OPERATION AND MAINTENANCE OF COMMUNICATION DEVICES (789)

Sample Question Paper

Class XII - 2018-19

Time:2½Hours   **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 12questions.*
    ii. *Very Short Answer of 2 marks each. Answer any 5 questions from the given 7questions.*
    iii. *Short Answer of 3 marks each. Answer any 5 questions from the given 7questions.*
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 2½hrs.*

SECTION –A

Answer any 10 questions out of the given 12 questions:

1. The frequency range of 300KHz to 3000KHz is known as   **(1)**
    (a) Low frequency
    (b) Medium frequency
    (c) High Frequency
    (d) Very High frequency

2. Noise is added to a signal in a communication system   **(1)**
    (a) At the receiving end
    (b) At transmitting end
    (c) In the channel
    (d) During regeneration of the information

3. A transponder is a satellite equipment which   **(1)**
    (a) Receives the signal from earth station and amplifies it
    (b) Changes the frequency of received signal
    (c) Retransmits the received signal
    (d) All of the above

4. The quality of space link is measured in terms of_____ratio   **(1)**
    (a) C/N
    (b) S/N
    (c) G/T
    (d) EIRP

5. CDMA rejects **(1)**
      (a) Narrow band interference
      (b) Wideband interference
      (c) Both A and B
      (d) None of the above.

6. Which type of PCB requires minimum soldering on component side in order to avoid replacement oriented difficulties ? **(1)**
      (a) Single sidedPCB
      (b) Double sidedPCB
      (c) Both a and b
      (d) None of the above

7. Which of the following is not a virus in mobile phone ? **(1)**
      (a) Trojan Horse
      (b) Fake android apps
      (c) spyware
      (d) Avast

8. The maximum allocated frequency deviation in FM is **(1)**
      (a) 10MHz
      (b) 75MHz
      (c) 100MHz
      (d) 125MHz

9. In digital modulation
      (a) Carrier Signal is digital and message signal is analog **(1)**
      (b) Message signal is digital and carrier signal is analog
      (c) Both carrier and message signals are digital
      (d) Both carrier and message signals are analog

10. WiFi stands for **(1)**
      (a) Wireless fidelity
      (b) Wideband function
      (c) wireless function
      (d) None of the above.

11. IMT2000 is a digital mobile system that function as **(1)**
      (a) Pager
      (b) Cordless
      (c) Low earth orbit satellites
      (d) All of theabove.

12. CDMA offers _____ **(1)**
      (a) Soft handoff
      (b) Hard Handoff
      (c) Hanofff varies from cell to cell
      (d) None of the above

Answer any 5 questions out of the given 7 questions:

13.	What is the need of modulation in communication system?	**(2)**
14.	What is the significance of IMEI in mobile?	**(2)**
15.	Write the differences between TDMA and FDMA.	**(2)**
16.	Draw neat diagram for AM and FM.	**(2)**
17.	List various tools to repair mobile phones.	**(2)**
18.	What are advantages of CDMA over GSM phones?	**(2)**
19.	What are the functions of antenna in communication systems?	**(2)**

Short Questions: (3 marks each).
Answer any 5 questions out of the given 7 questions:

20.	How is unlocking of phone done using software?	**(3)**
21.	Draw the hexagonal structure of cellular system. Explain various performance criteria of cellular system.	**(3)**
22.	Draw the block diagram of satellite communication system and explain all the components of it .	**(3)**
23.	How to open and manage mobile repair shop?	**(3)**
24.	What are the precautions to be observed while working on Ball Grid Array (BGA ICs).	**(3)**
25.	Classify types of internal noise.	**(3)**
26.	Explain how will you format a virus affected mobile phone.	**(3)**

SECTION –B

Long/Essay type questions (5 marks each).
Answer any 3 question out of the given 5 questions:

27.	How to deal with customers and while providing technical support guidance.	**(5)**

28.	Explain the functions of following used in mobile technology
	    (a) Bluetooth
	    (b) GPRS
	    (c) SIM
	    (d) UMTS
	    (e) Infrared
		(5)

29.	Explain Very Small Aperture Terminal (Very Small Aperture Terminal) in details.	**(5)**
30.	What are various faults in mobile hardware? Suggest the methods to remove those faults.	**(5)**
31.	What are various propagation methods of electromagnetic waves in atmosphere? Explain all the methods in details.	**(5)**