Code No: **RT42024D** **R13** **Set No. 1**

IV B.Tech II Semester Regular/Supplementary Examinations, April/May - 2019

POWER SYSTEM REFORMS

(Electrical and Electronics Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B

Answer ALL sub questions from Part-A

Answer any THREE questions from Part-B

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PART–A *(22 Marks)*

1. a) What is meant stranded cost? How it is determined? [3]
   b) What is meant by OASIS? What is its function? [4]
   c) What are desired features of congestion management schemes? [3]
   d) List out electricity price indexes used in the analysis of electricity price volatility. [4]
   e) What are the activities of the ISO in pool market structure? [4]
   f) What is meant by black start capability ancillary service? [4]

PART–B *(3x16 = 48 Marks)*

2. a) Explain in detail about transmission pricing and congestion pricing. [12]
   b) What is the power exchange? How many power exchanges are there in India? [4]

3. a) Discuss methodologies to calculate ATC in detail. [12]
   b) Write the technical benefits of OASIS users. [4]

4. a) Explain the following transmission congestion management methods:
      (i) Postage Stamp Rate Method
      (ii) MW-Mile Method [8]
   b) Compare different cost allocation methods in transmission congestion management. [8]

5. What are the electricity pricing models used in electricity market. What are the problems with these models? Discuss the challenges to electricity pricing. [16]

6. Discuss the operational planning activities of Independent System Operator (ISO) in bilateral markets. [16]

7. Explain in detail about reactive power ancillary service provided by synchronous generators. [16]