

13

SULIT



BAHAGIAN PEPERIKSAAN DAN PENILAIAN  
JABATAN PENDIDIKAN POLITEKNIK  
KEMENTERIAN PENDIDIKAN TINGGI

JABATAN TEKNOLOGI MAKLUMAT DAN KOMUNIKASI

PEPERIKSAAN AKHIR  
SESI DISEMBER 2015

DFC2033: DATABASE SYSTEM

TARIKH : 12 APRIL 2016 (SELASA)  
MASA : 8.30 AM - 10.30 AM (2 JAM)

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Kertas ini mengandungi **DUA PULUH TIGA (23)** halaman bercetak.

Bahagian A: Objektif (30 soalan)

Bahagian B: Struktur (2 soalan)

Dokumen sokongan yang disertakan : Tiada

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JANGAN BUKA KERTAS SOALANINI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

**SECTION A : 45 MARKS****BAHAGIAN A : 45 MARKAH****INSTRUCTION:**

This section consists of **THIRTY (30)** objective questions. Mark your answers in the OMR form provided.

**ARAHAN :**

Bahagian ini mengandungi **TIGA PULUH (30)** soalan objektif. Tandakan jawapan anda di dalam borang OMR yang disediakan.

CLO1

C1

1. Identify which of the following is the function of database.

*Kenalpasti yang manakah di antara berikut merupakan fungsi pangkalan data.*

- A. To collect and organize input data.  
*Kumpul dan susun data yang dimasukkan.*
- B. To check all input data.  
*Semak semua data yang dimasukkan.*
- C. To check all spellings.  
*Semak semua ejaan.*
- D. To output data.  
*Keluarkan data.*

CLO1

C1

2. Choose the software that is commonly used in database

*Pilih perisian yang biasa digunakan sebagai pangkalan data*

- A. Oracle.
- B. SQL Access.
- C. SQL Desktop.
- D. Linux.

- CLO1      3. Choose suitable category of Database Management System (DBMS) suitable to manage “Sistem Pengurusan Maklumat Pekerja”.

*Pilih kategori Sistem Pengurusan Pangkalan Data (SPPD) yang paling sesuai untuk menguruskan Sistem Pengurusan Maklumat Pekerja.*

- A. Oracle
- B. Server database
- C. Desktop database
- D. Microsoft Access

- CLO1      4. Internal Schema is one of the level in Three-Schema Architecture. Choose the **TRUE** statement about Internal Schema

*Internal Schema adalah salah satu aras di dalam “Three-Schema Architecture”. Pilih pernyataan yang **BENAR** tentang Internal Schema*

- A. It hides the details of physical storage structures and concentrates on describing entities, data types, relationships, user operations, and constraints  
*Menyembunyikan butiran struktur penyimpanan fizikal dan menumpukan pada penerangan entiti, jenis data , hubungan, operasi pengguna, dan kekangan*
- B. Uses a physical data model and describes the complete details of data storage and access paths for the database  
*Menggunakan model data fizikal dan menerangkan butir-butir lengkap penyimpanan data dan akses laluan untuk pangkalan data*
- C. Implementation of data model  
*Pelaksanaan model data*
- D. The part of the database that a particular user is interested in and hides the rest of the database from user  
*Sebahagian daripada pangkalan data yang diminati oleh sesetengah pengguna dan menyembunyikan sebahagian pangkalan data yang lain daripada pengguna*

CLO1  
C1

5.

“ all companies operate four departments in their organization”  
“Semua syarikat mempunyai empat jabatan dalam organisasi mereka”

Figure A2/Rajah A2

Identify which of the following relationship represented in Figure A2

*Kenalpasti perhubungan yang diwakili oleh Rajah A2*

- A. one-to-one relationship  
*Hubungan satu ke satu*
- B. one-to-many relationship  
*Hubungan satu ke banyak*
- C. many-to-one relationship  
*Hubungan banyak ke satu*
- D. many-to-many relationship  
*Hubungan banyak ke banyak*

CLO1  
C1

6.

“set of allowable values for one or more attributes ”  
“set nilai yang dibenarkan bagi satu atau lebih atribut ”

Figure A3/Rajah A3

Choose which of the following related to the Figure A3.

