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Reg. No. :

Code No. : 20308 E Sub. Code : CSPH 41

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

Fourth Semester

Physics

Skill Based Subject — MAINTENANCE OF
ELECTRONIC APPLIANCES

(For those who joined in July 2021 and 2022 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The _____ of a resistor is determined generally by its physical size.
- (a) resistance (b) current
(c) power (d) (a) and (b)

2. What is the internal voltage drop in an ideal constant-voltage source?
- (a) variable (b) 0
(c) 1 (d) high
3. A CRO can display _____ signals.
- (a) D.C (b) A.C
(c) both D.C and A.C (d) Time-invariant
4. LCD TV work on the principle of _____
- (a) emission of cathode rays and light
(b) emission of cathode rays
(c) light emission
(d) light blockage
5. Which of the following can act as an inverse transducer?
- (a) LVDT
(b) Strain gauge
(c) Piezo electric crystal
(d) Bimetal strip

6. The most widely used material for photovoltaic cell is _____
- (a) silicon (b) selenium
(c) gallium arsenide (d) germanium
7. Which of the following is the function of the antenna?
- (a) Converts photons to electrons
(b) Converts electrons to photons
(c) Converts electrons to neutrons
(d) Both (a) and (b)
8. The ISDN address is _____ digits long.
- (a) 10 (b) 40
(c) 55 (d) 65
9. The amount of light or darkness on a photography is known as _____
- (a) exposure (b) shutter speed
(c) contrast (d) sharpness
10. Which shutter speed lets in more light?
- (a) 1/30 (b) 1/60
(c) 1/400 (d) 1/1000

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain colour coding of resistors with examples.
- Or
- (b) Describe how printed circuit board is prepared and used.
12. (a) Write the difference between analog and digital multimeter.
- Or
- (b) What are Lissajous figures? Describe the formation of Lissajous figures in CRO.
13. (a) Give the basic requirements of a transducer.
- Or
- (b) Describe a resistive type of transducer.
14. (a) Explain the principle and working of DTH.
- Or
- (b) Explain the working of the telephone system.

15. (a) Give the specification of battery types used in flash photography.

Or

- (b) Explain resolution in digital photography.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Describe the different types of capacitors.

Or

- (b) Explain in detail the various soldering techniques.

17. (a) Describe the measurement of voltage, frequency and phase using cathode ray oscilloscope.

Or

- (b) Explain the working of an audio frequency oscillator with neat circuit diagram.

18. (a) Describe an inductive transducer.

Or

- (b) Describe the construction, working and application of a photo resistor.

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19. (a) Explain the basic concepts of radio transmitter and receiver.

Or

- (b) Explain the principle of operation of a mobile phone.

20. (a) Discuss the various elements of flash photography.

Or

- (b) What are digital formats? Explain the characteristics of any two digital formats.

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