

Basavarajeswari Group of Institutions  
**BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT**  
(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

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Course Code 

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Fifth Semester B.E. Degree Examinations, April/May 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>Question</u>	<u>Marks</u>	<u>(RBTL:CO:PI)</u>
<b><u>Module-1</u></b>			
1.	a. Explain different forms of energy.	04	(1 :1: 1.6.1)
	b. Explain the various key energy trends in India.	06	(2 :1: 1.6.1)
	c. Explain briefly the factors affecting India's energy development.	10	(2 :1: 1.6.1)
<b>(OR)</b>			
2.	a. Define energy and power. Differentiate between energy and power.	04	(2 :1: 1.6.1)
	b. Differentiate between primary energy and secondary energy resources.	06	(3 :1: 1.7.1)
	c. Explain world energy scenario with respect to production and consumption.	10	(3 :1: 1.7.1)
<b><u>Module-2</u></b>			
3.	a. Discuss need and benefits of energy storage systems.	10	(2 :2: 1.6.1)
	b. With a neat sketch, explain pumped storage system.	10	(3 :2: 1.7.1)
<b>(OR)</b>			
4.	a. Elaborate the different phases in detailed energy audit.	10	(2 :2: 1.6.1)
	b. Explain sensible and latent heat storage methods.	10	(2 :2: 1.6.1)
<b><u>Module-3</u></b>			
5.	a. Discuss: (i) Food Web (ii) Ecological pyramid (iii) food chain	06	(1 :3: 1.6.1)
	b. Discuss how carbon cycle is utilized in the ecosystem.	06	(2 :3: 1.6.1)
	c. What is an ecosystem? Discuss forest ecosystem. Explain how conservation of forest can be done.	08	(2 :3: 1.6.1)
<b>(OR)</b>			
6.	a. Write a short note on ecological succession.	06	(3 :3: 1.7.1)
	b. Elaborate how the nitrogen cycle ecosystem operates.	06	(3 :3: 1.7.1)
	c. What is multidisciplinary nature of environmental studies, explain with suitable examples.	08	(3 :3: 1.7.1)

**Note: (RBTL - Revised Bloom's Taxonomy Level: CO - Course Outcome: PI- Performance Indicator)**

#### **Module-4**

7. a. Discuss the role of individual in prevention of pollutions. **06** (2 :4: 1.6.1)  
b. Explain main source and effects of air-pollution. **06** (2 :4: 1.6.1)  
c. Enumerate the water pollution causes and its effects. Mention control measures that can be initiated for mitigating the same. **08** (2 :4: 1.6.1)

**(OR)**

8. a. Write a note on solid waste management. **06** (2 :4: 1.6.1)  
b. Discuss any two case studies related to pollution of environmental in detail. **06** (3 :4: 1.7.1)  
c. Elaborate the causes, effects and control measures of:  
(i) Soil pollution (ii) Noise Pollutions (iii) Thermal pollution (iv) Marine pollution. **08** (2 :4: 1.6.1)

#### **Module-5**

9. a. What are salient features of wild life protection act? **06** (2 :5: 1.6.1)  
b. Write a short note on causes and effects of  
(i) Global warming (ii) Acid rain **06** (2 :5: 1.6.1)  
c. What are the objectives of water (Prevention and control of pollution) act? Explain its salient features and penalties for violation. **08** (2 :5: 1.6.1)

**(OR)**

- 10 a. What are salient features of air pollution act? **06** (2 :5: 1.6.1)  
b. Write a short note on causes and effects of  
(i) Ozone layer depletion (ii) Nuclear accidents **06** (3 :5: 1.7.1)  
c. Explain the role of environment impact assessment (EIA) in enforcing environmental legislation. **08** (2 :5: 1.6.1)

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