*Pilih yang manakah antara berikut berkaitan dengan Rajah A3.*

- A. Cardinality  
*Kardinaliti*
- B. Tuple  
*Tupel*
- C. Degree  
*Darjah*
- D. Domain  
*Domain*

CLO1  
C2

7.

STUDENT x COURSE

Figure A4 / Rajah A4

Choose the meaning of following relational algebra in the Figure A4 above

*Pilih maksud pernyataan relational algebra yang diberikan didalam rajah A4 di atas*

- Compute the natural join between the STUDENT and COURSE relations  
*Kira 'natural join' antara jadual STUDENT dan COURSE*
- Compute the left outer join between the STUDENT and COURSE relations  
*Kira 'left outer join' antara jadual STUDENT dan COURSE*
- Compute the Cross Product between the STUDENT and COURSE relations  
*Kira 'Cross Product' antara jadual STUDENT dan COURSE*
- Compute the outer join between the STUDENT and COURSE relations  
*Kira 'outer join' antara jadual STUDENT dan COURSE*

CLO1  
C3

8.

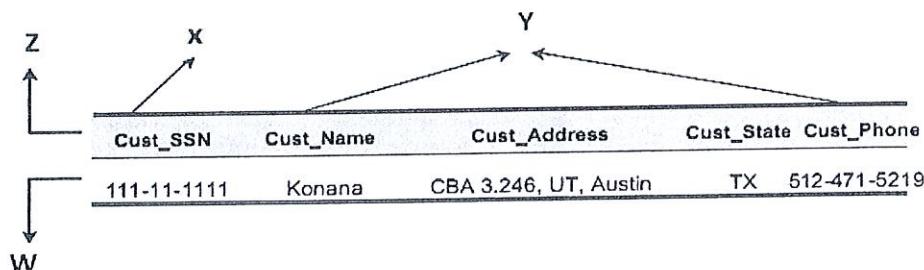


Figure A5/ Rajah A5

Based on the Figure A5, identify which one is the Candidate Key?

*Berdasarkan Rajah A5, kenalpasti yang manakah kekunci calon?*

- W
- X
- Y
- Z

**Question 9 and 10 are based on Figure A6 below :**

**Soalan 9 dan 10 adalah berdasarkan Rajah A6 di bawah :**

Employees			Department	
EmpNo	EmpName	Emp_DeptNo	DeptNo	DeptName
555	Ahmad	300	100	Sales
666	Aishah	200	200	Finance

Figure A6 / Rajah A6

CLO2  
C1

9.

EmpNo	EmpName	Emp_DeptNo	DeptNo	DeptName
555	Ahmad	300	100	Sales
555	Ahmad	300	200	Finance
555	Ahmad	300	300	Marketing
666	Aishah	200	100	Sales
666	Aishah	200	200	Finance
666	Aishah	200	300	Marketing

Table A1/ Jadual A1

Identify the operator in relational algebra applied from tables EMPLOYEES and DEPARTMENT which produce the following result as in Table A1.

*Kenalpasti operator algebra hubungan yang diaplikasikan daripada Jadual EMPLOYEES dan DEPARTMENT untuk hasil seperti Jadual A1.*

- A. An outer join operator/Operator 'outer join'
- B. The project operator/Operator 'project'
- C. The cross product operator/Operator 'cross product'
- D. The natural join operator/Operator 'natural join'

CLO2  
C1

10.

EmpNo	EmpName	DeptNo	DeptName
NULL	NULL	100	Sales
666	Ahmad	200	Finance
555	Aishah	300	Marketing

Table A2/ Jadual A2

Identify the operator in relational algebra applied from tables EMPLOYEES and DEPARTMENT which produce the following result as in Table A2

*Kenalpasti operator relational algebra yang di aplikasikan daripada Jadual EMPLOYEES dan DEPARTMENT untuk hasil seperti Jadual A2*

- A. An outer join operator/Operator 'outer join'
- B. The project operator/Operator 'project'
- C. The cross product operator/Operator 'cross product'
- D. The natural join operator/ Operator 'natural join'

CLO2  
C2

11. Select the result of the **JOIN** operator on A and B relation, if relation A has **m** attributes and relation B has **n** attributes.

