School of Engineering
B.TECH Electrical Engineering
Mid Term Examination - Nov 2023

Duration : 90 Minutes
Max Marks : 50

Sem V - G2UB502T - Power System Analysis

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1) Classify bus in power flow analysis with known and unknown quantities. — K2 (2)

2) Define the synchronous reactance, transient reactance, sub transient reactance. — K1 (3)

3) Explain steady state operating condition in the power system. — K2 (4)

4) Illustrate the bus admittance matrix. — K2 (6)

5) Model the per phase analysis for the given a transformer. — K3 (6)

6) Construct the algorithm to calculate base current, and base impedance of a three phase system. — K3 (9)

7) Inspect the method for converting the per unit impedance expressed in one base to another base take an example to explain this. — K4 (8)

8) Analyse the Continuation Power Flow method and its role in preventing voltage collapse. — K4 (12)

OR

Analyze the advantages and disadvantages of Newton Raphson method in load flow studies with respect to all other methods. — K4 (12)