PUNE VIDHYARTHI GRIHA'S
COLLEGE OF SCIENCE & TECHNOLOGY
S.Y. B.SC (COMPUTER SCIENCE) – SEM-IV REGULAR AND ATKT FIRST HALF OF APRIL-2024
SUBJECT:IoT Technologies

Q.P CODE:USCS404 (TIME :2 ½ Hrs.) TOTAL MARKS :75M

Q1) Attempt the following (ANY FOUR) (Each of 5 marks) [20M]

a. Distinguish between : IoT and M2M.
b. What are the characteristics of IoT? Explain in brief.
c. Explain SoC Elements : FPGA and GPU in detail
d. Explain logical design of IoT.
e. Elaborate SoC-Arm Architecture with appropriate diagram.
f. Write a short note on IoT framework.

Q.2) Attempt the following (ANY FOUR) (Each of 5 marks) [20M]

a. Discuss: DHT11 Temperature Sensor in detail.
b. What is the role of Actuators in IoT?
c. Compare HTTP and CoAP
d. What are the limitations of Internet protocol stack?
e. Write a short note on Gas sensor in detail.
f. List features of Universal Asynchronous Receiver / Transmitter.

Q.3) Attempt the following (ANY FOUR) (Each of 5 marks) [20M]

a. Mention the methodologies for IoT applications.
b. Write a short note on Cloud computing
c. List disadvantages of Edge computing.
d. Enlist applications of IoT in Agriculture.
e. Write a short note on IoT edge platform.
f. How MQTT works to send and receive messages to IoT devices? Explain.

Q.4) Attempt the following (ANY Five) (Each of 3 marks) [15M]

a. How different sensors can be interfaced with IoT devices?
b. Write Advantages and uses of SoC.
c. Elaborate the terms : i) Analog Sensors ii) Digital Sensors
d. Write a short note on Arduino Uno microcontroller.
e. Enlist types of WSN in detail.
f. List various features of Fog computing.