

**KABARAK**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS  
2010/2011 ACADEMIC YEAR**

**FOR THE DEGREE OF BACHELOR OF BUSINESS  
MANAGEMENT & INFORMATION TECHNOLOGY**

**COURSE CODE: BMIT 226**

**COURSE TITLE: COMPUTER PROGRAMMING**

**STREAM: Y2S2**

**DAY: THURSDAY**

**TIME: 9.00 – 11.00 A.M.**

**DATE: 09/12/2009**

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**INSTRUCTIONS:**

- Answer question **ONE** compulsory and any other **Three** questions in section **B**

**PLEASE TURN OVER**

**QUESTION ONE (40 marks)**

- a. Explain the difference between While and Do---While looping statements. Give the syntax for each with example. [3marks]
- b. State and explain the five main features of C programming language [3 marks]
- c. Explain any four derived data types used in C language [2 marks]
- d. Define an identifier? List all the rules for identifiers. [3 marks]
- e. Consider the following segment of a program:-

```
.....  
If(sex is male)  
{  
  If (salary > 10000)  
    Bonus=0.05 * balance;  
    Else  
    Bonus=0.02 * balance;  
}  
Else  
{  
  Bonus=0.02 * balance;  
}  
Balance=balance * bonus;
```

Required:-

- a).Identify what type of If statement is this and why? [1mrk]
- b).Explain the execution flow for the above program segment. [3mrks]
- c). Draw a well labeled flow chart to represent the above execution procedure. [2mrks]
  
- f. WRITE A C++ program to find the largest value of any three numbers entered by the user through the keyboard. [2 marks]
  
- g. Define a constructor and hence explain its function and characteristics [3 marks]
- h.).Define function overloading hence write a program to show its implementation [4 marks]
  
- i. Define Polymorphism. State its types [3 marks]
- j. write down the syntax for declaring a 2 dimensional array [2 marks]
- k. Write a C++ program to calculate the area of a circle and its perimeter. [4marks]
- m.Differentiate between Data abstraction and Encapsulation [2 marks]

## **SECTION B ANSWER ANY THREE QUESTIONS**

### **QUESTION TWO (20 Marks)**

- a) Identify the error and rewrite the program [ 4 marks]

```
# include <stdio.h>
main
{
    Integer A,b, sum;
    printf ("ENTER VALUE FOR A ; ")
    scanf ("%d", $a);
    printf(ENTER VALUE FOR B ;");
    scanf ("%d", &b);
    sum=a+b
    printf("Sum Of Given Two Numbers are %d" Sum);
} }
```

- b) Write a c language program to read a number and find whether the given number is even or odd. [5 marks]

- c) Explain the steps involved in executing a C program [4 marks]

- d) Write a C program that accepts student Roll number, Marks in three subjects and prints the calculated Total, Average.(It should be well commented [5 marks]

- e) What is the function of Cin and Cout in C++ [2 marks]

### **QUESTION THREE (20 Marks)**

- a) . Using case statement, write a C++ or C program to display the day depending on the Choice entered by the user from the key board [5 marks]

- b) Discuss the C character set giving out examples in each case. [4 marks]

- c) Discuss the scope of variables. Use simple Program to illustrate . [4 marks]

- d) (i) What is a Pointer? [2 marks]

- (ii) Describe four advantages of using pointers [3 marks]

- e). Define initialization of a variable. Use simple program to illustrate [2 marks]

**QUESTION FOUR (20 Marks)**

- a) (i) What is variable. [1 marks]  
(ii) What are the rules followed when declaring it. [3 marks]
- b) What is a Constant? How are they defined? [2 marks]
- c) Discuss any three advantages for using functions in a program [3 marks]
- d) Describe the following functions. [6 marks]  
(i) Call by value  
(ii) Call by reference  
(iii) Inline function
- e) ).Discuss the following Operators used in C:-  
i) Conditional Operators [2 marks]  
ii) Increment and decrement operator (explain both prefix and postfix  
in all the cases) (3marks)

**QUESTION FIVE (20 Marks)**

- a) (i) What is inheritance? [1marks]  
(ii) Discuss any Two types of inheritance available in C++. [4 marks]
- b) Write a C++ program to find the sum of first 100 natural Numbers using for loop  
Statement [4 marks]
- c. What is the role of Printf ( ) function. Write down its syntax [3 marks]
- d. Explain the following terms:-  
i).keyword  
ii).Object  
Iii) Encapsulation  
Iv) Derived class [4 marks]
- e. Explain any two logical operators used in C++ [2 marks]