13+11=12

KEMENTERIA PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA		COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS
		COURSEWORK ASSESSMENT		ASSIGNMENT (B)
		SESSION		DECEMBER 2018
JABATAN MATEMATIK, SAINS DAN KOMPUTER		DURATION	60 MINS	CLO1 / CLO2 / CLO3 — 20 MARKS
NAME	Frederick Jack	TOTAL MARKS		20 MARKS
REGISTRATION NO.	05DDT18F1112			
PROGRAMME/ SECTION	DDT2A			

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C3 [4 marks]

P	E	N	C	I	L	S

The diagram shows seven letter cards. A four-letter code is to be formed using four of these cards. Find

(a) The number of different four-letter codes that can be formed.
(b) The number of four-letter codes that begin with a consonant.

Question 2

CLO1, C3 [4 marks]

A group of students are to be chosen for a students' exchange program. These 5 students are chosen from 5 monitors, 3 assistant monitors and 4 perfects. Find the number of ways of performing the team if

(a) There is no restriction.
(b) The team consists of only 1 monitor and exactly 3 perfects.

Question 3

CLO1, C2 [2 marks]

Six students of the editorial board of a school magazine are to be arranged in a row to have their photograph taken. Find the number of ways they can arranged.

Question 4

CLO1, C3 [5 marks]

A six-member committee of the PTA of SMK Dato Alan is to be elected from the principal, 5 teachers and 6 parents. Find the number of different committees that can be formed with the condition that

(a) The principal must be elected.
(b) The committee is to consist of the principal, two teachers and three parents.
(c) At least one parent must be elected.

No:.....

Subject:..... Date:

Question 1

a) ${}^{7}P_{4}$

$= 840$

b) _ _ _ _

${}^{5}P_{1}$ ${}^{6}P_{3}$

${}^{5}P_{1} \times {}^{6}P_{3}$

$= 600$

4

Question 2.

a) ${}^{12}C_{5}$

$= 792$

2

b)

monitor	Perfect
1	3

${}^{5}C_{1} \times {}^{4}C_{3}$

$= 20$

Question 3

${}^{6}P_{6}$

$= 720$

2

Question 4

a) ${}^{1}C_{1} \times {}^{11}C_{5}$

$= 462$

b) ${}^{1}C_{1} \times {}^{5}C_{2} \times {}^{6}C_{3}$

$= 200$

3

c)

Parents	Principal	Teacher	
1	1	4	${}^{6}C_{1} \times {}^{1}C_{1} \times {}^{5}C_{4} = 30$
2	1	3	${}^{6}C_{2} \times {}^{1}C_{1} \times {}^{5}C_{3} = 150$
3	1	2	${}^{6}C_{3} \times {}^{1}C_{1} \times {}^{5}C_{2} = 200$
4	1	1	${}^{6}C_{4} \times {}^{1}C_{1} \times {}^{5}C_{1} = 75$

455

KEMENTERIA PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA JABATAN MATEMATIK, SAINS DAN KOMPUTER		COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS	
		COURSEWORK ASSESSMENT		ASSIGNMENT (B)	
		SESSION		DECEMBER 2018	
		DURATION	60 MINS	CLO1	
				CLO2	
				CLO3	20 MARKS
NAME	Petrus anak Kantin	TOTAL MARKS		20 MARKS	
REGISTRATION NO.	05 DDT 17F 1055				
PROGRAMME/ SECTION	DDT4B				

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C3 [4 marks]

P	E	N	C	I	L	S

The diagram shows seven letter cards. A four-letter code is to be formed using four of these cards. Find

(a) The number of different four-letter codes that can be formed.
(b) The number of four-letter codes that begin with a consonant.

Question 2

CLO1, C3 [4 marks]

A group of students are to be chosen for a students' exchange program. These 5 students are chosen from 5 monitors, 3 assistant monitors and 4 perfects. Find the number of ways of performing the team if

(a) There is no restriction.
(b) The team consists of only 1 monitor and exactly 3 perfects.

Question 3

CLO1, C2 [2 marks]

Six students of the editorial board of a school magazine are to be arranged in a row to have their photograph taken. Find the number of ways they can arranged.

Question 4

CLO1, C3 [5 marks]

A six-member committee of the PTA of SMK Dato Alan is to be elected from the principal, 5 teachers and 6 parents. Find the number of different committees that can be formed with the condition that

(a) The principal must be elected.
(b) The committee is to consist of the principal, two teachers and three parents.
(c) At least one parent must be elected.

