

Ref. No.: Ex/PG/PT/T/113C/2024
M. TECH. IN PRINTING ENGINEERING AND GRAPHIC COMMUNICATION
FIRST YEAR FIRST SEMESTER EXAMINATION 2024
STANDARDIZATION IN PRINTING AND PACKAGING

Use separate answer script for each part

PART-I

Full Marks: 50

**Answer any Two Questions from Group-A and
any One Question from Group-B**

Group-A

1. (a) What are the strength and limitations of Flexography Printing Process?
(b) Any job having 5% dot area to 95% dot area and fine lines to thicker lines can not be printed in Flexography Process. Why?
(c) Discuss with sketch the common impression type Flexographic presses along with merits and demerits.
(d) What are the merits of stack type flexographic press? 5+3+10+2=20

2. (a) What are the strengths and limitations of gravure printing process?
(b) What are the benefits of chromium plating on gravure printing cylinder?
(c) What are the reasons of cell skip and mottling in gravure printing?
(d) Discuss in brief the different methods of Gravure cylinder preparation. 5+3+2+10=20

3. Discuss the capabilities of the following printing processes, according to different types of subject matter such as type matter, fine lines, tone reproduction, solid areas of colour and process colour reproduction :-
 - (a) Offset
 - (b) Flexography
 - (c) Gravure
 - (d) Laser Printing 5x4=20

Group-B

4. Discuss in brief, the characteristics of the printed images of the following printing processes:
 - (a) Offset Printing
 - (b) Gravure Printing 5x2 = 10

5. (a) What are the strength and limitations of Offset Process?
(b) What are the merits and demerits of water based inks used in flexography?
(c) When Electrostatic Assisted (ESA) Ink Transfer is used in gravure printing? 5+3+2=10

[Turn over

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PART-II

Answer 50 marks

Answer Q. No. 5 and any two from rest

1. What are the different types and techniques for standardization process. Why it is important for printing industries? Discuss about the print quality variables.
15

2. Mention the applications and uses of Quality Management System (QMS). What is SIPOC model and how it is related to QMS.
15

3. What are the basic elements and tools of TQM to improve the system? Why it is necessary to consider ISO certification for any organization?
15

4. a) What is process control chart? How the control limits are determined in the chart?
b) Why statistical process control in printing is necessary for quality production?
10+5=15

5. (Answer any four)
 - a) How can the categories of problems be properly prioritized graphically?
 - b) What is Fishbone diagram and how it is useful?
 - c) Explain 'DMAIC' Framework in six-sigma technique.
 - d) Mention Deming's 14 points on quality management.
 - e) Explain the four-stage problem solving model used for improving a process.

4x5=20