

Reg. No. : .....

Code No. : 30322 E Sub. Code : SSPH 4 A/  
ASPH 41

Sc. (CBCS) DEGREE EXAMINATION, APRIL 2022

Fourth Semester

Physics

Skill Based Subject — MAINTENANCE OF  
ELECTRONIC APPLIANCES

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

If the last band in a resistor is gold, the tolerance is

- (a) 20%                      (b) 15%
- (c) 10%                     (d) 5%

The antenna is a conductor that radiates or intercepts \_\_\_\_\_ wave energy.

- (a) electrochemical      (b) electrical
- (c) mechanical            (d) electromagnetic

The heart of mobile communication system is

- (a) base terminal station
- (b) base station controller
- (c) mobile switching center
- (d) none of the above

The aperture of a camera lens controls the

- (a) image sharpness
- (b) depth of field of an image
- (c) amount of light reaching the sensor
- (d) all the above

Before images are transferred to the memory card, they are stored in the

- (a) sensor
- (b) buffer
- (c) secondary memory card
- (d) none of the above

2. The wires used in multimeters have \_\_\_\_\_ resistance.
  - (a) zero                      (b) small
  - (c) large                    (d) infinite
3. A CRO can be used to measure
  - (a) a.c. voltage            (b) d.c. voltage
  - (c) frequency              (d) all the above
4. The stored image in digital storage oscilloscope can be displayed
  - (a) for a limited time
  - (b) for infinite time
  - (c) for zero time
  - (d) for an intermediate time
5. Thermistor is a \_\_\_\_\_ transducer.
  - (a) resistive                (b) inductive
  - (c) capacitive              (d) all the above
6. Transducers convert
  - (a) electrical signal into non electrical quantity
  - (b) non-electrical quantity into electrical signal
  - (c) electrical signal into mechanical quantity
  - (d) all the above

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 the method of achieving good soldering.
12. (a) Give the difference between analog and digital multimeters.  
Or  
(b) Describe how to detect a faulty capacitor.
13. (a) Give the basic requirements of a transducer.  
Or  
(b) Explain the working of a light transducer.
14. (a) Explain the basic concepts of radio transmitter.  
Or  
(b) Describe the cellular structure of a mobile communication system.

15. (a) Give the difference between wide angle lens and telephoto lens.

Or

- (b) Write about digital data transfer from a digital camera to computer.

PART C — ( $5 \times 8 = 40$  marks)

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

Each answer should not exceed 600 words.

16. (a) Describe the various types of resistors.

Or

- (b) Calculate the equivalent resistance while converting star connection into delta connection and delta in connection into star connection.

17. (a) Draw the block diagram of CRO and explain the function of each unit in it.

Or

- (b) Describe the construction and working of LCD displays of instruments.

18. (a) Describe the classification of transducers.

Or

- (b) Explain the construction and working of a resistance temperature detector.

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19. (a) Describe the construction and working of the yagi antenna.

Or

- (b) Discuss the requirements and working of the telephone system.

20. (a) Explain the essential accessories of a camera.

Or

- (b) Explain ISO speed and resolution of a digital camera.

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