*Pilih hasil daripada operator **JOIN** pada hubungan A dan B, jika hubungan A mempunyai **m** atribut dan hubungan B mempunyai **n** atribut.*

- A. mn
- B. m + n
- C. m x n
- D. (m + n)/2

CLO2  
C3

12. Choose a relational algebra expression to find customers, who have a payment balance of over than RM 1000.

*Pilih ungkapan algebra hubungan untuk mencari pelanggan yang mempunyai baki bayaran lebih daripada RM 1000.*

- A.  $\Pi \text{customer\_name} (\sigma \text{balance} > 1000 \text{ (Deposit)})$
- B.  $\sigma \text{customer\_name} (\Pi \text{balance} > 1000 \text{ (Deposit)})$
- C.  $\Pi \text{customer\_name} (\sigma \text{balance} > 1000 \text{ (Borrow)})$
- D.  $\sigma \text{customer\_name} (\Pi \text{balance} > 1000 \text{ (Borrow)})$

CLO1 13. In Entity Relationship Diagram (ERD), choose a symbol that represent a relationship?

C1

*Dalam Gambarajah Hubungan Entiti (ERD), simbol manakah mewakili hubungan?*

- A. Ellipse  
*Elips*
- B. Dashed ellipse  
*Elips garis putus-putus*
- C. Rectangle  
*Segi Empat Tepat*
- D. Diamond  
*Diamond*

CLO1 14. In Entity Relationship Diagram (ERD), choose a symbol that represent a derived attribute?

C1

*Dalam Gambarajah Hubungan Entiti (ERD,) simbol manakah mewakili atribut terbitan*

- A. Ellipse  
*Oval*
- B. Dashed ellipse  
*Oval garis putus-putus*
- C. Rectangle  
*Segi Empat Tepat*
- D. Triangle  
*Segitiga*

CLO1 15. Select the entity which most likely contains INVALID attributes.

C2

*Pilih entiti yang berkemungkinan besar mengandungi atribut yang TIDAK SAH.*

- A. Entity: Car, Attributes: Car Type, Owner Occupation, Owner Salary, Speed  
*Entiti: Kereta, Atribut: Jenis Kereta, Pekerjaan Pemilik, Gaji Pemilik, Kelajuan*
- B. Entity: Home, Attributes: Number of Bedrooms, Owner, Address, Date Built  
*Entiti: Rumah, Atribut: Jumlah Bilik, Pemilik, Alamat, Tarikh Dibina*
- C. Entity: Mother, Attributes: Name, Birthdate, Occupation, Number of Children  
*Entiti: Ibu, Atribut: Nama, Tarikh Lahir, Pekerjaan, Bilangan Anak*
- D. Entity: Pet, Attributes: Name, Birthdate, Owner  
*Entiti: Haiwan, Atribut: Nama, Tarikh Lahir, Pemilik*

- CLO1  
C3
16. Each book in the library is categorized under a particular field of study. There are hundreds of books available under each field of study. Identify the relationship between field of study and books.

*Setiap buku di perpustakaan dikategorikan di bawah bidang pengajian yang tertentu. Terdapat beratus-ratus buku di bawah setiap bidang pengajian. Kenalpasti perhubungan antara bidang pengajian dengan buku.*

- A. M:N
- B. 1:1
- C. 1:M
- D. M:1

- CLO2  
C1
17. Select the multivalued attribute?

*Pilih attribut yang berjenis berbilang nilai*

- A. Person's name  
*Nama orang*
- B. Class location  
*Lokasi kelas*
- C. Book title  
*Tajuk buku*
- D. Bank account balance  
*Baki akaun bank*

- CLO2  
C1
18. Identify the symbol to represent a weak entity set in an E-R model.

*Kenalpasti simbol yang mewakili set entiti lemah dalam model E-R..*

- A. Dotted rectangle  
*Segiempat tepat bertitik*
- B. Diamond  
*Diamond*
- C. Double outlined rectangle  
*Segiempat tepat bergaris dua*
- D. Double line  
*Garisan berkembar*

- CLO2 C1 19. Choose SQL command that lets you modify data in a table  
*Pilih arahan SQL yang membolehkan anda mengubahsuai data dalam jadual*
- A. EDIT
  - B. ALTER
  - C. UPDATE
  - D. MODIFY
- CLO2 C1 20. Identify the output when you issue the “DELETE FROM tablename” command without specifying a “WHERE” condition.  
*Kenalpasti output apabila anda mengeluarkan arahan DELETE FROM tanpa menyatakan kondisi “WHERE”.*
- A. No rows will be deleted  
*Tiada baris yang akan dihapuskan*
  - B. The first row will be deleted  
*Baris pertama yang akan dihapuskan*
  - C. The last row will be deleted  
*Baris terakhir yang akan dihapuskan*
  - D. All rows will be deleted.  
*Semua baris akan dihapuskan*

CLO2 21. Identify the function of ALTER TABLE clause.

