



RV Educational Institutions[®]
RV College of Engineering[®]

Autonomous
Institution Affiliated
to Visvesvaraya
Technological
University, Belagavi

Approved by AICTE,
New Delhi, Accredited
By NAAC, Bengaluru
And NBA, New Delhi

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DEPARTMENT OF CIVIL ENGINEERING

| | | | |
|--------------------------------|--------------------------|--------------------|----|
| Date | 8 th Jan 2024 | Maximum Marks | 50 |
| Course Code | CV232AT | Duration (minutes) | 90 |
| Sem | III Semester | CIE – I | |
| Environment and Sustainability | | | |

| No. | Questions | M | BT | CO |
|-----|---|--------|--------|--------|
| ✓1 | a) Define the terms i) Environment ii) Ecology iii) Bio-Diversity ✓b) Materials flow in eco system is cyclic and Energy flow is unidirectional, justify. | 6 4 | 1 2 | 1 1 |
| ✓2 | Classify different types of ecosystems. Explain in brief any two ecosystems with their structure and composition | 10 | 2 | 2 |
| ✓3 | ✓a) Recall the concept of ecological succession and classify the same ✓b) Discuss the approaches of conserving the biodiversity | 5 5 | 1 2 | 1 1 |
| ✓4 | ✓a) Highlight the salient features of various hotspots of biodiversity in India ✓b) Briefly discuss the causes, effects and preventive measures of water pollution | 5 5 | 1 2 | 1 2 |
| ✓5 | Briefly describe the various Environmental protection acts in India | 10 | 2 | 2 |

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

| Marks Distribution | | Particulars | CO1 | CO2 | CO3 | CO4 | L1 | L2 | L3 | L4 | L5 | L6 |
|--------------------|-----------|-------------|-----|-----|-----|-----|----|----|----|----|----|----|
| Test | Max Marks | | 25 | 25 | -- | - | 16 | 34 | - | - | - | - |



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NBA Accredited (UG - 6Years)

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Department of Civil Engineering

Academic year 2023-2024 (Odd Sem)

| | | | |
|-----------------------------------|----------------------|-----------------|--------|
| Academic year 2023-2024 (Odd Sem) | | | |
| Date | 20-02-2024 | Maximum Marks | 50 |
| Course Code | CV232AT | Duration | 90 Min |
| Sem | III (Basket Course) | CIE – II (Test) | |
| ENVIRONMENT AND SUSTAINABILITY | | | |

| Sl. No. | Questions | Marks | BT | CO |
|---------|---|-------|----|----|
| 1. | Enumerate the process of energy management and energy conservation with its objectives. | 10 | 2 | 3 |
| 2. | Explain any 5 types of alternate energy sources with their advantages and disadvantages. | 10 | 3 | 1 |
| 3. | Enumerate the objectives of sustainable urban projects. | 10 | 2 | 3 |
| 4. | Highlight five important principles of sustainable development | 10 | 3 | 3 |
| 5. | a. Briefly explain any 5 international protocols and agreements that address specific environmental issues. | 05 | 2 | 2 |
| | b. Describe any 5 disadvantages of linear resource management systems. | 05 | 3 | 2 |

Course outcomes:

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

| Marks Distribution | | Particulars | CO1 | CO2 | CO3 | CO4 | L1 | L2 | L3 | L4 | L5 | L6 |
|--------------------|--|----------------|-----|-----|-----|-----|----|----|----|----|----|----|
| | | Test Max Marks | 10 | 10 | 30 | - | - | 25 | 25 | - | - | - |

Department of Civil Engineering

| | | | |
|--------------------------------|------------|------------------|--------|
| Date | 19-03-2024 | Maximum Marks | 50 |
| Course Code | CV232AT | Duration | 90 Min |
| Sem | III | CIE – III (Test) | |
| Environment and Sustainability | | | |

| Sl. No. | Questions | M | BT | CO |
|---------|--|----|----|----|
| 1. a | Enumerate the impacts of ozone layer depletion. | 5 | 2 | 3 |
| b | Explain the concept of 5R: | 5 | 2 | 3 |
| 2. | Define the following. i) EIA ii) Climate change iii) Carbon Credit iv) Carbon Footprint v) Green Building | 10 | 2 | 3 |
| 3. | Explain the principles of CSR. | 10 | 2 | 4 |
| 4. | Enumerate the ways to reduce carbon foot print. | 10 | 3 | 3 |
| 5. a | Briefly explain the concept of circular economy. | 5 | 2 | 3 |
| b | Explain the concept of charity and corporate philanthropy. | 5 | 2 | 4 |

