Navrachana University
School of Engineering & Technology
End-Semester Examination May 2023
Program Name – MECHANICAL ENGINEERING
Year and Semester: 3rd YR, 6th Sem
ME 405 ENERGY CONVERSION-II

Date: 16/05/2023
Time: 2pm – 4pm

Max. Marks: 40

Instructions:

- ➔ Write each answer on a new page
- ➔ Use of calculator is permitted.

Q1	Discuss about Nuclear fusion and fission. What are the different types of nuclear power reactor? Explain any one.	**(10)**	CO1, CO2
Q2	Steam at 20 bar and 360 deg C expands in a steam turbine at 0.08 bar. It is then condensed in a condenser to a saturated water. The pump feedback the water to the boiler. Assume ideal Rankine cycle and determine (1) Net work done / kg of steam (2) Rankine efficiency.	**(10)**	CO3, CO4
Q3	What is Draught? Discuss various types of draught with Neat Sketches in detail.	**(08)**	CO1, CO2
Q4	Draw a neat sketch of Thermal Power Plant layout and Explain various circuits used in the plant.	**(08)**	CO1, CO2
Q5	What are the merit and demerit of super critical boilers over sub critical boilers? **OR** Explain Rankine cycle with schematic and T-s Diagram.	**(04)**	CO1, CO2

---------End of Question Paper---------