

TROUBLESHOOTING MAINTENANCE OF ELECTRONIC EQUIPMENTS (790)

Sample Question Paper

Class XII - 2018-19

Time: 2½ Hours

Max. Marks: 50

General Instructions:

1. Question paper is divided into two sections: Section-A and Section-B.
2. **Section-A:**
 - i. Multiple choice question/Fill in the blanks/Direct Questions of 1 mark each. Answer any 10 questions out of the given 12 questions.
 - ii. Very Short Answer of 2 marks each. Answer any 5 questions from the given 7 questions.
 - iii. Short Answer of 3 marks each. Answer any 5 questions from the given 7 questions.
3. **Section-B:** Long/Essay type questions of 5 marks each. Answer any 3 question from the given 5 questions.
4. All questions of a particular section must be attempted in the correct order.
5. Please check that this question paper contains 31 questions out of which 23 questions are to be attempted.
6. The maximum time allowed is 2½ hrs.

SECTION -A

Answer any 10 questions out of the given 12 questions:

1. Ribbon type microphone has important characteristics of two faces. What are those two faces? (1)
 - (a) To and fro
 - (b) Front and back
 - (c) Forward and reverse
 - (d) Up and down
2. The process of magnetic recording is based on principle of (1)
 - (a) Electromagnetic induction
 - (b) Mutual induction
 - (c) Self-Induction
 - (d) Both A and B
3. Impedance of loudspeaker is of the order of (1)
 - (a) Ohm
 - (b) Megaohm
 - (c) Kilo ohm
 - (d) Gegaohm
4. The diameter of circular plastic coated CD disc is (1)
 - (a) 130 mm
 - (b) 220 mm
 - (c) 20 mm
 - (d) 120mm

5. Enclosure of a loudspeaker act as a (1)
(a) Infinite baffle
(b) Woofer
(c) Tweeter
(d) Finite baffle
6. CD player reads recorded information from (1)
(a) Center track
(b) Innermost track
(c) Outermost track
(d) None of the above
7. In monochrome Television, the contrast is controlled by (1)
(a) DC voltage
(b) AC voltage
(c) DC current
(d) Both A and B
8. In Television receiver, if the vertical sync is missing, the picture will (1)
(a) Roll up and down
(b) Roll horizontally
(c) Not distorted
(d) No Picture
9. Which device would be the best aid in shorted track detection? (1)
(a) Multimeter
(b) Logic Pulser
(c) Current Tracer
(d) Oscilloscope
10. Which test equipment allows comparison between input and output signals? (1)
(a) Single channel oscilloscope
(b) Logic probe
(c) Spectrum Analyzer
(d) Multitrace Oscilloscope
11. Full form of DTMF is (1)
(a) Double throw multiple functions
(b) Dual Tone multiple frequency
(c) Digital tunable multiplex phone
(d) Double tunable mobile frequency
12. When in a TV receiver both sound and picture are weak and distorted, the problem is most likely in (1)
(a) AFC
(b) FMD detector
(c) Tuner
(d) Video Amp

Very Short Questions: (2 marks each).

Answer any 5 questions out of the given 7 questions:

13. What are the advantages of piezoelectric microphone? Where is it used? (2)
14. What is the need of biasing in electronic devices? (2)
15. What are the differences between analog and digital sound recording? (2)
16. What is scrambling in telecommunication? (2)
17. Draw the frequency response of practical loudspeaker? (2)
18. What is use of blanking pulse in TV? (2)
19. What are desirable features of printers? (2)

Short Questions: (3 marks each).

Answer any 5 questions out of the given 7 questions:

20. Explain the principle of moving coil microphone. Also draw a neat diagram to show the principle of generation of voltage. (3)
21. Draw the block diagram of telephone system and explain its operation. (3)
22. What is optical recording? List the advantages and disadvantages of CD player over DVD player. (3)
23. How is colour extension achieved in TV system? (3)
24. Draw and explain the block diagram of remote control of TV? (3)
25. Give physical construction details of Compact Disc (CD). (3)
26. Write various safety and precautions to be observed while performing troubleshooting of electronic equipments. (3)

SECTION –B

Long/Essay type questions (5 marks each).

Answer any 3 questions out of the given 5 questions:

27. What are various faults in colour TV receiver? Mention all the faults and methods to remove those faults. (5)
28. Explain working principle of tape recording system with block diagram. (5)
29. Explain microwave oven in details with block diagram. Also explain the principle of heating in microwave oven. (5)
30. Describe the construction and principle of operation of moving coil microphone. Also list its advantages and applications. (5)
31. Draw and explain block diagram of tape recording system. (5)