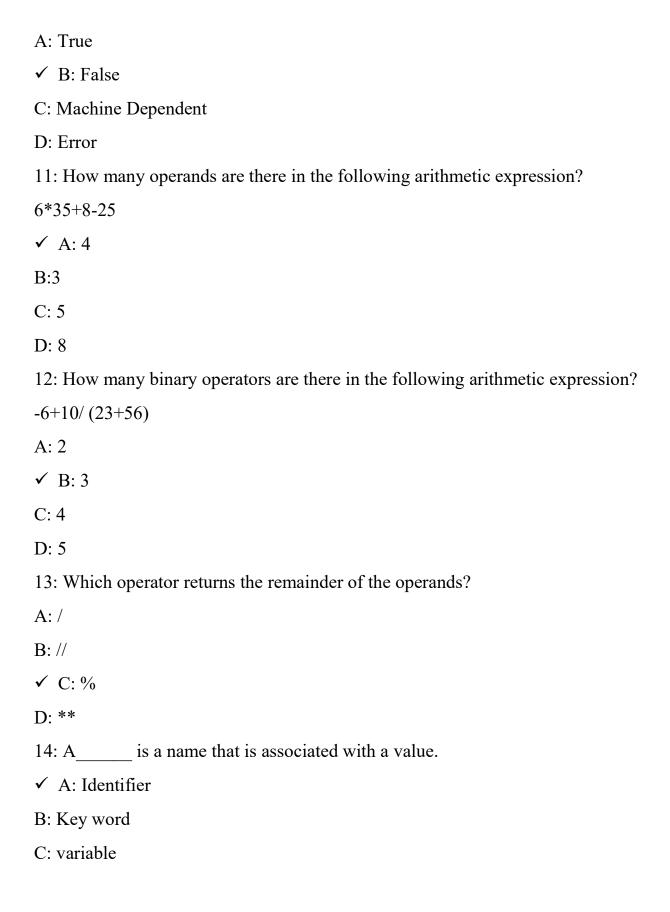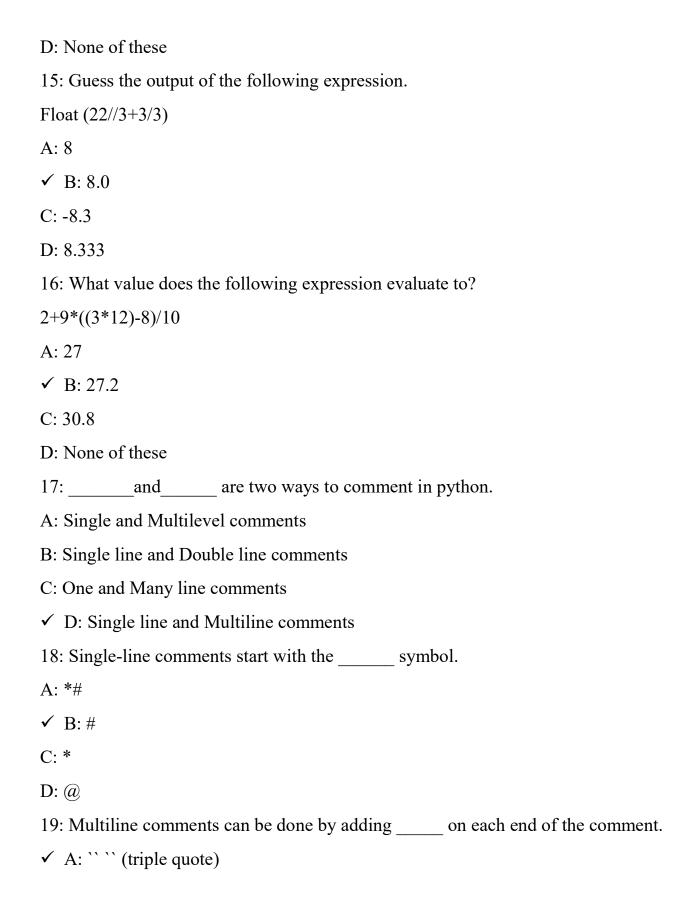Name: Hamayoon(shekohmand)

F/name: Ahmad Shah

Class: 1th (ISE)

1: Which of the following are invalid identifiers in python?

