

Ex/PRN/T/423/2019

B.E. PRINTING ENGINEERING FOURTH YEAR SECOND SEMESTER EXAM 2019
QUALITY CONTROL IN PRINTING INDUSTRY

Time: 3hour

Full Marks: 100

Answer any **five** of the following questions:

1. a) What is the goal of Quality control in Printing and packaging Industry?
b) Discuss the difference between defect prevention and defect detection.
c) After a test following samples are obtained:

2	4	4	5	13	9	10	11	6	11
5	8	8	7	9	14	4	6	11	12

Explain with quality control chart plot and describe how the control chart helps in quality assurance of industry. [4+4(7+5) =20]

2. a) Briefly describe the utilization of check sheets and scatter diagram in the printing and packaging industry.
b) Why are rheological parameters controlled in quality of oil inks? [(5+5)+10=20]

3. a) What are the benefits of applying Cause and Effect diagram in industry. How does midtone dotgain variation effect on offset quality control?
b) Explain the following print performance test for film printing: i) cold seal packaging, ii) non-curl and iii) odour and taint. [10+10=20]

4. Discuss about:

- a. Inkfly
- b. Job ticketing and tracking
- c. Densitometry
- d. Histogram

[5+5+5+5=20]

5. a) Explain the working principle of spectrometer.
b) Briefly explain the drawbacks in remote proofing document management.
c) Discuss about the dye-sublimation and thermal-wax proofer. [5+10+5=20]

6. a) Discuss the drawback of PIRA ink drying time tester.
b) Briefly explain the steps of Raster Image Processing.
c) What are the factors needed to be checked for liquid ink? [5+10+5=20]

7. a) How will you correlate six sigma in quality control? Explain DMAIC methodology.
b) What is the difference between DMAIC and DMADV?
c) What are the five specific types of analysis in six sigma? [5+(5+2)+8=20]

8. a) Why is the abrasion resistance test required for board printing?
b) What is DPMO? What is the objective of improve phase?
c) What is the importance of controlling slip resistance in film printing? [5+(3+5)+7=20]