(6 pages) **Reg. No. :** .....

Code No. : 20306 E **Sub. Code : CSPH 31**

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

Third Semester

Physics

Skill Based Subject — MAINTENANCE OF ELECTRICAL 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. One farad capacitance is
   (a) one coloumb/volt
   (b) one volt/coloumb
   (c) one volt/columb
   (d) none of the above

2. An ammeter is a
   (a) secondary instrument
   (b) absolute instrument
   (c) recording instrument
   (d) integrating instrument

3. Transformers work on the principle of
   (a) Conservation of momentum
   (b) Joule's law
   (c) Lenz's law
   (d) None of the above

4. Continuous cooling transformation diagrams are mainly drawn for
   (a) iron (b) manganese
   (c) any alloy (d) steel

5. Fluorescent lamp was invented by
   (a) Thomas Alwa Edison
   (b) Moison
   (c) Edmund Germer
   (d) Peter Cooper

6. The heating element in an iron box is made of

(a) copper (b) zinc

(c) iron (d) nichrome

7. D.C. can be converted to A.C by

(a) rectifier (b) filter

(c) transformer (d) inverter

8. A good earthing path has

(a) very high resistance

(b) very low resistance

(c) zinc rod

(d) none of the above

9. ELCB means

(a) Earth-Leakage Circuit Breakers

(b) Miniature Circuit Breaker

(c) Earth-Leak Circuit Break

(d) Earth Miniature Circuit Breaker

10. Motors are used in

(a) washing machines (b) vacuum cleaners

(c) refrigerators (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) Write a short note on Ohm's law and application.

Or

(b) Write a short note on galvanometer and working principle.

12. (a) Write in detail about classification of transformers.

Or

(b) Write a short note on testing of transformers.

13. (a) Write a short note on stabilizer.

Or

(b) Write a note on electric bulbs.

14. (a) Give a short note on single phase and three phase connection.

Or

(b) Give a short note on color code for insulator.

15. (a) Explain about the relays and fuses.

Or

(b) Explain the functioning of U.P.S

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain with theory, how a galvanometer may be converted into an ammeter.

Or

(b) Explain with theory, how a galvanometer may be converted into a voltmeter.

17. (a) Explain about the cooling of transformer.

Or

(b) Explain about the transformer losses.

18. (a) Explain the principle and working of microwave oven.

Or

(b) Describe and explain the working of a fridge.

19. (a) Explain about the overloading earth.

Or

(b) Explain about the RMS and peak values.

20. (a) Explain about the overloading devices.

Or

(b) Describe the construction and working of

(i) Electric motor

(ii) DC motor

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