part A

1. B
2. D
3. D
4. A.
5. C
6. D
7. C
8. B
9. B
10. D
11. D
12. C
13. D
14. B
15. D
16. B
17. A
18. D
19. B
20. B

Part B

Question 1

(a) Suitability for the project requirement where the programming should have the necessary features and capabilities to support the project requirements. The second criteria is the availability of skilled developers, the language should have a sufficient amount of skilled developers that can work on the project.

(b) Assignment: =

~~Identifier~~

Identifier : celcius, fahrenheit

Operation : -, *, /

Semicolon : ;

value: 35, 5, 9

Question 2

i. Reserved word:
   - A word that has special meaning in programming and cannot be used for any other purpose except what it was programmed to do.

ii. Record
   - A data structure that combines multiple fields or attributes of different data types into a single unit.

iii. Array
   - Stores a collection of elements of the same data type in a contiguous block of memory, can be accessed via index.

iv. Lifetime of a variable.
   - the duration for which a variable remains in existence in a program.

Question 3

There are two types of scope in programming which is ~~the for~~ the local scope and global scope. Local scope is a variable ~~declare~~ declared within a block of code, such as a function or a loop, are only accessible within that block. Global scope is a variable declared outside of any block or function and can be accessed from anywhere in the program. This is useful for storing information that needs to be accessed by multiple functions or blocks of code. Downside of local scope is the values stored are lost once the block is exited ~~while~~ and it will be harder to keep track of where and how variable ~~is~~ is being used if global ~~scope~~ scope is used.

Question 4

readability and performance. Readability refer to how easily a human can understand the code written in a programming ~~languages.~~ language. Performance refer to how fast a program written in a programming language can run.

Artificial intelligence (AI) is a programming domain that involve ~~using~~ creating ~~a~~ intelligent machines that capable of performing task that would typically require human intelligence. ~~there~~ Three popular programming language used for AI application is Phyton, Java and Lisp.

Question 5

To convert the source code into an Intermediate representation that is in dependent of the target machine but still keep the meaning of the original program. Then, the intermediate code is used by subsequent stages of the compilation process to generate the final executable code.

Question 6

(i) Sum and num0.

(ii) int, return)

(iii)   The sum of the numbers = 23

The numbers in the reverse order are:

9   3   6   4   1