

3

SULIT



BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK
KEMENTERIAN PENDIDIKAN TINGGI

JABATAN KEJURUTERAAN ELEKTRIK

PEPERIKSAAN AKHIR

SESI DISEMBER 2015

DEC2012: FUNDAMENTAL PROGRAMMING

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

Kertas ini mengandungi TIGA BELAS (13) halaman bercetak.

Bahagian A: Objektif (10 soalan)

Bahagian B: Struktur (4 soalan)

Bahagian C: Esei (2 soalan)

Dokumen sokongan yang disertakan : OMR

JANGAN BUKA KERTAS SOALANINI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

SECTION A : 10 MARKS**BAHAGIAN A : 10 MARKAH****INSTRUCTION:**

This section consists of TEN (10) objective questions. Mark your answers in the OMR form provided.

ARAHAN :

Bahagian ini mengandungi SEPULUH (10) soalan objektif. Tandakan jawapan anda di dalam borang OMR yang disediakan.

CLO1
C1

1. Contains only numerical information and is difficult to be understood by human. This statement refers to _____.

Mengandungi maklumat bernombor sahaja dan sukar untuk difahami oleh manusia. Penyataan ini merujuk kepada _____.

- A. Machine Language
Bahasa Mesin
- B. Intermediate Level Language
Bahasa Tahap Pertengahan
- C. High Level Language
Bahasa Tahap Tinggi
- D. Assembly Language
Bahasa Himpunan

CLO1
C1

2. Thestructure are also called the Decision Structure because instructs the computer make a decision and then take some action based on the result of the decision.

..... struktur juga dipanggil Struktur Pilihan kerana arahan komputer untuk melaksanakan pilihan berdasarkan dua aksi pilihan.

- A. Selection
Pilihan
- C. Algorithm
Algoritma
- B. Sequence
Jujukan
- D. Repetition
Ulangan

- CLO1 3. Choose the right value contained in the number variable after the following C instruction is processed.

Pilih nilai bulat yang betul setelah arahan program C di bawah di proses.

```
int number = 0;  
number = 10;  
number = number + 5;
```

- A. 0
B. 5
C. 10
D. 15

- CLO2 4. Choose the FALSE statement of the usage of comments in C language

Pilih pernyataan **SALAH** mengenai penggunaan komen di dalam bahasa C.

- A. // is another of comments symbol in C language.
// merupakan satu lagi simbol untuk komen dalam bahasa C.
 - B. Comments will not be executed by the compiler.
Komen tidak boleh dijalankan oleh penyusun.
 - C. A line starting with /* and ending with */
Baris bermula dengan / dan ditamatkan dengan */*
 - D. Comments are used to name constants, variables, function name and labels.
Komen digunakan untuk menamakan pemalar, pembolehubah, nama fungsi dan label.


```
{  
    int check = 2;  
    switch(check) {  
        case 1: printf(" Aminah");  
        case 2: printf(" Abu");  
        case 3: printf(" Bakar");  
        default: printf(" Debu");  
    }  
}
```

- A. Abu
 - B. Debu
 - C. Abu Bakar Debu
 - D. Compilation error

CLO2
C3

6.

```
/*This program is to show the use of if-else statement*/
#include <stdio.h>
void main()
{
int mark;
printf("\nInsert your test mark:");
scanf("%d",&mark);
if(mark>=50)
printf("Congratulations! You passed!");
else
printf("Sorry to inform that you failed");
}
```

Choose the **CORRECT** output of the program above if the mark entered is 50.

Pilih keluaran yang BETUL untuk program di atas jika markah yang dimasukkan ialah 50.

- A. Insert your test mark:50
Sorry to inform you failed.
- B. Insert your test mark:50
Congratulations! You passed!
- C. Insert your test mark:50
Sorry, you failed.
- D. Insert your test mark:50
Congratulations, you passed!

