Code No : 9A02603/R09

Set-3

III Year B.Tech II Semester Regular & Supplementary Examinations

April/May - 2013

POWER SYSTEM OPERATION & CONTROL

(Electrical & Electronics Engineering)

Time: 3 Hours | Max. Marks: 70

*Answer any **FIVE** Questions*

*All Questions carry **equal** marks*

- - -

1 Explain in detail the following for the power system network :

(i) Control variables.

(ii) Disturbance variables.

(iii) State variables.

2 Draw flow chart for optimum operation of a power system with 'n' plants when losses are considered.

3 Explain Kirchmayer's method.

4 Derive transfer function model of speed governing system.

5 Derive the expression for steady state frequency change in a two control area system.

6 For a two area load frequency control with proportional plus integral controller, derive the expression for steady values of change in frequency and tie line power for simultaneously applied unit step load disturbances in the two areas.

7 Explain the need of voltage control in power systems. How it is achieved?

8 Explain the technical issues related to embedded generation in deregulated power market.