NO: Thursday DATE: 14.3.2019

Question 1

a) _ _ _ C I L S

b) C I L S

$P_1 \times P_3$

$= 6$

Question 2

a)

NO:.................. DATE:..................

Question 3

$\frac{2}{2}\ \frac{3}{3}\ \times\ \frac{2}{2}$

Question 4

a)

$$\frac{(6+5-1)!}{5!(6-1)!}$$

$= 252$

b)

c) ~~(4+6-4)!~~ / ~~6!(6-4)!~~

POP bazic™

KEMENTERIA PENDIDIKAN MALAYSIA

POLITEKNIK MALAYSIA

JABATAN MATEMATIK, SAINS DAN KOMPUTER

NAME	MOHD DANIAL HAZEEQ	COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS	
REGISTRATION NO.	05DDT17F1051	COURSEWORK ASSESSMENT		ASSIGNMENT (B)	
PROGRAMME/ SECTION	DDT 4B	SESSION		DECEMBER 2018	
		DURATION	60 MINS	CLO1	3
				CLO2	
				CLO3	20 MARKS
		TOTAL MARKS		20 MARKS	

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C3 [4 marks]

P	E	N	C	I	L	S

The diagram shows seven letter cards. A four-letter code is to be formed using four of these cards. Find

(a) The number of different four-letter codes that can be formed.
(b) The number of four-letter codes that begin with a consonant.

Question 2

CLO1, C3 [4 marks]

A group of students are to be chosen for a students' exchange program. These 5 students are chosen from 5 monitors, 3 assistant monitors and 4 perfects. Find the number of ways of performing the team if

(a) There is no restriction.
(b) The team consists of only 1 monitor and exactly 3 perfects.

Question 3

CLO1, C2 [2 marks]

Six students of the editorial board of a school magazine are to be arranged in a row to have their photograph taken. Find the number of ways they can arranged.

Question 4

CLO1, C3 [5 marks]

A six-member committee of the PTA of SMK Dato Alan is to be elected from the principal, 5 teachers and 6 parents. Find the number of different committees that can be formed with the condition that

(a) The principal must be elected.
(b) The committee is to consist of the principal, two teachers and three parents.
(c) At least one parent must be elected.

No: ..... Date: .....

Question 1

(a) C I L S

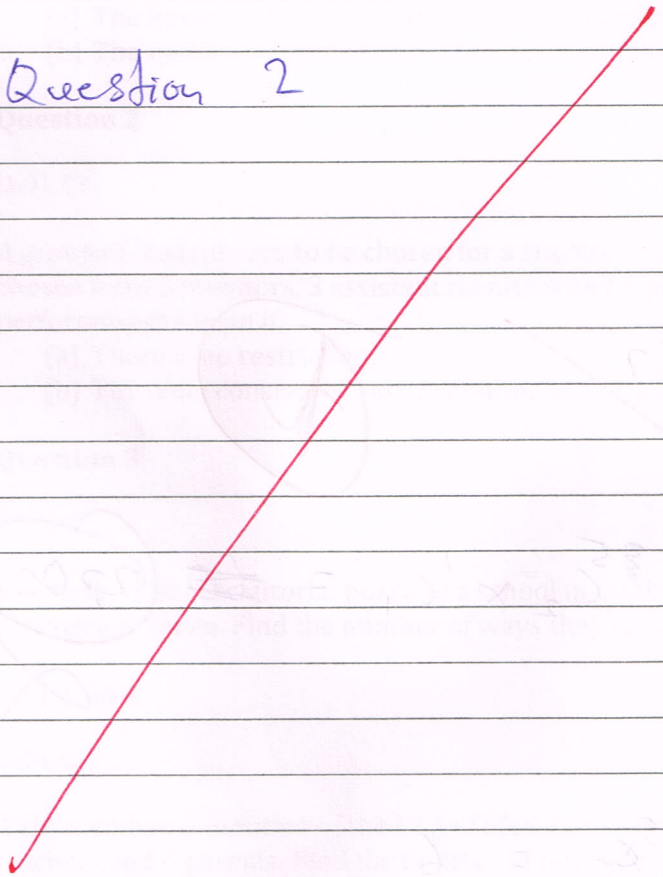
(b) C I L S

↓

P_1 3 P_3

Question 2

(a)



No: ..... Date: .....

