

Code No. : 20310 E Sub. Code : ASPH 31

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023.

Third Semester

Physics — Skill Based Subject

MAINTENANCE OF ELECTRICAL APPLIANCES

(For those who joined in July 2020 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The resistance of a conductor is inversely proportional to its
 - (a) Length
 - (b) Supply length
 - (c) Types of supply
 - (d) Cross - Sectional Area

7. In pure inductive circuit the power is _____.
 - (a) Infinite
 - (b) Maximum
 - (c) Zero
 - (d) Minimum
8. Pure capacitance circuit the power is _____.
 - (a) Infinite
 - (b) Maximum
 - (c) Minimum
 - (d) Zero
9. The content resistance of a manually operated switch is
 - (a) Zero
 - (b) Very high
 - (c) Very low
 - (d) None of the above
10. Which switch should have _____.
 - (a) High insulation resistance
 - (b) Low insulation resistance
 - (c) Insulation resistance equal to content resistance
 - (d) None of the above

Page 3 Code No. : 20310 E

2. Resistance can be described as the
 - (a) Opposition to current flow
 - (b) Resist rate of the voltage
 - (c) Current acceptability of a voltage
 - (d) Opposition to voltage flow
3. The open circuit test in a transformer is used to measure.
 - (a) Copper loss
 - (b) Winding loss
 - (c) Total loss
 - (d) Core loss
4. Which of the following does not change in a transformer?
 - (a) Current
 - (b) Voltage
 - (c) Frequency
 - (d) All of the above
5. Which gas is used for filling electric bulbs?
 - (a) Neon
 - (b) Chlorine
 - (c) Halogen
 - (d) Argon
6. The main application of indirect arc furnace is to melt.
 - (a) Iron
 - (b) Steel
 - (c) Non-ferrous metal
 - (d) None of these

Page 2 Code No. : 20310 E

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 resistance and types.
Or
(b) Short note on capacitance and application.
12. (a) Write five uses of transformer.
Or
(b) Write a short note on application of transformer.
13. (a) Explain about the fluorescent lamps.
Or
(b) Explain about the water heater.
14. (a) Short note on AC and DC circuits.
Or
(b) Explain about the RMS peak values.

Page 4 Code No. : 20310 E

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15. (a) Write a short note on circuit breakers.

Or

(b) Write any five uses of UPS.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain about the types of resistance and application.

Or

(b) Briefly explain about the galvanometer and working principle and application.

17. (a) Explain the principle and working construction of transformer.

Or

(b) Explain about the classification of transformer.

18. (a) Briefly explain about the electric bulbs and fluorescent lamps.

Or

(b) Explain about the wet grinder and mixer.

Page 5 Code No. : 20310 E

19. (a) Explain about the AC and DC electrical circuits.

Or

(b) Explain about the short circuit.

20. (a) Explain about the electrical switch and construction and working.

Or

(b) Brief explain about the UPS.

Page 6 Code No. : 20310 E