



NATIONAL UNIVERSITY OF COMPUTER AND EMERGING SCIENCES
(KARACHI CAMPUS)
Department of Computer Sciences
First Mid-Term Examinations Spring 2017

Subject: Introduction to Computing -CS102

Date: 20th February, 2017

Total Time: 60 Minutes

Total Marks: 22

Course Instructor: M. Shahzad/Noman Atique

Section/GR: _____

Roll Number: _____

You are advised to READ these notes:

- Attempt all questions and all parts in order.
- It is advisable to go through the paper once before starting with the first question.
- All questions don't carry **equal marks**. Marks of subparts are equally distributed.
- Exam is a closed books and closed notes.
- Don't use pencil , write in dark blue or black pen.

Q1): What will be the output of the following programs (Assuming that the program executes correctly)

[04]

<p>(i): Let suppose the value of color is 'R'</p> <pre>main() { switch (color) { case 'R': printf("red\n"); case 'B': printf("blue\n"); case 'Y': printf("yellow\n"); } }</pre>	<p>(ii):</p> <pre>main() { int i = 1, j = 1; for (; ;) { if (i > 5) break; else j += i; printf ("\n%d", j); i += j; } }</pre>
<p>(iii): What will be the result is in the variable k after execution of the following statements?</p> <pre>int j=1, k = 4; while(++j <= 10) k++;</pre>	<p>(iv): What value gets stored in variable c after the following instructions are executed?</p> <pre>int a, b, c; a=7; b=2; c=b+a/b%2-1;</pre>

Q2): Write down the programs for the following problem statements (No need to write header files): [08]

<p>A) Here is a part of a program that begins by asking the user to input three integers:</p> <pre>#include <stdio.h> int main(void) { int a, b, c, sum; printf("Input three integers: "); }</pre> <p>Complete the program so that when the user executes it and types in 2, 3 and 7, this is what appears on the screen:</p> <p>Input three integers: 2 3 7 Twice the sum of your integers plus 7 is 31 --- bye!</p>	<p>B) Write a program that prints following pattern (Use nested loop).</p> <pre>C1 C3 C5 C7 B1 B3 B5 B7 A1 A3 A5 A7</pre>
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Q3) Find the errors in following program and rewrite the statements with the line number [05]

<pre>1. main() 2. { 3. double g = "9.8"; 4. printf("Enter The mass of body"); 5. scanf("%f",&mass); 6. double wight = mass * g; 7. printf("Wight of body is %f ", wight); 8. int num, 9. int counter, 10.if (wight => 50.0) 11.{ 12. num == 30; 13. counter = 5; 14.} 15.else if (wight => 25.0)</pre>	<pre>16. else() 17.{ 18.num = 10; 19.counter = 2; 20.} 21.do 22.{ 23.printf("%d", num); 24.counter--; 25.}while (counter != 0); 26.float pi = 3.14; 27.printf("Enter radius "); 28 scanf("%f", radius); 29.printf("Area of Circle is %f", (pi * radius * radius)); 30.}</pre>
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Q4) Provide a very short (1 - 2 lines only) description for each of the following: [05]

- A. Discuss the limitation of switch statement
- B. Which of the following are not legal identifiers(variable names) in C language and why?
 (1) 3id (2) _yes (3) start*it (4) me_to-2 (5) int
- C. What are the possible reasons of runtime errors?
- D. Can a program be compiled without main() function? Give reason for Yes/No.
- E. Can we give same name to two variables of different scope? If yes, give example. If no, give reason.