**BABCOCK UNIVERSITY**

**SOFTWARE ENGINEERING DEPARTMENT**

**[QUESTION PAPER] TITLE: INTRO TO PROGRAMMING USING C (COSC111)**

ASSIGNMENT 2 (Due Date:16-03-2022)

**MARKING GUIDE**

**SECTION A (Attempt all)**

|  |  |
| --- | --- |
| 1. Identify the valid variables from the following:   while, 2\_cost, **score2**, for, **item\_qty** | 2. State the error in the following code chunk:  printf("Input the radius");  scanf("%d", radius);  **Answer:** scanf("%d", **&**radius); |
| 3. What is wrong with the following statement:  **int break = 25;**  **break** is a keyword and should not be used as a variable | 4. What is the final value of count in the following code extract:  int i, count = 0;  for (i = 2; i < 10; i++)  count++;  **Answer: 8** |
| 5. Identify the problem with the following code chunk:  **int Bread = 500;**  **printf("\n The Total Bread = %d", bread);**  **Answer: bread should have first letter as uppercase, just as it was declared.**  **C language is case sensitive.** | 6. An error in design or implementation that does not prevent your program from compiling but causes it to do what is NOT intended is called……………….  **Answer: Logic error** |
| 7. What is the value of x = 8 + 2 \* 6 – 1;  8 +12-1  20-1  **Answer:**  19 | 8. What does the following code print?  printf( "\*\n\*\*\n\*\*\*\n\*\*\*\*\n");  **Answer:**  \*  \*\*  \*\*\*  \*\*\*\* |
| 9. If **int sum = 25** and **int val = 4,** what is **sum+=val** ?  **Answer:**  **29** | 10. What is the output if integer value 2 is read in to variable ***choice*** in the following code fragment:  printf("\n Enter your Choice:");  scanf("%d", &choice );  switch(choice){  Case 1: printf("Hey "); break;  Case 2: printf("How ");  Case 3: printf("Coding"); break;  default: printf("\n Out of Range");  }  **Answer:**  How Coding |

**SECTION B (Attempt all)**

1. Write a C language program to detect if a number is even.

|  |
| --- |
| 1. #include <stdio.h> 2. //Program to test for even number 3. int main() 4. { 5. int number; 7. printf("\nEnter Value to Test for Even:"); 8. scanf("%d", &number); 9. if(number%2==0) 10. { 11. printf("Value %d is even", number); 12. } 13. else 14. { 15. printf("Value %d is NOT even", number); 16. } 17. return 0; 18. } |

1. Write a C code to add integer numbers from 1 to 10

|  |
| --- |
| 1. //C code to add integer numbers from 1 to 10 2. #include <stdio.h> 3. int main() 4. { 5. int sum=0; 6. int i; 8. for (i = 1; i<=10; ++i) 9. { 10. sum = sum + i; 11. } 12. printf("sum = %d", sum); 13. return 0; 14. } |

1. Write a program to find the sum of even numbers from first 10 positive integers

|  |
| --- |
| 1. /\*program to find the sum of even numbers between 1 and 10\*/ 2. #include <stdio.h> 3. int main() 4. { 5. int i; 6. int sumEven=0; 7. for(i=1;i<=10;++i) 8. { 9. if(i%2==0) 10. { 11. sumEven=sumEven+i; 12. } 13. }//end of for 14. printf("\nThe sum of Even of first 10 integers =%d",sumEven); 15. return 0; 16. } |

1. If **5!** (factorial) is computed as **120**, write a C code using iterative procedure to implement this.

|  |
| --- |
| 1. //C code using iterative procedure to find n! 2. #include <stdio.h> //5! = 5\*4\*3\*2\*1 3. int main() 4. { 5. int n, mult=1; //variable declarations 6. printf("\nEnter the value of n:"); 7. scanf("%d", &n); // input the value of n e.g. n = 5; 8. for(i=1;i<=n;++i) 9. { 10. mult = mult\*i; 11. } 12. printf("\nThe factorial of %d = %d", n, mult); 13. return 0; 14. } |

1. How many times does the following loop run? for (j = 2; j < n; j++)

|  |
| --- |
| **Answer**: n-2 |