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ITBC 3602

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Following Paper ID and Roll No. to be filled in your Answer Book.

PAPER ID : 44006 Roll No.

B. Tech. Examination, 2024-25

(Even Semester)

SMART CITY APPLICATION DEVELOPMENT

Time : Three Hours] *[Maximum Marks : 60*

Note :– Attempt all questions.

SECTION – A

1. Attempt all parts of the following : 8×1=8

   (a) Define a smart city.

   (b) List any two components of a smart city.

   (c) What is IoT?

   (d) Name any one protocol used in IoT.

   (e) What is Blockchain?

   (f) Name any two blockchain platform.

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(g) Mention one application of a smart city.

(h) What is the role of smart energy in smart cities?

SECTION – B

2. Attempt any two parts of the following : 2×6=12

(a) Describe the eras of smart cities.

(b) Explain the role of IoT in smart cities.

(c) What are the challenges in implementing blockchain in smart cities?

(d) Write short notes on any two smart applications in a smart city.

SECTION – C

Note :– Attempt all questions. Attempt any two parts from each questions. 8×5=40

3. (a) Discuss the various smart technologies used in smart cities.

(b) Explain smart city services and applications with examples.

(c) Describe use cases of any two existing smart cities.

4. (a) Explain IoT architecture with a neat diagram.

(b) Describe any two IoT platforms.

(c) Write a note on wireless Ad-hoc networks.

5. (a) Explain types of blockchain with examples.

(b) Describe the opportunities and risks of blockchain in smart cities.

(c) Discuss the role of a decentralized ledger system.

6. (a) Describe intelligent transportation systems in smart cities.

(b) Explain how smart utility meters work.

(c) Discuss the impact of the fourth industrial revolution on smart cities.

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