C1

*Kenalpasti fungsi klausu ALTER TABLE?*

- A. The SQL alter table deletes data from the table.  
*Pernyataan SQL ALTER TABLE akan memadamkan data dari jadual.*
- B. The SQL ALTER TABLE clause is used to insert data into database table.  
*Pernyataan SQL ALTER TABLE digunakan untuk memasukkan data ke dalam jadual pangkalan data.*
- C. The SQL ALTER TABLE clause is used to delete database table.  
*Pernyataan SQL ALTER TABLE digunakan untuk memadamkan jadual pangkalan data.*
- D. The SQL ALTER TABLE clause modifies a table definition by altering, adding or deleting table columns or constraints.  
*Pernyataan SQL ALTER TABLE akan merubah definasi jadual dengan cara mengubah, menambah atau memadam lajur dalam jadual atau sekatan kepada jadual.*

CLO2 22. Select SQL command to remove rows from a table CUSTOMER

C2

*Pilih pernyataan SQL untuk membuang baris daripada jadual CUSTOMER*

- A. REMOVE FROM CUSTOMER WHERE...
- B. DROP FROM CUSTOMER WHERE...
- C. DELETE FROM CUSTOMER WHERE ...
- D. UPDATE FROM CUSTOMER WHERE...

CLO2 23. Choose SQL statement to change “Nur” into “Nurul” in the “FirstName” column in the Employee table

C2

*Pilih arahan SQL untuk menukar “Nur” kepada “Nurul” pada lajur “FirstName” dalam jadual Employee*

- A. MODIFY Employee SET FirstName='Nurul' WHERE FirstName='Nur'
- B. UPDATE Employee SET FirstName='Nurul' WHERE FirstName='Nur'
- C. UPDATE Employee SET FirstName='Nur' INTO FirstName='Nurul'
- D. MODIFY Employee SET FirstName='Nur' INTO FirstName='Nurul'

CLO2  
C2

24.

```
SELECT Name FROM Customer WHERE State = 'VA';
```

Figure A7 / Rajah A7

Find the SQL statement below that is equal to the SQL statement in the Figure A7.

*Cari pernyataan SQL yang mempunyai maksud yang sama dengan pernyataan SQL di dalam Rajah A7*

- A. SELECT Name IN Customer WHERE State IN ('VA');
- B. SELECT Name IN Customer WHERE State = 'VA';
- C. SELECT Name IN Customer WHERE State = 'V';
- D. SELECT Name FROM Customer WHERE State IN ('VA');

CLO2  
C2

25. Select two commands from the following orders that are used in ORDER BY clauses

*Pilih dua daripada arahan yang berikut digunakan dalam klausu ORDER BY*

- i. ABS
- ii. ASC
- iii. DESC
- iv. DISC

- A. i and ii
- B. i and iii
- C. ii and iii
- D. iii and iv

CLO2  
C3

26. Choose the statement for using comparison operators in SQL.

*Pilih pernyataan untuk menggunakan operator perbandingan di dalam SQL.*

- A. SELECT sname, coursename FROM studentinfo WHERE age>50 and <80;
- B. SELECT sname, coursename FROM studentinfo WHERE age>50 and age <80;
- C. SELECT sname, coursename FROM studentinfo WHERE age>50 and WHERE age<80;
- D. SELECT sname, coursename FROM studentinfo WHERE age>50 && age<80;

- CLO2      27. Locking is a mechanism to control concurrent access to data item. Choose the **CORRECT** lock mode that will allow data item to be read and written.

