



### 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 ]