

- Q.25 Define Geographic effect. How it affects propagation.
  - Q.26 Write a short on hand-over technique.
  - Q.27 Draw the schematic of cordless system, explain in briefly its's working.
  - Q.28 Define Adjacent channel interference, show how it is minimized.
  - Q.29 Write constructional features of wi-fi.
  - Q.30 What are the advantages and disadvantages of paging system?
  - Q.31 Discuss briefly the concept of fading.
  - Q.32 What are atmospheric effects on propagation of signals?
  - Q.33 What is interference? What are different types of interferences?
  - Q.34 What is the principle of working of GPS?
  - Q.35 Explain the working of AMPS phone system.

## **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Draw and explain the architecture of GSM system.

Q.37 Distinguish between TDMA, FDMA & CDMA.

Q.38 Explain in detail, the different methods to improve the coverage and capacity in cellular system?

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# **6th Sem / Branch : Electrical & Electronics Engg. Sub. : Wireless & Mobile Communication**

Time : 3Hrs.

M.M. : 100

## **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 In a Cellular network, which of the following is used to use the same frequency for others?

  - Frequency hopping
  - Frequency reuse
  - Frequency planning
  - None of the above

Q.2 A mobile phone uses \_\_\_\_\_ type of duplex communication.

  - Half
  - Full
  - Zero
  - Both A & B

Q.3 Which of the following are the components of GPS?

  - Satellites
  - Ground stations
  - Transmitter & receiver
  - All of the above

Q.4 1G uses \_\_\_\_\_ type of signals to communicate data

  - Digital
  - Analog
  - Discrete
  - None of the above

- Q.5** What is the full form of PSTN?  
 a) Port source telephone network  
 b) Public source telephone network  
 c) Port switching telephone network  
 d) Public switched telephone network
- Q.6** Adjacent channel interference can be minimized through \_\_\_\_\_  
 a) Changing frequency of base stations  
 b) Careful filtering and channel assignments  
 c) Increasing number of base stations  
 d) Increasing number of control channels
- Q.7** The full form of GSM used in mobile phone is \_\_\_\_\_  
 a) Geo-stellite for mobile  
 b) Global system for mobility  
 c) Global system for mobile  
 d) Geo-station for mobility
- Q.8** In which one of the following times is specifically divided into several time slots that are in the fixed patterns?  
 a) TDMA                            b) CDMA  
 c) FDMA                            d) All of the above
- Q.9** Very low frequency (UHF) refers to the band of electromagnetic radiation with a radio frequency range between \_\_\_\_\_  
 a) 3 Hz and 30 Hz  
 b) 30 Hz and 300 Hz  
 c) 3 kHz and 30 kHz  
 d) 3 Mhz and 30 MHz
- Q.10** What is the responsibility of MSC in cellular telephone system?  
 a) Connection of mobile to base stations  
 b) Connection of mobile to PSTN  
 c) Connection of base station to PSTN  
 d) Connection of base station to MSC

### **SECTION-B**

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11** Define cell sectoring.  
**Q.12** What is the function of HLR?  
**Q.13** What is a repeater?  
**Q.14** What is the full form or FHSS?  
**Q.15** What is a micro-cell?  
**Q.16** Write any two applications of GPS.  
**Q.17** What is the function of SIM?  
**Q.18** Name of the modes of communication.  
**Q.19** List any two advantages of CDMA.  
**Q.20** What is hand-off technique?

### **SECTION-C**

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21** List important applications of wireless communications.  
**Q.22** Write the concept of “GPRS”.  
**Q.23** Discuss how cell splitting is done in cellular system.  
**Q.24** DRAW schematic of FHSS system and briefly explain its function.