*Pengunci adalah mekanisme untuk mengawal capaian serentak ke atas item data. Pilih mod mengunci yang BETUL yang akan membenarkan item data dibaca dan ditulis.*

- A. Shared (S) mode
- B. Binary mode
- C. Exclusive (X) mode
- D. Exclusive (Y) mode

- CLO2      28. Choose the statement about locking in a RDBMS

*Pilih pernyataan tentang pengunci di dalam RDBMS*

- A. A read lock prevents other transactions from reading the locked data.  
*'Read Lock' menghalang transaksi lain dari membaca data yang dikunci.*
- B. Write lock prevents other transactions from reading or writing to the locked data.  
*'Write Lock' menghalang transaksi lain dari membaca atau menulis kepada data yang dikunci.*
- C. Multiple transactions can have write locks on the same data item.  
*Transaksi berbilang boleh mempunyai 'write lock' pada satu data yang sama.*
- D. Multiple transactions can have read locks and write locks on the same data item.  
*Transaksi berbilang boleh mempunyai 'read lock' dan 'write lock' pada data yang sama.*

CLO2  
C2

29.

This property ensures that transaction is executed independently of one another. The partial effects of incomplete transaction should not be visible to other transactions.

*Ciri ini memastikan transaksi dilaksanakan secara bebas daripada satu sama lain. Kesan sebahagian daripada transaksi yang tidak lengkap tidak akan diperlihatkan kepada transaksi yang lain.*

Figure A8 / Rajah A8

Identify the transaction properties described in the following statement:

*Kenalpasti ciri transaksi yang digambarkan dalam pernyataan berikut:*

- A. Atomicity  
*Atomik*
- B. Consistency  
*Konsisten*
- C. Isolation  
*Isolasi*
- D. Durability  
*Kekal*

CLO2  
C3

30.

You are monitoring the company database, on a SQL Server 2008. You find out that one of the data file computer is corrupted. You should reserve the database which is from the most recent configuration of backup. In order to reduce the lost, find out the method as quickly as possible.

*Anda memantau pangkalan data syarikat iaitu SQL Server 2008. Anda mengetahui bahawa salah satu fail data komputer rosak. Anda perlu mempunyai pangkalan data yang mempunyai konfigurasi salinan paling terkini. Dalam usaha untuk mengurangkan kehilangan data, kenalpasti kaedah yang sesuai digunakan*

- A. You should run a transaction log backup for the database  
*Anda perlu membuat salinan transaksi log pada pangkalan data*
- B. You should reserve the old database backup for the database  
*Anda perlu menggunakan salinan pangkalan data lama pada pangkalan data*
- C. You should reserve the most recent store produce log backup for the database  
*Anda perlu mempunyai penyimpanan yang paling terkini bagi menghasilkan log salinan untuk pangkalan data*
- D. You should run the whole database backup  
*Anda sepatutnya membuat salinan penuh pada pangkalan data*

**SECTION B : 55 MARKS**  
**BAHAGIAN B : 55 MARKAH**

**INSTRUCTION:**

This section consists of **TWO (2)** structured questions. Answer **ALL** questions.

**ARAHAH:**

Bahagian ini mengandungi **DUA (2)** soalan berstruktur. Jawab **SEMUA** soalan.

**QUESTION 1**

**SOALAN 1**

- CLO1 C1 (a) Define **TWO (2)** categories of Database Management System (DBMS). Give an example for each category.

*Kenalpasti **DUA (2)** kategori Sistem Pengurusan Pangkalan Data (SPPD). Berikan satu contoh untuk setiap kategori.*

[7 marks]  
[7 markah]

- CLO1 C1 (b) Describe the given terms below :

*Huraikan istilah yang diberikan di bawah :*

- i) Primary Key
- ii) Candidate Key
- iii) Foreign Key

[6 marks]  
[6 markah]

CLO1  
C1

(c)

Location : LocationID, Address, Type

Figure B1/ Rajah B1

Identify the Entity and Attribute based on the Figure B1

*Kenalpasti entiti dan atribut berdasarkan Rajah B1*[4 marks]  
[4 markah]CLO2  
C1

(d)

