



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

END SEMESTER MAKE-UP EXAMINATIONS, DECEMBER 2019

SUBJECT: DIGITAL AND SECURITY PRINTING [PMT 3102]

REVISED CREDIT SYSTEM

(21/12/2019)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Assume the missing data.

- 1A. How does Digital Printing differ from Analog printing? Explain.
- 1B. Explain in detail, the steps involved in Raster Image Processing.
- 1C. With neat diagrams, explain Thermal Transfer and Thermal Sublimation process.
[02 + 04 + 04]
- 2A. Explain the following:
 - a. Resolution b. Pixel Dimensions c. Bit Depth d. Dynamic Range
- 2B. With a neat diagram, explain the CTP-DI 'TRUEPRESS 544' concept.
- 2C. What are the responsibilities of a security printer?
[02 + 04 + 04]
- 3A. Explain the process of creating a Look-up Table.
- 3B. With neat diagram, explain the working of DCP/32 printing system.
- 3C. Explain the three main digital proofing technologies.
[02 + 04 + 04]
- 4A. Explain the importance of Preflighting and its assistance in workflow.
- 4B. What is workflow integration? What are the driving factors that motivates workflow integration in a digital system? Explain.
- 4C. State and explain the main classifications of security documents.
[02 + 04 + 04]
- 5A. State and explain the requirements of a proofing system.
- 5B. Explain the following: (Give sketches wherever necessary)
 - a. Guilloches b. Ghost watermarks
 - c. Draped lines d. Metameric effect
- 5C. With a neat diagram, explain the CTP-DI concept of '74 KARAT' with its unique features.
[02 + 04 + 04]