

M. TECH. IN PRINTING ENGINEERING AND GRAPHIC COMMUNICATION
FIRST YEAR FIRST SEMESTER EXAMINATION 2025
STANDARDIZATION IN PRINTING AND PACKAGING

Time : 3 Hours

Use separate answer script for each part

Full Marks: 100

PART-I (50 Marks)

**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 Offset Process?
(b) What are the benefits of introducing Computer-to-Plate unit in an existing plant?
(c) What are the factors which should be considered to choose whether the job is to be printed using sheet-fed offset or web offset? Discuss. 5+5+10=20
2. (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 cannot be printed in Flexography Process. Why?
(c) Discuss with sketch the stack type Flexographic presses along with merits and demerits.
(d) What are the merits of common impression type flexographic press? 5+3+10+2=20
3. Discuss the Printed Image characteristics of the following printing processes:
(a) Offset (b) Flexo (c) Gravure (d) Laser Printing 5x4=20

Group-B

4. (a) What are the differences between conventional gravure and halftone gravure?
(b) What are the limitations of water based inks used in flexography?
(c) When Electrostatic Assisted (ESA) Ink Transfer is used in gravure printing?
(d) What is "doctor streaks" in gravure printing? 3+3+2+2=10
5. Discuss the capabilities of the following printing processes, according to different types subject matter such as type matter, fine lines, tone reproduction, solid areas of colour and process colour reproduction, :-

(c) Offset
(d) Gravure 5x2=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. Write short notes on (any four)
 - a) Six-sigma
 - b)'DMAIC' framework
 - c) Pareto chart
 - d) Fish-bone diagram
 - e) PDSA Cycle

4x5=20