

# GOVT. POLYTECHNIC, BHADRAI

SUB- ELEMENTS OF MECHANICAL ENGG.

BRANCH-ELECTRICAL ENGG./3<sup>rd</sup> sem

Internal Assessment Test - 2022 (Winter)

(Answer all the question)

1. a. Define 1<sup>st</sup> law of thermodynamic.
- b. what is fusible plug and their function.
- c. Define boiler accessories and their types.
- d. Define Boyle's law, Charle's law and Gay-Lussac law.
- e. Define mean effective pressure.

( Answer any two question)

2 × 5

2. a. Comparison between fire tube and water tube

b. What is steam boiler and their classification.

c. Calculate brake power simple steam engine .Having 250mm cylinder diameter and 300mm stroke length at 350rpm.The initial and back pressure 8.5bar & 1.2bar.Assume 90% mechanical efficiency and cutoff 25% of stroke & 0.73 diagram factor neglecting clearance.