UNIVERSITI TEKNIKAL MALAYSIA MELAKA
PEPERIKSAAN AKHIR SEMESTER II
FINAL EXAMINATION SEMESTER II
SESI 2020/2021
SESSION 2020/2021

FAKULTI TEKNOLOGI MAKLUMAT DAN KOMUNIKASI

KOD KURSUS *COURSE CODE*	:	**BITP 1323**
KURSUS *COURSE*	:	**PANGKALAN DATA** *DATABASE*
NAMA PENSYARAH *LECTURER'S NAME*	:	_____
PROGRAM *PROGRAMME*	:	**BITM/ BITD/ BITC/ BITE/ BITS/ BITZ/BITI**
NAMA PELAJAR *STUDENT'S NAME*	:	_____
NOMBOR MATRIK *MATRIC NO.*	:	B

BAHAGIAN C (SOALAN STRUKTUR)
PART C (STRUCTURED QUESTION)

ARAHAN KEPADA CALON
INSTRUCTIONS TO CANDIDATES

1. **Kertas soalan ini mengandungi soalan Bahagian C. Jawab KESEMUA EMPAT soalan dari bahagian ini pada ruangan yang disediakan dan muatnaik kertas jawapan anda ke dalam Exam Portal.**

1. *This question paper consists Part C questions. Answer ALL FOUR questions from this part in the space provided and submit your answer paper in Exam Portal.*

BAHAGIAN INI TERDIRI DARIPADA (11) MUKA SURAT SAHAJA TERMASUK MUKA SURAT HADAPAN
THIS PART CONTAINS (11) PAGES INCLUSIVE OF FRONT PAGE

BAHAGIAN C: SOALAN STRUKTUR (35 MARKAH)
PART C: STRUCTURED QUESTION (35 MARKS)

ARAHAN/ *INSTRUCTION:*

Jawab **SEMUA** soalan dalam bahagian ini. Rujuk Lampiran 1 bagi menjawab soalan-soalan yang diberikan / *Answer **ALL** questions in this part. Refer Appendix 1 to answer the questions given.*

SOALAN 1 (8 MARKAH)/ *QUESTION 1 (8 MARKS)*

a)   Harga biasa sewaan bagi setiap hari untuk setiap kereta adalah antara RM100.00 hingga RM200.00. Bina **penyataan** *SQL* untuk menyenaraikan semua kereta yang **TIDAK** mempunyai harga sewaan bagi setiap hari seperti ini. Sertakan semua nama lajur dalam penyataan SQL anda.

*The normal rent price per day for each car is between RM100.00 and RM200.00. Construct the **SQL statement** to list all cars that **DO NOT** have this rent price per day. Include all column names in your SQL statement.*

Ruangan jawapan untuk soalan 1a/ *Answer space for question 1a*:

```
SELECT * FROM Tbl_Car_For_Rent WHERE Priceperday BETWEEN
100 AND 200
```

(3 markah/ *marks***)**

b)   Bina **pernyataan Algebra Hubungan (*RA*)** untuk memaparkan semua kereta dengan huruf 'C' dalam modelnya dan tidak mempunyai tambahan bahagian. Sertakan CARNO, MODEL dan PARTNO sahaja. Namakan semula paparan lajur PART NO sebagai ADDITIONAL PART NO.

*Construct the **Relational Algebra (RA) statement** to display all cars with the letter 'C' in their model and have no additional part. Include CARNO, MODEL and PARTNO only. Rename PARTNO column as ADDITIONAL PART NO.*

Ruangan jawapan untuk soalan 1b/ *Answer space for question 1b*:

(5 markah/ *marks*)

SOALAN 2 (9 MARKAH)/ *QUESTION 2 (9 MARKS)*

Pengurus anda menghendaki anda untuk membuat laporan yang mengandungi maklumat mengenai nama pelanggan, nombor kereta, model kereta, harga per hari, tarikh mula sewa, tarikh pengembalian sewa, jangka masa sewa dalam beberapa hari dan jumlah harga untuk menyewa kereta.

Your manager requires you to perform a report containing information regarding the customer's name, car number, car model, price per day, rental start date, rental return date, rental durations in days and the total price for renting a car.

a)   Bina **pernyataan SQL** bagi memaparkan tujuan di atas seperti ditunjukkan di dalam Jadual di bawah.