CLO1
C2

7. Identify error, if any in the given 'do..while;' loop below.

Kenalpasti ralat yang terdapat di dalam gelung 'do..while' di bawah sekiranya ada.

```
#include<stdio.h>
main()
{
int a = 1;
while() {
    a = a + 2;
    printf("%d\t",a);
}
return 0;
}
```

- A. There should be a condition in the 'while' loop.
Gegelung 'while' perlu mempunyai keadaan.
- B. There should a semicolon in the 'while' loop.
Perlu ada koma bertitik di dalam gegelung 'while' .

C. The ‘while’ loop should be replace with *for* loop.
Gegelung ‘while’ perlu diganti dengan gegelung for.

D. There is no error in the program.
Tiada sebarang ralat di dalam aturcara ini.

CLO2
C3

8. What is the correct output for the program code below?
Apakah keluaran yang betul bagi kod program di bawah?

```
{  
    int a = 1;  
    do {  
        a = a + 2;  
        printf("%d\n",a);  
    }  
    while( a<10 );  
}
```

- A. 3 5 7 9
B. 1 2 3 4 5 6
C. 1 3 5 7 9 11
D. 3 5 7 9 11

CLO1
C2

9. Choose the correct arrangement of stages involve in programming project development.

Pilih peringkat susunan yang betul dalam membangunkan projek pengaturcaraan.

- A. Planning → Development → Implementation → Testing → Documentation
Perancangan→Pembangunan→Perlaksanaan→Pengujian→Dokumenkan
- B. Planning → Implementation → Testing → Development → Documentation
Perancangan→Perlaksanaan→Pengujian→Pembangunan→Dokumenkan
- C. Planning → Testing → Development → Implementation → Documentation
Perancangan→Pengujian→Pembangunan→Perlaksanaan→Dokumenkan
- D. Planning → Development → Testing → Implementation → Documentation
Perancangan→Pembangunan→Pengujian→Perlaksanaan→Dokumenkan

CLO2
C3

10. Items below are required to prepare the project documentation EXCEPT _____.

Perkara-perkara berikut adalah diperlukan dalam menyediakan dokumentasi projek **KECUALI** _____.

- A. Development
Pembangunan
- B. Project proposal
Cadangan Projek
- C. Flowchart
Carta Aliran
- D. Gantt chart
Carta Gantt

SECTION B : 60 MARKS**BAHAGIAN B : 60 MARKAH****INSTRUCTION:**

This section consists of **FOUR (4)** structured questions. Answer **ALL** questions.

ARAHAN:

*Bahagian ini mengandungi **EMPAT (4)** soalan berstruktur. Jawab **SEMUA** soalan.*

QUESTION 1**SOALAN 1**

- CLO1 C1 a) Define the programming language and list **TWO (2)** types of programming language.

*Takrifkan istilah bagi bahasa pengaturcaraan dan senaraikan **DUA (2)** jenis bahasa pengaturcaraan.*

[3 marks]

[3 markah]

- CLO1 C2 b) Sketch the flowchart by referring to the pseudocode below.

Lakarkan cartalir dengan merujuk pseudocode di bawah.

Start

1. Enter the current price and increase rate
2. Calculate the increase amount by multiplying the current price by the increase rate
3. Calculate the new price by adding the increase amount to the current price
4. Display the increase amount and new price.

End

[5 marks]

[5 markah]

CLO2

C3

- c) Write a pseudo code based on flowchart in Figure B1 below.

Tuliskan kod pseudo berdasarkan kepada carta alir dalam Rajah B1 di bawah.

