FIRST YEAR HIGHER SECONDARY EXAMINATION
SECOND TERMINAL EXAMINATION – DECEMBER 2019
COMPUTER APPLICATION (COMMERCE)
ANSWER KEY

1. 1
2. "string"
3. 0 bytes
4. #
5. While
6. Source Code: - The program written in any HLL is known as source code.
   Object Code: - The source code converted into machine language.
7. The process of detecting and correcting errors knows as debugging.
8. (KILPO) Keywords, Identifiers, Literals, Punctuators and Operators.
9. Comma is used, No exponent part
10. Single line Comment: The character (//) is used.
    Multi line comment: Anything written within /* and */
11. A) 2   B) 3
12. Here conditional operator is used, it has three operands. If the condition is true then 'a' is evaluated otherwise 'b' will be evaluated.
13. Loop control variable is a counter variable used to construct a loop.
14. Agreed, (1) Three elements are placed together. (2) Initialization along with loop
15. X++, ++X, X+=1, X=X+1
16. **Input Operator**: Get from or extraction (>>) operator is used to allow the user to store data. **Output Operator:** put to or insertion (<<) operator is used to make the result available to the users through any output device.
17. Assignment Operator (=) is used to assign a value to a variable. Comparison Operator (= =) is used to compare two values.
18. Step1- start   step2- input N   step 3-N=1   step 4-print N
    step 5- N=N+1   step6- if N<=100 then goto step4   step 7-stop
19. **Entry Controlled Loop**:
    - Condition is checked before the execution of the body
    - Body may never be executed
    - Suitable, when skipping of the body

    Exit Controlled Loop:

    - Condition is checked after the execution of the body.
    - Body will surely be executed
    - Suitable, when normal execution of body
20. -> Identifiers are the combination of letters, digit and underscore (_)
    ➔ The first character must be a letter or underscore
    ➔ White space and special characters are not allowed
    ➔ Keywords cannot be used
   ➔ Upper case and lower case letters treated differently

21. Logical AND (&&) Operator: - If two relational expressions E1 and E2 are combined using logical AND operator, the result will be 1(true) only if both E1 and E2 have values 1(True). In all other cases the result will be 0 (False)

    Logical OR(||):- If two relational expressions E1 and E2 are combined using logical OR (||) operations, the result will be 0 (false) only if both E1 and E2 are having values 0 (false), in all other cases the result will be 1(True).

22. Int data type (4 bytes):- integers are whole numbers without fractional part. They can be positive, zero and negative. Eg:- 121, -150

    Float data type (4 byte):- Numbers with fractional part are called floating point numbers. Eg- 1.51

    Char data type: - characters are the symbols covered by the character set of the c++ language. All letters, digits, special symbol, punctuations come under this category. Eg: 'A', '\n'

23. Based on operands operators are classified into three.

    Unary: - operates on a single operand. Eg: - increment (++) and Decrement (--)

    Binary: - operates on a two operands. Eg: - Arithmetic operations etc

    Ternary: - operates on a three operands. Eg: - Conditional operator (? :)

24. An expression is composed of operators and operands.

    a) Arithmetic Expression –   a=b+c
    b) Relational Expression -   x = = y

25. Type Casting: - The programmer explicitly cast a data to the desired type known as type casting. Eg:- x= (float)p/q;

    Type Promotion: - The conversion is done from lower sized operand to higher sized operand known as type promotion. Eg: - 5/2 (integer division)

26. Comments: comments are providing internal documentation of a program. They are ignored by the compiler

    Indentation: - An indent style is a convention governing the indentation of blocks of code to convey the program's structure, for good visibility and better clarity.

27. 5/2 is integer division

    5/2.0 is floating point division

28. Nesting means one inside another, Eg:- Nested if, When we write an if statement inside another if block it is called nested if.

    Syntax:
    If (test expression1)
    {
    If(test expression2)
    Statement block1;
    Else
    Statement block2;
    Else
    { body of else }}

29. If (n= =1)
    Cout<<"Pass";
    Else if (n = = 2)
    Cout<<"Fail";
    Else

Cout<<"invalid input";

30. a) Type modifier which help us to alter the size, range over precision. It is classified as signed, unsigned, long and short

    b) Access modifier is used to represent symbolic constants. Eg: Const

31. a)

```
                              ┌──────────┐
         ◄────────────────────┤   Test   ├────────────────────►
         │                    │Expression│                    │
         │                    └──────────┘                    │
         ▼                                                     ▼
   ╱──────────────╲                                   ╱──────────────╲
  ╱  Statement Block1 ╲                              ╱  Statement Block2 ╲
 ╱──────────────────────╲                           ╱──────────────────────╲
```
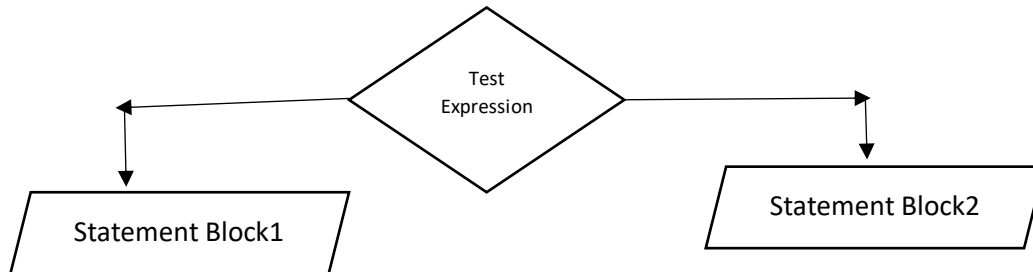
    b) if (score>=18)
        cout<<"Passed";
        else
        cout<<"Failed";

32. Phases in Programming (PACTDED)
    Problem Identification
    Algorithm and Flow chart
    Coding
    Translation
    Debugging
    Execution/Testing
    Documentation

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