Code: 5G16C

III B.Tech. II Semester Supplementary Examinations July/Aug 2021
Internet of Things
(Common to CSE & IT)

Max. Marks: 70   Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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| UNIT–I |

1. a) Define Internet of Things? Explain about things/objects in Internet of Things with example? 8M

   b) Explain in detail IoT architecture with neat diagram? 6M

OR

2. a) Define RFID? Explain principles of RFID? 7M

   b) Discuss various components of RFID system? 7M

| UNIT–II |

3. a) With neat sketches, demonstrate enterprise IoT stack and it role in designing of IoT applications. 7M

   b) Demonstrate Solutions Layer and it roles and responsibility in enterprise IoT stack. 7M

OR

4. Discuss the following in detail
   a) IoT security
   b) Cognitive Platform Layer
   c) Communication Layer
   d) Analytics Platform Layer 14M

| UNIT–III |

5. Explain in detail application areas of IoT in different industry manufacturing domains with example? 14M

OR

6. a) With an example explain the general connectivity pattern which allows devices to communicate to the core platform? 7M

   b) Explain about the role of IoT in connected car solutions? 7M

| UNIT–IV |

7. a) Illustrate Wireless Radio Frequency Identification (RFID) Infrastructure for wireless embedded internet in IoT. 7M

   b) Write in detail about ZigBee compact application protocol. 7M

OR

8. a) With neat sketches explain The 6LoWPAN Architecture. 7M

   b) Write short note on:
      i. 6LoWPAN Format
      ii. 6LoWPAN Addressing 7M

| UNIT–V |

9. a) What are the factors considered when you choosing your platform? 7M

   b) Write short note on:
      i) Microcontrollers
      ii) System-on-chips. 7M

OR

10. a) Discuss Why Arduino is most preferable IoT Kit for many applications justify your answer with example? 7M

    b) Create a Program for LED blinking in Arduino IDE? 7M

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III B.Tech. II Semester Supplementary Examinations July/August 2021
Python Programming
(Computer Science and Engineering)

Max. Marks: 70   Time: 3 Hours
Answer *any five full* questions by choosing one question from each unit (5x14 = 70 Marks)
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UNIT–I

1. a) Explain the process of computational problem solving?   7M
   b) Discuss in brief about operators in python with an example?   7M

OR

2. a) Write a python program to perform addition, subtraction, multiplication, integer division, truncation division on two values?   10M
   b) What is literal? List out kinds of literals in python with example?   4M

UNIT–II

3. a) Write a simple Python program to check the given number is prime or not   7M
   b) Explain decision making statements with an example program.   7M

OR

4. a) Write a program to print Fibonacci series up to n.   7M
   b) What is List structure? Discuss about iteration over list with an example. 7M

UNIT–III

5. a) What is an object? How they are represented in python, give an instances   10M
   b) Explain about memory deallocation and Garbage collection in python?   4M

OR

6. Describe the following
   a. Actual Arguments vs Formal Arguments
   b. Mutable vs immutable arguments
   c. Keywords arguments
   d. Default arguments in python   14M

UNIT–IV

7. a) Discuss in details about Modules in Python with an example   7M
   b) Write a short note on Exception Handling   7M

OR

8. Write a short note on String Handling methods with an example program
   a) Length   b) Find   c) Lower Case
   d) Replace   e) Slice   14M

UNIT–V

9. a) Write a brief note on SET data type?   7M
   b) Explain about Recursive problem Solving?   7M

OR

10. a) Explain about Dictionary type in python?   10M
    b) Compare Iteration vs recursion?   4M

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