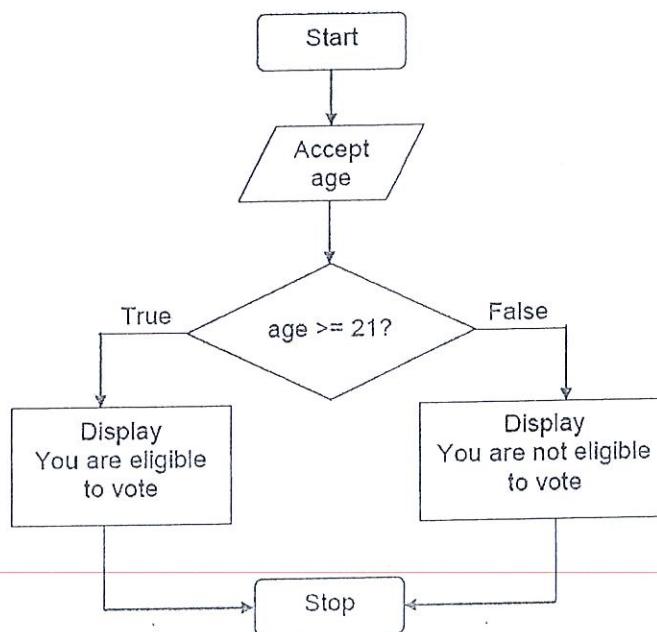


Figure B1 / Rajah B1

[7 marks]

[7 markah]

QUESTION 2**SOALAN 2**CLO1
C1

(a) Identify the data type for following variables:

*Kenalpasti jenis data bagi setiap pembolehubah di bawah:*i. $a = -8.2$ ii. $b = 360$ iii. $c = '?'$

[3 marks]

[3 markah]



CLO1

C2

(b) Rewrite the following names to be valid identifier.

Tulis semula nama-nama berikut supaya menjadi "identifier" yang sah.(i) 4^{th} value

(ii) Order-no

(iii) Error flag

(iv) Break

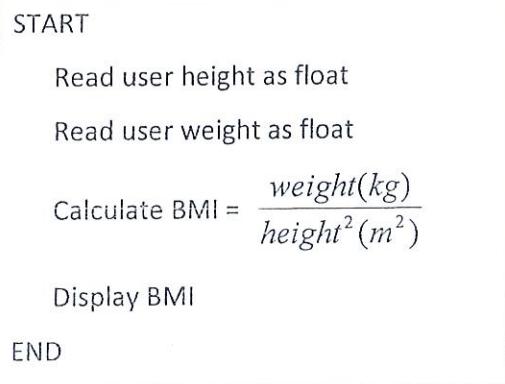
(v) @google.com

[5 marks]

[5 markah]



(c)

CLO2
C3

Solve the above pseudocode by writing C language.

Selesaikan pseudocode di atas dengan menggunakan bahasa C.

[7 marks]

[7 markah]

QUESTION 3**SOALAN 3**

- CLO1 a) List **THREE (3)** types of selection statements.

C1

*Senaraikan **TIGA (3)** jenis penyataan pilihan.*

[3 marks]

[3 markah]

- CLO1 b) Discuss **TWO (2)** differences between '*if-else*' statement and '*switch*' statement.

*Bincangkan **DUA (2)** perbezaan antara penyataan '*if-else*' dan penyataan '*switch*'.*

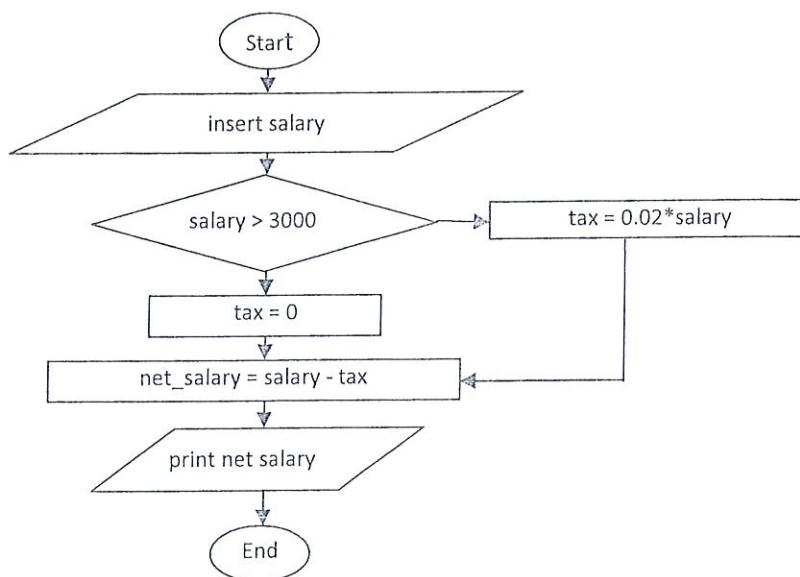
[5 marks]

[5 markah]

CLO2

C3

c)



By referring to the above flowchart, write a C program to calculate a simple net salary system.

