MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

V SEMESTER B.TECH. (MEDIA TECHNOLOGY)

ONLINE Grade IMOROVEMENT/ MAKE-UP EXAMINATIONS, AUGUST 2021

SUBJECT: FLEXOGRAPHY, GRAVURE AND SCREEN PRINTINNG TECHNOLOGIES [MED 2254]

REVISED CREDIT SYSTEM

(13/08/2021)

Time: 2 Hours MAX. MARKS: 40

Answer ANY FOUR FULL questions.

1A. Describe the elements of Flexographic printing unit and explain each element. Explain the advantages of flexographic printing process

[05]

1B. Explain the conventional and ctp flexographic plate making procedure with simple diagrams.

[05]

2A. Explain the principle of working with ink control factors of the following inking systems with neat diagram.

i. Two roller inking system with revers angle doctor blade

ii. Manifold inking system

[05]

2B. What is anilox roller? Describe the various cell structures of anilox roller with their application. How do you select right anilox roller for the job? explain.

[05]

3A. Describe the stages of gravure cylinder making using electro mechanical and laser cutting processes.

[05]

3B. Explain the following gravure press with neat diagrams. List 2 advantages and 2 disadvantages of each of them

i. Indirect gravure

ii. CIC gravure press

[05]

4A. How does dancer roll and tension transducers help maintain web tension on flexo and gravure presses? Explain each of them.

[05]

4B. i. What is ESA system? Why is it required on gravure presses? Discuss the various designs of ESA system used on gravure presses.

ii. Explain the importance of effectiveness of impression roller on gravure presses.

[03+02]

5A. Explain the basic elements of screen printing with neat diagram. What are the categories of mesh available? Explain them.

[05]

5B. With neat diagrams explain the working principles of flat bed cylinder screen printing press and rotary screen printing press.

[05]

6A. i. Describe ON-contact and OFF-contact screen printing methods with simple diagrams. Mention their applications.

ii. Explain the tension measurement and consequences of improper tensioning of screen mesh.

[03+02]

6B. Explain the functions of squeegee. What are the parameters of squeegee which can be used to vary the ink deposition? Explain each of them with illustrations.

[05]