



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER II  
SESSION 2014/2015**

COURSE NAME : COMPUTER PROGRAMMING  
COURSE CODE : BIT 10303  
PROGRAMME : 1 BIT  
EXAMINATION DATE : JUNE 2015 / JULY 2015  
DURATION : 2 HOURS AND 30 MINUTES  
INSTRUCTIONS : A) ANSWER **ALL** QUESTIONS.  
B) PLEASE WRITE YOUR  
ANSWERS IN THIS QUESTION  
BOOKLET.

THIS QUESTION PAPER CONSISTS OF **SEVEN (7)** PAGES

**Q1 (a)** Determine whether each statement in Figure **Q1(a)(i)- Q1(a)(xv)** is **VALID** or **INVALID**. State your response in the answer column.  
(15 marks)

No	Statement(s)	Answer
(i)	Identifiers include variables, constants, and function names.	
(ii)	C is a case-sensitive programming language.	
(iii)	Values of variables are changeable during execution.	
(iv)	Values of constants are changeable during execution.	
(v)	We may not indicate a data type whenever a variable is declared.	
(vi)	A constant may be declared using #define statement.	
(vii)	The rules for naming a function is the same with the rules for naming a variable.	
(viii)	Identifiers must be declared before they are used in any programming statement.	
(ix)	Any program may be executed without main program.	
(x)	A function may be implemented above main program only.	
(xi)	<stdio.h> is a header file that contains mathematical functions.	
(xii)	A function can be invoked from a main program or other functions.	
(xiii)	A name for an identifier can start with a letter or a digit.	
(xiv)	In C, \* marks the start of a comment, and *\ marks the end of a comment.	
(xv)	scanf statement enables user input to be stored in a variable.	

- (b) Figure **Q1(b)** shows samples of programming statements with errors. Write corresponding corrected version of each statement in the answer column of Figure **Q1(b)**.

(10 marks)

Programming statement(s)	Answer
int const size == -500;	
double num, Num == 0.5	
printf{"\nAlways happy"};	
character alphabet = M;	
define Size = 150;	

**FIGURE Q1(b)**

- (c) Figure **Q1(c)** shows a program with a function call. Determine the output of the program.

```
#include <stdio.h>
void main(void)
{
int n = 7, result;
int show_Value1(int);

result = show_Value1(n);
printf("\nThe result is = %d\n",result);

result = show_Value1(5);
printf("\nThe result is = %d\n",result);
printf("\nThe result is x = %d x = %d\n",n+10,n*n);
}

int show_Value1(int x)
{
if (x<5)
{
printf("\n x = %d",x);
return -x;}
else
{
printf("\n x = %d",x);
return x * 2;}}
```

**FIGURE Q1(c)**

(10 marks)

**Answer:**

- Q2 (a)** Figure **Q2(a)** shows a program with some operations for an array called `arr1`. Determine the output of the program in Figure **Q2(a)**.

```
#include <stdio.h>
void main(void)
{
    int arr1[ ]={10,25,12,24,15,67,72}, i;

    arr1[1] = a[5];
    arr1[3] = a[1]*a[0];
    arr1[4]++;
    --arr1[2];
    arr1[6] = arr1[0]+arr1[6];

    printf("\nDisplay values in arr1:");
    printf("\narr1[0] = %d\n", arr1[0]);
    printf("\narr1[1] = %d\n", arr1[0]);
    printf("\narr1[2] = %d\n", arr1[0]);
    printf("\narr1[3] = %d\n", arr1[0]);
    printf("\narr1[4] = %d\n", arr1[0]);
    printf("\narr1[5] = %d\n", arr1[0]);
    printf("\narr1[6] = %d\n", arr1[0]);}
```

**FIGURE Q2(a)**

(15 marks)

**Answer:**

- (b) Write a program fragment that will read ten integer values into a single dimensional array. Then determine sum of positive values from the array.  
(15 marks)

**Answer:**

- Q3** (a) Figure **Q3(a)** shows declaration of structure variable's members. State **TWO (2)** ways to copy values from auto1 to auto2.

```
typedef struct car{
    char* make;
    char* model;
    int year;
    float price;
}AUTO;

AUTO auto1, auto2;

auto1.make = "Ford";
auto1.model = "Fiesta";
auto1.year = 1978;
auto1.price = 4500.89;
```

**FIGURE Q3(a)**

(10 marks)

**Answer:**

- (b) Figure **Q3(b)** shows part of a program that opens a file called "test.dat". There are five rows of data in the file. Each row of the data presents two integer values, first score and second score. Complete the program with looping statements to read and display each line of the data. Finally, determine a statement to close the file.

(15 marks)

```
#include <stdio.h>
void main(void)
{ FILE *infile;
  int score1, score2;
  float val;

  infile = fopen("test.dat","r");
```

**Answer:**

**FIGURE Q3(b)**

- (c) Figure Q3(c) shows a program with pointer variables. Determine the output.

```
#include <stdio.h>
#include <stdlib.h>
main()
{
    char c1 = 'J';
    char c2 = 'O';
    char c3 = 'G';
    char* p1 = &c1;
    char* p2;

    p2 = &c2;
    printf("%c%c%c", *p1,*p2,c3);

    p2 = p1;
    p1 = &c3;
    printf("%c%c%c", *p1,*p2,c3);

    return 0;}

```

FIGURE Q3(c)

(10 marks)

**Answer:**

- END OF QUESTION -