19CMU35B

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Sixth Semester)

Branch – **COMPUTER SCIENCE**

DISCIPLINE SPECIFIC ELECTIVE – II:
PARALLEL & DISTRIBUTED COMPUTING

Time: Three Hours Maximum: 50 Marks

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1 Program Counter is also called _____.
i) instruction pointer ii) memory pointer
iii) data counter iv) file pointer

2 The cost of a parallel processing is primarily determined by _____.
i) time complexity ii) switching complexity
iii) circuit complexity iv) memory complexity

3 If one site fails in distributed system then _____.
i) the remaining sites can continue operating
ii) all the sites will stop working
iii) directly connected sites will stop working
iv) none of the mentioned

4 Processes on the remote systems are identified by _____.
i) host ID ii) host name and identifier
iii) identifier iv) process ID

5 In distributed systems, link and site failure is detected by _____.
i) polling ii) handshaking
iii) token passing iv) none of the mentioned

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6 a) Explain the scope of parallel computing.
OR
b) Narrate the communication cost in parallel machines.

7 a) Summarize the characteristics of task and interaction.
OR
b) Distinguish between the exploratory decomposition and speculative decomposition.

8 a) Describe the trends in distributed systems.
OR
b) Outline the different types of network.

9 a) State the API for the internet protocols.
OR
b) Analyze the importance of distributed objects.

10 a) Show the concept of domain name system with example.
OR
b) What are the methods of distributed deadlocks? Explain.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11 a) Analyze the physical organization of parallel platforms.

OR

b) Enumerate the routing mechanism for interconnection networks.

12 a) Compare and construct recursive decomposition and data decomposition.

OR

b) Examine the methods for containing interaction overheads.

13 a) Identify the focus on resource sharing.

OR

b) Discuss the architectural models in distributed systems.

14 a) Discover the implementation of remote method invocation.

OR

b) Assume the services descriptions and IDL for web service.

15 a) Elucidate the concurrency control in distributed transactions.

OR

b) Outline the requirements of X.500 directory services.

Z-Z-Z END