Question 3

$6P_6 = 720$ ✓

(2)

Question 4

(a) ${}^1C_1 \times {}^{11}C_5 = 462$ ✓

(1)

(b) ~~${}^1C_1 \times {}^5C_2$~~ ${}^6C_3 \times {}^5C_2 \times {}^1C_1 =$ ~~60~~ 2,200

(2)

(c)

Parent	
1	${}^6C_1 \times {}^5C_5 = 6$
2	${}^6C_2 \times {}^4C_4 = 15$
3	${}^6C_3 \times {}^3C_3 = 20$
4	${}^6C_4 \times {}^2C_2 = 15$ ✓
5	${}^6C_5 \times {}^1C_1 = 6$
6	${}^6C_6 = 1$

60 ✓

2+4=3

KEMENTERIA PENDIDIKAN MALAYSIA / POLITEKNIK MALAYSIA JABATAN MATEMATIK, SAINS DAN KOMPUTER		COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS
		COURSEWORK ASSESSMENT		ASSIGNMENT (B)
		SESSION		DECEMBER 2018
NAME	Muhd Hafiz Hazig	DURATION	60 MINS	CLO1
REGISTRATION NO.	05DDT18F1140			CLO2 CLO3 20 MARKS
PROGRAMME/ SECTION	PDT2A	TOTAL MARKS		20 MARKS

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C3 [4 marks]

P	E	N	C	I	L	S

The diagram shows seven letter cards. A four-letter code is to be formed using four of these cards. Find

(a) The number of different four-letter codes that can be formed.
(b) The number of four-letter codes that begin with a consonant.

Question 2

CLO1, C3 [4 marks]

A group of students are to be chosen for a students' exchange program. These 5 students are chosen from 5 monitors, 3 assistant monitors and 4 perfects. Find the number of ways of performing the team if

(a) There is no restriction.
(b) The team consists of only 1 monitor and exactly 3 perfects.

Question 3

CLO1, C2 [2 marks]

Six students of the editorial board of a school magazine are to be arranged in a row to have their photograph taken. Find the number of ways they can arranged.

Question 4

CLO1, C3 [5 marks]

A six-member committee of the PTA of SMK Dato Alan is to be elected from the principal, 5 teachers and 6 parents. Find the number of different committees that can be formed with the condition that

(a) The principal must be elected.
(b) The committee is to consist of the principal, two teachers and three parents.
(c) At least one parent must be elected.

NO. :

Date :

Question 1

a) ${}^4C_3 = 4$ ${}^7P_4 = \frac{7!}{3!}$

$= 840$

b) D

${}^4C_1 + {}^4C_3$ ${}^4C_1 \times {}^4C_3$

$= 96$

Question 2

a) ${}^5P_5$ ${}^5P_3$ ${}^5P_4$

$= \frac{5!}{} \times \frac{5!}{2!} \times \frac{5!}{1!}$

$= 864000$

b) ${}^4P_1 \times {}^4P_3$

$\frac{4!}{3!} \times \frac{4!}{1!}$

$= 96$

Question 3

$6! = 720$

Question 4

a) ${}^6P_1 = \frac{6!}{5!}$

$= 6!$

NO. :

Date :

b) ${}_6P_1 \quad {}_6P_2 \quad {}_6P_3$

$= \frac{6!}{5!} + \frac{6!}{4!} \quad \frac{6!}{3!}$

$= 21600$

c) 6 committee

1 parents

${}_6P_1 = \frac{6!}{5!}$

$= 6$

(3+4=8½

KEMENTERIA PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA		COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS
		COURSEWORK ASSESSMENT		ASSIGNMENT (B)
		SESSION		DECEMBER 2018
JABATAN MATEMATIK, SAINS DAN KOMPUTER		DURATION	60 MINS	CLO1
NAME	MILLENNIA AK SAWING			CLO2
REGISTRATION NO.	05DDT18 F1108			CLO3 20 MARKS
PROGRAMME/ SECTION	DDT2A	TOTAL MARKS		20 MARKS

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C3 [4 marks]

P E N C I L S

The diagram shows seven letter cards. A four-letter code is to be formed using four of these cards. Find

(a) The number of different four-letter codes that can be formed.
(b) The number of four-letter codes that begin with a consonant.

Question 2

CLO1, C3 [4 marks]

A group of students are to be chosen for a students' exchange program. These 5 students are chosen from 5 monitors, 3 assistant monitors and 4 perfects. Find the number of ways of performing the team if

(a) There is no restriction.
(b) The team consists of only 1 monitor and exactly 3 perfects.

a) $^{12}C_5 \times {}^{12}C_3 \times {}^{12}C_4$

$= 86248800$

Question 3

CLO1, C2 [2 marks]

Six students of the editorial board of a school magazine are to be arranged in a row to have their photograph taken. Find the number of ways they can arranged.

