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Question Paper Code: U9171

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2024

Open Elective

Civil Engineering

21UCE971-DEVELOPMENT OF SMART CITIES

(Common To All Branches)

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (5 x 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. Identify challenges to developing smart cities: CO1-U
(a) Security and privacy (b) Infrastructure
(c) Education (d) All of the above
3. The sum of all emissions of carbon dioxide which were induced by an entity's activities in a given timeframe is called CO1-U
(a) Carbon Footprint (b) Carbon Intensity
(c) Carbon Sinks (d) None of the above
4. In the current market scenario, IoT captures the maximum share in which one of these? CO1-U
(a) Industry (b) Security (c) Healthcare (d) Automation
5. Name the country that has proposed to assist in developing Delhi as the first global and smart city in India under the framework of the draft MoUs presented on 27th Apr'15? CO1-U
(a) Spain (b) France (c) China (d) Srilanka

PART – B (5 x 3= 15 Marks)

6. What are some of the emerging trends in smart cities technology? CO1-U
7. What is the primary goal of smart planning in smart cities? CO1-U
8. Discuss the role of citizen engagement in smart city planning CO1-U
9. What are some challenges in implementing smart city technologies? CO1-U
10. What are the risks of smart cities? 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) Why there is a need of smart cities a now? Categorize the components of smart cities. CO2-App (16)
Or
(b) Describe the Sustainable development construction and methodology for the smart cities CO2-App (16)
13. (a) Detailed explanations are needed on how smart planning works for smart cities CO1-U (16)
Or
(b) Explain in detail about the smart building and benefits of smart building. CO1-U (16)
14. (a) Explain in detail about Big Data analytics and its characteristics for the smart cities project CO1-U (16)
Or
(b) An overview of India's smart city development through the use of remote sensing and GIS technology. CO1-U (16)
15. (a) Describe the project organizational structures of the Madurai smart city project CO1-U (16)
Or
(b) Case Study on Urban Environment Quality Index CO1-U (16)