


III SEMESTER B.TECH. (MEDIA TECHNOLOGY)
END SEMESTER EXAMINATIONS, NOV 2018
SUBJECT: PRINTING MATERIAL SCIENCE I [PMT 2104]
REVISED CREDIT SYSTEM
(29/11/2018)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitable assumed.

1A. Describe the features of the following printing ink ingredients;

- a) Mineral oil b) Alcohol c) Cyclized rubber

1B. Explain the features of various chemicals used for photographic film processing.

1C. Explain various stages of pulping for manufacturing paper.

[03 + 03 + 04]

2A. List the 4 functions of dampening solution. Discuss the ingredients of it?

2B. With neat diagram, explain the structure of an offset blanket.

2C. i) With neat diagram, explain the method of cast coating.

ii) Write notes on magnetic black pigments and metallic pigments.

[03 + 03 + (02+02)]

3A. With diagram, explain the process of manufacturing paste ink.

3B. Explain the features of various carbon blacks.

3C. Explain various components of wet end of the Fourdrinier paper machine

[03 + 03 + 04]

4A. Explain the features of 3 types of photographic films based on type of base used.

4B. With neat diagrams, Compare the features and working of Stamping mill and Hollander beater.

4C. i) Describe the 4 criteria for acceptable secondary fibre for paper recycling.

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- ii) Explain the Screening method of fibre separation for paper recycling with diagram.

[03 + 03 + (02+02)]

5A. With neat diagram, explain the construction and working of ball mill. List its advantages and disadvantages.

5B. Write notes on the following raw materials used for paper manufacturing:

- i) Sizing agents ii) Colouring agents iii) Strengthening agents

5C. i) What do you mean by foaming problem in printing ink? Describe its causes and remedies.

- ii) Discuss the features of Aluminium metal as an image carrier material for printing.

[03 + 03 + (02+02)]