Roll No. ....

Total Pages : 2

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May 2024
M.Tech. (PED) II Semester
SCADA Systems and Applications (MPS-209A)

Time : 3 Hours]   [Max. Marks : 75

Instructions :

　　1.　Question No.1 is compulsory from Part-I.

　　2.　Attempt any four questions from Part-II.

PART–I

l.　(a)　What is SCADA System?

　　(b)　What are the advantages of optical Fibre Communication?

　　(c)　What is the function of HMI?

　　(d)　What is HDLC?

　　(e)　Differentiate DCS and SCADA System.

　　(f)　What are the functions of PLC in Power System?

　　(g)　What are the objectives of SCADA?

　　(h)　What is the function of static and Dynamic memory in RTU?

　　(i)　What are Trend Curves?

　　(j)　What are the benefits of DNP3 protocol? $(1.5 \times 10 = 15)$

PART-II

2. (a) Explain the various functions and advantages of SCADA System. (7)

   (b) Explain the function of SCADA in power system automation. (8)

3. (a) Explain various components used in SCADA System. (8)

   (b) What are different communication technologies for SCADA System? (7)

4. (a) Explain the application of SCADA in oil and gas industry. (7.5)

   (b) Explain the applications of SCADA in Transmission and Distribution. (7.5)

5. Explain the various SCADA architecture. Give advantages and disadvantages of each System. (15)

6. (a) Explain various sensors used in industries for SCADA System. (7)

   (b) Give a comparison between PLC and RTU. (8)

7. Explain various standard protocols with their features used for SCADA system. (15)