Ref. No.: Ex/PG/PT/T/121C/2019

M. TECH. IN PRINTING ENGINEERING AND GRAPHIC COMMUNICATION
FIRST YEAR 2ND SEMESTER EXAMINATION 2019
TOTAL PRODUCTIVE MAINTENANCE IN PRINTING

Time: 03 hrs **Full Marks: 100**

Answer any five

1. a) Explain different types of maintenance techniques.
   b) Distinguish between 'Maintainability' and 'Availability'?

   12+8=20

2. a) Explain Downtime. What are the types of downtime?
   b)What is risk assessment? How can you determine the risk factor?

   10+10=20

3. a)What is Risk Based Maintenance (RBM) methodology? How can you assess the risk by using RBM strategy?
   b) What are the main objectives Total Productive Maintenance (TPM)? Why is TPM so popular and important?

   10+10=20

4. What are the interactively linked modules involved with the RBM methodology? Explain the modules which consist of different steps involved to reduce the risk through maintenance planning.

   20

5. a) "TPM is aimed for eliminating the six big losses" – What are the six big losses? Explain.
   b) Define Overall Equipment Effectiveness (OEE). Define and explain the factors associated with OEE. How these factors are related with OEE.

   8+12=20

6. Explain the steps involved for the implementation of TPM development program in an organization. Also mention the fundamental activities of TPM.

   20

7. a) Explain the '5S' techniques to be achieved through maintenance (TPM) team.

   b) A medium volume printing plant with a capacity of producing 20 impressions per minute actually produced 8000 impressions in a planned running 2 shifts of 8 hours each. It had breaks and scheduled maintenance for 40 minutes and also faced 40 minutes breakdowns and 1 hour 20 minutes for changeover and adjustment. Number of rejects and re-works were 100 and 60 impressions respectively. Calculate the overall effectiveness of the plant.

   8+12=20