

Total number of printed pages-3

53 (IE 812) IPID

2017

**INSTRUMENTATION AND CONTROL IN
PAPER INDUSTRY**

Paper : IE 812

Full Marks : 100

Time : Three hours

**The figures in the margin indicate
full marks for the questions.**

Answer **any five** questions out of **seven**.

1. (a) Discuss with flow diagram the steps followed in paper making process. 14
- (b) Write the difference between Kraft Sulphate and Sulphite process. 6
2. Write short notes on the following : 4×5=20
 - (i) Consistency sensors
 - (ii) Level measurement

Contd.

- (iii) Earthing
- (iv) Grounding.
3. (a) Explain how pulp is made using chemical recovery process. 10
- (b) Explain the advantages of brown stock washing process by injection of Carbon dioxide. 10
4. Explain about basic SCADA communication topologies and Alarm management. 20
5. Explain with necessary diagrams the working of Digester Liquor Feed Pump Controller and Dissolving Tank Density Controller. 20
6. (a) What are the various standards of PC based control system ? 10
- (b) What are the measuring devices used in paper industries ? 10
7. (a) Discuss the working of *any two* types of pressure sensors. Write the various applications of pressure sensors in paper industry. 12

- (b) Write short note on Basis Weight Control used in Paper industry. 8
-