Question 4

CLO1, C3 [5 marks]

A six-member committee of the PTA of SMK Dato Alan is to be elected from the principal, 5 teachers and 6 parents. Find the number of different committees that can be formed with the condition that

(a) The principal must be elected.
(b) The committee is to consist of the principal, two teachers and three parents.
(c) At least one parent must be elected.

a) $^{1}C_1 \times {}^{6}C_5 \times {}^{6}C_6$

b) =

ition 1.

P E N C — — —

$^{4}P_{4} \times {}^{3}P_{3} \times {}^{2}P_{2} \times {}^{1}P_{1}$

$= 4P_4 \times {}^{3}P_{3} \times {}^{2}P_{2} \times {}^{1}P_{1}$

$= 288$

b) P N C L —

$^{5}P_{4} \times {}^{3}P_{3} \times {}^{2}P_{2} \times {}^{1}P_{1}$

$= 5P_4 \times {}^{3}P_{3} \times {}^{2}P_{2} \times {}^{1}P_{1}$

$= 1440$

x to pencil

Question 2

a) $^{12}C_5 \times {}^{12}C_3 \times {}^{12}C_4$

$= 86248800$

b) $^{5}C_1 \times {}^{4}C_3$

$= 20$

Question 3

$^{6}C_5 \times {}^{5}C_4 \times {}^{4}C_3 \times {}^{3}C_2 \times {}^{2}C_1$

$= 720$ ways

2

Question 4

a) ${}^{1}C_{1} \times {}^{6}C_{5} \times {}^{6}C_{6}$

$= 6$

X

b) ${}^{1}C_{1} \times {}^{5}C_{2} \times {}^{6}C_{3}$

$= 200$

✓ (2)

c)

/

KEMENTERIA PENDIDIKAN MALAYSIA

POLITEKNIK MALAYSIA

JABATAN MATEMATIK, SAINS DAN KOMPUTER

NAME	IVY CHELSY	COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS
REGISTRATION NO.	05DDT18F1001	COURSEWORK ASSESSMENT		ASSIGNMENT (B)
PROGRAMME/ SECTION	DDT2A	SESSION		DECEMBER 2018
		DURATION	60 MINS	CLO1 / CLO2 / CLO3 — 20 MARKS
		TOTAL MARKS		20 MARKS

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C3 [4 marks]

The diagram shows seven letter cards. A four-letter code is to be formed using four of these cards. Find

(a) The number of different four-letter codes that can be formed.
(b) The number of four-letter codes that begin with a consonant.

Question 2

CLO1, C3 [4 marks]

A group of students are to be chosen for a students' exchange program. These 5 students are chosen from 5 monitors, 3 assistant monitors and 4 perfects. Find the number of ways of performing the team if

(a) There is no restriction.
(b) The team consists of only 1 monitor and exactly 3 perfects.

Question 3

CLO1, C2 [2 marks]

Six students of the editorial board of a school magazine are to be arranged in a row to have their photograph taken. Find the number of ways they can arranged.

Question 4

CLO1, C3 [5 marks]

A six-member committee of the PTA of SMK Dato Alan is to be elected from the principal, 5 teachers and 6 parents. Find the number of different committees that can be formed with the condition that

(a) The principal must be elected.
(b) The committee is to consist of the principal, two teachers and three parents.
(c) At least one parent must be elected.

Subject : No : Date : / /

Question 1

(a) ${}^nP_n = n!$

${}^7P_4 = \frac{7!}{(7-4)!}$

$= \frac{7!}{3!}$

$= 840$

∴ There are 840 ways to perform four-letter codes.

(b) ${}^4P_1 \times {}^3P_2 \times {}^1P_1 = 24$

∴ There are 24 ways to perform four-letter codes that begin with a consonant.

Question 2

(a) ${}^{12}C_5 \times {}^7C_3 \times {}^4C_4 = 27720$

∴ There are 27720 ways to perform a team with no restriction.

(b) $\frac{12!}{1!\,3!} = \frac{12!}{6!}$

$= 665280$

Question 3

${}^6P_6 = 6!$

$= 720$

∴ There are 720 ways of numbers they can arrange.