Course outcomes:

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

| Marks Distribution | Particulars | | CO1 | CO2 | CO3 | CO4 | L1 | L2 | L3 | L4 | L5 | L6 |
|--------------------|-------------|-----------|-----|-----|-----|-----|----|----|----|----|----|----|
| | Test | Max Marks | - | - | 35 | 15 | - | 40 | 10 | - | - | - |

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RV COLLEGE OF ENGINEERING®
 (An Autonomous Institution Affiliated to VTU)
 III Semester B. E. Examinations April/May-2024
 Common to All

ENVIRONMENT AND SUSTAINABILITY

Time: 03 Hours

Maximum Marks: 100

Instructions to candidates:

- Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
- Answer FIVE full questions from Part B. In Part B question number 2 is compulsory. Answer any one full question from 3 and 4, 5 and 6, 7 and 8, 9 and 10.

PART-A

M BT CO

| | | | | | |
|---|------|---|----|---|---|
| 1 | 1.1 | Define the terms Biotic and Abiotic components. | 02 | 1 | 1 |
| | 1.2 | Mention threats to bio-diversity. | 02 | 1 | 1 |
| | 1.3 | List out the types of land pollution. | 02 | 1 | 2 |
| | 1.4 | State the effects of noise pollution. | 02 | 1 | 2 |
| | 1.5 | What are fossil fuels and why they are non-renewable? | 02 | 1 | 2 |
| | 1.6 | What is biogas and mention its uses. | 02 | 1 | 2 |
| | 1.7 | Highlight the significance of GDP in nation's economic activity. | 02 | 2 | 3 |
| | 1.8 | Highlight the distinction between Kyoto protocol and Paris agreement. | 02 | 2 | 3 |
| | 1.9 | Mention the principles of organic farming. | 02 | 1 | 3 |
| | 1.10 | Enumerate the significance of EIA in developmental projects. | 02 | 1 | 4 |

PART-B

| | | | | | |
|-----------|---|---|----|-----|---|
| 2 | a | Discuss the importance of any four environmental protection acts promulgated in India. | 08 | 2 | 1 |
| | b | Briefly discuss the causes, effects and preventive measures for soil and air pollution. | 08 | 2 | 2 |
| 3 | a | Explain the concept of energy management and conservation. | 08 | 2 | 2 |
| | b | Enumerate the concept of sustainable urbanization and the need for the same. | 08 | 1,2 | 3 |
| OR | | | | | |
| 4 | a | Explain the concept of hydrogen energy with its uses, advantages and disadvantages. | 08 | 2 | 2 |
| | b | Explain the carbon cycle with sketch. | 08 | 2 | 2 |
| 5 | a | Define environmental audit. Briefly describe the types of environmental audit. | 08 | 1 | 3 |
| | b | Enumerate the economic and social aspects of sustainability. | 08 | 1 | 3 |
| OR | | | | | |

| | | | | | |
|-----------|---|--|----|---|---|
| 6 | a | Explain the key concepts of system thinking along with its advantages. | 08 | 2 | 3 |
| | b | Discuss the concepts of circular economy and industrial ecology. | 08 | 2 | 3 |
| 7 | a | Enumerate the various ways of reducing carbon footprint in our daily life. | 08 | 1 | 3 |
| | b | State and explain how green building concept evolved as sustainable habitat. | 08 | 2 | 3 |
| OR | | | | | |
| 8 | a | Enumerate ISO 14000 series of standards. | 08 | 1 | 3 |
| | b | Explain in brief the necessity of energy efficiency and sustainable transport. | 08 | 2 | 3 |
| 9 | a | Explain the principles of CSR. | 08 | 2 | 4 |
| | b | Explain the concept of charity and corporate philanthropy. | 08 | 2 | 4 |
| OR | | | | | |
| 10 | a | Enumerate the environmental aspects of CSR. | 08 | 1 | 4 |
| | b | Explain how the changing emphasis of companies focusing on CSR. | 08 | 2 | 4 |