Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech III Year II Semester Supplementary Examinations February-2022
POWER SYSTEMS - II
(Electrical and Electronics Engineering)

Time: 3 hours   Max. Marks: 60

PART-A
(Answer all the Questions **5 x 2 = 10** Marks)

|			
1	a	What is graph and sub-graph?	2M
	b	Define short-circuit KVA	2M
	c	Mention the methods for load flow studies	2M
	d	List the advantages of Fast-De coupled method.	2M
	e	Define the term transfer reactance.	2M

PART-B
(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

2   Find the bus impedance matrix for the system whose reactance diagram as shown   **10M**
below. All the impedances are in p.u
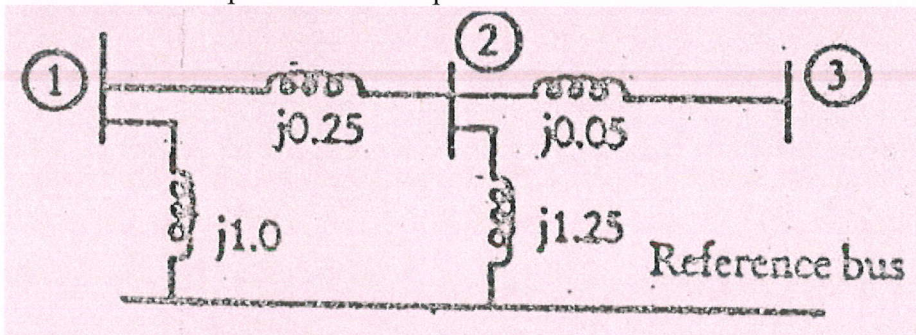
OR

3   For the network shown below. Draw the Oriented graph from that find A1,A.   **10M**
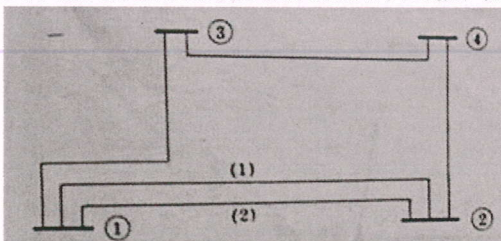
UNIT-II

4	a	State the advantages of Per Unit system.	5M
	b	Derive an expression for the fault current for the 3 ǿ fault.	5M

OR

5	a	How are reactors classified? Explain the merits and demerits of different types of system protection using reactors.	5M
	b	Define per unit system and write equation for new base impedance?	5M

UNIT-III

6	a	What is Acceleration factor and Explain its role gauss seidel method?	5M
	b	State merits and demerits of Gauss seidel method.	5M

OR

7   Write step by step algorithm for Gauss seidel method with PV buses.   **10M**

UNIT-IV

8   Develop an Algorithm for N-R Polar Coordinate Method when PV Bus is absent.   **10M**

OR

9   With neat sketch explain the Flow Chart for N-R Rectangular Coordinate Method when PV Bus is present   **10M**

UNIT-V

10 a   What is critical clearing angle? Explain by using Swing curves.   **5M**

b   Derive an expression for critical clearing angle.   **5M**

OR

11 a   Explain the Factors effecting the Transient stability.   **5M**

b   What is stability? Explain different types of stabilities.   **5M**

END