

**BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT**

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

USN 

--	--	--	--	--	--	--	--	--	--

Course Code 

2	1	M	E	5	5	2
---	---	---	---	---	---	---

Fifth Semester B.E. Degree Examinations, September / October 2024

**ENERGY AND ENVIRONMENT**

Duration: 3 hrs

Max. Marks: 100

Note: 1. Answer any FIVE full questions choosing ONE full Question from each Module.  
2. Missing data, if any, may be suitably assumed

<u>Q. No</u>	<u>Questions</u>	<u>Marks</u>	<u>(RBTL:CO:PI)</u>
<b><u>Module-1</u></b>			
1.	a. Explain the various key energy trends in India.	10	(2 :1 : 1.6.1)
	b. Using relevant statistics, explain world energy production and consumption.	10	(2 :1 : 1.7.1)
(OR)			
2.	a. Explain factors affecting India's energy development.	10	(1 :1 : 1.6.1)
	b. Briefly explain primary energy and secondary energy sources.	06	(2 :1 : 1.7.1)
	c. State differences of energy and power.	04	(2 :1 : 1.7.1)
<b><u>Module-2</u></b>			
3.	a. With neat sketch, explain pumped storage method.	06	(2 :2 : 1.6.1)
	b. Define energy management. List out the principles of energy management.	06	(2 :2 : 1.6.1)
	c. With neat sketch, explain working of solar pond.	08	(3 :2 : 1.6.1)
(OR)			
4.	a. Explain the needs of an energy audit.	04	(2 :2 : 1.6.1)
	b. Differentiate between preliminary and detailed energy audit.	06	(2 :2 : 1.6.1)
	c. Explain ten steps of methodology for detailed energy audit.	10	(2 :2 : 1.6.1)
<b><u>Module-3</u></b>			
5.	a. Explain the need for public awareness towards environment.	06	(2 :3 : 1.6.1)
	b. Explain multidisciplinary nature of environmental studies.	08	(2 :3 : 1.6.1)
	c. Differentiate between environment and ecosystem.	06	(2 :3 : 1.6.1)
(OR)			
6.	a. With neat sketch, explain (i) food chain (ii) food Web (iii) ecological pyramid.	08	(2 :3 : 1.6.1)
	b. Explain grassland ecosystem. What are its type? How conservation of grassland can be made.	08	(2 :3 : 1.6.1)
	c. Write a short note on ecological succession.	04	(1 :3 : 1.6.1)

#### **Module-4**

7. a. Differentiate between primary pollutant and secondary pollutant. **04** (2 :4 : 1.6.1)  
b. Explain causes, and control measures of air pollution. **08** (2 :4 : 1.6.1)  
c. Discuss the causes, effects and control measures of soil pollution. **08** (2 :4 : 1.6.1)

**(OR)**

8. a. Define Solid Waste Management (SWM). Explain 3R`s of SWM. **08** (3 :4 : 1.6.1)  
b. List out the roles of an individual in prevention of pollution. **04** (1 :4 : 1.6.1)  
c. Discuss briefly the case study of Bhopal Gas Tragedy. **08** (2 :4 : 1.6.1)

#### **Module-5**

9. a. Explain the need for waste land reclamation. **06** (2 :5 : 1.6.1)  
b. Enumerate the impact of global warming on the nature. **08** (2 :5 : 1.6.1)  
c. Write a short note on ozone layer depletion. **06** (1 :5 : 1.6.1)

**(OR)**

- 10 a. Explain nuclear accidents and holocaust. **06** (2 :5 : 1.6.1)  
b. List out the salient features and penalties under Water Act. **06** (1 :5 : 1.6.1)  
c. Explain about Environmental Impact Assessment (EIA). **08** (2 :5 : 1.6.1)

\*\* \*\* \*