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Reg. No. :

Code No. : 20364 E Sub. Code : ESPH 41

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2025

Fourth Semester

Physics

Skill Enhancement Course – MAINTENANCE OF
ELECTRONIC APPLIANCES

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. A soldering iron 'bit' is made of
(a) Brass (b) Tin
(c) Steel (d) Copper
2. Soldering iron is made of wedge shape in order to
(a) Apply high pressure at edge
(b) Retain heat
(c) Retain solder
(d) Facilitate molecular attraction

3. The output voltage of a regulated power supply is affected by which of the following factors.
(a) Input voltage (b) Load current
(c) Temperature (d) All the above
4. Digital multimeter is used for _____.
(a) Measuring a.c and d.c. current, voltage and resistance
(b) Measuring a.c. current and voltage
(c) Measuring d.c. current and resistance
(d) Measuring a.c. voltage and resistance
5. Electro-optical effect is produced in _____.
(a) LED (b) LCD
(c) OFC (d) OLED
6. CRO is used for measurement of _____.
(a) AC as well as DC current
(b) AC current only
(c) DC current only
(d) AC power only

7. Which of the following is designed to control the operations of a computer?
- (a) User
 - (b) Application software
 - (c) System software
 - (d) Utility software
8. Modem stands for
- (a) A type of secondary memory
 - (b) Mainframe operating device memory
 - (c) Modulator demodulator
 - (d) All of the above
9. Which of the following should not be the characteristic of the solar cell material?
- (a) High Absorption
 - (b) High Conductivity
 - (c) High Energy Band
 - (d) High Availability
10. Series and parallel combination of the solar cell is known as _____.
- (a) Solar array
 - (b) Solar light
 - (c) Solar sight
 - (d) Solar eye

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Summarize the principle of breadboard.
- Or
- (b) Illustrate the concept of groove board.
12. (a) Outline the function of integrated circuit 7805.
- Or
- (b) List out the practical uses of transistor and resistor.
13. (a) Explain the basic principle and working action of CCTV camera.
- Or
- (b) How to measurement of frequency using CRO?
14. (a) Explain about the formatting in windows operating system.
- Or
- (b) Distinguish hardware maintenance and software maintenance.

15. (a) Calculate the power rating of solar panel and solar inverter.

Or

- (b) Explain the working principle of solar inverter.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Discuss about the working principle of soldering tools.

Or

- (b) Compare dry and cold solder joints.

17. (a) Explain about the working principle of Zener diode used as voltage regulator.

Or

- (b) Explain the practical uses of Multimeter.

18. (a) Annotate the working principle of LCD.

Or

- (b) Extend the principle of CRO with block diagram.

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19. (a) Describe about the installation of basic network.

Or

- (b) What is MODEM? Explain its working principle with a neat diagram?

20. (a) Discriminate the working action of solar battery.

Or

- (b) List out the protection circuits used in inverter.
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