Dengan merujuk kepada cartalir di atas, tuliskan aturcara C bagi mengira gaji bersih yang diperolehi.

[7 marks]

[7 markah]

QUESTION 4**SOALAN 4**

- CLO1 a) List the correct syntax of 'for' loop.

C1

Senaraikan sintaks yang betul bagi gelung 'for'.

[3 marks]

[3 markah]

- CLO1

C2

- b)

```
{  
    int a, jum;  
    jum = 0;  
    for (a=1; a<10; a+=2)  
        jum = jum +a;  
        printf("Jumlah ialah %d  
\n",jum);  
}
```

Rewrite the above program segment to 'do – while' statement.

Tulis semula segmen aturcara di atas kepada kenyataan 'do – while'.

[5 marks]

[5 markah]

- CLO2

C3

- c)

I want to get EXCELLENT in C programming

Apply C language to write a program to print 10 times of the above statement using 'for'.

Gunakan Bahasa C untuk menulis aturcara bagi memaparkan 10 kali pernyataan di atas menggunakan gelung 'for'.

[7 marks]

[7 markah]

SECTION C : 30 MARKS***BAHAGIAN C : 30 MARKAH*****INSTRUCTION:**

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

ARAHAN:

Bahagian ini mengandungi DUA (2) soalan esei. Jawab SEMUA soalan.

QUESTION 1***SOALAN 1***

CLO2
C3

Produce C language to display the examination result status and grade point when a mark is entered by user using *if statement*. The grading classification is shown in the Table1.

Binakan satu aturcara C yang akan memaparkan status keputusan peperiksaan dan mata gred apabila pengguna memasukkan markah menggunakan if statement. Penggredan adalah seperti yang ditunjukkan dalam Jadual1 di bawah:

Mark	Grade	Status
75 – 100	A	PASS
60 – 74	B	PASS
47 – 59	C	PASS
40 – 46	D	FAIL
20 – 39	E	FAIL
0 – 19	F	FAIL

Table1/Jadual 1

[15 marks]

[15 markah]

QUESTION 2**SOALAN 2**CLO2
C3

Produce C program to display ‘multiplication table’ and draw the flowchart.

Binakan satu aturcara C yang akan memaparkan ‘jadual sifir’ dan lukiskan cartalir.

The example output as follows:

Contoh keluaran seperti berikut:

Please enter number of ‘multiplication table’: 3

$1 \times 3 = 3$

$2 \times 3 = 6$

$3 \times 3 = 9$

$12 \times 3 = 36$

[15 marks]

[15 markah]

SOALAN TAMAT



BAHAGIAN PEPERIKSAAN DAN PENILAIAN
BORANG JAWAPAN OBJEKTIF

JUMLAH MARKAH

JABATAN	TARIKH	
NO SIRI BUKU JAWAPAN	PROGRAM	
KOD & NAMA KURSUS		

Arahan : Sila hitamkan pilihan jawapan anda

(A) (B) (C) (D)

1	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
2	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
3	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
4	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
5	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
6	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
7	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
8	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
9	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
10	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
11	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
12	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
13	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
14	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
15	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
16	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
17	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
18	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
19	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
20	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D

21	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
22	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
23	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
24	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
25	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
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28	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
29	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
30	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
31	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
32	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
33	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
34	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
35	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
36	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
37	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
38	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
39	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
40	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D

41	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
42	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
43	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
44	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
45	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
46	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
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48	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
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50	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
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58	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
59	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D
60	<input type="radio"/> A	<input type="radio"/> B	<input type="radio"/> C	<input type="radio"/> D

HAKMILIK UNIT PEPERIKSAAN

TIDAK DIBENARKAN MEMBAWA BORANG JAWAPANINI KELUAR DARIPADA BILIK/DEWAN PEPERIKSAAN

