(FOR THE CANDIDATES ADMITTED   SUBJECT CODE 20UCT6E4

DURING THE ACADEMIC YEAR 2020 – 2023 ONLY)   REG.NO.

N.G.M. COLLEGE (AUTONOMOUS): POLLACHI

END-OF-SEMESTER EXAMINATIONS: MAY – 2023

B.Sc. – COMPUTER TECHNOLOGY   **MAXIMUM MARKS: 70**

VI SEMESTER   **TIME: 3 HOURS**

PART – III

ELECTIVE II: EMBEDDED SYSTEMS

SECTION – A   (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS.   (K1)

1. What does ICE stand for?

a)	in-circuit EPOM	b)	in-code emulation
c)	in-circuit emulation	d)	in-code EPROM

2. Which of the following is considered as the heart component of ES?

a)	Software	b)	Processor
c)	Memory	d)	Hardware

3. In which of the following programming language can embedded software be programmed in?

a) C   b) C++   c) Java   d) Both a and b

4. Which of the following are medical applications of embedded systems?

a) CT   b) MRI   c) PET   d) All the above

5. What is Interprocess communication?

a) allows processes to communicate and synchronize their actions when using the same address space.

b) allows processes to communicate and synchronize their actions. [b]

c) allows the processes to only synchronize their actions without communication.

d) none of the mentioned

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES.   (K2)

6. Explain the constrains of Embedded system

7. Explain Real Time Clock [RTC]

8. Explain Hardware interrupt

9. Explain configuration files

10. Explain Basic OS Functions

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SECTION – B   **(5 X 4 = 20 MARKS)**
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11.   a)   Describe the components of embedded system hardware with diagram.

(OR)

      b)   List various forms of memory system.

12.   a)   Describe synchronous communication.

(OR)

      b)   Describe HDLC Protocol.

13.   a)   Describe software instruction related interrupts sources.

(OR)

      b)   Describe virtual Device Drivers.

14.   a)   Show the uses of loops.

(OR)

      b)   Show sequential programming model.

15.   a)   Describe task and data.

(OR)

      b)   Describe the features of real time operating system.

SECTION – C   **(4 X 10 = 40 MARKS)**
ANSWER ANY FOUR OUT OF SIX QUESTIONS.   (K4/K5)
(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS

16.   Discuss Embedded software in a system.

17.   Discuss Embedded system on chip and use of VLSI.

18.   Explain I/O Types with Examples.

19.   Discuss interrupt servicing mechanism.

20.   Discuss Modeling of Multiprocessor Systems.

21.   Explain Operating system services.

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