Roll No. [   ]

Total No. of Pages: 02
Total No. of Questions: 09

B. Tech. (Sem.-3^{rd)}
COMPUTER ARCHITECTURE
Subject Code: CS-201
Paper ID: [A0451]

Time: 3 Hrs.   **Max. Marks: 60**

INSTRUCTIONS TO CANDIDATE:

1. **Section –A, is Compulsory.**

2. **Attempt any four questions from Section-B.**

3. **Attempt any two questions from Section-C.**

Section –A   (10x2=20)

Q.1.   Write briefly

(a)   What do you mean by memory hierarchy?

(b)   Discuss 8255 chip

(c)   What is the difference between micro program and micro code?

(d)   What is the role of shift Registers in digital computers?

(e)   Differentiate between RISC & CISC

(f)   How cache Memory is useful in memory hierarchy

(g)   Write characteristics of I/O channels.

(h)   What is a multiprocessor? Explain the term SIMD

(i)   What is the role of shift register in digital computer?

(j)   Differentiate among direct mapping and associate mapping.

Section –B   (4x5=20)

Q.2.   What are Banch marks? Discuss various kinds of Benchmarks. Give their significance in
computer architecture.

Q.3.   Explain in brief about MIMD machines.

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Q.4. Discuss the Booth's Algorithm for binary multiplication.

Q.5. Which is the elements considered in Bus design.

Q.6. Discuss the hardware implementation of division for signed-magnitude data.

Section –C   (2x10=20)

Q.7. Discuss the following:

(a) Parallel Computing

(b) Distributed computing.

(c) Serial and Parallel interface

Q.8.(a) Explain instruction set of SPARC with descriptions

(b) Write and explain types of parallel processor systems.

Q.9. What do you mean by initialisation of DMA controller? How DMA controller works?

Explain with suitable block diagram.

*******END********