

CBSE Class 12 Electrical Technology 2020 - Set 343/C - Compartment



Question Paper

Conducted by the Central Board of Secondary Education (CBSE)

Time Allowed: 3 Hours

Maximum Marks: 60

General Instructions

- (i) This question paper consists of two parts: Section A – Employability Skills (10 marks) and Section B – Subject Skills (50 marks).
- (ii) Section A: Answer any 4 of Questions 1–6 (1 mark each), and any 3 of Questions 7–11 (2 marks each).
- (iii) Section B: Answer any 10 of Questions 12–23 (1 mark each), any 5 of Questions 24–30 (2 marks each), any 5 of Questions 31–37 (3 marks each), and any 3 of Questions 38–42 (5 marks each).
- (iv) This question paper contains 42 questions out of which 30 questions are to be answered.
- (v) All questions of a particular part/section must be attempted in the correct order.
- (vi) The maximum time allowed is 3 hours.

Section A: Employability Skills

Answer any 4 questions out of the given 6 questions of 1 mark each. $1 \times 4 = 4$

1. I can't _____ (hear/listen) you. Could you speak louder please ?

2. What is motivation ?

3. Name any two personality disorders.

4. What do you mean by the term 'Recycle' ?

5. What is micro research project ?

6. Name any two softwares used for creating presentations.

Answer any 3 questions out of the given 5 questions of 2 marks each. $2 \times 3 = 6$

7. What is a sentence ? Write its types.

8. What do you understand by influence of personality ?

9. Explain the role of green jobs in the field of greenhouse emissions.

10. Which quality and capacity are included in Entrepreneurship ? Give any four.

11. Name different components of an OpenOffice Impress window.

Section B: Subject Skills

Answer any 10 questions out of the given 12 questions of 1 mark each. $1 \times 10 = 10$

12. Frequency of alternative voltage power supply at home in India is

- (A) 25 Hz (B) 50 Hz
(C) 60 Hz (D) 314 Hz

13. To improve power factor, the rating of capacitor is in _____.

- (A) Voltage (B) VA
(C) KW (D) KVAR

14. In which part of a transformer is the maximum heat generated ?

- (A) Core (B) Winding
(C) Oil (D) Frame

15. Which condition is required to work a transformer on parallel ?

- (A) Same KVA rating (B) Voltage rating compared to load sharing ratio
(C) Same frequency (D) Transformer ratio compared to load sharing

16. By which part of DC motor is it easily identified ?

- (A) Slip ring (B) Armature
(C) Winding (D) Commutator

17. If in an induction motor, supply voltage is changed by 5%, then the change in torque will be

- (A) 2.5% (B) 5%
(C) 10% (D) 50%

18. Starting torque of capacitor start induction motor is

- (A) Zero (B) Less
(C) Equal to rated torque (D) More than rated torque

19. What are the advantages of moving coil, permanent magnet type instruments ?

- (A) Low power expense (B) No hysteresis loss
(C) Damping efficiency by eddy current (D) All of the above

20. Which instrument is used to measure high voltage ?

- (A) Current transformer (B) Potential transformer
(C) Induction type meter (D) Repulsion type meter

21. Separate pump motor is used in

- (A) Desert cooler (B) Room cooler
(C) Both (A) and (B) (D) None of the above

22. A person can be removed from electric contact by

- (A) Pulling his arms (B) Using wooden rods
(C) Using cotton dry cloth (D) Both (B) and (C)

23. The running winding of a split phase motor is placed in the

- (A) Rotor (B) Stator
(C) Both (A) and (B) (D) None of the above

Answer any 5 questions from the given 7 questions of 2 marks each. $2 \times 5 = 10$

24. What is the advantage of AC over DC ?

25. Write different types of a transformer.

26. Explain the working of a voltage transformer.

27. What are the faults and how will you rectify them if a DC shunt motor does not start ?

28. Write precautions while working on an Immersion Rod.

29. Draw a labelled diagram of an electric mixer.

30. Explain the procedure to rescue a person from electric shock.

Answer any 5 questions from the given 7 questions of 3 marks each. $3 \times 5 = 15$

31. Explain cooling system of a Transformer.

32. What do you mean by a three phase induction motor ? Write its advantages.

33. Differentiate between single phase slip ring motor and squirrel cage induction motor.

34. Define single phase induction motor. Write its types.

35. Explain advantages and disadvantages of Dynamometer type wattmeter.

36. Explain the working of a universal motor.

37. Explain the construction and working of a pressure type geyser.

Answer any 3 questions from the given 5 questions of 5 marks each. $5 \times 3 = 15$

38. Explain the working of capacitor start motor. Write its precautions and advantages and disadvantages of single phase motor over three phase motor.

39. With a diagram, explain the working of Star-Delta Motor starter.

40. Explain the working of Digital Multimeter with its block diagram.

41. Explain different kinds of faults which may occur in various domestic appliances.

42. With the help of a diagram, explain the construction and working of a room cooler.

- End of Question Paper -