

KAMARAJ COLLEGE (Autonomous)

Accredited with A+ Grade by NAAC

(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

THOOTHUKUDI – 628 003

(5 Pages)

Reg. No:

Question Code No : 25001417

Course Code : 24PECA24

PG Degree - End Semester Examinations, November 2025

Second Semester

M.C.A

Internet of Things

(For those who joined in July 2024 onwards)

Time : 3 Hours

Maximum : 75 Marks

PART - A (10 × 1 = 10 Marks)

Answer ALL Questions

Choose the correct answer:

1. Expand REST.
 - (a) Representational State Transfer
 - (b) Recurrent State Transfer
 - (c) Representational State Transmission
 - (d) Representational Stateless Transfer

2. _____ is a wireless technology that covers small distance to link different devices.
- (a) Bluetooth (b) Zigbee
(c) REST (d) Web Socket API
3. _____ virtualization combines physical memory of different servers to form a pool of single virtual memory.
- (a) Hardware (b) Memory
(c) Network (d) Software
4. _____ is a compact, fully featured single board mini-computer.
- (a) Arduino (b) Python
(c) RaspberryPI (d) Virtualization
5. In agriculture, IoT can be used to _____.
- (a) Manage urban traffic congestion
(b) Control human population
(c) Monitor soil moisture levels
(d) Predict global oil prices
6. Which cloud service model provides the basic infrastructure like virtual machines, storage and networking?
- (a) IaaS (b) PaaS
(c) SaaS (d) FaaS
7. Expand IoMT.

- (a) Internet of Medical Things
 - (b) Industry of Medical Things
 - (c) Innovation of Medical Things
 - (d) Industry of Metal Things
8. Wearable technology is a key feature of _____.
- (a) Smart education
 - (b) Smart health
 - (c) Smart home
 - (d) Smart industry
9. CoAP is based on which internet protocol layer?
- (a) Application layer
 - (b) Transport layer
 - (c) Network layer
 - (d) Link layer
10. What are the three domains of ETSI M2M architecture?
- (a) Device, Network, Gateway
 - (b) Device, Interface, Service
 - (c) Device, Network, Service
 - (d) Device, Host, Service

PART - B (5 X 5 = 25 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 250 words.

11. (a) What are the various characteristics of IoT? Explain.

(OR)

- (b) Explain Fog based architecture.

12. (a) Discuss on software virtualization.

(OR)

(b) Explain virtualization for IoT resource management through container based virtualization.

13. (a) Explain on IoT applications in politics.

(OR)

(b) Discuss on the IoT applications in constructions.

14. (a) Write a note on smart governance.

(OR)

(b) Explain how IoT is used in smart education.

15. (a) Explain service capabilities layers.

(OR)

(b) Discuss on security of CoAP.

PART - C (5 X 8 = 40 Marks)

Answer ALL Questions choosing either (a) or (b).

Answer should not exceed 600 words.

16. (a) Give the IoT architecture and explain its components.

(OR)

(b) Explain bluetooth technology with the help of a diagram.

17. (a) Explain how Arduino programming helps in IoT.

(OR)

(b) Give a brief outline of different types of virtualizations.

18. (a) Discuss on agricultural applications of IoT.

(OR)

(b) Give the cloud IoT architecture and explain.

19. (a) Elaborate on the IoT applications in smart cities.

(OR)

(b) Discuss on IoT applications in smart health care.

20. (a) Explain the IETF IoT & M2M communication technologies
- ROLL RPL and CoAP.

(OR)

(b) Discuss on security of IoT and M2M network technologies.