

(4)

Ex/PG/PT/T/113C/237/2014

10. (a) Why statistical process control in printing is necessary for quality production ?

(b) Write short notes on : 8+8=16

(i) Pareto chart

(ii) Fish-bone diagram.

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**M. TECH. IN PRINTING ENGG. & GRAPHIC
COMMUNICATION EXAMINATION, 2014**

(1st Semester)

Standardization in Printing and Packaging

Time : Three hours.

Full Marks : 100

Use a separate Answer-Script for each part.

PART - I (50 marks)

Answer questions fifty marks only.

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 can not be printed in Flexography Process. Why ?

(Turn Over)

- (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. (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? $3+3+2+2=10$
4. Discuss the Printed Image characteristics of the following printing processes : $5 \times 4 = 20$
- (a) Offset
- (b) Flexo
- (c) Gravure
- (d) Laser Printing
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 color and process colour reproduction : $5 \times 2 = 10$
- (a) Offset
- (b) Gravure

PART - II (50 marks)

Answer any **three** questions.

Two marks for neatness.

6. Mention the different types and techniques for standardization process. Why it is important to industry? 16
7. What are the quality management principles in ISO 9000 standard? Discuss these briefly. 16
8. (a) What is the purpose of TQM? What are its basic tools to improve the system?
- (b) What do you mean by ‘six-sigma’ and familiar framework ‘DMAIC’ on the management side? $8+8=16$
9. (a) “All work is done in a system of interconnected processes and all processes have variation”.– Explain.
- (b) What is process control chart and how it is used? What are the steps involved in using statistical process control? $6+10=16$

(Turn Over)