Answers for Debugging Exercises: Chapter 6

Find the Output

1.
```
s = "Welcome"
print(s[1:3])
```
Ans. el

2.
```
s = "Welcome"
print(s[ : 6])
```
Ans. Welcom

3.
```
s = "Welcome"
print(s[4 : ])
```
Ans. ome

4.
```
s = "Welcome"
print(s[1:-1])
```
Ans. elcom

5.
```
str = "Welcome"
print("come" in str)
```
Ans. True

6.
```
str = "Welcome"
print("come" not in str)
```
Ans. False

7.
```
"free" == "freedom"
```
Ans. False

8.
```
"man" != "men"
```
Ans. True

9.
```
str = "Welcome to Python"
print(str.isalnum())
```
Ans. False

10.
```
"Hello".isalpha()
```
Ans. True

11.
```
"14-10-2106".isdigit()
```
Ans. False

12. `print("hello".islower())`
Ans. True

13. `"\t".isspace()`
Ans. True

14.
```
str = "Hello"
print(str.startswith("he"))
```
Ans. False

15.
```
str = "Hello, welcome to the world of Python"
print(str.find("o"))
```
Ans. 4

16.
```
str = "Hello, welcome to the world of Python"
print(str.find("if"))
```
Ans. -1

17.
```
str = "Hello, welcome to the world of Python"
print(str.rfind("of"))
```
Ans. 28

18.
```
str = "Hello, welcome to the world of Python"
print(str.count("o"))
```
Ans. 6

19. `"us" not in "success"`
Ans. True

20. `"mi" in "ours"`
Ans. False

21.
```
for i in 'Python':
 print(2 * i, end=' ')
```
Ans. PP yy tt hh oo nn

22.
```
import string
print(string.find("abcdabcdabcd", "cd", 3))
```
Ans. 6

23.
```
import string
print(string.find("abcdabcdabcdabcdabcd", "cd", 7, 13))
```
Ans. 10

24.
```
a = 10
b = 20
print("3**4 = %d and %d * %d = %f" % (3**4, a, b, a * b))
```

Ans. 3**4 = 81 and 10 * 20 = 200.000000

25.
```
print("%d %f %s" % (7, 15, 28))
print("%-.2f" % 369)
print("%-10.2f%-10.2f" % (91, 23.456))
print("%5.2f %5.2f $%5.2f" % (9, 1.2, 55.78))
```

Ans.
```
7 15.000000 28
369.00
91.00     23.46
9.00  1.20 $55.78
```

26.
```
str1 = 'Welcome!'
str2 = 'to Python'
str3 = str1[:2] + str2[len(str2) - 2:]
print(str3)
```

Ans. Weon

27.
```
print("She sells sea shells on the sea shore.".find("sea", 3, -6))
```
Ans. 10

28.
```
len("She sells sea shells on the sea shore.")
```
Ans. 38

29.
```
str = "Welcome to the world of Python"
print(str[:10].find("t"))
```

Ans. 8

30.
```
str = "Welcome to the world of Python"
start = 3
end = 10
print(str[start:end])
```

Ans. come to

31.
```
str = "Hello"
print(str.startswith('h'))
print(str.lower().startswith('h')
```

Ans. False
True

32. `'In %d years I have saved %g %s.' % (3, 4.5, 'lakh rupees')`
Ans. `'In 3 years I have saved 4.5 lakh rupees.'`

33. `', '.join(['Sun', 'Stars', 'Planets'])`

Ans. `'Sun, Stars, Planets'`

34. `' '.join(['Welcome', 'to', 'the', 'world', 'of', 'Python!'])`

Ans. `'Welcome to the world of Python!'`

35. `'Hello'.join(['Welcome', 'to', 'the', 'world', 'of', 'Python!'])`
Ans. `'WelcomeHellotoHellotheHelloworldHelloofHelloPython!'`

36. `"Good morning students".split()`
Ans. `['Good', 'morning', 'students']`

37. `'WelcomeHellotoHellotheHelloworldHelloofHelloPython!'.split('Hello')`
Ans. `['Welcome', 'to', 'the', 'world', 'of', 'Python!']`