A: Total-sum

B: Error

✓ C: Error_ count

D: None of these

2: A_____ is a sequence of one or more characters used to provide a name for a given program element.

✓ A: Identifier

B: Variable

C: String

D: Character

3: Identify the invalid identifier below.

✓ A: _2017discount

B: profit

C: Total-discount

D: Total discount

4: _____are not allowed as part of an identifier.

✓ A: Spaces

B: Numbers

C: Underscore

D: All of these

5: Identifiers may contain letters and digits but cannot begin with a _____.
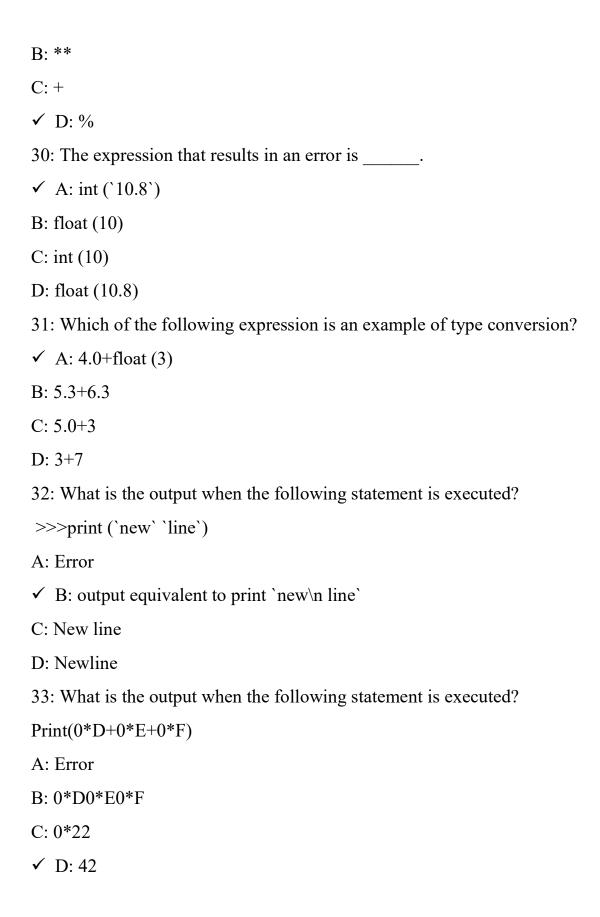
A: Character

✓ B: Digit

C: Underscore

D: Special symbols

6: Which is not a reserved keyword in python?

✓ A: Insert

B: Except

C: Import

D: Yield

7: Identify the invalid keyword below.

A: And

B: As

C: While

✓ D: Until

8: _____is an identifier that has predefined meaning.

A: Variable

B: Identifier

✓ C: Keyword

D: None of these

9: Bitwise _____operator gives 1 if one of the bit is zero and the other is 1.

A: Or

B: And

✓ C: xor

D: Not

10: Guess the output of the following code.

1>2 and 9>6

A: True

✓ B: False

C: Machine Dependent

D: Error

11: How many operands are there in the following arithmetic expression?

6*35+8-25

✓ A: 4

B:3

C: 5

D: 8

12: How many binary operators are there in the following arithmetic expression?

-6+10/ (23+56)

A: 2

✓ B: 3

C: 4

D: 5

13: Which operator returns the remainder of the operands?

A: /

B: //

✓ C: %

D: **

14: A_____ is a name that is associated with a value.

✓ A: Identifier

B: Key word

C: variable

D: None of these

15: Guess the output of the following expression.

Float (22//3+3/3)

A: 8

✓ B: 8.0

C: -8.3

D: 8.333

16: What value does the following expression evaluate to?

