

Seat No. **MAR_APR 2025 SUMMER EXAMINATION****11731 Bachelor of Technology (NEP-2.0)****Sub. Name: Basic Mechanical Engineering****Sub. Code: 108727/109840****Day and Date: SEPTEMBER,13-09-2025****Total Marks: 60****Time: 10:30 AM To 01:00 PM**

Instructions: 1. All questions are compulsory
 2. Draw neat labelled diagrams wherever necessary
 3. Figures to the right indicate full marks

Special Inst.: Attempt 3 sub questions from each main question

- Q1) A.** Explain construction and working of Four Stroke SI engine [5]
B. Explain construction and working of Hydroelectric power plant [5]
C. Explain different types of belt drives with neat sketch [5]
D. Explain with neat sketch construction and working of Centrifugal pump [5]
- Q2) A.** Explain inversions of Four Bar chain [5]
B. Classify different types of Kinematic pairs [5]
C. What is an automobile? Explain the main components of automobile with their functions [5]
D. Explain construction and working of Electric Vehicles [5]
- Q3) A.** With neat sketch explain different steps involved in casting process [5]
B. Explain with neat sketch Arc welding process in detail [5]
C. Explain advantages and applications of CNC [5]
D. Define Additive Manufacturing (3 D Printing). List the various steps involved in additive manufacturing [5]
- Q4) A.** With neat sketch explain different components of Mechatronics system [5]
B. Define Sensors and describe different types of sensors [5]
C. Define Robot and explain anatomy of robot [5]
D. Explain applications of robots in various fields [5]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (11731) Bachelor of Technology (NEP-2.0) (108727) Basic Mechanical Engineering Part 1 SEM 1

2] (11731) Bachelor of Technology (NEP-2.0) (109840) Basic Mechanical Engineering Part 1 SEM 2