UNIVERSITI TUN HUSSEIN ONN MALAYSIA

PEPERIKSAAN AKHIR
SEMESTER I
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NAMA MATA PELAJARAN	:	PENGATURCARAAN KOMPUTER
KOD MATA PELAJARAN	:	BFC 2042
KURSUS	:	2 BFC / 3 BFC
TARIKH PEPERIKSAAN	:	NOVEMBER 2009
JANGKA MASA	:	2 JAM
ARAHAN	:	JAWAB **SEMUA** SOALAN.

KERTAS SOALAN INI MENGANDUNGI SEPULUH (10) MUKA SURAT

SECTION A

Instruction: State whether each of the following declaration statement is **TRUE** or **FALSE**.

Q1   `int a, b(2);`

Q2   `float a23b[99], 1xy[66];`

Q3   `void city[36], ton[45];`

Q4   `double temperature[-100];`

Q5   `long phone [200];`

Q6   `float c[ ] = {11,22,33,44};`

Q7   `int amount_in$;`

Q8   `float 2many[3];`

Q9   `int a;float b;`

Q10   `float iTotal[3] = {11,22,33,44};`

(10 marks)

SECTION B

Instruction: Choose the **BEST** answer.

Q11   Which phase follows the design phase in Software Development Life Cycle?

    (a) Coding
    (b) Testing
    (c) Maintenance
    (d) Requirements Analysis

Q12   The process where several people offer constructive criticism of a programmer's code with a view to simplify it, to make it more efficient and to eliminate errors is known as

    _____.

    (a) testing
    (b) debugging
    (c) code review
    (d) design

Q13   A preprocessor command _____.

    (a) need not start on a new line
    (b) need not start on the first column
    (c) has # as the first character
    (d) comes before the first executable statement

Q14   Which of the following C statement assigns a value 10 to the 4th location of an integer based array `aiNum[10]`.

    (a)   `10[aiNum]=4;`
    (b)   `aiNum[4]=10;`
    (c)   `aiNum[10]=4;`
    (d)   `aiNum[3]=10;`

Q15   What is the output of the following code?

```
#include<stdio.h>
int iNum=10;
int main(int argc,char** argv)
{
        int iNum=20;
        {
                printf("iNum =%d",iNum);
        }
                return 0;
}
```

(a) iNum=10
(b) iNum=20
(c) Junk value
(d) Error

Q16   What would be the output of following code?

```
#include<stdio.h>
main(int argc, char **argv)
{
        int iCnt;
         for(iCnt =0;iCnt<5;iCnt++)
        {
            while(iCnt > 10)
            {
                    printf("%d ",iCnt);
            }
        }
        return 0;
}
```

(a) Nothing will be printed
(b) Infinite sequence of 0 1 2 3 4 5 6 7 8 9 10
(c) 0 1 2 3 4 5
(d) Infinite sequence of 0 1 2 3 4

Q17 Which of the following statements is/are TRUE?

(i) Continue statement can occur within loops and switch statements.

(ii) In case of nested loops, break statement of innermost loops takes the control out of the outermost loop.

(iii) Continue statement written in a while loop will continue from condition statement of while loop.

(iv) If a task can be achieved using for loop, it can be done using while loop as well.

(a) (i), (ii) and (iii)

(b) (ii) and (iv)

(c) (iii) and (iv)

(d) (iii) only

Q18 What is the output of the following code?

```
#include<stdio.h>
int  main(int argc, char **argv)
{    int iNum=345;
do
{    printf("%d", iNum % 10);
     iNum =iNum/ 10;
}while (iNum > 0);
 return 0;
}
```

(a) 543

(b) 345

(c) Error

(d) 5

Q19 Which of the following are valid cases for switch statement:

(i) -200

(ii) 3*5+2

(iii) a*5+2

(iv) 'x'

(a) (i), (ii), (iii) and (iv)

(b) (i), (ii) and (iv)

(c) (i) and (iv)

(d) (ii) and (iv)

Q20 What would be the output of following code?

```c
#include<stdio.h>
main(int argc,char **argv)
{
        int iA=100,iB,iC;
        iB = ++iA;
        iC = --iB;
        printf("%d %d %d",iA,iB,iC);
        return 0;
}
```

(a) 101   99   100
(b) 101   100   100
(c) 101   99   101
(d) 100   101   100

(20 marks)

SECTION C

Instruction: Answer **ALL** questions.

Q21   Draw a flowchart based on the following scenario:

> Find the average of a student given the marks he obtained in three
> subjects. For a student to pass, average should not be less than 65.
> Show whether he passed or failed.

(10 marks)

Q22   State the output for each of the statement below:

(a)
```c
#include<stdio.h>
int main(int argc,char** argv)
{
        int iIndex=3;
        for(iIndex = 3;iIndex >= 0;iIndex--)
        {
                switch(iIndex)
                {
                        case 1 : printf("Hi ");
                        case 2 : printf("Welcome ");
                               break;
                        case 3 : continue;
                        default : printf("Goodbye ");
                }
        }
        return 0;
}
```

(4 marks)

(b)
```c
#include<stdio.h>
int main(int argc,char **argv)
{
        int iNum1=2,iNum2=1,iNum3=1,iNum4;
        switch(iNum1)
        {
            case 0  : iNum1=2;
                      iNum2=3;
            case 1  : iNum1=4;
                      break;
            default : iNum2=3;
                      iNum1=1;
        }
    printf("%d %d %d %d",iNum1,iNum2,iNum3,iNum4==iNum3);
    return 0;
}
```
(4 marks)

(c)
```c
int number = 0;
if(number = 0)
     printf("UTHM");
else
     printf("FTMM");
```
(1 marks)

(d)
```c
int number = 2;
if(number -= 1)
     printf("UTHM");
else if(number == 2)
     printf("FTMM");
else
     printf("FKAAS");
```
(1 marks)

Q23 Study the array x given.

Array a before execution:

1	2	3	4	5	6	7	8	9	10

```
int i = 1;
a [ i ] = a [ 9 ] + a [ i+3 ];
i++;
a [ i++ ] = a [ 0 ];
a [ i+2 ] = a [ 2 ] + 10;
a [ 6 ] = a [ i ];
a [ i++4 ] = a [ i-1 ] * 2;
a [ 8 ] =a [ i++ ] + a [ 5 ];
```

After the above statement are executed, rewrite all values in array a.

Array a after execution:

(10 marks)

SECTION D

Instruction: Answer **ALL** questions.

Q24 Write a program that will display the desired multiplication table.

Example output:

```
Enter the desired multiplication table > 9

1 X 9 = 9
2 X 9 = 18
3 X 9 = 27
:
:
12 X 9 = 108
```

(10 marks)

Q25 Write a program that when character 'A' or 'a' is entered; a message "THIS TEST IS EASY" will be printed on the screen otherwise prints "THIS TEST IS DIFFICULT!"

(10 marks)