

**SECTION B: 70 MARKS**  
**BAHAGIAN B:70 MARKAH**

**INSTRUCTION:**

This section consists of **THREE (3)** structured questions. Answer **ALL** questions.

**ARAHAN:**

*Bahagian ini mengandungi **TIGA (3)** soalan berstruktur. Jawab semua soalan.*

**QUESTION 1****SOALAN 1**

- |            |  |                             |
|------------|--|-----------------------------|
| CLO1<br>C1 | (a) Name <b>TWO (2)</b> major components in a business intelligence system.<br><i>Namakan <b>DUA (2)</b> komponen utama dalam sistem kecerdasan perniagaan</i>         | [2 marks]<br><br>[2 markah] |
| CLO1<br>C2 | (b) Explain <b>THREE (3)</b> benefits of Business Intelligence to organization.<br><i>Terangkan <b>TIGA (3)</b> kelebihan kecerdasan perniagaan kepada organisasi.</i> | [3 marks]<br><br>[3 markah] |
| CLO1<br>C1 | (c) List <b>TWO (2)</b> types of Decision Support System (DSS).<br><i>Senaraikan <b>DUA (2)</b> jenis Sistem Sokongan Keputusan (DSS).</i>                             | [2 marks]<br><br>[2 markah] |
| CLO1<br>C2 | (d) Differentiate between OLAP and data warehouse<br><i>Bezakan antara OLAP dan gudang data</i>  | [4 marks]<br><br>[4 markah] |
| CLO1<br>C2 | (e) Describe <b>TWO (2)</b> functions of data warehouse.<br><i>Huraikan <b>DUA (2)</b> fungsi gudang data.</i>   | [4 marks]<br><br>[4 markah] |

CLO1 C2	(f) Explain about data cleansing. <i>Terangkan mengenai pembersihan data.</i>	 [2 marks] [2 markah]
CLO1 C3	(g) Sketch ETL (Extract, Transform, Load) process in data warehouse. <i>Lakarkan proses ETL (Extract, Transform, Load) dalam gudang data.</i>	 [6 marks] [6 markah]
CLO1 C3	(h) Illustrate 2-tier architecture in data warehouse. <i>Illutrasikan 2-tier architecture di dalam gudang data.</i>	 [2 marks] [2 markah]

**QUESTION 2*****SOALAN 2***

CLO1

C1

- (a) State the definition of OLAP.

*Nyatakan definisi OLAP.*

[2 mark]

[2 markah]

CLO1

C2

- (b) Explain **TWO (2)** advantages of an OLTP system.

*Terangkan **DUA (2)** kelebihan sistem OLTP.*

[4 marks]

[4 markah]

CLO1

C2

- (c) Discuss **THREE (3)** challenges of an OLTP system.

*Bincangkan **TIGA (3)** cabaran sistem OLTP.*

[6 mark]

[6 markah]

CLO1

C2

- (d) Explain **TWO (2)** types of Online Analytical Processing (OLAP) Architecture.

*Terangkan **DUA (2)** jenis seni bina Proses Analisis Atas Talian (OLAP).*

[4 marks]

[4 markah]

CLO1

C2

- (e) Differentiate between Multidimensional Online Analytical Processing (MOLAP) and Relational Online Analytical Processing (ROLAP) in OLAP architecture.

*Berikan perbezaan antara multidimensional online analytical processing (MOLAP) dan Relational Online Analytical Processing (ROLAP) pada OLAP architecture*

[4 marks]

[4 markah]

CLO1  
C3

- (f) You work as a data analysis manager at an airlines company. Explain how multidimensional data could support the Online Analytical Processing (OLAP) operations in the company with an example.

*Anda bekerja sebagai pengurus analisis data di sebuah syarikat penerbangan. Terangkan bagaimana data dimensi pelbagai dapat menyokong Operasi Pemprosesan Analitikal atas talian (OLAP) di syarikat beserta contoh.*

[5 marks]

[5 markah]

**QUESTION 3*****SOALAN 3***CLO1  
C1

- (a) State
- THREE (3)**
- types of dashboard.

*Nyatakan **TIGA (3)** jenis papan pemuka*

[3 marks]

[3 markah]

CLO1  
C2

- (b) Explain
- ONE (1)**
- advantage of dashboard in report and presentation.

*Terangkan **SATU (1)** kelebihan papan pemuka dalam laporan dan pembentangan.*

[2 marks]

[2 markah]

CLO1  
C2

- (c) Explain dashboard in report and presentation.

*Terangkan papan pemuka dalam laporan dan persembahan*

[2 marks]

[2 markah]

CLO1  
C2

- (d) Differentiate between scorecards and dashboard.

*Bezakan antara kad skor dan papan pemuka.*

[4 marks]

[4 markah]

CLO1  
C2

- (e) Explain
- TWO (2)**
- perspectives in the balanced scorecard.

*Terangkan **DUA (2)** perspektif bagi keseimbangan kad skor.*

[4 marks]

[4 markah]

CLO1  
C3

- (f) As an analytics manager in a clothing and fashion retailer company, you need to build a dashboard for your company sales performance. Sketch a design of your enterprise performance dashboard that consists information of types clothing and at least have 3 charts.

*Sebagai pengurus analitik di dalam syarikat peruncit dan fesyen pakaian, anda perlu membina papan pemuka prestasi penjualan syarikat anda. Lakar reka bentuk papan pemuka prestasi perniagaan anda yang mengandungi maklumat jenis pakaian dan sekurang-kurangnya mempunyai 3 carta.*

[5 marks]

[5 markah]

**-END OF THE QUESTION-**

*-SOALAN TAMAT-*