Question 4

(a) ${}^6C_1 = 6$

(b) ${}^6C_3 \times {}^6C_2 \times {}^6C_1 = 1800$

(c) ${}^6C_1$

$= 6$

0 + 13 = 62

KEMENTERIA PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA		COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS
		COURSEWORK ASSESSMENT		ASSIGNMENT (B)
		SESSION		DECEMBER 2018
JABATAN MATEMATIK, SAINS DAN KOMPUTER		DURATION	60 MINS	CLO1 / CLO2 / CLO3 — 13 — 20 MARKS
NAME	Armano Waganer			
REGISTRATION NO.	05PPT18F1992			
PROGRAMME/ SECTION	PDT2A	TOTAL MARKS		20 MARKS

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C3 [4 marks]

P	E	N	C	I	L	S

The diagram shows seven letter cards. A four-letter code is to be formed using four of these cards. Find

(a) The number of different four-letter codes that can be formed.
(b) The number of four-letter codes that begin with a consonant.

Question 2

CLO1, C3 [4 marks]

A group of students are to be chosen for a students' exchange program. These 5 students are chosen from 5 monitors, 3 assistant monitors and 4 perfects. Find the number of ways of performing the team if

(a) There is no restriction.
(b) The team consists of only 1 monitor and exactly 3 perfects.

Question 3

CLO1, C2 [2 marks]

Six students of the editorial board of a school magazine are to be arranged in a row to have their photograph taken. Find the number of ways they can arranged.

Question 4

CLO1, C3 [5 marks]

A six-member committee of the PTA of SMK Dato Alan is to be elected from the principal, 5 teachers and 6 parents. Find the number of different committees that can be formed with the condition that

(a) The principal must be elected.
(b) The committee is to consist of the principal, two teachers and three parents.
(c) At least one parent must be elected.

05DPT1EF1992

NO:..... DATE:.....

Question 1

a) $^{7}P_4$ = ~~[illegible]~~ 840

b) ~~$^{5}P_1$~~ # $5P_1 \times 6P_3 = 600$

4

Question 2

a) $6 \times 3 \times 4 = 12$ students

$12C_5$ = ~~[illegible]~~ 792

4

b) ~~$5C_1 \times 3C$~~ $4C_3 \times 5C_1 \times 3C_1 = 60$

Question 3

$6P_6$ = ~~720~~ ways

720

2

Question 4

a) $1C_1 \times 11C_5 = 462$

b) $1C_1 \times 5C_2 \times 6C_3 = 200$

c) $6C_1 \times 5C_4 \times 1C_1 = 30$

$6C_2 \times 5C_3 \times 1C_1 = 150$

$6C_3 \times 5C_2 \times 1C_1 = 200$

$6C_4 \times 5C_1 \times 1C_1 = 75$

$6C_5 \times 5C_0 \times 1C_1 = 6$

$6C_6 \times 5C_0 \times 1C_0 = 1$

461 #

3

KEMENTERIA PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA		COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS	
		COURSEWORK ASSESSMENT		ASSIGNMENT (B)	
		SESSION		DECEMBER 2018	
JABATAN MATEMATIK, SAINS DAN KOMPUTER		DURATION	60 MINS	CLO1	
NAME	Nurul Ikhsyam			CLO2	
REGISTRATION NO.	05DDT18F1142			CLO3	20 MARKS
PROGRAMME/ SECTION	DDT2A	TOTAL MARKS		20 MARKS	

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C3 [4 marks]

The diagram shows seven letter cards. A four-letter code is to be formed using four of these cards. Find

(a) The number of different four-letter codes that can be formed.
(b) The number of four-letter codes that begin with a consonant.

Question 2

CLO1, C3 [4 marks]

A group of students are to be chosen for a students' exchange program. These 5 students are chosen from 5 monitors, 3 assistant monitors and 4 perfects. Find the number of ways of performing the team if

(a) There is no restriction.
(b) The team consists of only 1 monitor and exactly 3 perfects.

Question 3

CLO1, C2 [2 marks]

Six students of the editorial board of a school magazine are to be arranged in a row to have their photograph taken. Find the number of ways they can arranged.

Question 4

CLO1, C3 [5 marks]

A six-member committee of the PTA of SMK Dato Alan is to be elected from the principal, 5 teachers and 6 parents. Find the number of different committees that can be formed with the condition that

(a) The principal must be elected.
(b) The committee is to consist of the principal, two teachers and three parents.
(c) At least one parent must be elected.

