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Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2017

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. Differentiate between PMMC and MI instruments.
2. What is a Q meter ?
3. List the advantages of digital voltmeter.
4. State the applications of sweep voltage.
5. What is a thermistor ?
6. What do you mean by miller sweep circuit ?
7. What are the different types of optical recording of sound ?
8. What is a compact disc ?

(8 × 1 = 8)

Part B (Brief Answer Questions)

Answer any **six** *questions.*
Each question carries 2 *marks.*

9. Bring out the benefits of a multimeter over other such instruments.
10. Give the working of an insulation tester.
11. State the conditions for resonance in series RLC circuit.
12. What is a double tuned transformer ?
13. Explain the working of an exponential sweep circuit.
14. Explain the features of boot strap sweep circuit.
15. Explain directivity and sensitivity of a microphone.
16. What is meant by optical recording ? Explain.

Turn over

17. What is a PCB ? Explain.

18. List the advantages of compact disc.

(6 × 2 = 12)

Part C (Descriptive / Problems / Short Essays)

Answer any **four** *questions.*
Each question carries 4 *marks.*

19. Explain audio and RF signal generation principles with circuit diagrams.

20. Bring out the operating characteristics of a tuning circuit ?

21. Explain sweep circuit using unijunction transistor switch.

22. Distinguish between photo transistor and piezoelectric transducer.

23. Explain the different types of soldering used with the PCB.

24. Discuss master disc, father disc and cd play back process.

(4 × 4 = 16)

Part D (Essay Type Questions)

Answer any **two** *questions.*
Each question carries 12 *marks.*

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

26. Discuss on low-pass and high-pass filters with theory.

27. Describe the Miller sweep circuit with theory and give one application.

28. Discuss the variable density method for optical recording and compare it with variable area method.

(2 × 12 = 24)