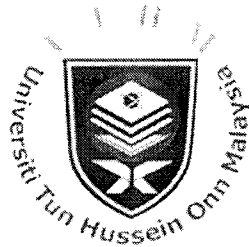


**CONFIDENTIAL**



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER II  
SESSION 2012/2013**

COURSE NAME : COMPUTER PROGRAMMING  
COURSE CODE : DAM 31303  
PROGRAMME : 2 DAI/ 3 DAM  
EXAMINATION DATE : MARCH 2013  
DURATION : 2 HOURS  
INSTRUCTIONS : ANSWER **ALL** QUESTIONS  
FOR PART A AND B AND  
ANSWER **TWO (2)** QUESTIONS  
FOR PART C

THIS QUESTION PAPER CONSISTS OF NINE (9) PAGES

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**PART A OBJECTIVE QUESTIONS (15 marks)**

**Q1** The body of a `if` statement that contains multiple statement is placed in \_\_\_\_\_.

- A. { }
- B. [ ]
- C. ( )
- D. < >

**Q2** Decrement prefix operator for `z` is \_\_\_\_\_.

- A. `z --`
- B. `-- z`
- C. `z -= 1`
- D. `z = -1`

**Q3** The following are **VALID** declaration of an array:

- i. `float average_temp[100];`
- ii. `int lMalaysia[];`
- iii. `int x[];`
- iv. `char grade[10];`

- A. i, ii
- B. i, iii, iv
- C. ii, iii, iv
- D. All of the above

**Q4** The \_\_\_\_\_ is **NOT** C program operator.

- A. `||`
- B. `>|`
- C. `!=`
- D. `%`

**Q5** What is the output of the following code snippet?

```
int a = 20, b = 5, c = -2;
  a + = b++ - 10;
  b -= a % 3;
  c *= a/b;
printf("a = %d b = %d c = %d", a, b, c);
```

- A. a = 20 b = 5 c = -2
- B. a = 20 b = 6 c = -4
- C. a = 15 b = 6 c = -4
- D. a = 15 b = 5 c = -6

**Q6** \_\_\_\_\_ are a segment of program by itself that does a specific task.

- A. Arrays
- B. Pointer
- C. String
- D. Functions

**Q7** Which of the following is **NOT** a data type in C?

- A. int
- B. float
- C. boolean
- D. double

**Q8** What is the value of y if the switch statement below is executed?

```
x = 3;
switch (x + 3){
  case 6: y = 0;
  case 7: y = 1;
  default: y += 1;
}
```

- A. 1
- B. 4
- C. 3
- D. 2

**Q9** What is the output of the following code snippet?

```
int x = 9;
int y = 8;
int z = 7;
if (x > 9)
    if (y > 8)
        printf("x > 9 and y > 8");
else if (z >= 7)
    printf("x <= 9 and z >= 7");
else
    printf("x <= 9 and z < 7");
```

- A. x > 9 and y > 8
- B. x <= 9 and z >= 7
- C. x <= 9 and z < 7
- D. None of the above

**Q10** Identify the output of the following code snippet.

```
int i = 1;
int j = 1;
while (i < 5) {
    i++;
    j = j * 2;
}
System.out.println(j);
```

- A. 4
- B. 8
- C. 16
- D. 32

**Q11** If  $x = 3$  and  $y = 4$ ,  $!((5 * y <= 23 - x))$  will be given \_\_\_\_\_ answer.

- A. 0
- B. 1
- C. 0.5
- D. 20

**Q12** Which of the following is the **VALID** array initialization?

- A. `float array{4} = {1,2,3,4};`
- B. `float array{ } = {1,2,3,4};`
- C. `float array[] = {1,2,3,4};`
- D. `float array|4| = {1,2,3,4};`

**Q13** Identify the expression in C programming for the following statement:

$$b = \frac{3a - cy}{4c}$$

- A. `b = 3*a-c*y/4*c`
- B. `b = (3*a-c*y)/(4*c)`
- C. `b = 3a-cy/(4*c)`
- D. `b = (3*a-c*y)/4*c`

**Q14** The function \_\_\_\_\_ is normally written before the main function.

- A. prototype
- B. call
- C. definition
- D. reference

**Q15** It is given: `int exam_score [4] = {88, 89};`

What is the value of the fourth (4<sup>th</sup>) element?

- A. 88
- B. 89
- C. 0
- D. None of the above

**PART B TRUE/FALSE QUESTIONS (15 marks)**

- Q16** Functions cannot return more than one value at a time.
- Q17** A program is usually not limited to a linear sequence of instructions.
- Q18** `(4 != 2) && (5 < 3)`
- Q19** Every `if` statement must have a corresponding `else` statement.
- Q20** Array is a series of elements of the same type stored on adjacent memory locations.
- Q21** A `do...while` repetition statement first executes the loop body and computes the predicate/condition.
- Q22** `break` statement will terminates the loop immediately.
- Q23** Not all directives in the `if...else` statements can be converted into `switch...case` statements.
- Q24** There are three important aspects in using a function: function definition, function prototype and function calls.
- Q25** The two types of searching are linear and bubbles.
- Q26** `struct account myAccount;`  
Based on the above declaration, `myAccount` is the structure name.
- Q27** It is correct to declare a string the same as initializing array values as shown below:  
`char animal[] = "cat";`
- Q28** To access each of the structure elements, the operator dot (`.`) is used.

**Q29** A pointer is an array that contains an address value.

**Q30** The process of correcting errors is called debugging.

**PART C STRUCTURE QUESTIONS (20 marks)**

- Q31** (a) Declare a one-dimensional real number array of size 6 that is called constant. Assign the following values to the array elements: 0.02, -0.45, 5.77, -2.55, 7.50, -5.

(2 marks)

- (b) Given the following program segments, state the values of the array elements at the end of the respective segments.

```
(i)  int M[6] = {2,3};
      M[2] = M[1] * 3;
      M[3] = M[2] * 1;
      M[4] = M[0] * 2 * 3;
      M[5] = M[4] * 5 - 1;
```

```
(ii) int R[4], i = 1;
      R[i-1] = 8;
      R[i] = R[i-1] * 8;
      R[i+1] = R[i] + 10;
      R[i+2] = R[i] * 5;
```

(8 marks)

- Q32** (a) Given the following declaration:

```
struct information {
    char telephoneNo[10];
    char address[50];
    char postcode[5];
    char city[15];
    char state[15];
};

struct customerInfo {
    char name[30];
    int customerNo;
    struct information personal;
} customer;
```

Write the statement to access the following structure elements:

- (i) name **element** for customer  
(ii) telephoneNo **element** for customer

(1 mark)



- (b) Using the same declaration given, write statement for assigning the following information to the customer structure.

- (i) The customer's name is Aisyah
- (ii) The customer's number is 1226
- (iii) The customer's telephone number is 012-420374
- (iv) The customer's address is No. 21, Jalan Kenangan
- (v) The postcode is 86000
- (vi) The city is Seri Intan

(3 marks)

- (c) Declare a proper data structure named *StudDetails* to store the following student data:

student's name, student's ID, programme, year of study, marks of academic, marks of curriculum, marks of interpersonal and total marks.

Use the most appropriate data type for each member.

(6 marks)

- Q33** (a) Rewrite the following code snippet, using a `switch...case` statement.

```
if ((x == 1) || (x == 2))
    total = x * 0.8;
else if (x == 3)
    total = x * 0.7;
else
    total = x * 0.6;
```

(3 marks)

- (b) Write a C program that will add two floating point numbers in a function called `addition` and the total is returned and displayed from the main function.

(7 marks)

- END OF QUESTION -