Q.P. Code: **16EE203** **R16**

Reg. No: | | | | | | | | | | |

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**
**(AUTONOMOUS)**
**B.Tech II Year I Semester (R16) Regular Examinations November 2017**
**NETWORK ANALYSIS & SYNTHESIS**
**(ELECTRICAL & ELECTRONICS ENGINEERING)**

Time: **3 hours** Max. Marks: **60**

(Answer all Five Units **5 X 12 = 60** Marks)

**UNIT-I**

1 a A three phase balance delta connected load of (4+j8) Ω is connected across a 400V,3¢ balanced supply. Determine the phase currents and line currents. And also power drawn by the load. Assume RYB phase sequence. 12M

**OR**

2 A 400V,3¢ supply feeds an unbalanced 3 wire star connected 3 wire, star connected load. The branch impedances of the load are $Z_R$=(4+j8)Ω ,$Z_Y$=(3+j4)Ω ,$Z_B$=(5+j20)Ω. Find the line currents and voltages across phase impedance. Assume RYB phase sequence 12M

**UNIT-II**

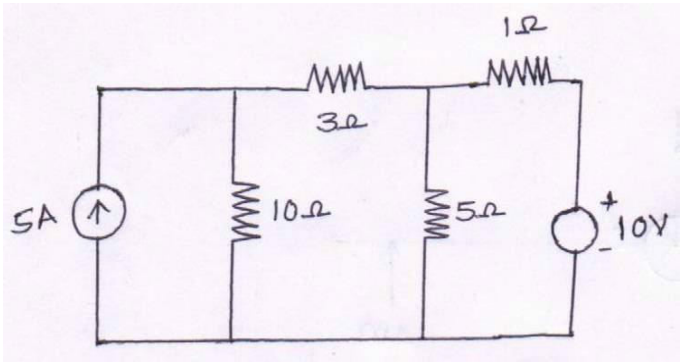
3 Derive the transient response of an RLC circuit with dc excitation 12M

**OR**

4 Derive the transient response of an RC circuit with AC excitation. 12M

**UNIT-III**

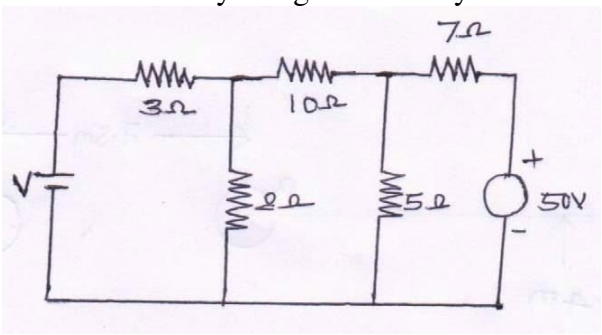
5 Determine current in 10Ω resistor for the following network by using nodalanalysis.




12M

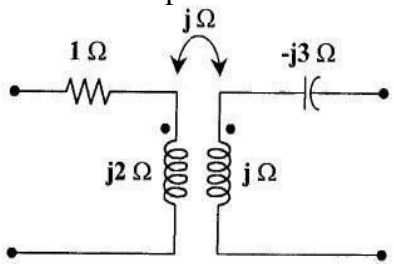
**OR**

6 Find voltage V for the circuit shown in fig which makes the current in the 10Ω resistor is zero by using nodal analysis? 12M




**UNIT-IV**

7 a Obtain the T parameters of the following two port network 6M




b Write short notes on cams 6M

**OR**

8 Derive the expressions for Y-parameters in terms of ABCD parameters? 12M

**UNIT-V**

9 Design a low pass filter having cut of frequency of 2KHz with load resistance of 500ohms 12M

**OR**

10 Design K-type band pass filter having cut of frequency of 2KHz &10KHzand with load resistance of 500ohms. 12M

***** END *****