CBSE Class 12 Electrical Technology 2017 - Set 312

Question Paper

Conducted by the Central Board of Secondary Education (CBSE)

Time Allowed: 2 Hours **Maximum Marks: 40**

General Instructions

(i) This question paper contains 32 questions in three sections.
(ii) Section A: Answer any eleven questions from Questions 1–15, carrying 1 mark each.
(iii) Section B: Answer any ten questions from Questions 16–27, carrying 2 marks each.
(iv) Section C: Answer any three questions from Questions 28–32, carrying 3 marks each.

Section A

Answer any 11 questions.

1. When a test lamp is connected in series with live wire and earthed reflector of a heater, then the lamp will

(A) glow dim (B) fuse
(C) not glow (D) glow bright

2. Earth continuity test of a reflector type bowl room heater can be carried out by connecting the multimeter between the reflector and the

(A) neutral terminal (B) heating element
(C) earth terminal (D) live terminal

3. Heating element used in electric iron is similar to the element of a

(A) room heater (B) bowl type heater
(C) hot plate (D) None of these

4. Continuity test of defective iron may be carried out by

(A) megger only (B) multimeter only
(C) test lamp only (D) All of these

5. An electric iron should be connected with supply by

(A) 3 pin, 200 V plug (B) 2 pin, 250 V plug
(C) 3 pin, 230 V plug (D) Any one of these

6. Heating element of a hot plate is made of

(A) copper (B) steel
(C) brass (D) nichrome

7. Rotary switch is used in a/an

(A) bowl type heater (B) rod type heater
(C) automatic toaster (D) hot plate

8. Element used in an automatic electric toaster is similar to the element of a

(A) bowl type heater (B) hot plate
(C) room heater (D) None of these

9. Timer and relay is used in

(A) an ordinary toaster (B) an automatic toaster
(C) both (a) and (b) (D) None of these

10. For obtaining low heat the two heating elements of a room heater are connected in

(A) series (B) parallel
(C) either (a) or (b) (D) None of these

11. Thermostat control is used in a

(A) rod type room heater (B) bowl type room heater
(C) heat convector (D) All of these

12. Exhaust fan is generally used in a/an

(A) room cooler (B) air cooler
(C) desert cooler (D) All of these

13. Motor used in blower type room cooler is

(A) split-phase motor (B) universal motor
(C) capacitor start and universal motor (D) None of these

14. Shading ring of a shaded pole motor is made of

(A) nichrome (B) brass
(C) steel (D) copper

15. Commutator is used in a/an

(A) split-phase motor (B) shaded pole motor
(C) universal motor (D) ceiling fan

Section B

Answer any 10 questions.

16. Describe the construction and working of a hot plate.

17. Describe the construction and working of an ordinary electric toaster.

18. Describe the construction of an immersion heater.

19. Describe the common faults in a geyser and their causes.

20. Describe the working principle of an automatic electric kettle.

21. A small table fan using shaded pole motor is not operating. Give full scheme of step-by-step testing for the purpose of trouble shooting.

22. Describe the construction of the motor used in a pedestal fan.

23. Describe in brief how faults are developed in a washing machine.

24. Describe the common faults in a hair dryer.

25. Explain the construction and working principle of a vacuum cleaner.

26. Explain the construction of an electric hand drill machine.

27. Write a short note on electric shock and its treatment.

Section C

Answer any 3 questions.

28. Explain the various causes of overheating of a motor used in a mixer.

29. Explain the construction and working of an electric grinder.

30. What are the common defects in an emergency light ? How will you rectify them ?

31. Draw the circuit diagram of an automatic voltage stabilizer.

32. Describe the procedure of testing and repairing of a defective split-phase motor.

- End of Question Paper -