



Kazakh-British Technical University
Faculty of Information technologies
Course: Programming Principles I Date: 14/12/2019
Variant: 2

Full name:

Answers section

If you have multiple answers for one question write them all

- | | | | | |
|----|----|-----|-----|-----|
| 1. | 5. | 9. | 13. | 17. |
| 2. | 6. | 10. | 14. | 18. |
| 3. | 7. | 11. | 15. | 19. |
| 4. | 8. | 12. | 16. | 20. |

Questions section

1. Which of the following data types CANNOT store the number 47255?

- (a) int (b) float (c) char (d) double

2. What will be the output of this code, if variable "in" will be 0.

```
#include <iostream>
using namespace std;
int main(){
    int in;
    string num[10] = {"Greater than 9", "one", "two", "three", "four",
                     "five", "six", "seven", "eight", "nine"};

    cin >> in;
    if(in > 9){
        cout << num[0];
    }
    else{
        cout << num[in];
    }
    return 0;
}
```

- (a) One (b) Two (c) It will stop with and error (d) Greater than 9

3. What will be the output of this code:

```
#include <iostream>
using namespace std;
int main(){
    int i = 0;
    if (i == '0') cout << "Cheating is bad";
}
```

```

else if (i == '1') cout << "Don't Cheat";
else cout << "IWillNeverCheatAnymore";
return 0;
}

```

- (a) Cheating is Bad (b) Nothing (c) Don't Cheat (d) IWillNeverCheatAnymore

4. Which of the following gives us a memory address of int array[10]:

- (a) array[1] (b) array[0] (c) array (d) memory(array);

5. What will be the output of this string concatenation:

```

#include <iostream>
using namespace std;
int main(){
    string x = "10";
    int y = 20;
    string z = x y;
    return 0;
}

```

- (a) 10+20 (c) 20 pile because of
(b) 30 (d) It wouldn't com- error

6. What will be the output of this code. Please, write answers in the answers section.

```

#include <iostream>
using namespace std;
void swap(int a, int b){
    int c;
    c = b;
    b = a;
    a = c;
}
int main(){
    int a = 5, b = 22;
    swap(a, b);
    cout << a << " " << b;
    return 0;
}

```

7. What will be the output of this code:

```

#include <iostream>
#include <vector>
#include <algorithm>
#include <iterator>
using namespace std;
int main(){
    vector<int> g1;
    for (int i = 1; i <= 5; i += 2)
        g1.push_back(i);
    cout << "Size : " << g1.size();
}

```

```
    return 0;
}
```

(a) Size : 5

(b) Size : 3

(c) 5

(d) 3

8. What will be the output of this code:

```
#include <iostream>
#include <set>
using namespace std;
int main(){
    set<int> a;
    for (int i = 0; i < 100; i++) {
        a.insert(i);
    }
    a.insert(43);
    a.insert(32+21+3);
    return 0;
}
```

(a) 100

(b) 102

(c) 99

(d) empty set

9. What will be the output of this code. Please, write answers in the answers section.

```
#include <iostream>
using namespace std;
int main() {
    int a = 1;
    int b = 5;

    a ^= b;
    b ^= a;
    a ^= b;
    cout << a << " " << b;
    return 0;
}
```

10. What will be the output of this code. Please, write answers in the answers section.

```
#include <iostream>
#include <map>
using namespace std;
int main() {
    map<string, int> a;
    string s = "1";
    for (int i = 0; i < 10; i++){
        s += char(i);
        a[s] = i;
    }
    map<string, int> :: iterator it;
    for(it = a.begin(); it != a.end(); ++it) {
        cout << it->second;
    }
    return 0;
}
```

11. What will be the output of this code. Please, write answers in the answers section.

```
#include <iostream>
using namespace std;
int main(){
    int c = 5;
    if( c > 5 && c > 0 )
        cout << c++ << endl;
    if( 1 | 0 )
        c--=-1;
    cout << c << endl;
    if(c)
        ++c;
    cout << c + 1 << endl;
    return 0;
}
```

12. How many strings will be in the output and what will be the first line of the output? Please, write answers in the answers section.

```
#include <algorithm>
#include <iostream>
using namespace std;
int main(){
    string s = "asd";
    sort(s.begin(), s.end());
    do{
        cout << s << endl;
    }while(next_permutation(s.begin(), s.end()));
    return 0;
}
```

13. What will be the output of this code:

```
#include <iostream>
using namespace std;
int main(){
    int a[5] = {0, 1, 6, 8, 9};
    for(int i = 0; i < 6; i++)
        cout << a[i] << " ";
    return 0;
}
```

- (a) Yes, there is no mistakes (b) No, there will be compilation error (c) No, there will be run-time error (d) Yes, but there will be warnings

14. What will be the output of this code:

```
#include <iostream>
#include <string>
using namespace std;
int main(){
    string nums;
    cin >> nums;
    int ind = 0;
    for(int i = 0; i < nums.size(); i++){
```

```

        if (nums[i] != '0') {
            nums[ind] = nums[i];
            ind++;
        }
    }
    for (int i = ind; i < nums.size(); i++) {
        nums[i] = '0';
    }
    cout << nums << endl;
    return 0;
}

```

- (a) Finds the palindrome (b) Finds number of 0's (c) Moves 0 to the end of the string (d) Output 0's

15. Fill the gaps. Please, write answers in the answers section.

```

#include <iostream>
#include <algorithm>
#include <-----> //1
#include <-----> //2
using namespace std;
int main() {
    stringstream ss;
    vector<string> v;
    string s = "I will never cheat on programming exams";
    ss << s;
    string word = "";

    while (ss -- word) //3
    {
        v.push_back(word);
        word = "";
    }

    reverse(-----); // 4 reverse vector v

    for (int i=0; i<v.size(); i++)
        cout << v[i] << endl;
    return 0;
}

```

16. Select the incorrect statements for Set (multiple choice)

- (a) STL container (b) unique elements (c) FIFO (d) static

17. Fill the gaps. What will be the output of the code below?

```

#include <iostream>
#include <set>
#include <map>
using namespace std;

int main() {
    map<----, ----> m;
}

```

```

m[ 'C' ] = 98;  m[ 'R' ] = 100;
m[ 'A' ] = 87;  m[ 'Z' ] = 75;
map <----, ---->:: iterator it = m.begin();
cout << it->first << " " << it->second;
return 0;
}

```

- (a) string, int, A 87 (b) int, char, R 100 (c) char, int, R 100 (d) char, int, A 87

18. What will the “pie” equal to after the operations below?

```

int pie = 12;
pie = pie << 2;
pie = pie >> 1;
pie = pie >> 3;

```

- (a) 5 (b) 3 (c) 24 (d) 48

19. What is the output of following program?

```

#include <iostream>
using namespace std;
int main(){
    int n = 12;
    if ( (n % 3 == 0) && (n % 4 == 0) ){
        cout << n/3 << n/4;
    } else
        cout << n;
    return 0;
}

```

- (a) 3 4 (b) 12 (c) 4 3 (d) 43

20. What is the output of following program?

```

#include <iostream>
using namespace std;
int main()
{
    for (int i = 0; i <= 5; i++) {
        if (i % 2 == 0) continue;
        else cout << i << " ";
    }
    return 0;
}

```

- (a) 0 2 4 (b) 0 1 2 3 4 5 (c) 1 3 (d) 1 3 5

Minutes #2 of Faculty of Information Technology meeting November 11, 2019

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