CBSE Class 12 Electronic Technology 2015 - Set 313/1

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 33 questions in four sections.

(ii) Section A: Attempt any thirteen of Questions 1–15, carrying 1 mark each. Select the correct answer.

(iii) Section B: Attempt any five of Questions 16–22, carrying 2 marks each.

(iv) Section C: Attempt any four of Questions 23–28, carrying 3 marks each.

(v) Section D: Attempt any three of Questions 29–33, carrying 5 marks each.

Section A

Attempt any thirteen questions. Each question carries one mark. Write the correct answer.

1. Modulating Frequency is :

(A) Lower than carrier frequency
(B) Higher than carrier frequency
(C) Equal
(D) Can have any value

2. In a communication system, each channel needs a band width of 30 kHz. How many channels can be accommodated between 825 MHz to 828 MHz ?

(A) 30
(B) 100
(C) 300
(D) 1000

3. Space wave propogate through :

(A) Ionosphere
(B) Troposphere
(C) Around the surface of the earth
(D) Waveguide

4. In a communication system, it is desirable that S/N ratio is :

(A) High
(B) Low
(C) Unit
(D) Medium

5. In Telemetry, the signal is :

(A) Voice
(B) Music
(C) Data
(D) All of the above

6. In Satellite Communication, the uplink and downlink frequencies respectively are :

(A) High and Low
(B) Low and High
(C) Equal
(D) Can have any value

7. In GSM mobile, which combination of multiplexing is used ?

(A) FDM & TDM
(B) FDM & CDM
(C) TDM & CDM
(D) Only TDM

8. Bluetooth technology is used in communication for :

(A) Long Distance
(B) Short Distance
(C) Optical
(D) Wired

9. In cellular mobile system, the shape of the cell is :

(A) Circular
(B) Hexagonal
(C) Pentagon
(D) Rectangular

10. A SMD station desolders the components on PCB by :

(A) Hot Air
(B) Direct Heat
(C) Dielectric Heating
(D) All of the above

11. BGA technology is used for ICs where the number of pins are :

(A) 14
(B) 16
(C) 24
(D) Very High

12. The difference in GSM and CDMA mobile system is basically in :

(A) Cell Size
(B) Type of Multiplexing
(C) Master Station Power
(D) Base Station Power

13. Out of the following, what is not required in mobile repair ?

(A) PCB Testing Board
(B) Hot Air Gun
(C) Soldering Station
(D) Pattern Generator

14. Out of the following, which is not a tool ?

(A) Screw Driver
(B) BGA IC kit
(C) AC / DC Supply
(D) PCB Stand

15. A SMD station is used to :

(A) Solder
(B) De-solder
(C) Remove Dry Solder
(D) All of the above

Section B

Attempt any five questions. Each question carries two marks.

16. Write the expression and draw waveform for Frequency Modulated Wave.

17. Explain, what are electromagnetic waves.

18. Draw block diagram of a communication system.

19. In reference to satellite communication explain uplink, downlink frequencies.

20. Compare different generations of Mobile Phones.

21. In a soldering station, what is 'Bit' ? Why do we have bits of different size ?

22. Write the name and the function of any three equipment that are used in mobile repair.

Section C

Attempt any four questions. Each question carries three marks.

23. Explain need of modulation and demodulation.

24. Explain how signal is received when it travels by space wave propagation.

25. What are the advantages of digital communication ?

26. Explain in brief VSAT technology.

27. Explain function of SIM card in mobile phone.

28. Name any one component of mobile phone and write its need.

Section D

Attempt any three questions. Each question carries five marks.

29. Explain the elements of cellular Radio System.

30. Explain telemetry with example.

31. Write the procedure to format a virus effected mobile phone.

32. Write the various steps to use a SMD workstation along with the precautions.

33. Write how will you open and manage your own mobile repair shop.

- End of Question Paper -