



**R18 Regulation** **Subject code: 2E7CD**  
**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY**  
(Autonomous, Accredited by NAAC with 'A+' Grade)

**B.Tech VII Semester Supplementary Examinations, December 2024**

**UNCONVENTIONAL MACHINING PROCESSES**  
**(Mechanical Engineering)**

**Maximum Marks: 70**

**Date: 07.01.2025**

**Duration: 3 hours**

- Note:**
1. This question paper contains two parts A and B.
  2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
  3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
  4. Each question carries 10 marks and may have a, b, c, d as sub questions.

**Part-A**

| All the following questions carry equal marks (10X2M=20) Marks) |   | CO | Bloom Tx |
|---|---|----|----------|
| 1   | Write any two advantages of non-traditional machining process   | 1  | L1       |
| 2   | Define modern machining processes                               | 1  | L1       |
| 3   | Write any two applications of electrochemical machining process | 2  | L1       |
| 4   | Define the term electrochemical grinding                        | 2  | L1       |
| 5   | Write the applications of EDM                                   | 3  | L1       |
| 6   | Write any two names of dielectric fluid in EDM                  | 3  | L1       |
| 7   | Define the term accuracy  | 4  | L1       |
| 8   | Write the applications of Abrasive flow finishing               | 4  | L1       |
| 9   | Define the term MASKANT   | 5  | L1       |
| 10  | Write any two Applications of Electric stream drilling          | 5  | L1       |

**Part-B**

| Answer All the following questions. (5X10M=50Marks) |   | CO | Bloom Tx |
|---|---|----|----------|
| 11  | Explain the working principle of Ultrasonic machining process with neat sketch [10M]            | 1  | L2       |
| OR  |   |    |          |
| 12  | Briefly explain the need for non-traditional machining methods [10M]                            | 1  | L2       |
| 13  | Explain the working principle of Electro Chemical Processes with neat sketch [10M]              | 2  | L2       |
| OR  |   |    |          |
| 14  | Explain the working principle of Abrasive water Jet Machine with neat sketch [10M]              | 2  | L2       |
| 15  | Explain working principle of Wire cut EDM with neat sketch [10M]                                | 3  | L2       |
| OR  |   |    |          |
| 16  | Write advantages, disadvantages and applications of EDM [10M]                                   | 3  | L2       |
| 17  | Write the advantages, disadvantages, applications and limitations of laser beam machining [10M] | 4  | L2       |
| OR  |   |    |          |

|    |  |   |    |
|----|--|---|----|
| 18 | Explain the theory of electron beam machining with neat sketch [10M] | 4 | L2 |
| 19 | Briefly explain about maskants and its applications in ECM [10M]     | 5 | L2 |
| OR |  |   |    |
| 20 | Explain working principle of PAM with neat sketch [10M]              | 5 | L2 |