QP CODE	2100550869

Reg.No: | | | | | | | | | | | |

DMI-ST. EUGENE UNIVERSITY
DEGREE EXAMINATION – DECEMBER – 2022

SEM: X **055CS008 PARALLEL COMPUTING**

Time: 3 Hours Max. Marks: 100

Answer any Five questions (5 x 20 = 100 Marks)

1. a) Explain the applications of parallel computing and give examples. (7 Marks)
   b) State the types of parallelism. (5 Marks)
   c) Discuss distributed computing model and give examples. (8 Marks)

2. a) State the advantages and disadvantages of pipelining. (6 Marks)
   b) Enumerate the factors that cause pipelining conflicts. (8 Marks)
   c) Explain the architecture of superscalar processors and give an example. (6 Marks)

3. a) Briefly discuss the message passing model in parallel computing. (8 Marks)
   b) Give an example a message passing model and briefly explain how it functions. (6 Marks)
   c) State the basic components of the interconnection networks or parallel computers. (6 Marks)

4. a) Describe a snooping protocol. (10 Marks)
   b) State and explain the type of snooping protocols. (6 Marks)
   c) What is the functioning cache coherence? (4 Marks)

5. a) Discuss the directory organization. (6 Marks)
   b) Explain the cache coherence protocols classification. (8 Marks)
   c) What causes latency? (6 Marks)

6. a) Discuss the advantages of parallel computing. (12 Marks)
   b) How can parallelism be implemented? (6 Marks)
   c) What is the future of parallel processing? (2 Marks)

7. a) What is the difference between a pipeline and a superscalar? (6 Marks)
   b) Define a vector processor and briefly explain its working principle? (10 Marks)
   c) Compare a vector and scalar processor. (4 Marks)