

CBSE Class 12 Electronic Technology 2024 - Set 344



Question Paper

Conducted by the Central Board of Secondary Education (CBSE)

Time Allowed: 3 Hours

Maximum Marks: 60

General Instructions

- (i) Please read the instructions carefully.
- (ii) This question paper consists of 24 questions in two sections: Section A and Section B.
- (iii) Section A has Objective Type Questions and Section B has Subjective Type Questions.
- (iv) Answer 17 questions: all 6 questions in Section A and 11 of the 18 questions in Section B, following the choices within each question or group.
- (v) Attempt the questions of each section in the correct order.
- (vi) Section A carries 30 marks. There is no negative marking. Follow the instructions given; marks are indicated against each question or part.
- (vii) Section B carries 30 marks. Follow the instructions given; marks are indicated against each question or part.

Section A

1. Answer any 4 out of the given 6 questions on Employability Skills. $4 \times 1 = 4$

1(i). The complete subject consists of simple subject and its _____.

1(ii). This type of personality disorder is characterized by extreme professionalism, order and neatness :

- | | |
|---------------|---------------|
| (A) Dependent | (B) Schizoid |
| (C) Paranoid | (D) Obsessive |

1(iii). Ram has feelings of emptiness and abandonment. Which type of personality disorder does he have ?

- | | |
|----------------|------------------|
| (A) Borderline | (B) Narcissistic |
| (C) Histrionic | (D) Antisocial |

1(iv). Name the shortcut key which is used for 'Select all' option.

- | | |
|--------------|--------------|
| (A) Ctrl + C | (B) Ctrl + X |
| (C) Ctrl + Y | (D) Ctrl + A |

1(v). An angel investor is person who

- | | |
|---|---|
| (A) Takes bank loan for doing business. | (B) Invests own money in a company or a start-up. |
| (C) Takes government grants for doing business. | (D) Invests money in stock market. |

1(vi). RWHS stands for _____.

- | | |
|---------------------------------|------------------------------------|
| (A) Reduce Water Harvest System | (B) Rain Water Harvesting System |
| (C) Rain With Harvest System | (D) Reuse Water for Harvest System |

2. Answer any 5 out of the given 7 questions. $5 \times 1 = 5$

2(i). Safety is defined as the protection from :

- | | |
|------------------|-----------------------|
| (A) Danger | (B) Inefficiency |
| (C) Incompetence | (D) Lack of knowledge |

2(ii). Asthma is an occupational disease. (True/False)

2(iii). Evaluation is the measure of hazards which can be assessed with the help of tools and techniques. (True/False)

2(iv). Identify the picture.



- | | |
|------------------------|-------------------|
| (A) RF Hazard | (B) Safety goggle |
| (C) Hearing protection | (D) Laser hazard |

2(v). Bacteria and infectious waste are examples of :

- | | |
|------------------------|---------------------------|
| (A) Physical hazards | (B) Chemical hazards |
| (C) Biological hazards | (D) Psychological hazards |

2(vi). Hearing protectors reduce noise exposure level and the risk of hearing loss when used properly. (True/False)

2(vii). Laser can cause :

- | | |
|--------------------------|------------------------------|
| (A) Corneal inflammation | (B) Enhanced vision |
| (C) Enhanced hearing | (D) Better blood circulation |

3. Answer any 6 out of the given 7 questions.
 $6 \times 1 = 6$

3(i). The other name of Capacitance microphone is _____.

3(ii). The input impedance of a crystal loudspeaker is :

- | | |
|----------------|------------------------------|
| (A) Capacitive | (B) Resistive |
| (C) Inductive | (D) Capacitive and Resistive |

3(iii). The large audience can hear the voice of a speaker with the help of :

- | | |
|----------------|----------------------------|
| (A) Amplifier | (B) Microphone and speaker |
| (C) Oscillator | (D) Rectifier |

3(iv). The frequency range of a guitar is 80 Hz to 1650 Hz. (True/False)

3(v). Squawker is used to reproduce the mid-frequencies in a loudspeaker system. (True/False)

3(vi). The unit of sound pressure used for rating microphone is :

- | | |
|------------|-------------|
| (A) Bar | (B) Watt |
| (C) Pascal | (D) Decibel |

3(vii). Moving coil loudspeaker is used in _____.

