

CBSE Class 12 Electronic Technology 2025 - 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). It is important to clearly communicate instructions, ideas and concepts that can help you find success in any career. (True/False)

1(ii). People who help and take care of others have _____ personality trait. (Openness/Agreeableness)

1(iii). Which of the following is **not** an internal motivational force ?

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|--------------|--------------|
| (A) Feedback | (B) Goals |
| (C) Needs | (D) Attitude |

1(iv). What is the default save type of a newly created spreadsheet ?

- | | |
|---------------------|---------------------------------|
| (A) ODF spreadsheet | (B) dBase |
| (C) Microsoft Excel | (D) Office Open XML spreadsheet |

1(v). Which of the following is **not** a green job ?

- | | |
|-----------------------------|------------------------------------|
| (A) Installing solar panels | (B) Installing solar water heaters |
| (C) Organic farming | (D) Installing diesel power plant |

1(vi). Which of the following is true for entrepreneurs ?

- | | |
|---|---|
| (A) All entrepreneurs must have great ideas all the time. | (B) One must know everything before starting a business. |
| (C) A lot of money is required to start any business. | (D) To be successful, entrepreneurs should be hardworking, energetic and perseverant. |

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

2(i). Almost all the accidents usually occur due to lack of safety. (True/False)

2(ii). Identify the picture.



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

2(iii). Which of the following is **not** an occupational disease ?

- | | |
|--------------|------------------|
| (A) Jaundice | (B) Asthma |
| (C) COVID | (D) Hearing loss |

2(iv). The process of identification of hazards in the workplace and their associated effect on health is called evaluation. (True/False)

2(v). Damaged cables must be repaired or removed from service immediately. (True/False)

2(vi). In three-prong plugs, the third prong works as :

- | | |
|------------------|---------------------------------|
| (A) Earth path | (B) Phase path |
| (C) Neutral path | (D) Both earth and neutral path |

2(vii). Maintenance and servicing of machines in large manufacturing industries are done :

- (A) At the beginning of the year (B) At the end of the year
(C) At regular intervals of time (D) When breakdown occurs

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

3(i). Decibel is the unit used to measure sound intensity. (True/False)

3(ii). A moving coil microphone is also called :

- (A) Inductance microphone (B) Condenser microphone
(C) Crystal microphone (D) Dynamic microphone

3(iii). Crystal microphones work based on :

- (A) Electromagnetic induction (B) Piezoelectric effect
(C) Resistance change (D) Capacitance change

3(iv). The loudspeaker driver used for low frequency range is called _____ .

3(v). Sound waves produced at the back of a loudspeaker are _____ degrees out of phase with respect to sound waves produced in front.

- (A) 90 (B) 180
(C) 270 (D) 360

3(vi). What is the frequency range of flute ?

- (A) 80 Hz – 650 Hz (B) 250 Hz – 3 KHz
(C) 240 Hz – 2.5 KHz (D) 80 Hz – 1 KHz

3(vii). Ribbon tweeters are often used in place of horn loaded compression tweeters because :

- (A) They can handle large output power. (B) They give very good low frequency response.
(C) They give very good mid-frequency response. (D) They can be mounted on the throat of the horn.

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

4(i). Which of the following is **not** part of A to D Converter ?

- (A) Sampler (B) Quantiser
(C) Encoder (D) Equaliser

4(ii). The play time of a DVD is :

- (A) 470 minutes (B) 460 minutes
(C) 450 minutes (D) 480 minutes

4(iii). In a CD recorder, the stage that combines digital data with error control and sync word is :

- (A) ADC (B) Filter
(C) Multiplexer (D) Laser unit

4(iv). Optical recording system needs a motor. (True/False)

4(v). HF biasing is used in _____.
(Magnetic tape recording/DVD recording)

4(vi). As compared to other storage media, a CD has lower signal-to-noise ratio. (True/False)

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

5(i). The picture tube of a TV receiver is known as _____. (Visual tube/Cathode ray tube)

5(ii). FM modulator is used in _____ section of a TV transmitter. (Audio/ Video)

5(iii). A varactor diode is used in _____ stage of a TV receiver.

- | | |
|--------------|---------------------|
| (A) TV tuner | (B) Video IF |
| (C) Audio IF | (D) Synchronization |
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5(iv). Which of the following is **not** a feature of HDTV ?

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|------------------------|-------------------------------|
| (A) High resolution | (B) Good audio and video |
| (C) Multichannel audio | (D) Less Aspect (image) ratio |
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5(v). The process by which the information is modified with the help of locally generated carriers is called _____.
(Scrambling/Modulation)

5(vi). In TV transmission, aspect ratio is the ratio between :

- | | |
|-----------------------|----------------------|
| (A) height : width | (B) width : height |
| (C) diagonal : height | (D) diagonal : width |
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6. Answer any 5 out of the given 6 questions.
 $5 \times 1 = 5$

6(i). A magnetron is used in _____.

- | | |
|------------------------|--------------------|
| (A) Telephone receiver | (B) Microwave oven |
| (C) Laser printer | (D) Scanner image |
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6(ii). Scanner is used to transfer images into digital form. (True/False)

6(iii). The device used in microwave oven to match power between source and load is called circulator. (True/False)

6(iv). In which year was the telephone invented ?

- | | |
|----------|----------|
| (A) 1873 | (B) 1878 |
| (C) 1871 | (D) 1876 |
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6(v). In a FAX machine if the printed image is dirty, then :

- | | |
|--------------------------------|--------------------------------------|
| (A) Check power chord and fuse | (B) Clean drum and scanner head |
| (C) Check telephone connection | (D) Check exit tray roller and brush |
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6(vi). _____ is referred to as 'heart' of the image formation system in a printer.

- | | |
|-----------------------|-----------------------|
| (A) Changing roller | (B) Toner cartridge |
| (C) Controller system | (D) Formatter section |
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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. How can you acquire good listening skills ?

8. Why is self-motivation important ?

9. How do you select a range of cells in a spreadsheet ?

10. Write any two roles and functions of entrepreneurship.

11. Write any four steps that green jobs perform to reduce greenhouse gas emissions.

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

12. Explain the process of scrambling.

13. Write a short note on Tweeter.

14. What is the function of DC Biasing ?

15. What are the faults which may occur in scanners ?

16. Write a short note on occupational hazards.

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

17. What is a loudspeaker ? Write names of different types of loudspeakers.

18. Explain the working and features of remote control of TV receiver.

19. Write some general causes of failure of recorder / player.

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

20. With the help of a block diagram, explain the working principle of disc recording system.

21. Explain the working principle of microwave oven.

22. What are the precautions to be taken to prevent electric shock ?

23. Explain working, merits, demerits and application of moving coil microphone.

24. What are the possible problems that can occur at different subsections of cable TV ?

- End of Question Paper -