

SOUTHWESTERN UNIVERSITY NIGERIA

KM 20, SAGAMU-BENIN EXPRESSWAY, OKUN OWA, IJEBU-ODE, OGUN STATE.

FACULTY OF PURE & APPLIED SCIENCES

DEPARTMENT OF COMPUTER SCIENCE

HND TO BSC CONVERSION PROGRAMME

2018/2019 FOURTH SEMESTER EXAMINATION

COURSE CODE: CMP 423
Parallel

COURSE TITLE: Distributed System &

Computing

INSTRUCTION: Answer question 1 and any other three questions. **TIME:** 2hrs

1. (a) List and explain with the aid of diagrams the following parallel Algorithm models.
Table
(i) Pipeline model graph (ii) Work pool model (iii) mustorslave model
(b) State three(3) precautions in using mustorslave model.
(c) Discuss the Time complexity in an algorithm, explain briefly the three(3) categories.
2. (a) When designing an algorithm, discuss the features to consider.
(b) Distinguish between SISD Computers and SIMD Computer with diagrams.
(c) Discuss two applications of SISD Computers and SIMD Computers in each case.
(d) Explain the relevance of parallism in computers.
3. (a) Discuss false showing in distributed systems.
(b) Define the followings:
(i) Algorithm (ii) Concurrent procesing networks
(iii) Parallelism (iv) Hypercube
(c) Why would you design a system as a distributed system? List some advantages of distributed systems.
(d) List three(3) properties of distributed system.
4. (a) Discuss the following:
(i) Real-time systems (ii) Batch processing
(iii) On-line processing (iv) C0ncurrent processing
(b) Discuss the followings:
(i) Worst case complexity (ii) Average case complexity
(c) Explain the properties of hypercube networks
5. (a) What is shared memory Architecture
(b) Discuss task=parallel computation
(c) What is task latency
(d) Discuss data parallel computation.