4. Answer any 5 out of the given 6 questions.
 $5 \times 1 = 5$

4(i). Which type of current is passed through the record head in magnetic recording ?

- | | |
|------------------|--------|
| (A) DC | (B) AC |
| (C) Audio signal | (D) RF |

4(ii). The major components of a Disc Drive Mechanism are _____ and _____.

4(iii). The storage capacity of a DVD is :

- | | |
|------------|------------|
| (A) 6.7 GB | (B) 4.7 GB |
| (C) 5.7 GB | (D) 3.7 GB |

4(iv). On the vinyl disc, the sound is recorded in the form of grooves on the disc. (True/False)

4(v). The first scientist who developed the idea of sound recording and reproduction was _____.

4(vi). The direction of rotation of a CD is :

- | | |
|--------------------------|------------------------------------|
| (A) Clockwise | (B) Anti-clockwise |
| (C) Depends on frequency | (D) Depends on voltage and current |
-

5. Answer any 5 out of the given 6 questions.
 $5 \times 1 = 5$

5(i). Y signal has maximum percentage of _____ colour.

- | | |
|----------|------------|
| (A) Red | (B) Green |
| (C) Blue | (D) Yellow |
-

5(ii). What is the purpose of amplifier ?

5(iii). The inner coating of CRT is made of phosphor. (True/False)

5(iv). The first TV standard for America was _____. (PAL/NTSC/CCIR-B)

5(v). Audio modulation for television is :

- | | |
|--------------------------|--------------------------|
| (A) Amplitude modulation | (B) Frequency modulation |
| (C) Vestigial modulation | (D) Phase modulation |
-

5(vi). Full form of LED TV is _____.

6. Answer any 5 out of the given 6 questions.
 $5 \times 1 = 5$

6(i). A magnetron is usually _____ in shape.

- | | |
|-----------------|-----------------|
| (A) Cylindrical | (B) Square |
| (C) Triangular | (D) Rectangular |
-

6(ii). What is the full form of DTMF ?

6(iii). FAX machine works to transmit black and white lines from sending end to receiving end. (True/False)

6(iv). The small hand held scanners are widely used with _____.

- | | |
|-------------------------|-----------------------|
| (A) Micro computers | (B) Mini computers |
| (C) Mainframe computers | (D) Multiuser systems |
-

6(v). Which instrument is used to increase and decrease the voltage in microwave unit ?

- | | |
|----------------|------------------------------|
| (A) Thermostat | (B) Relay |
| (C) Regulator | (D) High voltage transformer |
-

6(vi). What is the function of toner cartridge ?

Section B

Answer any 3 out of the given 5 questions on Employability Skills. Answer each question in 20 – 30 words. $3 \times 2 = 6$

7. List out the four steps of active listening.
8. Self-motivation is significant in building one's personality. Comment.
9. Write down the steps for inserting a text box in the slide.
10. Write any two barriers faced by an individual in becoming an effective entrepreneur.
11. Briefly explain the importance of green jobs in any two sectors of the economy.

Answer any 3 out of the given 5 questions in 20 – 30 words each. $3 \times 2 = 6$

12. Enlist different kinds of occupational diseases.
13. Write a short note on Woofer.
14. Describe the process of playback.
15. List the important characteristics of HDTV in comparison with analog television systems.
16. Write a short note on Tuner.

Answer any 2 out of the given 3 questions in 30 – 50 words each. $2 \times 3 = 6$

17. Explain Cable TV system.
18. Write any two types of problems associated with a Recorder/Player.
19. Write a short note on impedance and power level of a Loudspeaker.

Answer any 3 out of the given 5 questions in 50 – 80 words each. $3 \times 4 = 12$

20. Explain the electrical emergency procedures.
21. Explain the working, merits, demerits and applications of carbon microphone.
22. With the help of a block diagram, explain the working principle of CD/DVD Player.
23. Draw a flowchart for fault finding and rectification of TV Receiver.
24. Explain the troubleshooting process of a Printer.

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