2+9*((3*12)-8)/10

A: 27

✓ B: 27.2

C: 30.8

D: None of these

17: _____and_____ are two ways to comment in python.

A: Single and Multilevel comments

B: Single line and Double line comments

C: One and Many line comments

✓ D: Single line and Multiline comments

18: Single-line comments start with the _____ symbol.

A: *#

✓ B: #

C: *

D: @

19: Multiline comments can be done by adding _____ on each end of the comment.

✓ A: ``` ``` (triple quote)

B: # (hash)

C: $(dollar)

D: %(modulus)

20: Python programs get structured through_____.

A: Alignment

✓ B: Indentation

C: Justification

D: None

21: In python indentation is a _____ and not a matter of style.

✓ A: Requirement

B: Refinement

C: Not requirement

D: Not refinement

22: Which of the following is correct about python?

A: Python is a high-level interpreted interactive and object-oriented language.

B: Python is designed to be highly readable.

C: It uses English keywords frequently and has fewer syntactical constructions.

✓ D: All of the above.

23: Which of the following function is used to read data from the keyboard?

A: Function ()

B: Str ()

✓ C: Input ()

D: print ()

24: The one`s complement of 60 is given by_____.

A: -61

B: -60

C: -59

D: +59

25: The operators are and is not are _____.

✓ A: Identity operators

B: Comparison operators

C: Membership operators

D: Unary operators

26: In python an identifier is _____.

A: Machine Dependent

B: Keyword

✓ C: Case sensitive

D: Constant

27: Which of the following operator is truncation division operator?

A: /

B: %

C: |

✓ D: //

28: The expression that requires type conversion when evaluated is _____.

✓ A: 4.7*6.3

B: 1.7%2

C: 3.4+4.6

D: 7.9*6.3

29: The operators that has the highest precedence is _____.

A: <<and>>

B: **

C: +

✓ D: %

30: The expression that results in an error is _____.

✓ A: int (`10.8`)

B: float (10)

C: int (10)

D: float (10.8)

31: Which of the following expression is an example of type conversion?

✓ A: 4.0+float (3)

B: 5.3+6.3

C: 5.0+3

D: 3+7

32: What is the output when the following statement is executed?

 >>>print (`new` `line`)

A: Error

✓ B: output equivalent to print `new\n line`

C: New line

D: Newline

33: What is the output when the following statement is executed?

Print(0*D+0*E+0*F)

A: Error

B: 0*D0*E0*F

C: 0*22

✓ D: 42

34: What is the output of print (0.1+0.2==0.3)?

A: True

✓ B: False

C: Error

D: Machine dependent

35: Which of the following is not a complex number?

A: 1=4+5j

B: 1=complex (4.5)

C: 1=4+5i

✓ D: 1=4+5j

36: Guess the output of the expression.

X=15

Y=12

X and Y

A: 1101

✓ B: b1101

C: 0b1101

D: 12

37: Incorrect indentation rustles in_____.

✓ A: Indentation Error

B: Name Error

C: Type Error

D: Syntax Error

38: The function that converts an integer to a string of one character whose ASCII code is same as the integer is _____.

✓ A: chr (x)

B: ord (x)

C: eval (x)

D: input (x)

Review question:

1: Explain different operator in python with examples.

Answer: python language supports a wide range of operators they are:

- Arithmetic operator
- Assignment operator
- Comparison operator
- Logical operator
- Bitwise operator

Example

1. >>>10+35

   45

2. >>>-10+35

   25

2: Define a variable. How to assign values to them?

Answer: Variable is named placeholder to hold any type of data which the program can use to assign and modify during course of execution. The general format for assigning values to variable is as follows. Variable___ name=expression.

3: Briefly explain binary left shift and binary right shift operators with example.

Answer: Left Shift (<<): Shifts bits to the left and fills zeros on the right.
Example: $5 << 1 \rightarrow 10$ (binary 0101 becomes 1010)
Right Shift (>>): Shifts bits to the right.
Example: $8 >> 2 \rightarrow 2$ (binary 1000 becomes 0010)

4: Explain precedence and associativity of operators with examples.

