

PLYMOUTH UNIVERSITY

MODULE CODE: CNET343SL

TITLE OF PAPER: Distributed Systems

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|----------------------|------------------------------------|
| TIME ALLOWED | 24 HOURS |
| DATE | 26th May 2022 |
| TIME | 1:30pm to 1:30pm (24 Hours) |
| FACULTY | SCIENCE AND TECHNOLOGY |
| SCHOOL | COMPUTING AND MATHEMATICS |
| ACADEMIC YEAR | 2021/22 |
| STAGE | THREE |

INSTRUCTIONS TO CANDIDATES:

Answer All Questions – Total Marks 100

Candidates are not permitted to look at the examination paper until instructed to do so.

Release to library? Yes

In-Class Test

Answer all questions

Question 01

(20 Marks)

01. Critically evaluate what is meant by a Distributed computing in your own words with a relevant example. You may use diagrams if needed. (7 Marks)
02. Determine two characteristics of a Distributed System with relevant examples. (6 Marks)
03. Compare and contrast distributed computing system and centralized system with examples. (7 Marks)

Question 02

(20 Marks)

01. What is meant by the architecture of a distributed system in distributed computing. (4 Marks)
02. Compare and contrast **Client Server** architecture and **Peer to peer** architecture. (5 Marks)
03. Critically evaluate '**Three Tier Architecture**' in Distributed computing in your own words by explaining all three tiers and their responsibilities. (7 Marks)
04. Explain two challenges in Distributed computing in your own words. (4 Marks)

Question 03

(20 Marks)

01. Analyze what is meant by **thick client** and **thin Client** in client server computing. (6 Marks)
02. List down two advantages of **thick client** and **thin client**. (5 Marks)
03. What is meant by a Server in Client server architecture? (4 Marks)
04. Explain two types of servers in client server model with examples. (5 Marks)

Question 04

(20 Marks)

01. Explain what is meant by OSI seven-layer model in data communication on distributed computing system. You may use relevant examples if needed. (5 Marks)
02. Explain what is meant by Transmission Control Protocol (TCP) with its' responsibilities. (5 Marks)
03. Explain what is meant by User Data Protocol (UDP) with Its' responsibilities. (5 Marks)
04. Explain what is meant by a Socket and its operation in network programming. (5 Marks)

Question 05**(20 Marks)**

01. Explain what is meant by Service Oriented Architecture (SOA). (4 Marks)
02. Explain Service Oriented Architecture triangle in your own words. (6 Marks)
03. Explain three characteristics of web services in SOA. (5 Marks)
04. Explain what is meant by an Endpoint in WCF services with its components. (5 Marks)