U.S.N.										

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

August 2024 Supplementary Examinations

Programme: B.E. **Semester: VIII**
Branch: Computer Science and Engineering **Duration: 3 hrs.**
Course Code: 21CS8PCGCT **Max Marks: 100**
Course: Green Computing

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I

1	a)	Discuss the three complementary IT-enabled approaches for improving environmental sustainability with a diagram	**6**
	b)	Differentiate between Reuse, Refurbish and Recycle	**6**
	c)	Justify how the hazardous chemicals used in manufacturing various electronic devices effects on humans	**8**

UNIT - II

2	a)	By applying the knowledge of processor power states, differentiate between C-States and P-States	**6**
	b)	Demonstrate the technique and benefit in Energy-saving software methodologies with respect to Computational efficiency, Data efficiency, Context awareness and Idle efficiency	**8**
	c)	Sustainability encompasses environmental, social and economic dimensions? Justify	**6**

UNIT - III

3	a)	Demonstrate the consolidated data centre server power management usage models and virtualized data centre power management usage models with its benefits and use cases	**10**
	b)	Discuss the major steps that can be executed iteratively in developing a green IT strategy with a diagram	**10**

OR

4	a)	Justify how Green enterprises are over and beyond green IT	**10**
	b)	Outline the objectives of Green Networking. Also list the strategies to reduce carbon emissions	**10**

UNIT - IV

5 a) By applying the knowledge of software and database aspects of an environmental management information system, differentiate between the following software's **10**

- Environmental Risk and Impact Assessment Software
- Environmental Cost Assessment Software
- Environmental Management System Software
- Regulatory Software
- Application, Modelling and Simulation Software

b) With a diagram, demonstrate the steps involved in risk assessment **10**

UNIT - V

6 a) Applying the knowledge of various cloud deployment model, identify the cloud deployment model that is suitable for the following scenarios and justify the same. **6**

- Mr.X wants to store non critical data.
- Mr.Y needs greater level of security and works within the organization.
- Mr.Z needs to handle sudden spike in demand. Also, need store both critical applications as well as non-critical applications.

b) Compare and Contrast between MediaWiki and Semantic MediaWiki software ecosystem tools **6**

c) Smart grids are really beneficial? Justify **8**

OR

7 a) Justify how Green Cloud Architecture reduces power consumption and carbon emission without hurting cloud provider's market. **10**

b) Describe the general guidelines for making an enterprise's functional units green with a diagram **10**

******