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C·S· Test

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Q·1 a) Tokens : a token is a single element of programming language
the types of tokens are: identifiers, keywords operators etc.
ex: False, +, − etc.

b) an escape sequence is
an escape sequence is a sequence of characters that donot represent itself when used in a character or string literal
ex: '\' '\n' '\r'

c) L value and r value
a left value (l value) is an assignable object which may occur on the left side of the problem. an r value is an expression that has a value that may appear on right side of assignment

d)
'\\' → 1

'\ab' → 3

'Ash's pen' → 9

'r" IT "e' → 8

e) output =

12 48

f·

Syntax Errors	Logical Errors
→ Does not produce an output	→ produces an undesired output
→ Program stops running once it reaches the error	→ program does not stop running in between.
ex: forgetting the ')' symbol	ex: writing a code for finding the average as $x+y/2$ this will give the output $x+(\frac{y}{2})$ because '/' is having higher preference.

a)
```
num1 = float (input ("enter first number"))
num2 = float (input ("enter second number"))
num3 = float (input ("enter third number"))
num4 = float (input ("enter    fourthnumber"))
num5 = float (input (" enter fifth number"))

avg = (num1+num2+num3+num4+num5)/5
prod = num1*num2*num3*num4*num5

print ("The product of the numbers is", prod , "and the
        average of the numbers is", avg)
```

b)

line	correction
name="John'	name = "John"
prints (name)	print (name)
name[1]='u'	name_1 ='u'
Prints(type(name)	print (type (name))

c) _1 → valid

_k@ → invalid, special charaders like@ cannot be used.

1_a → invalid, Identifiers cannot begin with 0-9 digits

text.cy → invalid, characters like '.' are not allowed.

if → invalid, if is a predifined keyword

Switch → valid

break → invalid, it is a predefined keyword

new-rec → invalid, we cannotuse '-' (hyphen)

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d)

Implicit	Explicit
→ when computing with two different numerical data types, the program automatically converts the values into the same data type, which is a broader data type → ex: $\overset{int}{50} + \overset{float}{43.9} + \overset{float}{0.1}$ $= \underset{float}{94.0}$	→ type conversion has to be written in the source code to be executed. → The person writing the code has to specifically type a line to change the data type. → ex: num1 = int(input(" enter a number") num1 = str(num1) here num1 will be converted from integer to string.

e).

```
inches
  = int (input (" type the value in inches"))

feet = inches // 12
yard = feet // 3
feet = feet % 3
inches = inches % 12

print(" The value in yards is", yard, "yards,", feet, "feet",
        inches, "inches.")
```

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f. An operator is a token used to carry out arithmetic or logical computation.

associativity helps to find the orderof the operations.

forexample:

$a+b/c$

will give the output $a + (\frac{b}{c})$

because the operator (/) (divide) has a higher precedence than the binary "+" operator.