1. Which of the following operators is used to calculate remainder in a division?

Answer = %

```
2//3
```

```
0
```

```
6<<2
```

```
24
```

```
6&2
```

```
2
```

```
6|2
```

```
6
```

6. What does the finally keyword denotes in python?

A

7. What does raise keyword is used for in python?

A

8. Which of the following is a common use case of yield keyword in python?

C

9. Which of the following are the valid variable names?

A) _abc

C) abc2

10. Which of the following are the keywords in python?

A) yeild

B) raise

```
# Python program to find the factorial of a number provided by the
user.

# change the value for a different result
num = 7

# To take input from the user
#num = int(input("Enter a number: "))
```

```
factorial = 1

# check if the number is negative, positive or zero
if num < 0:
   print("Sorry, factorial does not exist for negative numbers")
elif num == 0:
   print("The factorial of 0 is 1")
else:
   for i in range(1,num + 1):
       factorial = factorial*i
   print("The factorial of",num,"is",factorial)
```

```
The factorial of 7 is 5040
```

```
# Program to check if a number is prime or not

num = 29

# To take input from the user
#num = int(input("Enter a number: "))

# define a flag variable
flag = False

# prime numbers are greater than 1
if num > 1:
    # check for factors
    for i in range(2, num):
        if (num % i) == 0:
            # if factor is found, set flag to True
            flag = True
            # break out of loop
            break

# check if flag is True
if flag:
    print(num, "is not a prime number")
else:
    print(num, "is a prime number")
```

```
29 is a prime number
```

```
# Program to check if a string is palindrome or not

my_str = 'aIbohPhoBiA'

# make it suitable for caseless comparison
my_str = my_str.casefold()

# reverse the string
```

```
rev_str = reversed(my_str)

# check if the string is equal to its reverse
if list(my_str) == list(rev_str):
   print("The string is a palindrome.")
else:
   print("The string is not a palindrome.")
```

```
The string is a palindrome.
```

```
def pythagoras(opposite_side,adjacent_side,hypotenuse):
        if opposite_side == str("x"):
            return ("Opposite = " + str(((hypotenuse**2) -
(adjacent_side**2))**0.5))
        elif adjacent_side == str("x"):
            return ("Adjacent = " + str(((hypotenuse**2) -
(opposite_side**2))**0.5))
        elif hypotenuse == str("x"):
            return ("Hypotenuse = " + str(((opposite_side**2) +
(adjacent_side**2))**0.5))
        else:
            return "You know the answer!"

print(pythagoras(3,4,'x'))
print(pythagoras(3,'x',5))
print(pythagoras('x',4,5))
print(pythagoras(3,4,5))
```

```
Hypotenuse = 5.0
Adjacent = 4.0
Opposite = 3.0
You know the answer!
```

```
string=input("Enter the string ")
freq=[None]*len(string)

for i in range(0,len(string)):
  freq[i]=1
  for j in range(i+1,len(string)):
    if(string[i]==string[j]):
        freq[i]=freq[i]+1

        string=string[:j]+'0'+string[j+1:];

print("Character and their frequency");
for i in range(0,len(freq)):
    if(string[i]!=' ' and string[i]!='0'):
        print(string[i]+"="+str(freq[i]))
```