

Time: 2 1/2 Hours

75 Marks

**N. B.**

- (1) All questions are compulsory.
- (2) Figures to questions are compulsory.
- (3) Illustrations, in-depth answers and diagrams will be appreciated.
- (4) Mixing of sub-questions is not allowed.
- (5) Each question carries 5 Marks.

**Q. 1 Attempt the three of the following. 15**

- a. Explain basics of Ubicom. Explain five internal properties of ubiquitous systems
- b. What is meant by smart DEI? Explain in details.
- c. Describe service architecture model.
- d. Write note on Service Provision Life-Cycle
- e. Explain transparency and openness in modern Ubiquitous systems
- f. Explain ICT devices and CPI in working with ubiquitous systems.

**Q. 2 Attempt the three of the following. 15**

- a. Explain Mobile code. What are its benefits and challenges.
- b. Explain 3 kinds of transparency for mobile services.
- c. Explain smart cards. Explain its types
- d. Explain operating system for mobile computers
- e. Write note on device network.
- f. Describe Single and Multi -Modal visual interfaces

**Q. 3 Attempt the three of the following. 15**

- a. What do you mean by implicit HCI. Give example
- b. Write note on wearable computers and computer implants in ubicom implementations.
- c. Explain diversity of ICT Device Interaction
- d. Write note on HCD.
- e. What are gesture interfaces and its classification types
- f. Explain VRD in detail

**Q. 4 Attempt the three of the following. 15**

- a. Explain the life cycle of tagging.
- b. Compare between Embedded systems vs Real time system
- c. Describe and discuss Active and Passive tags
- d. Explain a Sensor net Architecture with an example.
- e. Write note on MEMS.
- f. Explain control system for physical world task.

**Q. 5 Attempt the three of the following.**

**15**

- a. What is the advantage of Bluetooth over InfraRed?
  - b. Discuss overlay networks
  - c. How is WMN better than WLAN?
  - d. Describe the types and characteristics of mobile networks
  - e. What are data network? List and explain different types of data network.
  - f. Explain Wireless Telecoms Networks
-