SVKM'S
Mithibai College of Arts, Chauhan Institute of Science &
Amrutben Jivanlal College of Commerce and Economics (Autonomous)
Academic Year (2022-23)
Class: S.Y.B.Sc   Semester: IV

Program: Bachelor of Science   Max. Marks: 75
Subject: Computer Science   Time:
Course Code: USMACS403   Course Name : Physical Computing and IoT
Date: Duration: 2 hr 30 min

REGULAR EXAMINATION

Instructions: Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

1) This question paper contains 2 pages.
2) All Questions are compulsory.
3) **Answer to each new question to be started on a fresh page.**
4) Figures in brackets on the right hand side indicate full marks.
5) **Assume Suitable data if necessary**

Q.1   **Attempt any Three**   21
1   Define the term Embedded System. Draw and explain its various components.

2   Write a note on FPGA with respect to following :
     • Features
     • applications
3   State the need of following Linux commands in Raspberry PI.
     1)mv   2) cp   3) cat   4) ls   5) who am i   6) grep 7) touch
4   Analyze the comparison of CPU and GPU.

Q.2   **Attempt any Three**   21
1   In what way RFID plays a vital role in the field of IoT which helps in tracking inventory and improving customer satisfaction.
2   Compare M2M and IoT.
3   Discuss various inputs and outputs of an M2M Value Chain
4   What do you mean by IGVC? State the role of following with respect to IGVC :-
     • Data Factories
     • Service Provider/Data wholesalers
     • Intermediaries
     • Resellers

Q.3   **Attempt any Three**
1   Explain CoAP Protocol used in IOT
2   Pratham wants to purchase an IoT device to secure his office. Give him
     some tips to avoid IoT disasters.
3   Analyze the importance IoT in Education and Government sector
4   These days IoT has grabbed the popularity among other technologies.
     Discuss various characteristics/features which are responsible to make
     this popular.

Q.4   **Attempt any Three**
1   Draw pin diagram of Raspberry PI and list important pins.
2   Draw block diagram of 8051.
3   List and explain various features of Python.
4   State various features of carriots