    *Construct the **SQL statement** to perform the above purpose as shown in the table below.*

NAME	CARNO	MODEL	PRICE	STARTDATE	RETURNDATE	DAYS	TOTAL
NOUMAN	CAR1	AXIA	150	08/18/2020	08/20/2020	2	300
SHAMSURI	CAR1	AXIA	150	09/25/2020	09/28/2020	3	450
NORHAFIZAH	CAR1	AXIA	150	09/18/2020	09/19/2020	1	150
NOUMAN	CAR1	AXIA	150	11/18/2020	11/23/2020	5	750
NOUMAN	CAR2	AXIA	100	08/21/2020	08/26/2020	5	500
AZHAR	CAR2	AXIA	100	09/21/2020	09/22/2020	1	100
HALIM	CAR3	BEZZA	250	09/18/2020	09/28/2020	10	2500
AZHAR	CAR3	BEZZA	250	09/29/2020	09/30/2020	1	250
AZHAR	CAR5	PERSONA	250	09/18/2020	09/20/2020	2	500
ZAINAB	CAR7	CAMRY	400	12/1/2020	12/8/2020	7	2800
FARISHA	CAR7	CAMRY	400	12/9/2020	12/18/2020	9	3600
ZAINAB	CAR8	CAMRY	350	01/18/2021	01/20/2021	2	700
FARISHA	CAR9	ACCORD	400	11/12/2020	11/18/2020	6	2400
ZAINAB	CAR10	VELLFIRE	600	10/18/2020	10/19/2020	1	600
ZAINAB	CAR10	VELLFIRE	600	01/03/2021	01/18/2021	15	9000

Ruangan jawapan untuk soalan 2a/ *Answer space for question 2a*:

(4 markah/ *marks*)

b)   Bina **pernyataan Algebra Hubungan (*RA*)** yang memaparkan keputusan bagi persoalan 2(a).

*Construct the **Relational Algebra (RA) statement** that displays the results for question 2(a).*

Ruangan jawapan untuk soalan 2b/ *Answer space for question 2b*:

(**5 markah/ *marks***)

SOALAN 3 (9 MARKAH))/ *QUESTION 3 (9 MARKS)*

Pengurus anda menghendaki anda untuk membuat laporan yang mengandungi maklumat mengenai tempahan kereta bagi bulan November 2020. Laporan tersebut perlu mengandungi maklumat nama pelanggan, nombor tempahan, tarikh tempahan, nombor kereta, tarikh mula pinjam dan tarikh hantar seperti ditunjukkan di dalam jadual di bawah:

Your manager requires you to perform a report containing information regarding the car booking for November 2020. The report must contains customer's name, booking number, booking date, car number, car model, rental start date, and rental return date as shown in the table.

NAME	BOOKINGNO	BOOKINGDATE	CARNO	STARTDATE	RETURNDATE
NOUMAN	B8	11/09/2020	CAR1	11/18/2020	11/23/2020
ZAINAB	B9	11/20/2020	CAR7	12/01/2020	12/08/2020
FARISHA	B10	11/12/2020	CAR7	12/09/2020	12/18/2020

a)   Bina **pernyataan SQL** yang akan memaparkan output seperti yang ditunjukkan di dalam laporan.

*Construct the **SQL statement** to display output as required in the report.*

Ruangan jawapan untuk soalan 3a/ *Answer space for question 3a*:

(4 markah/ *marks*)

b)   Bina **pernyataan Algebra Hubungan (*RA*)** yang memaparkan output seperti di dalam soalan 3(a).

*Construct a **Relational Algebra (RA) statement** that displays the results for question 3(a).*

Ruangan jawapan untuk soalan 3b/ *Answer space for question 3b*:

(5 markah/ *marks*)

SOALAN 4 (9 MARKAH)/ *QUESTION 4 (9 MARKS*

a)   Pengurus anda menghendaki anda untuk mendapatkan maklumat pekerja yang pernah menguruskan permohonan pinjaman kenderaan yang pernah dibuat oleh pelanggan yang bernama Farisha. Bina **pernyataan SQL** dalam format **pertanyaan bersarang** bagi memperoleh maklumat yang dikehendaki.

