

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP2023)

CLASS: B TECH
BRANCH: MECHANICAL

SEMESTER : VI
SESSION : SP/2023

SUBJECT: ME365 DESIGN OF MECHANISMS

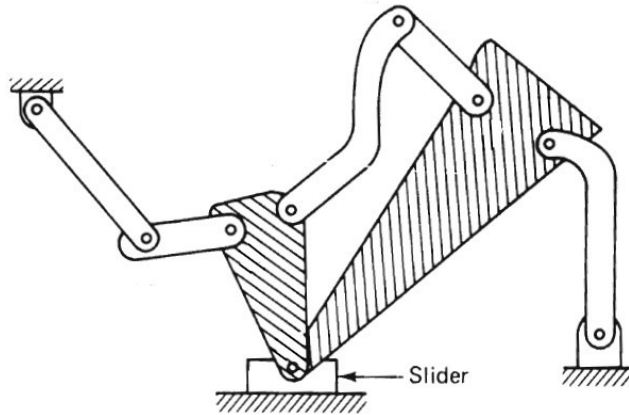
TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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|---|-------|----|
| Q.1 Explain any two inversions of slider-crank mechanism with neat diagram. | [5] 1 | 2 |
| Q.2 Find the number of degrees of freedom in the mechanism shown in Figure. | [5] 1 | 3 |



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|---|-------|---|
| Q.3 Explain Watt I and Watt II six bar linkages with neat diagrams | [5] 1 | 2 |
| Q.4 Explain motion generation and path generation tasks in kinematic synthesis with examples. | [5] 2 | 2 |
| Q.5 Explain and sketch the complete procedure to synthesize a four-bar mechanism for three position motion generation task. | [5] 2 | 3 |

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