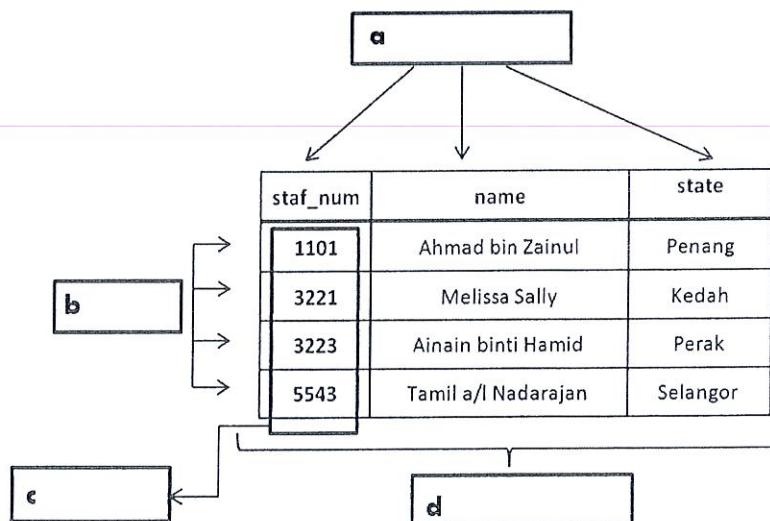


Figure B2/ Rajah B2

Label the answer based on Figure B2 above

*Labelkan Rajah B2 di atas*[4 marks]  
[4 markah]

(e)

eID	eName	eSalary	eState	ManagerID
S1079	Aina Suraya	RM 3220.15	Perak	S1005
S1034	Bibi Harlina	RM 3847.62	Pahang	S1011
S1042	H.Z.Wei	RM 3500.23	Pahang	S1062
S1025	Haziq Hakimi	RM 4521.43	Terengganu	S1028

Table B1:Employee / Jadual B1:Employee

Refer to the Table B1 to answer question e) i) and ii).

Rujuk Jadual B1 untuk menjawab soalan e) i) and ii).

CLO2  
C2

- By using symbol, give the relational algebra expression to display all names and states of employees who come from Pahang.

Dengan menggunakan simbol, beri ungkapan algebra hubungan untuk memaparkan semua nama dan negeri pekerja yang mana berasal dari Pahang.

[3 marks]

[3 markah]

CLO2  
C3

- Write the relational schema for the EMPLOYEE table.

Tuliskan skema hubungan bagi jadual EMPLOYEE.

[2 marks]

[2 markah]

CLO2 C2	(f)	StudNo	StudName	StudAge	StudSem	CGPA	CourseCode
		12DIP15F1111	Farok	19	3	3.52	CS09
		12DNS14F2222	Aisyah	21	4	3.68	CS10
		12DIP15F3333	Siti Jamaliah	23	3	3.41	Cs08

Table B2: STUDENT / Jadual B2: STUDENT

Based on Table B2 above, illustrate an entity and attributes for table STUDENT using Chen's Model notation.

*Berdasarkan Jadual B2 di atas, lakarkan entiti dan atribut untuk jadual STUDENT dengan menggunakan notasi Model Chen.*

[4 marks]

[4 markah]

CLO2 C3	(g)	<p>AYX company supplies variety type of books in Malaysia. As a manager, En Ali required to record important information including ISBN, Author, Title, Year and Price in a table named BOOK.</p> <p><i>Syarikat AYX membekalkan pelbagai jenis buku di Malaysia. Sebagai seorang pengurus, En Ali ingin menyimpan maklumat penting termasuk ISBN, Author, Title, Year dan Price di dalam jadual bernama BOOK.</i></p>
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Figure B3 / Rajah B3

Based on given statement, illustrate an entity and attributes using Crow's Foot Model.

*Berdasarkan pernyataan yang diberikan, lakarkan entiti dan atribut dengan menggunakan notasi Model Crow's Foot.*

[3 marks]

[3 markah]

**QUESTION 2****SOALAN 2**CLO2  
C1

(a) Answer questions below:

- i. List any **TWO (2)** tasks that can be implemented using SQL.

*Senaraikan **DUA (2)** tugas yang boleh dilaksanakan dengan menggunakan SQL.*

[2 marks]

[2 markah]

- ii. Explain the function of aggregate: COUNT(), MAX() and SUM().