38.

```
import re
pattern = r"[a-zA-Z]+ \d+"
matches = re.findall(pattern, "June 24, August 9, Dec 12")
for match in matches:
   print(match, end=' ')
```

Ans. June 24 August 9 Dec 12

39.

```
import re

pattern = r"good"
if re.match(pattern,"greatgoodjobdonegoodgood"):
    print("Match")
else:
    print("No match")
if re.search(pattern,"greatgoodjobdonegoodgood"):
    print("Match")
else:
    print("No match")

print(re.findall(pattern,"greatgoodjobdonegoodgood")
```

Ans.

```
No match
Match
['good', 'good', 'good']
```

40.

```
import re

string = "Good Morning, Welcome to the world of Python..."

pattern = r"Morning"

print(re.sub(pattern, "Evening", string))
```

Ans. Good Evening, Welcome to the world of Python...

41.

```
import re

pattern=r"[^aeiou]"

if re.search(pattern,"clue"):

    print("Match clue")

if re.search(pattern,"bcdfg"):

    print("Match bcdfg")

if re.search(pattern,"CLUE"):

    print("Match CLUE")
```

Ans.

```
Match clue
Match bcdfg
Match CLUE
```

42.

```
import re

print(re.sub(r"([a-zA-Z]+) (\d+)", r"\2 of \1", "Jan 16, June 05,
Septmenber 15, Dec 04"))
```

Ans. 16 ofJan, 05 ofJune, 15 ofSeptmenber, 04 ofDec

43.

```
import re

if re.search(r"P[ye][td]hon","Python is a wonderful language"):

    print("Match")

if re.search(r"Python\.$","I like Python."):

    print("Good")

print(re.search(r"Python\.$","I like Python as well as Java."))

if re.search("[0-9]+", "PNo. : 25227568, Date: February 17, 2017"):

    print("Number OK")
```

Ans.

```
Match
Good
None
Number OK
```

44.

```
import re
test = "Date of Examination : Sun Mar 26 09:30:00 2017"
pattern = r"\b(?P<hours>\d\d):(?P<minutes>\d\d):(?P<seconds>\d\d)\b"
match = re.search(pattern, test)
print(match.group('hours'), end=' ')
print(match.group('minutes'), end=' ')
print(match.group('seconds'), end=' ')
print(match.span('seconds'))
```

Ans. 09 30 00 (39, 41)

45.

```
import re
match = re.findall("[gP]\w+", "good going, welcome to Python 3.6.0")
print(match)
```

Ans. ['good', 'going', 'Python']

46.

```
import re
match = re.split(r'o','Good Going, Welcome to Python')
print(match)
match = re.split(r'i','Good Going, Welcome to Python',maxsplit=3)
print(match)
```

Ans.

```
['G', '', 'd G', 'ing, Welc', 'me t', ' Pyth', 'n']
['Good Go', 'ng, Welcome to Python']
```

47.

```
import re
List = ["Log Lot", "Leg Lead", "Lo Lo", "Kin Pin"]
for i in List:
    match = re.match("(L\w+)\W(L\w+)", i)
    if match:
        print(match.group(),end=' ')
```

Ans. No output as it does not match

Find the Error

1.
```
str = "Hello world"
str[6] = 'W'
print(str)
```

Ans. TypeError: 'str' object does not support item assignment

2.
```
"%s %s %s %s" % ('Welcome', 'to', 'Python')
```

Ans. TypeError: not enough arguments for format string

3.
```
"%s %s %s" % ('East', 'West', 'North', 'South')
```

Ans. TypeError: not all arguments converted during string formatting

4.
```
"%d %f %f" % (10, 20, 'Hello')
```

Ans. TypeError: float argument required, not str

5.
```
str = 'abcdefgh'
str[5] = 'a'
print(str)
str = 'Python'
print(str)
```

Ans. TypeError: 'str' object does not support item assignment

6.
```
str = "Hello World"
del str[2]
print(str)
```

Ans. TypeError: 'str' object doesn't support item deletion