

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

P. Pages : 2

Time : Three Hours



**NKT/KS/17/7461**

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 real - time issues occurred on signal transmission. **6**  
b) Explain different control strategies for discrete manufacturing process. **7**

**OR**

2. a) Explain data acquisition & supervisory control with suitable example. **6**  
b) How communication systems helps in automation in Industries suggest suitable example. **7**
3. a) What are different procedure for carrying the energy Audit explain the significance of energy audit. **6**  
b) Explain thermocouple based temperture indicator used in Energy Audit. **7**

**OR**

4. a) What is the need & importance of Energy conservation. **6**  
b) Explain return on investment (Ro I), life cysts cost in detail. **7**
5. a) What are different multi objective Energy management. **6**  
b) How software development make energy management more user friendly. **7**

**OR**

6. Explain Unix platforms for energy conservation & management studies. Illustrate with the help of suitable example. **13**
7. Explain serial data communication using both RS232 & RS485 system. **14**

**OR**

8. Explain IEEE 488 protocol in distributed system. **14**
9. a) Explain ALOHA protocol & it's different variants. **7**
- b) Explain IEEE 802 standards for local area network. **7**

**OR**

10. a) Write note on Network- Security. **7**
- b) What are the different types of service application protocol over TCP/IP. **7**
11. a) Write short note on microprocessor based control in Industrial application. **6**
- b) Explain SCADA system for power plant monitoring. **7**

**OR**

12. Explain & discuss in detail microprocessor based instrumentation system for temperature control of synchronous generator. **13**

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