Roll No._____ Total Printed Pages : 4

05BEC103

B.TECH (ELEC. & COMM. ENGG.)

V-SEM Examination, Dec.-2016

SUB: TELECOMMUNICATION ENGG.

Time : 3 Hours] **[Total Marks 60**

Use of following supporting material is permitted during examination.

1._____Nil_____ . _____ Nil_____

Note: 1. Attempt any five questions selecting one question from each unit.

2. Each question carry equal marks.

UNIT-I

1. a) Derive general equation of transmission line.

   b) Explain what is meant by –

      i) A traveling wave,

      ii) A standing wave, on a transmission line and describe the conditions under which such waves occur?

UNIT-V

5. a) Discuss with block diagram the working of a fax machine.

   b) Explain with block diagram the EPABX

OR

5. a) What do you understand by 'grade of service'? explain how is its defined in terms of traffic parameters.

   b) Define calling rate and holding time.

Telecomm

OR

1. a) Discuss the type of losses that may occur with high frequency transmission lines.

   b) A quarter wave length of transmission line at radio frequencies may be considered as an impedance inverter. Explain

UNIT-II

2. a) Drive and explain smith chart and it's application.

   b) Explain measurement of attenuation and insertion losses with diagram.

OR

2. Drive the expression for single and double stub matching.

UNIT-III

3. a) Explain symmetrical and asymmetrical two port network.

   b) Explain ladder type and T-section filter.

OR

3. a) What are the constant K filters? What are than major drawbacks and how are they over come using m-derived and composite filters.

   b) Explain carefully. What is meant by the terms pass band, attenuation band and cut-off frequency as applied to a filter network. Point out the effect of losses in the inductors and condensers on the filter characteristic.

UNIT-IV

4. What do you understanding by multiplexing? Explain the syschronous and asynchronous TDM. Why is asynchronous TDM more efficient then a synchronous TDM? Also explain FDM.

OR

4. a) Explain echo suppressor and chancellors with diagram? What are the source of cross talk in telephone system? How are different types of cross talk controlled?

   b) Explain the touch tone dialing system for a telephone for this system, what are the two tone frequencies generated when the key 6is pressed?