*Your manager requires you to get the information about employees who managed the car rental process made by customer named Farisha. Construct the **SQL statement in sub-query format** to get required information.*

Ruangan jawapan untuk soalan 4a/ *Answer space for question 4a*:
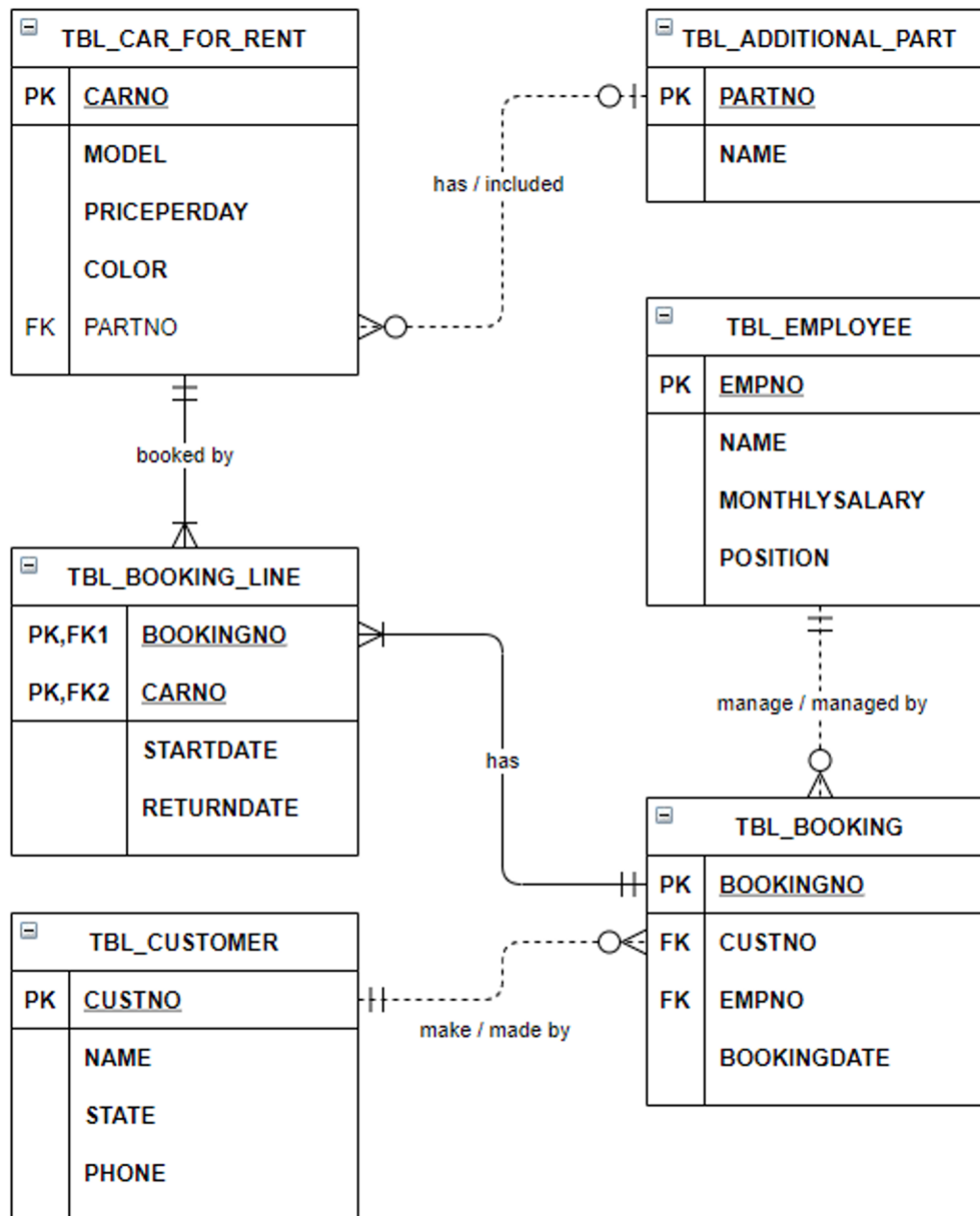
(5 markah/ *marks***)**

b) Pengurus anda menghendaki anda untuk mendapatkan maklumat nombor tempahan, Tarikh mula pinjaman dan tarikh pulang bagi semua kereta berjenama 'Camry'. Bina **pernyataan SQL** dalam format **pertanyaan bersarang** bagi memaparkan maklumat berikut.