Answer: Precedence: Defines which operator is evaluated first.
Example: $2 + 3 * 4 \rightarrow 14$ (Multiplication has higher precedence than addition).

Associativity: Defines order when operators have the same precedence.
Example: 10 / 5 * 2 → 4.0 (evaluated left to right).

5: Outline different assignment operators with examples.

Answer: = : Simple assignment → x = 5
+= : Add and assign → x += 2
-= : Subtract and assign → x -= 2
*= : Multiply and assign → x *= 2
/= : Divide and assign → x /= 2
%= : Modulus and assign → x %= 2
**= : Exponent and assign → x **= 2
//= : Floor divide and assign → x //= 2

6: Briefly explain how to read data from the keyboard.

Answer: In Python, we use the input () function to read data. It always returns a string.
Example:
name = input("Enter your name: ")
age = int(input("Enter your age: "))

7: Explain type conversion in python with examples.

Type conversion means changing one data type into another.
Implicit Conversion (Type Casting automatically by Python):
x = 10
y = 3.5
z = x + y   # x automatically converted to float
Explicit Conversion (Using functions):
x = int("100")   # String to int
y = float(5)   # Int to float
z = str(25)   # Int to string

8: Write a short note on data types in python.

Answer: Python supports different types of data:
Numeric Types: int, float, complex
Sequence Types: list, tuple, range
Text Type: str
Set Types: set, frozen set

Mapping Type: dict
Boolean Type: bool
Binary Types: bytes, byte array, memory view
Each data type is used to store specific kinds of values.

9: Write a program to read tow integers and perform arithmetic operations on them (addition, subtraction, multiplication, and division).

Answer: a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
print("Addition:", a + b)
print("Subtraction:", a - b)
print("Multiplication:", a * b)
print("Division:", a / b)

10: Write a program to read the marks of three subjects and find the average of them.

Answer: m1 = float(input("Enter marks of subject 1: "))
m2 = float(input("Enter marks of subject 2: "))
m3 = float(input("Enter marks of subject 3: "))
average = (m1 + m2 + m3) / 3
print("Average marks:", average)

11: Write a program to convert kilogram into pound.

Answer: (1 kg = 2.20462 pounds)
kg = float(input("Enter weight in kilograms: "))
pounds = kg * 2.20462
print("Weight in pounds:", pounds)

12: Surface area of a prism can be calculated if the lengths of the three sides are known write a program that takes the sides as input (read it as integer) and prints the surface area of the prism (surface area= 2ab+2bc+2ca)

Answer: a = float(input("Enter side a: "))
b = float(input("Enter side b: "))
c = float(input("Enter side c: "))
surface_ area = 2 * (a*b + b*c + c*a)
print("Surface area of prism:", surface_ area)

13: A plane travels 395'000 meters in 9000seconds. Write a program to find the speed of the plane (speed = Distance / Time).

Answer: distance = 395000
time = 9000
speed = distance / time
print("Speed of plane:", speed, "m/s")

Answer 14 Question: (Volume = l × w × h, Time = Volume.

15: Write a program to convert temperature from centigrade (read it as float value) to Fahrenheit.

Answer: ```python
C to F: F = (C * 9/5) + 32
Celsius = float(input("Enter temperature in Celsius: "))
Fahrenheit = (Celsius * 9/5) + 32
print("Temperature in Fahrenheit:", Fahrenheit)

16: Write a program that calculates the number of seconds in a day.

Answer: ```python
seconds_ in_ day = 24 * 60 * 60
print("Number of seconds in a day:", seconds_ in_ day)

17: A car starts form a stoplight and is traveling with a velocity of 10m/s east in 20 seconds. Write a program to find the acceleration of the car.

Answer: ```python
acc = (v_ final - v_ initial) / time
v_ initial = 0
v_ final = 10 # m/s
time = 20 # seconds
acceleration = (v_ final - v_ initial) / time
print("Acceleration of the car:", acceleration, "m/s^2").