Total No. of Printed Pages:02

SUBJECT CODE NO:- H-1792
FACULTY OF ENGINEERING AND TECHNOLOGY
M.E. (Electrical Power System)
Computer Aided Power System Analysis
**(REVISED)**

[Time: Three Hours] **[Max.Marks:80]**

Please check whether you have got the right question paper.
N.B
1) Solve any Two questions from each section.
2) Assume suitable data if necessary.

Section A

Q.1 a) Explain principle of symmetrical components. What is the difference between +Ve & -Ve sequence   10
components? Derive relation between

V_a, V_b, V_c, & V_{a_o}, V_{a_1}, and V_{a_2},

b) Derive the expression for three phase power in terms of symmetrical components.   10

Q.2 a) What are the aims & objectives of Power System analysis? State the advantages of PU System   10
analysis?

b) Define sequence Networks for unbalanced network impedances.   10

Q.3 a) Discuss about sequence impedance of synchronous machine.   10

b) Draw the positive, negative & zero sequence networks of power system shown below.   10
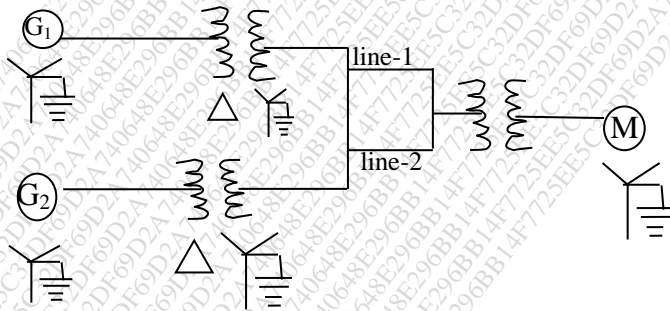
Section B

Q.4   a) Draw zero sequence diagram of Generators & Transformers.   10

b) Explain in details the sequence impedance of synchronous machines.   10

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Q.5   a) Develop load flow equations suitable for the solution of NR method. Using nodal admittance   10
matrix.

        b) Describe the method of simultaneous fault analysis by using POA network theory   10

Q.6   Write short notes on any TWO   10

        a) Computation of fault current & voltage using series fault transformation.

        b) Kron's transformation matrix

        c) Analytical simplification of series faults.

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