Subject: DSM2033

No:

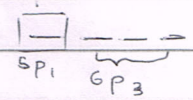
Date:

Q.1

a) ${}^{7}P_{4} = 840$ ✱

b) ${}^{5}P_{1} \times {}^{6}P_{3} = 600$ ✱

consonant



Q.2

a) ${}^{12}C_{5} = 792$ ✱

b) ${}^{5}C_{1} \times {}^{3}C_{1} \times {}^{4}C_{3} = 60$ ✱

Q.3

${}^{6}P_{6} = 720$ ways ✱

Q.4

a) ${}^{1}C_{1} \times {}^{11}C_{5} = 462$ ✱

b) ${}^{1}C_{1} \times {}^{5}C_{2} \times {}^{6}C_{3} = 200$ ✱

c) ${}^{6}C_{1} \times {}^{5}C_{5} = 6$

${}^{6}C_{2} \times {}^{5}C_{4} = 75$

${}^{6}C_{3} \times {}^{5}C_{3} = 200$

${}^{6}C_{4} \times {}^{5}C_{1} = 150$

${}^{6}C_{5} \times {}^{5}C_{1} = 30$

$= 461$ ✱

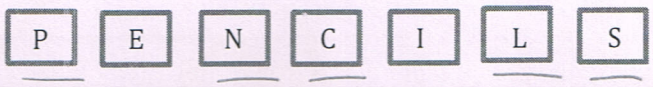
KEMENTERIA PENDIDIKAN MALAYSIA — POLITEKNIK MALAYSIA		COURSE CODE/ COURSE NAME		DBM2033 DISCRETE MATHEMATICS
		COURSEWORK ASSESSMENT		ASSIGNMENT (B)
		SESSION		DECEMBER 2018
JABATAN MATEMATIK, SAINS DAN KOMPUTER		DURATION	60 MINS	CLO1 / CLO2 / CLO3 — 20 MARKS
NAME	IRTEIDA FIRZA	TOTAL MARKS		20 MARKS
REGISTRATION NO.	05DDT18F1039			
PROGRAMME/ SECTION	DDT2A			

Instructions

- Answer ALL questions. Write your answers in the spaces provided.
- Show your working to get marks. You may use a non-programmable scientific calculator.

Question 1

CLO1, C3 [4 marks]



The diagram shows seven letter cards. A four-letter code is to be formed using four of these cards. Find

(a) The number of different four-letter codes that can be formed.
(b) The number of four-letter codes that begin with a consonant.

Question 2

CLO1, C3 [4 marks]

A group of students are to be chosen for a students' exchange program. These 5 students are chosen from 5 monitors, 3 assistant monitors and 4 perfects. Find the number of ways of performing the team if

(a) There is no restriction.
(b) The team consists of only 1 monitor and exactly 3 perfects.

Question 3

CLO1, C2 [2 marks]

Six students of the editorial board of a school magazine are to be arranged in a row to have their photograph taken. Find the number of ways they can arranged.

Question 4

CLO1, C3 [5 marks]

A six-member committee of the PTA of SMK Dato Alan is to be elected from the principal, 5 teachers and 6 parents. Find the number of different committees that can be formed with the condition that

(a) The principal must be elected.
(b) The committee is to consist of the principal, two teachers and three parents.
(c) At least one parent must be elected.

Subject:..... No:.....

Date: . .

Question 1

a) ${}^{7}P_{4} = 840$

b) ${}^{5}P_{1} \times {}^{6}P_{3} \times {}^{5}P_{2} \times {}^{4}P_{1}$

$= 48000$ ✗

${}^{5}P_{1} \times {}^{6}P_{3}$

$= 600$ ✓

(4)

Question 2

a) ${}^{12}C_{5} = 792$ ✓

(2)

b) ${}^{5}C_{1} \times {}^{4}C_{3} \times {}^{6}C_{1} = 160$ ✗

Question 3

${}^{1}P_{1} \times {}^{6}P_{6} = 720$ ✓

(2)

Question 4

a) ${}^{1}C_{1} \times {}^{11}C_{5} = 462$ ✓

b) ${}^{1}C_{1} \times {}^{5}C_{2} \times {}^{6}C_{3}$

$= 200$ ✓

(3)

No:.....

Subject:..... Date:

c)

Parents	Princ & Teacher = 6
1	5
2	4
3	3
4	2
5	1
6	0

$^6C_1 \times {}^6C_5 = 36$

$^6C_2 \times {}^6C_4 = 225$

$^6C_3 \times {}^6C_3 = 400$

$^6C_4 \times {}^6C_2 = 225$

$^6C_5 \times {}^6C_1 = 36$

$^6C_6 \times {}^6C_0 = 1$

$= 923$

✓ (2)