



FOURTH SEMESTER B.TECH. (PRINT AND MEDIA TECHNOLOGY)

MAKEUP EXAMINATIONS, JUNE 2017

SUBJECT: PRINTING MATERIAL SCIENCE II [PMT 2202]

REVISED CREDIT SYSTEM

(16/06/2017)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

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

- 1A.** Define Ash content. Explain its significance and testing procedure.
- 1B.** What are the 2 factors influencing viscosity of an ink in the printing press?
Explain them with the working principle of 4 types of viscometers.
- 1C.** Explain precipitation and absorption ink drying mechanisms.
- [03 + 03 + 04]**

- 2A.** Explain the 3 tests to determine abrasion resistance of a printed ink film.
- 2B.** Explain the features of offset metal decorating inks and 2 types of flexographic inks.
- 2C.** i) Explain the 4 paper properties influencing the blister resistance of coated papers.
ii) What is the purpose of Dennison wax test? Explain the testing procedure.
- [03 + 03 + 04]**

- 3A.** Explain the features of 3 types of light-weight papers and 3 types of safety papers.
- 3B.** Explain the features of plastisol ink with its advantages and disadvantages.
- 3C.** Explain the procedure for testing the following ink properties:
- i) Wet ink film thickness
 - ii) Emulsification

[03 + 03 + 04]

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- 4A.** Explain the 2 types of heat transfer inks used in textile screen printing.
- 4B.** With neat sketches, explain the 3 methods used to determine grain direction of a paper.
- 4C.** i) Explain the features needed by the papers meant for sheet-fed offset printing process.
- ii) What are the features of wet lamination? With neat diagram, explain the process.

[03 + 03 + 04]

- 5A.** What is the importance of tearing strength in papers? Explain its testing procedure.
- 5B.** Explain the features of powder toners. How can you check whether the ink is causing misting in the press room?
- 5C.** i) What is the weight of 2000 sheets of 80 gsm Maplitho paper, 63cmx88cm?
- ii) Find out the weight of reel of paper having width, outer diameter and inner diameters as 65cm, 110cm and 25 cm respectively. The substance of the paper is 80 and its caliper is 1/12mm.

[03 + 03 + 04]