UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2017/2018

COURSE NAME   : DISTRIBUTED SYSTEM

COURSE CODE   : BIE 33203

PROGRAMME CODE : BIP

EXAMINATION DATE : JUNE / JULY 2018

DURATION   : 3 HOURS

INSTRUCTION   : ANSWER **ALL** QUESTIONS

TERBUKA

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

Q1   (a)   What is the different between Architectural Model and Fundamental Model?

(6 marks)

(b)   Discuss types of models in Fundamental Model.

(6 marks)

(c)   The Security Model for distributed system is used to mitigate several types of attack such as `Man in the Middle`.

(i) Draw `Man in the Middle` attack process.

(10 marks)

(ii) In your opinion, describe **FOUR (4)** significant solutions to reduce this type of attack.

(8 marks)

Q2   (a)   Explain **FOUR (4)** characteristics of Interprocess Communication (IPC) in distributed system.

(8 marks)

(b)   What is the difference between Marshalling and Unmarshalling in External Data Representation of distributed system?

(4 marks)

(c)   Draw and explain the process of IPC consists of transmitting a message between a sockets.

(10 marks)

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Q3   (a)   Explain **TWO (2)** advantages and disadvantages of Remote Procedure Call (RPC) in the distributed system.

(8 marks)

(b)   Discuss **THREE (3)** Call Semantics types.

(6 marks)

(c)   Provide **TWO (2)** differences between Remote Procedure Call (RPC) and Remote Method Invocation (RMI).

(8 marks)

Q4   (a)   What happen if one site fails in a distributed system? Justify your answer.

(5 marks)

(b)   Write **TWO (2)** examples of distributed operating system.

(5 marks)

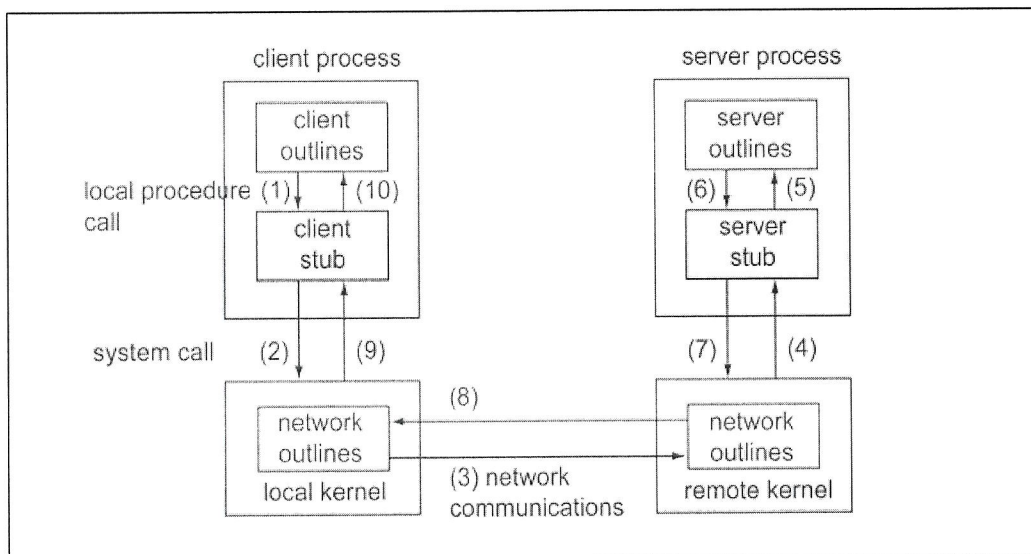(c)   Answer questions **Q4(c)(i)** and **Q4(c)(ii)** according to **Figure Q4(c)**.

Figure Q4(c)

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      (i)   Name the mechanism shown in **Figure Q4(c)**.

                                  (2 marks)

      (ii)   Explain **ALL** processes in **Figure Q4(c)**.

                                  (14 marks)

- END OF QUESTION -