

C.U.SHAH UNIVERSITY

Summer Examination-2019

Subject Name : Inter Connected Power System

Subject Code : 4TE07ICP1

Branch: B.Tech (Electrical)

Semester : 7

Date : 15/03/2019

Time : 10:30 To 01:30

Marks : 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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Q-1

Attempt the following questions:

(14)

- a) The optimal scheduling of hydro power plant is _____ optimization.
- b) The slope of the cost curve is technically termed as _____.
- c) The hydro generation is a function of _____ discharge and water storage.
- d) The equation used for determining the probability of running / Failure of Generating unit is termed as _____ .
- e) The full form of STOA is _____.
- f) Mean time to failure is represented by _____.
- g) What is meant by CONTROL AREA ?
- h) For inter state power transfer the critical parameter for monitoring is _____.
- i) The installed capacity of hydro power plant at Ukai location is _____.
- j) State any two disadvantages of inter connected system.
- k) What is MTIL ?
- l) What is the significance of MTIL ?
- m) Governor control system is _____(fast/slow) than Excitation control system.
- n) SLDC uses area _____ (control / operation) system to monitor and dispatch electricity to load.

Attempt any four questions from Q-2 to Q-8

Q-2

The four generating units are having the min. and max. power delivering capacity as 2MW and 12 MW each respectively. The parameters of a cost curve a_i, b_i is represented by a matrix $[a_i b_i] = [0.75 \ 23.5; 1.2 \ 25 ; 1.4 \ 27; 1.8 \ 20]$. **(14)**

Compute the F1(8) and F2(8) using dynamic programming method. The notations have their usual meaning.



