KAZAKH KBTU BRITISH

T E C H N I C A L

U N I V E R S I T Y

Kazakh-British Technical University
Faculty of Information technologies
Course: Programming Principles I   Date: 14/12/2019
Variant: 3

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. What will be the output of this code:

```cpp
#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

2. What will be the output of this code:

```cpp
#include <iostream>
#include <algorithm>
using namespace std;
int main(){
    int a[4] = {20, 4, -1, -8};
    sort(a, a + 4);
    for (int i = 0; i < 3; i++)
        cout << a[i] << " ";
    return 0;
}
```

(a) **20 4 -1 -8**   (b) **-8 -1 4**   (c) **4 -1 -8**   (d) **-8 -1 4 20**

3. **What will be the output of this code:**

```cpp
using namespace std;
int main(){
    set<int> s;
    s.insert(5);
    s.insert(6);
    s.insert(7);
    s.insert(5);
    set<int> :: iterator it;
    for (it = s.begin(); it != s.end(); it++)
        cout << *it << " ";
    return 0;
}
```

(a) **None of them**   (b) **7 6 5**   (c) **5 5 6 7**   (d) **5 6 7**

4. **What will be the output of this code:**

```cpp
#include <iostream>
using namespace std;
int main(){
    string s = "CheAtiNg";
    for (int i = 0; i < s.size();i++) {
        if (s[i] >= 'A' && s[i] <= 'Z')
            cout << s[i + 1];
    }
    return 0;
}
```

(a) **h t g**   (b) **c a n**   (c) **h g**   (d) **g t h**

5. **What will be the output of this code:**

```cpp
#include <iostream>

using namespace std;

int recursion(int n) {
    if (n == 1) {
        return 1;
    }
    return recursion(n - 2) * n;
}

int main()
{
    int n = 7;
    cout << recursion(n);
    return 0;
}
```

(a) **5040**   (b) **720**   (c) **105**   (d) **28**

6. **Evaluate the next expression, where n = 135:**

n << 0

(a) **270**   (b) **67**   (c) **1350**   (d) **None of the above**

7. **What will be the output of this code:**

```cpp
#include <iostream>
#include <vector>

using namespace std;

int main(){
    vector<int> v(5);
    v.push_back(0);
    v.push_back(7);
    v.push_back(0);
    v.push_back(10);
    v.push_back(2);

    for (int i = 0; i < v.size() - 1; i++) {
        bool ok = (v[i] & v[i+1]);
        if (ok)
            cout << "ok" << " ";
    }

    return 0;

}
```

(a) ok   (b) ok ok   (c) ok ok ok   (d) None of the above

8. **What will be the output of this code:**

```cpp
#include <iostream>
#include <map>

using namespace std;

int main() {
    map<int, int> marks;
    marks.insert(pair<int, int>(160, 42));
    marks.insert(pair<int, int>(166, 34));

    map<int, int>::iterator it;

    for (it = marks.begin(); it != marks.end(); ++it) {
        cout << *it << " ";
    }
    return 0;
}
```

9. **What will be the output of this code:**

```cpp
#include<iostream>

using namespace std;
void swap(int m, int n) {
    int x = m;
    m = n;
    n = x;
}
main() {
    int x = 5, y = 3;
    swap(x, y);
    cout << x << " " << y;
    return 0;
}
```

(a) 3 5   (b) 5 3   (c) 5 5   (d) Compile error

10. **What will be the output of this code:**

```cpp
#include<iostream>
using namespace std;
main() {
    int x = 5;
    if(x == 5) {
        if(x == 5) break;
        cout << "Hello";
    }
    cout << "Hi";
    return 0;
}
```

(a) Compile error   (b) Hi   (c) HelloHi   (d) Hello

11. **What will be the output of this code:**

```cpp
#include <iostream>
using namespace std;
int main(){
    void a = 10, b = 10;
    int c;
    c = a + b;
    cout << c;
    return 0;
}
```

(a) 40   (b) runtime error   (c) compile error   (d) 20

12. **Which of the following gives value of the first element of array?**

(a) array[0]   (b) array[[]]   (c) array[1]   (d) array

13. **What will be the output of this code:**

```cpp
#include <iostream>
using namespace std;
int main()
{
    int a = 10;
    if (a < 10)
    {
        for (i = 0; i < 10; i++)
            cout << i;
    }
    else
    {
        cout << i;
    }
    return 0;
}
```

(a) 123456789   (b) error   (c) 0123456789   (d) 0

14. **What will be the output of this code:**

```cpp
#include < iostream >
using namespace std;
void fun(int x, int y){
    x = 20;
    y = 10;
}
int main(){
    int x = 10;
    fun(x, x);
    cout << x;
    return 0;
}
```

(a) 10   (b) 20   (c) compile time error   (d) none of the mentioned

15. **Which of the following functions will correctly return true if its argument is an odd integer ?**

```cpp
I.  bool IsOdd (int x) { return (x % 2 == 1); }
II. bool IsOdd (int x) { return (x / 2 == 1); }
III. bool IsOdd (int x) { if (x % 2 == 1)
return true; else return false; }
```

(a) II   (b) I and II   (c) I and III   (d) II and III

16. **What will be the output of this code:**

```cpp
#include <iostream>
#include <set>
using namespace std;
int main (){
    set<int> myset;
    set<int>::iterator it;

    for (int i = 1; i < 10; i++)
        myset.insert(i*20);

    it = myset.begin();
    ++it;
    myset.erase(it);
    myset.erase(60);
    it = myset.find(80);
    myset.erase(it, myset.end());
    cout << "myset contains:";

    for (it = myset.begin(); it != myset.end(); ++it)
        cout << ' ' << *it;

    cout << '\n';
    return 0;
}
```

(a) 20   (b) myset   contains   (c) myset   contains   (d) 40
                        10   20

17. **What will be the output of this code:**

```cpp
#include <iostream>
#include <vector>
using namespace std;
int main (){
    vector<int> myvector;
    int sum = 0;
    myvector.push_back(100);
    myvector.push_back(200);
    myvector.push_back(300);
    while (!myvector.empty()){
    if(myvector.back() % 2 == 0){
        sum += myvector.back();
        myvector.pop_back();
    }
    cout << "The elements of myvector add up to " << sum << '\n';
    return 0;
}
```

(a) The elements of myvector add up to 200

(b) 200

(c) The elements of myvector add up to 600

(d) 300

18. **What will be the output of this code:**

```cpp
#include <iostream>
#include <queue>
using namespace std;
int main (){
    queue<int> myqueue;
    int sum(0);
    for (int i = 1; i <= 10; i++)
        myqueue.push(i);

    while(myqueue.empty()){
        sum += myqueue.front();
        myqueue.pop();
    }
    cout << "total: " << sum << '\n';
    return 0;
}
```

   (a) 55   (b) error   (c) 0   (d) 65

19. **What will be the output of this code:**

```cpp
#include <iostream>
using namespace std;
int main(){
    string s = "yourself"
    for(int i = 0;i < s.size()/2; i++) s[i] = s[i+1];
    cout << s;
    return 0;
}
```

   (a) oursself   (b) ourseelf   (c) yourself   (d) yourselt

20. **What will be the output of this code:**

```cpp
#include <iostream>
using namespace std;
int main(){
    int a = 70;
    string s = "70"
    a = a + s;
    cout << a;
    return 0;
}
```

   (a) compile error   (b) 140   (c) 70   (d) 7070

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

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