

1. which keyword is used to create a function. create a function to return a list of odd numbers in the range of 1 to 25.

ANSWER = def keyword is used to create a function

```
def odd():  
    l=[]  
    for i in range(1,25):  
        if i%2!=0:  
            l.append(i)  
    return l
```

2. why *args and **kwargs is used in some functions? create a function each for *args and **kwargs to demonstrate their use.

ANSWER = You can use *args and **kwargs as arguments of a function when you are unsure about the number of arguments to pass in the functions.

```
def Fun(*arg):  
    for arg in arg:  
        print(arg)  
Fun('Hello', 'Welcome', 'to', 'GeeksforGeeks')
```

```
print("Hello world")  
def Fun(**kwargs):  
    for key, value in kwargs.items():  
        print((key, value))  
Fun(first='Geeks', mid='for', last='Geeks')
```

3. what is an iterator in python? name the method used to initialise the iterator object and the method used for iteration . use these methods to print the first five elements of the given list[2,4,6,8,10,12,14,16,18,20].

ANSWER = An iterator is an object that contains a countable number of values. an iterator is an object which implements the iterator protocol, which consist of the methods `__iter__()` and `__next__()` .

```
l=[2,4,6,8,10,12,14,16,18,20]  
l=iter(l)  
for i in range(5):  
    print(next(l))
```

4. what is generator function in python ? why yield keyword is used? give an example of a generator function.

ANSWER = a generator is a function that returns an iterator that produces a sequence of values when iterated over. Generators are useful when we want to produce a large sequence of values, but we don't want to store all of them in memory at once.

yield keyword is used to create a generator function.

```
def test_fib(n):  
    a,b=0,1  
    for i in range(n):  
        yield a  
        a,b=b,a+b
```

6. write a python program to print the first 10 fibonacci numbers using while loop.

ANSWER =

```
n1=0  
n2=1  
print(n1)  
print(n2)  
i=1  
while i<=8:  
    n3=n1+n2  
    n1=n2  
    n2=n3  
    print(n3)  
    i+=1
```

7. write a list comprehension to iterate through the given string 'pwwskills'.

ANSWER = [i for i in string]

8. write a program to check whether a given number is palindrome or not using while loop.

ANSWER =

```
n=int(input("enter a number"))
temp=n
reverse=0
while n>0:
    rem=n%10
    reverse=reverse*10+rem
    n=n//10
if reverse==temp:
    print("palindrome")
else:
    print("not palindrome")
```

9. write a code to print odd numbers from 1 to 100 using list comprehension.

ANSWER = [i for i in range(1,101) if i%2!=0]