

Total number of printed pages-2

53 (IE 812) ICPI

2018

**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.

1. Discuss in detail the mechanical and chemical pulping process. Compare their merits and demerits. 20
2. Discuss with flow diagram the steps followed in paper making process and explain with diagram, about the various stages in chemical recovery process in details. 20
3. (a) Explain in details about the principle and construction of Electromagnetic Flowmeter with neat diagram. 10

Contd.

(b) Explain with hardware, the measurement and control of density and thickness in the pulp making process. 10

4. Enumerate in detail about the following control systems with neat diagrams: $2 \times 10 = 20$

(a) Dissolving tank density controller

(b) Condensate conductivity control.

5. Explain the importance of Oxidation Reduction Potential and pH measurement in paper making process. 20

6. Explain about computer controls for online basis weight and functioning of alarm management in paper industry. 20

7. Write short notes on the following: $4 \times 5 = 20$

(a) Types of wood used for making pulp

(b) Important objectives of process control

(c) Self-regulation

(d) Servo Operation.