



II SEMESTER M.TECH (DEPARTMENT OF CIVIL ENGINEERING)
END SEMESTER EXAMINATIONS
APRIL/MAY 2019
SUBJECT: ENERGY AND ENVIRONMENT [CIE 5283]

Date of Exam:

Time of Exam:

Max. Marks: 50

Instructions to Candidates:

- ❖ Answer ALL the questions & missing data may be suitably assumed
- ❖ Draw diagrams wherever necessary

1A.	Briefly discuss the importance of Paris agreement in safeguarding our environment	5	CO2
1B.	List and explain the causes and solutions for global energy crisis	5	CO1
2A.	With a neat diagram explain the components and principle of conversion of heat in flat plate solar collectors.	5	CO3
2B.	What is pyrheliometer? Explain the working of Angstrom compensation pyrheliometer.	3	CO3
2C.	Define specific speed. Find the specific speed when 10000kW power is to be generated under a head of 80m at 250rpm. Also, suggest the type of turbine to be used based on specific speed.	2	CO3
3A.	With a neat diagram explain the working of double stage anaerobic digestion process from biomass for the production of biogas.	5	CO3
3B.	Explain the steps involved in geothermal energy exploration. Mention the potential environmental impacts likely to be induced by geothermal power plants?	5	CO3
4A.	Give the classification of tidal power plants? Explain any one in detail.	4	CO3
4B.	Explain the working of pressurized water reactor.	3	CO3
4C.	What are the merits and demerits of Thermal power plants?	3	CO4
5A.	Explain in detail about the process of formation of coal	5	CO4
5B.	How acid rain is formed? Discuss the causes and effects of acid rain.	5	CO5