CBSE Class 12 Electronic Technology 2016 - Set 314

Question Paper

Conducted by the Central Board of Secondary Education (CBSE)

Time Allowed: 2.5 Hours **Maximum Marks: 50**

General Instructions

(i) The question paper contains 34 questions in four sections.

(ii) Section A: Attempt any fourteen of Questions 1–16, carrying 1 mark each. Select the correct answer.

(iii) Section B: Attempt any six of Questions 17–24, carrying 2 marks each.

(iv) Section C: Attempt any three of Questions 25–29, carrying 3 marks each.

(v) Section D: Attempt any three of Questions 30–34, carrying 5 marks each.

Section A

Attempt any fourteen questions. Each question carries one mark. Select the right answer.

1. The Electronic Equipment are 'Earthed' to :

(A) Save Electrical Power
(B) Provide Safety
(C) Improve Power Factor
(D) All of the above

2. When a coil is open it will show :

(A) Zero resistance and zero inductance
(B) Infinite resistance and zero inductance
(C) Infinite resistance and infinite inductance
(D) Zero resistance and infinite inductance

3. A Microphone that converts sound uniformly from all directions, is known as :

(A) Bidirectional
(B) Unidirectional
(C) Omnidirectional
(D) None of the above

4. For high quality music broadcast, the microphone used is :

(A) Carbon
(B) Moving Coil
(C) Piezo-Electric
(D) Capacitance

5. A Tweeter loudspeaker is used for :

(A) High Frequency
(B) Medium Frequency
(C) Low Frequency
(D) Radio Frequency

6. An Enclosure in a loudspeaker does not :

(A) match acoustic impedance
(B) stop sound cancellation
(C) amplify signal
(D) damp speakers resonance

7. In a Tape Recorder, recording is done by passing, through the 'Record Head'.

(A) 50 Hz current
(B) Signal current
(C) R.F. current
(D) D.C. current

8. In a Tape Recorder, the width of 'Air-gap is largest for :

(A) Erase Head
(B) Playback Head
(C) Recording Head
(D) All are equal

9. The Compact Disc (CD) is made of :

(A) Polycarbonate
(B) Vinyl
(C) Steel
(D) Carbon

10. In TV Transmission, the Video and Audio signals are respectively :

(A) AM and FM
(B) AM and PM
(C) FM and PM
(D) FM and AM

11. In a TV Receiver, from which stage, the audio signal is separated from video signal.

(A) Tuner
(B) IF Amplifier
(C) Video Amplifier
(D) Video Detector

12. In TV Transmission, the difference between audio and video carrier frequencies is :

(A) 5.5 MHz
(B) 6 MHz
(C) 5 MHz
(D) 4.5 MHz

13. What is the relation between the amplitudes of Blanking and Synchronising pulse in a Composite Video Signal ?

(A) Equal
(B) Amplitude of Blanking pulse is higher
(C) Amplitude of Synchronising pulse is higher
(D) No relation

14. In a Microwave Oven, microwaves are generated by :

(A) Klystron
(B) Magnetron
(C) Cathode Ray Tube
(D) Travelling Wave Tube

15. The Microwave Oven work, near which frequency ?

(A) 100 MHz
(B) 250 MHz
(C) 2500 MHz
(D) 500 MHz

16. What is the Full Form of DMP Printer ?

(A) Dot Mat Printer
(B) Decimal Mat Printer
(C) Digital Matrix Printer
(D) Dot Matrix Printer

Section B

Attempt any six questions. Each question carries two marks.

17. Explain how an electric circuit is completed when a person gets an electric shock ?

18. What is the Frequency Range of Musical Instruments ?

19. Why various 'Heads' of a Tape Recorder are made of Soft Iron ?

20. Why in a Loudspeaker, the diaphragm is made light ?

21. Explain how do we erase the signal in a Tape Recorder ?

22. Explain the difference between Analog and Digital Signal.

23. What is a LCD and what property of it's is used in TV Receiver ?

24. Explain the difference between Printer and Fax.

Section C

Attempt any three questions. Each question is of three marks.

25. State any three precautions that an electronic technician should observe.

26. Explain the electromagnetic principle that is used in Moving Coil Loudspeaker and Moving Coil Microphone and what is the difference between the two.

27. Explain the principle of Optical Recording.

28. Explain the basic difference between normal TV and HD - TV.

29. Explain the working of any one type of printer.

Section D

Attempt any three questions. Each question carries five marks.

30. State what do you understand by 'Occupational Safety'. Write the First Aid that should be given to a person who has got an electric shock.

31. Explain the construction and working of any **one** of the following microphones.

(1) Carbon (2) Capacitance (3) Piezo-electric

32. Draw the Block Diagram of a tape recorder and explain the function of each block.

33. Draw the Block Diagram of a Monochrome TV Receiver and explain in brief the function of each block.

34. Write the steps, that need to be taken to remove the fault of any one electronic appliance.

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