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Question Paper Code : 30429

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2024.

Sixth/Seventh/Eighth Semester

Computer Science and Engineering

CS 8078 – GREEN COMPUTING

(Common to : Computer and Communication Engineering/Information Technology)

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the major factors of carbon emissions in an organization.
2. Mention the levels in Green Capability Maturity Model.
3. List the role of smart meters in environmental intelligence.
4. Relate the enhancement of QoS in Green BPM.
5. Give any four options to get rid of unwanted or broken electronic devices.
6. Highlight any two green practices in your daily life with respect to energy saving.
7. List the advantages of Green virtual communities.
8. Specify the importance of ternary computing in reducing carbon emissions.
9. Mention the key features of Green banks.
10. State the Green business objectives of a hospital.

PART B — (5 × 13 = 65 marks)

11. (a) Discuss the creation of new correlations by Environmental impact organizational data warehouses with diagram and summarize BI to EI impact across organizational dimensions.

Or

- (b) Explain in detail the relationship between practices of lean business systems and Green IT initiatives.

12. (a) Demonstrate the effect of one extra bit in a data center on the green performance of an organization with diagram.

Or

- (b) With a neat diagram, elaborate the emerging technologies involved in the Green IT solution architecture.

13. (a) Outline the significance of virtualization to promote Green computing in detail.

Or

- (b) Discuss Green Grid. Describe briefly about the metrics created and endorsed by Green Grid framework.

14. (a) Examine the mapping of green skills to SFIA levels with diagram and describe the SFIA levels in the context of Green IT.

Or

- (b) Illustrate various elements and types in a Green IT audit with diagram and elaborate the key stakeholders in Green IT audits.

15. (a) Summarize the concept of environmentally responsible business strategies (ERBS) in detail.

Or

- (b) Explain how Green IT strategies can be applied to a packaging industry in the manufacturing sector.

PART C — (1 × 15 = 15 marks)

16. (a) Explore the significance of data center strategies in reducing carbon footprint of an organization.

Or

- (b) Analyze GIS requirements of an organization and create use case diagrams for green organizational portal of the organization.