UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2018/2019

COURSE NAME	:	DISTRIBUTED SYSTEM
COURSE CODE	:	BIE 33203
PROGRAMME CODE	:	BIP
EXAMINATION DATE	:	JUNE / JULY 2019
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

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

TERBUKA

Q1   (a)   Ahmad and Wing Lun were playing online car racing game at their home respectively. However, the game was hanged at certain time. State **TWO (2)** causes of the situation.

(4 marks)

(b)   Lina accesses the Google search engine through her smart phone that connects to her campus hotspot or wireless signal. However, her phone does not connect to wireless signal when she is at home. State **TWO (2)** problems of the situation.

(4 marks)

(c)   As a website administrator, you may need to have portable and handheld devices in a distributed system. Identify the typical practice to check on the network connectivity.

(2 marks)

(d)   Describe **TWO (2)** functions of online text retrieval.

(4 marks)

(e)   Describe **THREE (3)** services of GoogleDrive.

(6 marks)

Q2   (a) been   Izrul has sent the critical messages to Iman recently. However, the messages have read by an unknown person. Describe the problem using a diagram.

(10 marks)

(b)   Draw a diagram for the clients' communication improvement in distributed systems.

(10 marks)

Q3   (a)   Explain **TWO (2)** differences between two-tier and three-tier architectures.

(4 marks)

(b)   Describe the architectural elements between communicating entities and communication paradigm with a table.

(6 marks)

Q4   (a)   Explain and give example for each following the synchronous and asynchronous communication.

(4 marks)

(b)   Describe ServerSocket Class and Socket Class for client and server.

(2 marks)

(c)   Aina found the connection result as in **Figure Q4(c)**.   State the reason of the connection problem.

(4 marks)

Figure Q4(c)

Q5 (a) Aiman found his visitor counter on his client is not yet changed when his access a certain website. State the problems of client-server communication.

(5 marks)

(b) Based on the answer in **Q5(a)**, state the possible Remote Procedure Call (RPC) solutions for Aiman.

(5 marks)

Q6 (a) Programmer wrote Java coding as in **Figure Q6(a)**. Describe **THREE (3)** functions of the code.

(6 marks)

```
Thread starter = new Thread (new ServerStart());
starter.start();
```

Figure Q6(a)

(b) A client cannot access the Chat server if parameter A and B values are incorrect as shown in **Figure Q6(b)**. State parameter name for A and B.

(4 marks)

```
try
    {
      sock = new Socket (address, port);
      InputStreamReader streamreader = new
      InputStreamReader(sock.getInputStream());
      reader = new BufferedReader(streamreader);
      writer = new PrintWriter(sock.getOutputStream());
      writer.println(username+ ":has connected.:Connect");
      writer.flush();
      isConnected = true;

    }
```

Figure Q6(b)

- END OF QUESTIONS -

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