

(6 pages)

Reg. No. :

Code No. : 20611 E Sub. Code : ESPH 41

B.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 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. Solder is essentially a
 - (a) Tin-silver base
 - (b) Tin lead base
 - (c) Tin-zinc base
 - (d) Tin-bismuth base

2. Binding wire used to support the joints for soldering is made of
 - (a) Aluminum
 - (b) Copper
 - (c) Soft iron
 - (d) Mild steel
3. Which of the following represent a change of output voltage when load current is increased?
 - (a) Line regulation
 - (b) Load regulation
 - (c) Current regulation
 - (d) Voltage regulation
4. Current is converted to voltage ————.
 - (a) through a voltmeter
 - (b) through a resistance
 - (c) through an ammeter
 - (d) through a galvanometer
5. The full form of LCD is ————.
 - (a) Liquid Crystal Display
 - (b) Liquid Crystalline Display
 - (c) Logical Crystal Display
 - (d) Logical Crystalline Display

6. By making use of a CRO ———.
- (a) many characteristics of a signal can be measured
 - (b) only a few characteristics of a signal can be measured
 - (c) no characteristics of a signal can be measured
 - (d) signal can only be displayed
7. Which of the following is the brain of the computer?
- (a) Central Processing Unit
 - (b) Memory
 - (c) Arithmetic and Logic unit
 - (d) Control unit
8. Which of the following part of a processor contains the hardware necessary to perform all the operations required by a computer?
- (a) Controller (b) Registers
 - (c) Cache (d) Data path

9. A solar cell is a ———.
- (a) P-type semiconductor
 - (b) N-type semiconductor
 - (c) Intrinsic semiconductor
 - (d) P-N Junction
10. A solar cell converts light energy into ———.
- (a) Electrical energy
 - (b) Thermal energy
 - (c) Sound energy
 - (d) Heat energy

PART B — (5 × 5 = 25 marks)

Answer ALL the questions, choosing either (a) or (b).

11. (a) Explain dry solder joint.
- Or
- (b) Discuss about the working action of soldering iron.
12. (a) How does a transformer work?
- Or
- (b) List out the uses of capacitor and resistor.

13. (a) Annotate the working principle of LED.
Or
(b) Calculate AC and DC frequency using CRO.
14. (a) Explain about the various parts of a computer.
Or
(b) Explain basic network installation.
15. (a) Explain Overload and Overcharging.
Or
(b) Explain solar battery.

PART C — (5 × 8 = 40 marks)

Answer ALL the questions, choosing either (a) or (b).

16. (a) Describe about the printed circuit board.
Or
(b) Distinguish good and bad solders joints.
17. (a) Describe about the function of integrated circuit 7905.
Or
(b) Discuss about the principle of switch mode power supply with a suitable diagram.

18. (a) Explain about the working action of CCTV camera with a block diagram.
Or
(b) Describe about the construction and working of cathode ray tube.
19. (a) Describe about the installation of an windows operating system.
Or
(b) Examine the working principle of MODEM.
20. (a) Analyse the working principle of solar panel.
Or
(b) Summarize the various faults and its rectification of solar power system.