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Total Number of Pages : 02

MCA
MCA205

2nd Semester Regular / Back Examination 2017-18

GREEN IT

BRANCH : MCA

Time : 3 Hours

Max Marks : 100

Q.CODE : C1048

Answer Question No.1, Question No.2 which are compulsory and any four from the rest.

**The figures in the right hand margin indicate marks.
Answer all parts of a question at a place.**

Q1 Answer the following questions:

(2 x 10)

- a) Data center efficiency can be measured by
 - i. PUE
 - ii. PoE
 - iii. BTU
 - iv. DCiE
- b) Which one is not a carbon free energy source?
 - i. Biomass
 - ii. Nuclear
 - iii. Natural gas
 - iv. Wind
- c) Organization that collects and recycles rechargeable batteries
 - i. RoH
 - ii. WEEE
 - iii. RBRC
 - iv. EPEAT
- d) Pyramid of biomass of grassland is
 - i. inverted
 - ii. upright
 - iii. both i & ii
 - iv. non of these
- e) Transfer of toxicants with food energy is known as,
 - i. biodiversity
 - ii. biomagnification
 - iii. material recycling
 - iv. food chain
- f) Which is a non-ionizing radiation?
 - i. X-ray
 - ii. gamma ray
 - iii. radiowaves
 - iv. alpha ray
- g) The process of producing electricity from solid waste in absence of air is known as,
 - i. landfill
 - ii. gasification
 - iii. pyrolysis
 - iv. None of the above
- h) Which one measure water quality and organic matter content in water?
 - i. BOD
 - ii. DO
 - iii. COD
 - iv. all of these
- i) Which is a hazardous material according to RoHs?
 - i. Gold
 - ii. Silver
 - iii. Bronze
 - iv. Mercury
- j) Which organization provides software benchmark to evaluate computer system performance?
 - i. SPEC
 - ii. LEED
 - iii. Grin Grid
 - iv. EU

- Q2 Answer the following questions: (2 x 10)**
- a) Define IT ecosystem. What are the components of IT ecosystem?
 - b) What are the factors that influence the cost of electricity and how?
 - c) What are the green practices issued by EPA?
 - d) Differentiate cogeneration and trigeneration with example.
 - e) What is storage sprawling? What are the different ways to tackle storage sprawling?
 - f) What is carbon offset and what are the different offsetting activities?
 - g) How blade server improves green efficiency?
 - h) Why many companies go for outsourcing their archiving infrastructure and disaster recovery infrastructure to a third party?
 - i) What is ILM? What are the different stages of ILM model?
 - j) What is server consolidation? What are the green benefits of server consolidation?
- Q3 a) Define air pollution. Explain different air pollutants and air quality control in detail. (8)**
- b) Explain different solid waste management techniques. (7)**
- Q4 a) Describe in detail different major areas of avoidable cost to build business case for green. (8)**
- b) Describe different standards that cover green practices. (7)**
- Q5 a) Explain how data center efficiency can be maximized by choosing right location and consolidating physical infrastructure. (8)**
- b) Explain how data deduplication and thin provisioning helps in building green storage system. (7)**
- Q6 a) Explain how digital document and choosing printer, paper& ink can create a less-paper office. (8)**
- b) What is green gadget? How can you power gadgets intelligently? (7)**
- Q7 a) What are the green benefits of virtual Infrastructure? Describe different steps to build virtual infrastructure. (10)**
- b) Explain different industrial waste water treatment method. (5)**
- Q8 a) What are the different ways to improve green network efficiency? How can we create green Internet? (7)**
- b) Explain how green power technology in IT can increase energy efficiency. (8)**