(3 hours) **Total Marks: 80**

N.B. (1) Question no. **1** is **compulsory.**
(2) Attempt any **three** out of remaining **four** questions.
(3) **Figures** to the **right** indicate **full** marks.

Q.1 Attempt any **Four** out of **Five** questions

a. What is green IT? Explain with green IT dimensions. **5**
b. What is sustainable software? Explain attributes of software sustainability. **5**
c. What are the various energy management techniques for hard disk? **5**
d. What is Life Cycle Assessment? Explain 4 stages of LCA. **5**
e. Explain SITS value curve in SITS strategic framework. **5**

Q.2 a. Explain life cycle of a device or hardware in detail. **10**
b. What are the key elements of data centre IT infrastructure? **10**

Q.3 a. Explain sustainable software methodologies. **10**
b. What are the various energy saving software techniques? **10**

Q.4 a. What are the various business drivers for green IT strategies? **10**
b. Explain sustainable IT roadmap. **10**

Q5. a. What is strategic thinking, planning and implementation for green initiatives? **10**
b. Explain objectives of green networking. **10**

Q.6 Write a short note on (**any four**)

a. Strategies to reduce carbon emission suggested by BSR **5**
b. Three R's of Green IT **5**
c. Sustainability Hierarchy models **5**
d. Regulatory environment for green IT **5**
e. Data centers and associated energy challenges **5**

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