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Question Paper Code: U9171

B.E./B.Tech. DEGREE EXAMINATION, APRIL/ MAY 2025

Open elective

Computer Science Engineering

21UCE971 - DEVELOPMENT OF SMART CITIES

(Common to EEE, ECE, MECH, IT, Chemical, Agri, BME, CSBS & CSD branches)

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5x 1 = 5 Marks)

1. Name the function of management which involves setting objectives and developing appropriate courses of action to achieve these objectives. CO1-U
(a) Directing (b) Organizing (c) Planning (d) Staffing
2. The future of transportation is _____. CO1-U
(a) shared (b) shared, electric and automated
(c) shared, electric (d) None of the above
3. How many percent of carbon dioxide increased in the atmosphere since pre-industrial times? CO1-U
(a) About 10% (b) About 20% (c) About 30% (d) About 40%
4. Class-2 Bluetooth devices have a range of: CO1-U
(a) 1m (b) 10 m (c) 100 m (d) 1000 m
5. How many mega schemes for revamping urban India will be launched by the PM Narendra Modi on 25th June'15? CO1-U
(a) 1 (b) 2 (c) 3 (d) 4

PART – B (5 x 3= 15 Marks)

6. List some of the smart city technologies that are currently being used in real-world cities. CO1-U

7. What are some of the smart city technologies that are being used to improve transportation? CO1-U
8. How can the Internet of Things (IoT) contribute to efficient waste management in smart cities? CO1-U
9. What are some challenges in implementing smart city technologies? CO1-U
10. What are some technologies that are commonly used in smart cities projects? CO1-U

PART – C (5 x 16= 80 Marks)

11. (a) How to analyze the feasibility of smart cities and what are the steps to be involved in smart city construction. CO3-Ana (16)
Or
(b) Analysis the benefits of smart city and importance of smart city. CO3-Ana (16)
12. (a) Design and construct smart building and detail explain about infrastructure development. CO2-App (16)
Or
(b) Compute the Environmental energy management system. CO2-App (16)
13. (a) Explain in detail about intelligent emergency service. CO2-App (16)
Or
(b) Apply the intelligent transportation and smart mobility for your new planned city? CO2-App (16)
14. (a) Explain in detail about Big Data analytics and its characteristics for the smart cities project. CO1-U (16)
Or
(b) Brief about remote sensing approach to smart city development in India. CO1-U (16)
15. (a) Case Study on Smart City Projects in India: An analysis of Nagpur CO2-App (16)
Or
(b) What problems do smart city applications solve? Explain in detail CO2-App (16)