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| **Program:** | F.Y.B.Sc CS | **Semester:** 1 | **Program Code:** | UGCS02 | |
| **Course:** | Green Technologies | | **Course Code:** | NUES101 | |
| **Duration:** | 1 Hour | **Examination Pattern:** | NEP Autonomous-External | **Max. Marks:** | 30 |

**Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Draw neat diagrams wherever necessary.
4. CO (Course Outcome), KL (Knowledge Level).

**Examination:**
**REGULAR**

| Q. 1 | | **Attempt any TWO of the following.** | [10] | CO's | KL's |
|---|---|---|---|---|---|
| | (a) | Define Green IT and state its importance. | | CO1 | L1 |
| | (b) | Explain how IT contributes to energy consumption and carbon footprint. | | CO2 | L2 |
| | (c) | Describe the Reduce, Reuse and Recycle approach in sustainable IT practices. | | CO2 | L2 |
| | (d) | Evaluate the effectiveness of Energy Star and EPEAT in promoting environmentally responsible IT practices. | | CO4 | L5 |
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| **Q. 2** | | **Attempt any TWO of the following.** | [10] | CO's | KL's |
| | (a) | Define a Green Data Center. List any four techniques used to reduce energy consumption in data centers. | | CO3 | L1 |
| | (b) | Compare the role of IT in smart cities and environmental monitoring systems. | | CO3 | L4 |
| | (c) | Explain the concept of smart routing and bandwidth optimization in Green Networking. | | CO2 | L2 |
| | (d) | Explain the role of virtualization and server consolidation in reducing energy consumption. | | CO1 | L2 |
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| **Q. 3** | | **Attempt any TWO of the following.** | [10] | CO's | KL's |
| | (a) | Analyze the environmental impact of improper e-waste disposal and mechanical processing of e-waste management. | | CO2 | L2 |
| | (b) | Explain how cloud computing and energy-efficient cooling contribute to Green Data Centers. | | CO2 | L2 |
| | (c) | Apply suitable power management techniques in an operating system to reduce energy consumption. | | CO2 | L3 |
| | (d) | Analyze the Green IT initiatives implemented by Infosys, and TCS. | | CO4 | L4 |

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