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# Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)



## III SEMESTER M.TECH

### END SEMESTER EXAMINATIONS, MAY /JUNE 2016

#### SUBJECT: ENERGY AND ENVIRONMENT [CIE 558]

#### OPEN ELECTIVE

#### REVISED CREDIT SYSTEM

Time: 3 Hours

MAX. MARKS: 50

#### Instructions to Candidates:

- ❖ Answer any **FIVE FULL** questions.
- ❖ Draw neat sketches wherever required.
- ❖ All questions carry equal marks.

1A.	Write a brief note on global energy crisis.	05
1B.	Explain the principle of wind energy conversion?	05
2A.	Describe the classification of hydroelectric plants	05
2B.	Write a note on Parabolic dish reflector and Heliostat field collector	05
3A.	Explain the working of closed cycle ocean thermal-energy conversion systems.	05
3B.	Define gasification. Briefly explain about updraft gasifier	05
4A.	Write a short note on hydrothermal and petro thermal resources	05
4B.	With a neat diagram explain the double stage anaerobic digestion process biogas plant	05
5A.	What are the merits and demerits of nuclear power plants?	05
5B.	Explain the process of formation of coal.	05
6A.	Explain the process of fractional distillation in refining of crude oil.	05
6B.	Explain greenhouse effect with a neat sketch	05