M.TECH. DEGREE EXAMINATION, FEBRUARY 2012

Second Semester

Branch :   Electrical and Electronics Engineering

Specialization : Power Electronics and Power Systems

PEPS-206-2—POWER SYSTEM PLANNING AND RELIABILITY—(Elective III)

(Regular/Supplementary)

Time : Three Hours   Maximum : 100 Marks

*Answer any **five** full questions.*
All questions carry equal marks.

I. (a) Explain briefly long and short term planning in power system.

   (b) What are the characteristics of loads ?

II. (a) What are the methods used for peak demand forecasting ?

   (b) Forecast the peak demand in December month using linear characteristics.

Month	June	July	August	September	October	November
Peak demand (MW) :	5	5.3	6	6.5	7	7.2

III. (a) Explain the calculation of reliability in series and parallel systems.

   (b) Describe the probability models for generator units and loads.

IV. (a) Briefly describe the Markov process of reliability analysis.

   (b) Using any technique determine the reliability of the system shown in figure.
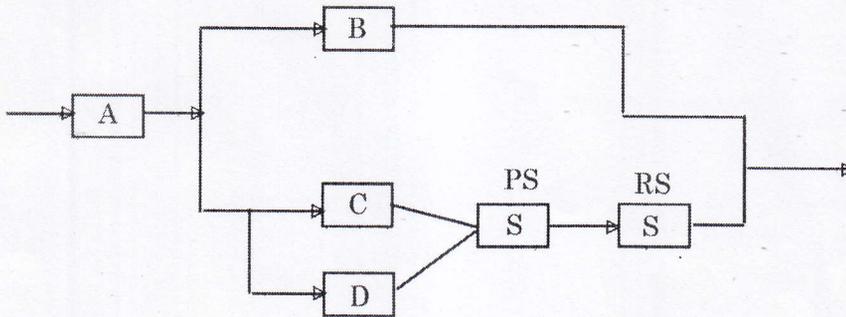
RA = 0.7, RB = 0.76, RC = 0.77, RD = 0.6, PS = 0.7, RS = 0.76.

V. (a) Describe the modelling of transmission system and the reliability analysis.

   (b) Explain LOLP method of reliability analysis with an example.

Turn over