

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2021-COURSE)
B. Tech. Sem - I Robotics & Automation Engineering : WINTER- 2022
SUBJECT : MECHANICAL ENGINEERING SYSTEMS

Day : Wednesday

Time : 10:00 AM-01:00 PM

Date : 18-01-2023

W-24:21-2022

Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) **Figures to the right indicate FULL marks.**
- 3) Use of non – programmable **CALCULATOR** is allowed
- 4) **Assume suitable data if necessary.**
- 5) Draw neat and labelled diagram if necessary.

Q.1 Give classification of S.I. and C.J. Engines. Explain four stroke diesel engine with neat sketch. (10)

OR

Q.1 Give classification of compressors. Explain reciprocating pump with neat sketch. (10)

Q.2 What do you understand by power transmitting devices? Explain any one type of coupling with neat sketch. List out advantages and disadvantages. (10)

OR

Q.2 Give classification of bearings. Explain Bush and ball bearing with neat sketch. (10)

Q.3 What do you understand by Kinematic link and Kinematic pair? Explain Kutzbach criterion with neat sketch. (10)

OR

Q.3 What is slider crank chain? Explain four bar chain and its any one type of inversion. (10)

Q.4 Give classification of welding processes. Explain submerged arc welding processes with neat sketch. (10)

OR

Q.4 What do you understand by Gas welding? Explain gas cutting processes with merits, demerits and applications. (10)

Q.5 What is Resistance and solid – state welding. Explain spot and seam welding with neat sketch. (10)

OR

Q.5 What is friction welding? Explain ultrasonic welding with neat sketch. (10)

Q.6 What is the use of Lathe machine? Explain working of Centre Lathe machine with neat sketch. (10)

OR

Q.6 What is the use of grinding machine? Explain cylindrical and surface grinder with neat sketch. (10)