

Roll No.

Total No. of Pages :02

Total No. of Questions : 09

MCA (Sem.-04)
IOT & BLOCKCHAIN TECHNOLOGY
Subject Code : PGCA-1967
M.Code : 91862
Date of Examination : 21-05-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION - B & C have FOUR questions each.
3. Attempt any FIVE questions from SECTION B & C carrying TEN marks each.
4. Select atleast TWO questions from SECTION - B & C and FIFTH from any.

SECTION-A

1. Write short notes on :

- a) Mention important characteristics of IoT technology.
- b) Name the communication protocols used in IoT architecture.
- c) What is a cryptocurrency?
- d) Mention few domain specific applications of blockchain.
- e) Outline the role of a sensor and an actuator in IoT system.
- f) Define a smart contract.
- g) What is Big Data Analytics?
- h) Define a block and transaction fee.
- i) What is permissioned model of blockchain?
- j) Mention the purpose of a CoAP protocol in IoT framework.

SECTION-B

2. Describe the physical design and logical design of IoT framework.
3. Briefly explain the different communication protocols used in IoT architecture.
4. Discuss the protocols, namely, ZigBee, UDP and TCP used in IoT communication model.
5. Elaborate the purpose and components of Arduino and Raspberry Pi.

SECTION-C

6. Take an example of supply chain financing and discuss how blockchain is beneficial for same?
7. What is a Block? Describe the public and private blockchain setup.
8. Explain the concept of creation of coins, payments and the problem of double spending with an example.
9. **Write short notes on the following :**
 - a) Security Attacks in blockchain
 - b) Bitcoin P2P networks.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.