



NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
B. Tech. VI Semester
Cycle Test I
CSPC61 Embedded Systems Architecture

Date: 23.02.2022

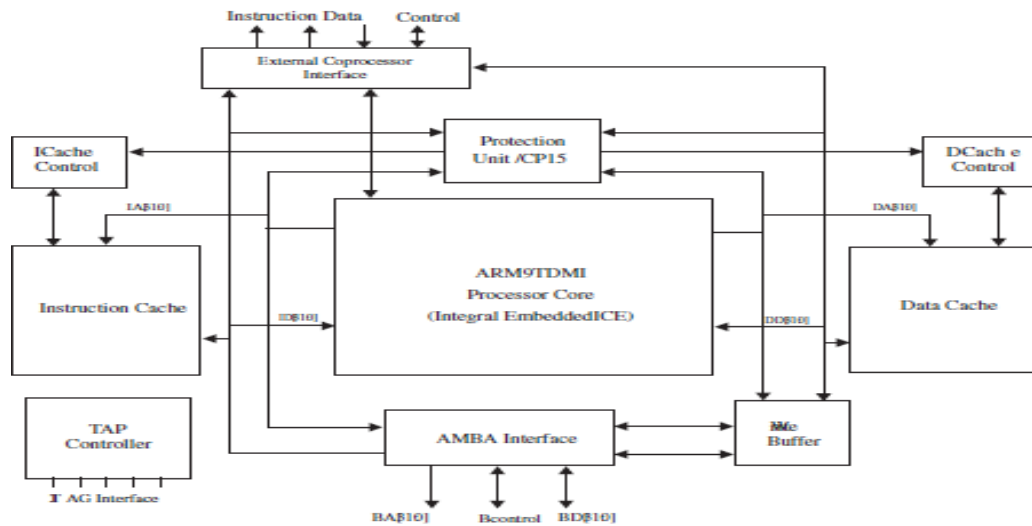
Max. Marks: 20

Time: 2:30pm-3:30 pm

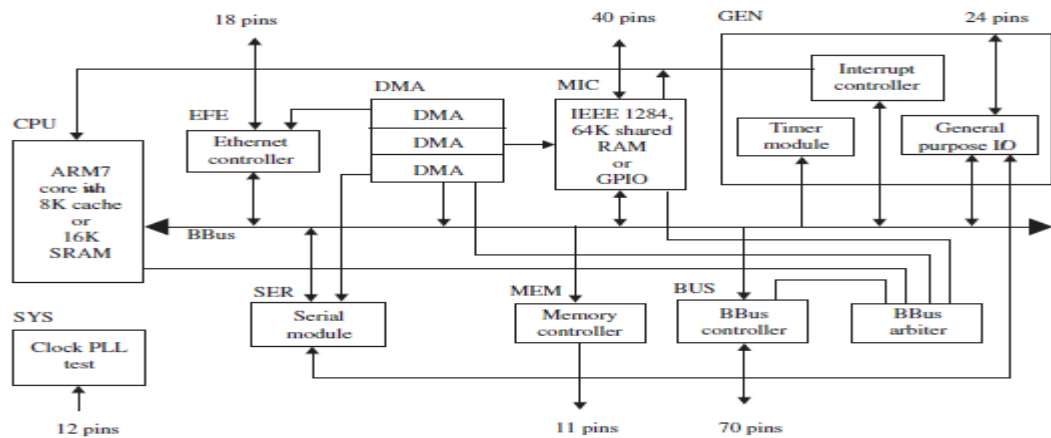
Answer ALL Questions

1. Name and describe any three different embedded system that is used in everyday life. **[1.5]**
2. Name five challenges commonly faced when designing an embedded system. **[1.5]**
3. Where in the Embedded Systems Model does each layer of the OSI model fall? Draw and verify. **[2]**
4. What are the two main differences between all embedded JVMs? How can the JVM be implemented in an embedded system? **[2+2]**
5. What is the difference between a high-level language and assembly language? Give an example of each. **[2+1]**
6. Name and describe two types of ISAs that fall under each of the three most common ISA models. Give three real-world processors that fall under the types of ISAs? **[1.5+1.5]**

7. Indicate whether Figures 1-a and 1-b are von Neumann-based or Harvard-based processors. Justify your answer. [5]



Figures 1-a



Figures 1-b