



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER I  
SESSION 2022/2023**

COURSE NAME : CLOUD COMPUTING  
COURSE CODE : BIW 33703  
PROGRAMME CODE : BIW  
EXAMINATION DATE : FEBRUARY 2023  
DURATION : 3 HOURS  
INSTRUCTION : 1. ANSWER ALL QUESTIONS  
2. THIS FINAL EXAMINATION IS CONDUCTED VIA **CLOSED BOOK**.  
3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK

**TERBUKA**

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

- Q1** Applications and services used in cloud computing are those that operate on a distributed network employing virtualized resources and are accessed through widely used Internet protocols and networking standards.
- (a) Examine **FIVE (5)** factors that a company should consider before implementing a cloud computing. (10 marks)
  - (b) Discuss the concept of virtualization in cloud computing. (5 marks)
  - (c) Draw the US National Institute of Standards and Technology (NIST) model of cloud computing including the characteristics, service model and deployment model. (6 marks)
  - (d) Discuss **TWO (2)** deployment model in **Q1 (c)**. (4 marks)

- Q2** Consider the following scenario:

You are the IT consultant for Company Fatihah. There are requirements to add more hardwares and softwares for Finance department. You have heard about cloud computing services. The top management asked you to decide either to buy or lease from cloud computing service.

Based on the above case study, answer the following questions.

- (a) Outline a proposal to top management either to buy or lease from cloud computing service by considering: challenge, unique characteristics and benefits. (15 marks)
- (b) Determine type of services required for this company if the company decides to lease from cloud computing service provider. (3 marks)
- (c) Select **TWO (2)** types of cloud services in **Q2(b)** and propose **THREE (3)** cloud computing service provide for each of the services. (5 marks)

**TERBUKA**

- Q3** (a) Analyze **TWO (2)** characteristics of Storage as a Service in a cloud computing environment. (4 marks)
- (b) Analyze **THREE (3)** characteristics of OpenID application to secure any cloud application. (6 marks)
- (c) State and explain a function of any one cloud storage provider. (3 marks)
- (d) Discuss **SIX (6)** important points in reliability aspect of Storage as a Service cloud computing. (12 marks)
- Q4** (a) Illustrate **THREE (3)** services in Platform as a Service (PaaS). (6 marks)
- (b) Explain **THREE (3)** characteristics of Software as a Service (SaaS). (6 marks)
- (c) Describe thin client. (3 marks)
- (d) UTHM enrollment has reached 15,000 students. The management asked you to conduct a research to use cloud computing services to deal with the growth. However, they worried about the security of the student and corporate data.
- (i) Compare **THREE (3)** cloud based Disaster Recovery approaches to be proposed to the management. (6 marks)
- (ii) Prepare a simple proposal for the best approach identify in **Q4(d)(i)**. Justify your answer. (4 marks)

- END OF QUESTIONS -