Structured Programming

Test 1, 29.10.2014, Group: B

*Each question has exactly **one correct** answer.*

Name: ———————————————

ID: ———————————————

1. Which of the following expressions **is valid** in C?

    (a) `for(x = 1)`

    (b) `for(x > 0; x-)`

    (c) `while(10 * 10)`

    (d) neither

2. What is the valid code in C that checks the following condition $5 < x < 50$?

    (a) `while((50 >= x) && (x > 5))`

    (b) `if((50 >= x) && (x > 5))`

    (c) `if((50 > x) && (x > 5))`

    (d) `if(5 < x <= 50)`

3. What will be the output after execution of the following code segment?

```
int a = 0;
printf(" %d ", printf(" %d", printf("%d", a)));
```

    (a) 0 1 2 3

    (b) 2 1 0

    (c) 0 1 2

    (d) the code is invalid

4. Which from the following expressions does not result in 2.5 if the variables are declared as `int a=5, b=2;`

    (a) `a*1./b`

    (b) `float(a)/b`

    (c) `(float)(a/b)`

    (d) `a/(float)b`

5. What will be the output after the execution of the following code segment?

```
if(-1 < x < 0) printf("YES");
else printf("NO");
```

    (a) YES

    (b) NO

    (c) cannot predict, will depend on value of variable x

    (d) the code will produce a syntax error

6. What will be the output after execution of the following code segment?

```
int a = 4;
int b = 1/a + 3/2 + 1/2;
printf ("b = %03d\n", b);
```

   (a)   b = 2.25

   (b)   b = 001

   (c)   b = 1

   (d)   b = 1.00

7. What will be the value of i after the execution of the following code segment?

```
int i; for(i = 0; i <= 10; ++i) {}
```

   (a)   0

   (b)   11

   (c)   9

   (d)   10

8. What will be the output after the execution of the following code segment?

```
int a = 1;
switch(a) {
  case 1: printf("1");
  case 12: printf("2");
  case 123: printf("3");
}
```

   (a)   123

   (b)   1

   (c)   2

   (d)   3

9. What is the result from the execution of the following code segment?

```
int a, b, d = 2; float c = 0;
for(a = 5, b = a--; a > 0, b < 10; a--, b++) c += 1 / d;
printf("%3.1f\n", c);
```

   (a)   0.0

   (b)   2.0

   (c)   2.5

   (d)   3.0

10. Which of the following expressions will declare an array a of 5 integers?

   (a)   `int a[] = {1, 2, 3, 4, 5};`

   (b)   `int array[];`

   (c)   `a int[5];`

   (d)   `array int[5];`

Answer Key for Exam $\boxed{A}$

1. Which of the following expressions **is valid** in C?

   (a)   `for(x = 1)`

   (b)   `for(x > 0; x-)`

   $\boxed{\text{(c)}}$ `while(10 * 10)`

   (d)   neither

2. What is the valid code in C that checks the following condition $5 < x < 50$?

   (a)   `while((50 >= x) && (x > 5))`

   $\boxed{\text{(b)}}$ `if((50 >= x) && (x > 5))`

   (c)   `if((50 > x) && (x > 5))`

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   ```
   int a = 0;
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   ```

   (a)   0 1 2 3

   (b)   2 1 0

   $\boxed{\text{(c)}}$ 0 1 2

   (d)   the code is invalid

4. Which from the following expressions does not result in 2.5 if the variables are declared as `int a=5, b=2`;

   (a)   `a*1./b`

   (b)   `float(a)/b`

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   ```
   if(-1 < x < 0) printf("YES");
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8. What will be the output after the execution of the following code segment?

```
int a = 1;
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9. What is the result from the execution of the following code segment?

```
int a, b, d = 2; float c = 0;
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printf("%3.1f\n", c);
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   (b)   2.0
   (c)   2.5
   (d)   3.0

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   (b)   `int array[];`
   (c)   `a int[5];`
   (d)   `array int[5];`