meter.
10. List the features of a time base signal.
11. What is recurrent sweep in CRO?
12. Describe the following terms with reference to a time base signal :
    (a) Sweep Time. (b) Flyback Time.
    (c) Slope Error. (d) Sweep speed.
13. What is a low pass filter? Explain.
14. List the advantages and disadvantages of LVDT.
15. State various applications of Thermistor.

Turn over

16. Differentiate between Son disk and Consumer disk.
17. What principle is employed for the operation of a function generator?
18. Write a short note on Miller Sweep Circuit.

(6 × 2 = 12)

Part C (Short Essay Type Questions)

Answer any **four** *questions.*

Each question carries 4 *marks.*

19. With neat diagram, explain the working of Digital Volt Meter.
20. Sketch the block diagram of a CRO. Explain the functions of each part in detail.
21. Explain the series LCR resonance with necessary graphs.
22. Explain any *one* method of generating a time base waveform.
23. Describe the operation of a piezoelectric transducer.
24. What are the different steps involved in development of PCB? Explain.

(4 × 4 = 16)

Part D (Essay Type Questions)

Answer any **two** *questions.*

Each question carries 12 *marks.*

25. Discuss the measurement of electrical quantities using RLC Bridge.
26. With a neat circuit diagram and necessary wave forms, describe the working of a Bootstrap Sweep circuit.
27. What is a transducer? Explain LVDT and Microphones with necessary diagrams.
28. Describe the principle of recording and reproduction of sound on a disc by a laser beam.

(2 × 12 = 24)