Sample exam 1

1. What is the output?
   \[ x = \frac{20}{2} \times 2 \]
   \[ \text{print}(x) \]
   a. 20  
   b. 20.0  
   c. 5  
   d. 5.0  
   e. none of the above

2. What is the output?
   \[ x = 15 \times 10 \]
   \[ \text{print}(x) \]
   a. 1  
   b. 5  
   c. 1.5  
   d. 10  
   e. none of the above

3. What is the output?
   \[ x = 25 \div 10 \]
   \[ \text{print}(x) \]
   a. 2  
   b. 5  
   c. 2.5  
   d. 0  
   e. none of the above

4. What is the output?
   \[ x = 2.3 + 0.7 \]
   \[ \text{print}(x) \]
   a. 3  
   b. 2.0  
   c. 3.0  
   d. none of the above

5. What is the output?
   \[ x = \text{"party"} \]
   \[ \text{print}(x) \]
   a. party  
   b. 'party'  
   c. x  
   d. 'x'  
   e. none of the above

6. What is the output?
x = "cat"
y = "dog"
print(x+y)
a. catdog
b. cat dog
c. none of the above

7. What is the output?
x = "apple"
y = "orange"
print(x, y)
a. appleorange
b. apple orange
c. none of the above

8. What is the output?
x = 10
y = "September"
print(x+y)
a. 10 September
b. 10September
c. none of the above

9. What is the output?
x = "15"
y = "10"
print(x+y)
a. 1015
b. 10 15
c. 25
d. '25'
e. none of the above

10. What is the output?
x = 4
y = 3
z = x*y
print(z)
a. 4*3
b. z
c. 'z'
d. 12
e. none of the above

11. What will be displayed? User input is in bold.
x = input("Enter an animal: ")
print(x)
a. Enter an animal: fish
   'fish'
b. Enter an animal: fish
   fish
c. Enter an animal: fish fish
d. none of the above

12. What will be displayed? User input is in bold.
x = input("Enter an number: ")
print(x+5)
a. Enter an number: 10
   15
b. Enter an number: 10
   10+5
c. Enter an number: 10
   '10'+5
d. none of the above

13. What will be the output?
    hours = 3
    minutes = 25
    print(hours, " hours ", minutes, " minutes")
a. hours 3 minutes 24
b. '3' hours '25' minutes
   c. 3 hours 25 minutes
d. none of the above

14. What is the output?
    for i in range(4):
        print(i)

   a. 1
      2
      3
      4
   b. 0
      1
      2
      3
c. 0
      1
      2
      3
      4
d. 0
      1
      2
15. Which will produce the following output?

1!2!3!4!5!6!

a. for k in range(1, 6):
   print(k, "!")

b. for k in range(1, 6):
   print(k, end="!")

c. for k in range(1, 7):
   print(k, end="!")

d. for k in range(1, 5):
   print(k, end="!")

e. none of the above

16. Fill in the blanks so the code will produce the desired output.

output:

7
26
9

code:
for m in [7, 26, 9]:
    print(m)

17. Fill in the blanks so the code will produce the desired output.

output:

2
6
12

code:
sum=0
for k in range(2, 7, 2):
    sum=sum+k
print(sum)

18. Fill in the blanks so the code will produce the desired output.

output:

6
5
4

code:
for k in range(6, 3, -1):
    print(k)
19. Fill in the blanks so the code will produce the desired output.
output:
1.3
2.3
3.3
code:
for k in [1.3, 2.3, 3.3]:
    print(k)

20. Fill in the blanks so the code will produce the desired output.
output:
109
code:
sum=9
for k in range(4):
    sum=sum+25
print(sum)

21. What will be the output?
sum=1
for t in [2.3, "fish", "carrots"]:
    sum=sum+1
print(sum)

a. 2.3
fish
carrots
b. 2
3
4
\textbf{c.} 4
d. 12.3fishcarrots
e. none of the above

22. Write a file with a main that
\begin{itemize}
  \item asks a user for a kind of fruit
  \item asks the user for the number of pieces of that fruit they have
  \item asks the user for the number of people in the room
  \item prints out how many pieces of fruit each person will get and how many will be left over.
\end{itemize}
Each person should get the same number of pieces of the fruit, as many pieces distributed as possible.
Your dialogue should be general, for any fruit, and any numbers entered. You may assume the user enters positive integer values.
Do not use if statements.

Sample dialogue 1:
What fruit are you sharing? grapes
How many grapes are there? 20
How many people are in the room? 3
Each person will get 6 grapes.
There will be 2 grapes left over.

Sample dialogue 2:
What fruit are you sharing? apples
How many apples are there? 12
How many people are in the room? 6
Each person will get 2 apples.
There will be 0 apples left over.

```python
def main():
    fruit = input("What fruit are you sharing? ")
    fruitCount = int(input("How many " + fruit + " are there? "))
    peopleCount = int(input("How many people are in the room? "))
    perPerson = fruitCount // peopleCount
    leftOvers = fruitCount % peopleCount
    print("Each person will get ", perPerson, fruit + ".")
    print("There will be ", leftOvers, fruit, " left over.")
main()
```

23. What command would be used to draw the circle circ into the graphics window win?
   a. win.draw(circ)
   b. circ.draw(win)
   c. circ.draw()
   d. draw(circ, win)
   e. none of the above

24. What command would create a line from (10,20) to (50,50)?
   a. Line(10,20,50,50)
   b. Line((10,20),(50,50))
   c. Line(10,50, 20, 50)
   d. Line(Point(10,20),Point(50,50))
   e. none of the above

25. A method that changes the state of an object is called a(n)
   a. accessor  b. constructor  c. mutator  d. stater

26. Point(4,30) is an example of a(n)
   a. accessor  b. constructor  c. mutator  d. identifier

27. Which of the following could NOT be the name of a variable in Python?
   a. goatCheese
   b. soy_milk
   c. g&er
   d. percent
   e. CoffeeCake
28. What will be displayed by this code segment? The user enters the value given in the comment.

```python
a=3
b=10
x=int(input("Enter a number: "))  #5
y=float(input("Enter a number: "))  #3.12
for k in range (x):
    a=a+k
    y=b*y
    print("a=",a,"y=",y)
print("***a=",a,"y=",y,"***")
```

**The display:**
Enter a number: 5
Enter a number: 3.12
a= 3 y= 31.2
a= 4 y= 312.0
a= 6 y= 3120.0
a= 9 y= 31200.0
a= 13 y= 312000.0
***a= 13 y= 312000.0 ***