CSI-140 Introduction to Programming

Test1 Fall 2025

Duration: 45 minutes Max Marks: 30

Name: ..... **Section:** .....

Date: ..... **Signature:** .....

IMPORTANT INSTRUCTIONS

How to Mark Correctly:

- Use only blue or black ball point pen
- Fill the bubble completely and darkly
- Mark only ONE answer per question
- Correct marking: Ⓐ

How NOT to Mark:

- Do not use pencil or gel pen
- Avoid these incorrect markings:
  - Tick mark: Ⓐ
  - Cross mark: Ⓐ
  - Partial fill: Ⓐ
  - Light marking: Ⓐ
- Do not mark multiple answers

ANSWER GRID

Q.No.	A	B	C	D
1	Ⓐ	Ⓑ	Ⓒ	Ⓓ
2	Ⓐ	Ⓑ	Ⓒ	Ⓓ
3	Ⓐ	Ⓑ	Ⓒ	Ⓓ
4	Ⓐ	Ⓑ	Ⓒ	Ⓓ
5	Ⓐ	Ⓑ	Ⓒ	Ⓓ
6	Ⓐ	Ⓑ	Ⓒ	Ⓓ
7	Ⓐ	Ⓑ	Ⓒ	Ⓓ
8	Ⓐ	Ⓑ	Ⓒ	Ⓓ
9	Ⓐ	Ⓑ	Ⓒ	Ⓓ
10	Ⓐ	Ⓑ	Ⓒ	Ⓓ

Q.No.	A	B	C	D
11	Ⓐ	Ⓑ	Ⓒ	Ⓓ
12	Ⓐ	Ⓑ	Ⓒ	Ⓓ
13	Ⓐ	Ⓑ	Ⓒ	Ⓓ
14	Ⓐ	Ⓑ	Ⓒ	Ⓓ
15	Ⓐ	Ⓑ	Ⓒ	Ⓓ
16	Ⓐ	Ⓑ	Ⓒ	Ⓓ
17	Ⓐ	Ⓑ	Ⓒ	Ⓓ
18	Ⓐ	Ⓑ	Ⓒ	Ⓓ
19	Ⓐ	Ⓑ	Ⓒ	Ⓓ
20	Ⓐ	Ⓑ	Ⓒ	Ⓓ

Note: Questions 1 to 10 carries 1 Point each and Questions 11 to 20 carries 2 Points each.

FOR EXAMINER'S USE ONLY

Score: ..... Comments: ..... Signature: .....

Multiple Choice Questions

Part A: Basic Concepts (1 Point Each)

1. RAM is primarily used to:
   A. Store data permanently
   B. Provide quick access to instructions and data for the CPU
   C. Store large volumes of files over time
   D. Handle user input

2. Mainframes are primarily used for:
   A. Playing video games
   B. Handling thousands of users and critical business applications
   C. Simple word processing tasks
   D. Developing small mobile apps

3. A compiler is a program that:
   A. Translates code line-by-line while executing
   B. Produces an executable file after translating source code
   C. Works only with assembly language
   D. Requires no machine code

4. Which phase of the Software Development Life Cycle involves debugging and ensuring requirements are met?
   A. Requirements and Design
   B. Implementation
   C. Testing
   D. Deployment

5. Which of the following is an example of modularity in program design?
   A. Writing one very large function
   B. Breaking a program into smaller functions and modules
   C. Writing code without comments
   D. Using a single file for the entire project

6. The Hexadecimal equivalent of the binary number $(\texttt{01010110110})_2$ is:

   A. $(\texttt{2D6})_{16}$

   B. $(\texttt{56C})_{16}$

   C. $(\texttt{6B2})_{16}$

   D. $(\texttt{2B6})_{16}$

7. Which of the following is a valid identifier in C++?

   A. `2variable`

   B. `my-var`

   C. `_count`

   D. `return`

8. Which operator is used for division in C++?

   A. `%`

   B. `/`

   C. `//`

   D. `div`

9. Which keyword is used to declare a constant variable?

   A. `constant`

   B. `const`

   C. `final`

   D. `static`

10. What happens when you divide an integer by zero in C++?

    A. Returns 0

    B. Returns infinity

    C. Compilation error

    D. Runtime error/undefined behavior

11. Which operator has the highest precedence?

    A. `+`

    B. `>=`

    C. `*`

    D. `&&`

12. What is the output of the following code?

```
#include <iostream>
using namespace std;
int main() {
    int x = 5;
    cout << "x" << endl;
    cout << x + 3 << endl;
    return 0;
}
```

A.
```
5
8
```

B.
```
x
x+3
```

C.
```
"x"
8
```

D.
```
x
8
```

13. What is the output of the following code?

```
#include <iostream>
using namespace std;
int main() {
   int x = 15/4;
   double y = 15/4;
   cout << x << ","<<y<< endl;

   x = 15/4.0;
   y = 15/4.0;
   cout << x << ","<<y<< endl;

    return 0;
}
```

A.
```
3,3.75
3,3.75
```

B.
```
3,3
3,3.75
```

C.
```
3,3.0
3.0,3.75
```

D.
```
3,3
3.0,3.75
```

14. What is the output of the following code?

```
#include <iostream>
using namespace std;
int main() {
    int x = 5, y = 10;
    cout << (x < y) << endl;
    cout << (x == 5) << endl;
    cout << (x != y) + (x <= y) << endl;
    return 0;
}
```

A.
```
0
0
2
```

B.
```
1
1
2
```

C.
```
1
1
1
```

D.
```
0
1
2
```

15. What is the output of the following code?

```
#include <iostream>
using namespace std;
int main() {
    int a = 3, b = 7, c = 5;
    cout << ((a + b) > (c * 2) && (b - a) == 4) << endl;
    cout << (!(a > c) && ((b % c) != 0)) << endl;
    cout << ((a * a) < 10 || (b / c) > 1 && (c - a) == 2) << endl;

    return 0;
}
```

A.
```
0
1
1
```

B.
```
1
1
0
```

C.
```
0
0
1
```

D.
```
1
0
1
```

16. Convert the decimal number $\mathbf{8547}_{10}$ to binary.

    A. 10000101100011_2

    B. 10000101100111_2

    C. 10000111100011_2

    D. 10001001100011_2

17. Convert the decimal number $\mathbf{63587}_{10}$ to hexadecimal.

    A. $F863_{16}$

    B. $F683_{16}$

    C. $E863_{16}$

    D. $F86E_{16}$

18. Convert the binary number $\mathbf{1101011101}_2$ to decimal.

    A. 861_{10}

    B. 859_{10}

    C. 863_{10}

    D. 857_{10}

19. Convert the hexadecimal number $\mathbf{FACE5}_{16}$ to decimal.

    A. 1027813_{10}

    B. 1027301_{10}

    C. 1027303_{10}

    D. 1027811_{10}

20. Add the following binary numbers: $\mathbf{101110101}_2 + \mathbf{110101011}_2$

    A. 1100100000_2

    B. 1100011000_2

    C. 1100100010_2

    D. 100100000_2