*Terangkan fungsi agregat: COUNT(), MAX() and SUM().*

[3 marks]

[3 markah]

(b)

Client_Id	Client_Name	Age
C001	Adam	35
C002	Muthu	40
C003	Faez	32
C004	Rahman	30

**Table B3: Client/ Jadual B3: Client**

Reg_Num	Client_Id	Start_Date	End_Date	Duration_Days
NAV 4747	C001	5/02/2016	7/02/2016	3
WGE 5150	C002	6/02/2016	6/02/2016	1
NAV 4747	C003	10/02/2016	11/02/2016	2
WJD 5213	C004	10/02/2016	14/02/2016	5
WGE 5150	C002	15/02/2016	18/02/2016	4

**Table B4: Rental List/ Jadual B4: Rental List**

Write the SQL statement for situation below based on Table B3 and Table B4:

*Tuliskan pernyataan SQL untuk situasi di bawah berdasarkan kepada Jadual B3 dan Jadual B4:*

- i. Create the CLIENT table.  
*Bina jadual CLIENT.* [2 marks]  
[2 markah]
- ii. Update Client Name ‘Muthu’ to ‘Maniam’.  
*Kemaskini nama klien Muthu kepada Maniam.* [2 marks]  
[2 markah]
- iii. List the minimum duration days, maximum duration days and average of the duration days.  
*Senaraikan bilangan hari yang minimum, bilangan hari yang maksimum dan purata bilangan hari.* [3 marks]  
[3 markah]

CLO2

(c)

C3

EmpNo	EmpName	JobTitle	DateJoined	Salary	DeptNo
1001	Smith	Clerk	13-Jun-83	800	20
1042	Allen Tan	SalesExec	15-Aug-83	1600	30
1232	Maznah	SalesExec	26-Mar-84	1250	30
1265	Mohamad	Manager	31-Oct-83	2975	20
1098	Fatimah	SalesExec	05-Dec-83	1250	30
1034	David	Manager	11-Jun-84	2850	30
1206	Mariah	Manager	14-May-84	2450	10
1154	Sathi	Analyst	05-Mar-84	3000	20
1192	James	Director	09-Jul-84	5000	10
1086	Swee Lee	SalesExec	04-Jun-84	1500	30
1245	Leong	Clerk	04-Jun-84	1100	20
1010	Sharifah	Clerk	23-Jul-84	950	30
1005	Muthu	Analyst	05-Dec-83	3000	20
1092	Johnny	Clerk	21-Nov-83	1300	10

Table B5 : Employee / Jadual B5: Pekerja

DeptNo	DeptName
10	Accounting
20	Operations
30	Research
40	Sales

Table B6 : Department / Jadual B6 : Jabatan

Based on Table B5 and Table B6, show the output of the SQL command

Berdasarkan Jadual B5 dan Jadual B6, tunjukkan keluaran hasil daripada penyataan SQL berikut

- SELECT EmpName, DeptNo, JobTitle, Salary  
FROM Employee  
WHERE Salary > 2000

[1.5 marks]  
[1.5 markah]

ii. SELECT EmpName,Employee.DeptNo,DeptName  
FROM Employee,Department  
WHERE Employee.DeptNo = Department.DeptNo  
ORDER BY Employee.DeptNo;

[1.5 marks]  
[1.5 markah]

CLO2  
C1

(d) Describe the properties of database transaction below:

- i. Atomic / atomik  
ii. Durable / ketahanan

[2 marks]  
[2 markah]

CLO2  
C2

(e) Explain the interference problems arise from simultaneous access to database

Jelaskan gangguan masalah yang timbul daripada capaian serentak ke atas pangkalan data

- i. Lost update / kemaskini hilang  
ii. Uncommitted dependency / kebergantungan tidak komit

[3 marks]  
[3 markah]

CLO2  
C3

- (f) Table MYTAB contains only one column of datatype CHAR (1). A user executes the following *SQL* statements in the order as shown below.

*Jadual MYTAB mengandungi hanya satu lajur jenis data CHAR(1). Seorang pengguna melaksanakan arahan SQL mengikut susunan yang ditunjukkan berikut:*

```
INSERT INTO mytab VALUES ('A');  
  
INSERT INTO mytab VALUES ('B');  
  
COMMIT;  
  
INSERT INTO mytab VALUES ('C');  
  
ROLLBACK;
```

List **ONE (1)** difference between COMMIT and ROLLBACK.

*Senaraikan SATU (1) perbezaan di antara COMMIT dan ROLLBACK.*

[2 marks]  
[2 markah]

### SOALAN TAMAT