

22533

11920

3 Hours / 70 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Answer each next main Question on a new page.
(3) Illustrate your answers with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.
(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: 10**
- a) State two features of CDMA 2000.
 - b) Define forward control channel and reverse control channel.
 - c) Explain the term cell splitting.
 - d) List two features of 4G LTE.
 - e) State the spectrum requirement of IMT 2000.
 - f) State any two features of bluetooth technology.
 - g) Give the applications of WLAN technology.
- 2. Attempt any THREE of the following: 12**
- a) State the advantages of CDMA 2000 over 3G-GSM standards.
 - b) State the types of interference in cellular system. Explain any one type in detail.
 - c) Compare IS95 with GSM. (any four points)

P.T.O.

- d) Identify the block diagram and state the functions of blocks A, B and C in Figure No. 1.

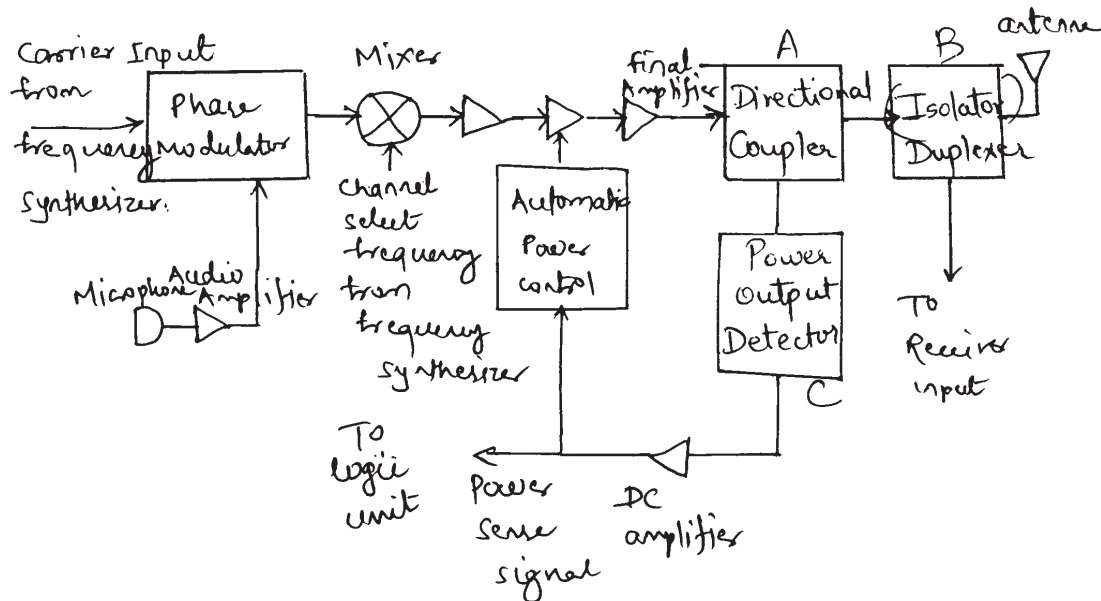


Fig. No. 1

3. Attempt any **THREE** of the following: 12
- Explain Microcell zone concept.
 - CDMA 2000 is more advantageous over 3G GSM standards. Justify.
 - Describe MANET and write applications of MANET.
 - Explain the architecture of Bluetooth technology.
4. Attempt any **THREE** of the following: 12
- Draw signalling system SS7 and explain services and performance.
 - State the features of 4.5G and 5G.
 - Explain authentication process by using Cipher key generation in GSM.
 - Draw the architecture of UMTS the function of different blocks in UMTS.
 - Draw GSM architecture and explain GSM control channels.

5. Attempt any TWO of the following:

12

- Draw LMDS and explain it in detail.
- Explain frequency reuse concept. Draw the frequency reuse pattern for cluster size 7.
- Explain step by step procedure of landline originated call with neat timing diagram.

6. Attempt any TWO of the following:

12

- Identify the block diagram and explain the blocks A and B in Figure No. 2.

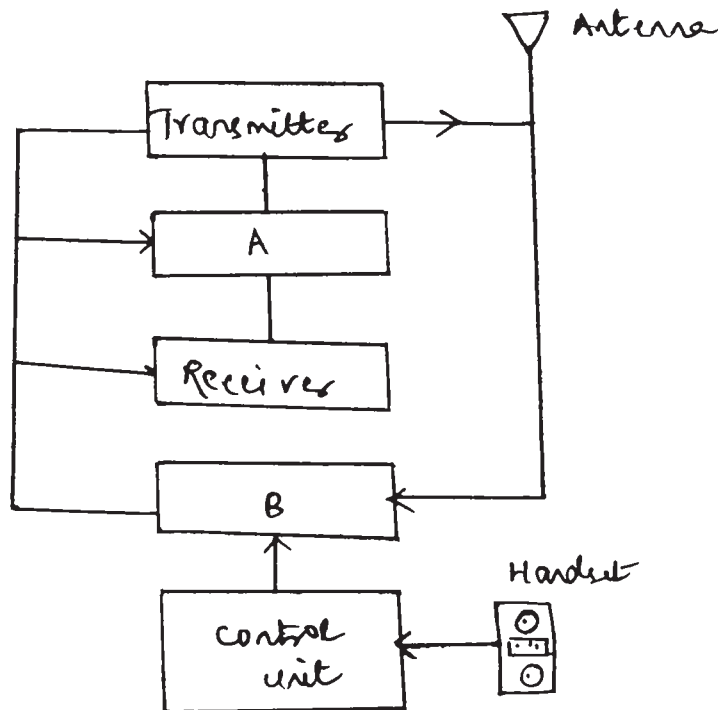


Fig. No. 2

- State the features of UMTS and give UMTS air interface specification.
- Give the classification of RFID tags and give the applications of RFID.