*Your manager requires you to get the information about booking no., start date for booking, and return date for all cars 'Camry'. Construct the **SQL statement in sub-query format** to display that information.*

Ruangan jawapan untuk soalan 4b/ *Answer space for question 4b*:

(4 markah/ *marks*)

- SOALAN TAMAT/ *END OF QUESTIONS* –

TBL_CUSTOMER

CUSTNO	NAME	STATE	PHONE
C1	NOUMAN	PULAU PINANG	191111111
C2	ZAINAB	KUALA LUMPUR	126968654
C3	MENK	PULAU PINANG	112525252
C4	SHAMSURI	PAHANG	102598788
C5	HALIM	KEDAH	193636363
C6	AZHAR	KUALA LUMPUR	196565656
C7	NORHAFIZAH	PULAU PINANG	115454545
C8	ASMA	KUALA LUMPUR	189898989
C9	HARUN	PULAU PINANG	125858585
C10	MUSA	KEDAH	196666666
C11	JAILANI	KELANTAN	118785899
C12	FARISHA	SELANGOR	122222222

TBL_EMPLOYEE

EMPNO	NAME	MONTHLYSALARY	POSITION
E1	MIDAH	1020.20	CLERK
E2	JOJIE	3200	CONSULTANT
E3	KHAI	4000	MARKETING MANAGER
E4	KHAIRUL	4500	SALES MANAGER
E5	ZACK	1020.20	CLERK
E6	HENRY	2200	ADMIN
E7	PUTERI	1200	ADMIN

TBL_BOOKING

BOOKINGNO	CUSTNO	EMPNO	BOOKINGDATE
B1	C1	E1	08/12/2020
B2	C4	E2	08/16/2020
B3	C5	E1	09/12/2020
B4	C6	E1	09/13/2020
B5	C7	E4	09/15/2020
B6	C2	E5	10/16/2020
B7	C12	E5	10/12/2020
B8	C1	E1	11/09/2020
B9	C2	E1	11/20/2020
B10	C12	E6	11/12/2020
B11	C2	E1	12/01/2020
B12	C2	E6	12/01/2020

TBL_BOOKING_LINE

BOOKINGNO	CARNO	STARTDATE	RETURNDATE
B1	CAR1	08/18/2020	08/20/2020
B1	CAR2	08/21/2020	08/26/2020
B2	CAR1	09/25/2020	09/28/2020
B3	CAR3	09/18/2020	09/28/2020
B4	CAR3	09/29/2020	09/30/2020
B4	CAR5	09/18/2020	09/20/2020
B4	CAR2	09/21/2020	09/22/2020
B5	CAR1	09/18/2020	09/19/2020
B6	CAR10	10/18/2020	10/19/2020
B7	CAR9	11/12/2020	11/18/2020
B8	CAR1	11/18/2020	11/23/2020
B9	CAR7	12/01/2020	12/08/2020
B10	CAR7	12/09/2020	12/18/2020
B11	CAR8	01/18/2021	01/20/2021
B12	CAR10	01/03/2021	01/18/2021

TBL_CAR_FOR_RENT

CARNO	MODEL	PRICEPERDAY	COLOR	PARTNO
CAR1	AXIA	150	WHITE	P1
CAR2	AXIA	100	WHITE	-
CAR3	BEZZA	250	RED	P2
CAR4	BEZZA	200	BLUE	-
CAR5	PERSONA	250	BLACK	P5
CAR6	PERSONA	200	WHITE	-
CAR7	CAMRY	400	BLACK	P1
CAR8	CAMRY	350	GOLD	-
CAR9	ACCORD	400	PINK	P3
CAR10	VELLFIRE	600	BLACK	P5

TBL_ADDITIONAL_PART

PARTNO	NAME
P1	TURBO A
P2	TURBO B
P3	TRUNK STORAGE BOX
P4	SEAT STORAGE BOX
P5	ROOF STORAGE BOX