**Rajasthan Institute of Engineering & Technology, Jaipur**

**Ist Mid Term Examination**

**Session: 2018-19**

**VII Semester Mechanical Engineering**

**Subject: Micro and Nano manufacturing (7ME6.1A)**

Time: 2 hrs. SET-A M.M.:20

**Instruction for students:**

1. No provision for supplementary answer book.

Q.1 What is size effect in machining process? Dicuss about spacing of adjacent slip planes.

Or

Q.1 Define micro machining and explain micro machining process physics.

Q.2 Explain Burr formation in detail.

Or

Q.2 What are the micro structures? Classify them and explain their use.

Q.3 Explain Design considerations for micro-molding. What are the limitations of micro molding?

Or

Q.3 Discuss Micro cutting tools. And explain tool offset and positioning in micro cutting tools.

Q.4 Discuss Micro turning. And explain micro turning parameters.

Or

Q.4 Explain micro drilling process in detail with diagram.



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Time: 2 hrs. SET-B M.M.:20

**Instruction for students:**

1. No provision for supplementary answer book.

Q.1 Explain mechanism of plastic deformation in metals.

Or

Q.1 Define Nano machining and explain micro machining process physics.

Q.2 What is nano scale cutting and brifly explain the classification of nano machining.

Or

Q.2 What is the micro machining and explain chip formation in detail

Q.3 Explain Design requirements of micro-turning machines. What are the limitations of micro turning?

Or

Q.3 Discuss Micro drilling. And explain High aspect ratio and applications of micro drilling.

Q.4 Discuss Micro molding. And explain micro molding processes.

Or

Q.4 Discuss in brief about micro milling and micro drilling with suitable examples, also explain thier characteristics features and applications.