

**Elective - I : IT and Its Applications in Power System Control**

P. Pages : 1

Time : Three Hours



**KNT/KW/16/7461**

Max. Marks : 80

- Notes :
- 1.. Solve Question 1 OR Questions No. 2.
  2. Solve Question 3 OR Questions No. 4.
  3. Solve Question 5 OR Questions No. 6.
  4. Solve Question 7 OR Questions No. 8.
  5. Solve Question 9 OR Questions No. 10.
  6. Solve Question 11 OR Questions No. 12.
  7. Due credit will be given to neatness and adequate dimensions.
  8. Assume suitable data whenever necessary.
  9. Illustrate your answers whenever necessary with the help of neat sketches.
  10. Use of non programmable calculator is permitted.

1. a) What are the different intelligence tools for monitoring of power system. **6**
- b) How communication helps in industrial Automation system. **7**

**OR**

2. Explain suitable case study of industry for industrial control system. Assume suitable data related to control automation. **13**

3. a) What are the different procedure for carrying out energy Audit. **7**
- b) Explain the role of Energy auditing in power system. **7**

**OR**

4. Explain in detail analysis of energy intensive unit in case of Iron-steel industry related to energy conservation. **14**

5. What are the different platform available for energy conservation. Explain in detail. **13**

**OR**

6. Explain objective of energy management for energy conservation. Explain in details what are the multi-objective scheme for energy management. **13**

7. Explain IEEE – 488 protocol in power system control. **13**

**OR**

8. a) Explain data communication using Rs485 tool. **6**

- b) Explain distributed measurement system for data communication. **7**

9. a) What are the IEEE- 802 standards available for LAN. **6**

- b) What are the different topologies available for LAN. **7**

**OR**

10. a) Explain the concept of "Network-security" in power system control. **7**

- b) Explain ALOHA protocol & it's variant's. **6**

11. a) Explain advantage & disadvantages of data acquisition system for industrial application. **7**

- b) Write in brief note on microprocessor based control of instrumentation in industrial application. **7**

**OR**

12. What are the design consideration in design of microprocessor based system. Explain with suitable example. **14**

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