



JK Lakshmipat University Jaipur
BCA - I Semester
Computer Science and Engineering
Programming - I (Python) CS1139 / CS1115 (Backlog)
Final Exam

Time: 2 hours

11 Dec 2023

Max Marks: 35

Instructions

- *There are a total of 8 questions consisting multiple parts. Attempt all questions.*
- *Read the questions and the codes provided with them very carefully.*
- *In case of any doubt, make your assumption, write it clearly and continue.*
- *When writing your programs, provide indentation correctly and clearly.*

1) Write three differences between lists and sets in Python.

3 marks [CO2,3,4]

2) Suppose we have a list in python called `x` which contains only numbers. Using list comprehension write a Python statement that:

- Creates a list containing the squares of all numbers of `x`.
- Creates a list containing the cubes of all the odd numbers in `x`.

1 + 1 = 2 marks [CO2,3,4]

3) Answer the following: questions about dictionaries:

- Can strings be used as keys in dictionaries?
- Can lists be used as keys in dictionaries?
- Can lists be used as values in dictionaries?
- Can sets be used as values in dictionaries?

0.5 × 4 = 2 marks [CO2,3,4]

4) Answer the following

- In Python, does "10">"2" evaluate to True or False?
- If x='python', what happens when I try to do x[0]='P'?
- If l=[10,20,30,40] write a Python statement that inserts 35 after 30 in the list. (So finally the list should become l=[10,20,30,35,40])

1 × 3 = 3 marks [CO2,3,4]

5) What are the values of a and b after running the code snippets shown below:

(a) <pre>a=10 b=20 if not a>50 and b<50: a=a+b else: b=a+b</pre>	(b) <pre>a=10 b=100 while a<b: a=a+5 b=b-10</pre>	(c) <pre>l=[10,20,30,40] a=l[-3] m=1 m[1]=1000 b=l[1]</pre>	(d) <pre>d=dict() d['abc']=10 d['xyz']=200 if 200 in d: a="john" else: a="peter" if 'abc' in d: b=d['abc'] else: b=d['xyz']</pre>
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2 + 2 + 2 + 2 = 8 marks [CO1,2,3]

6) What are outputs of the code snippets shown below

(a)

```
s="mississippi"
x=set()
i=0
for c in s:
    if c not in x:
        print(i)
        x.add(c)
    i=i+1
```

(c)

```
sen="God helps those who help themselves"
l=sen.split()
i=0
for x in l:
    if i<len(x):
        print(x[i])
    i=i+1
print("i is", i)
```

(b)

```
s"please finish the exam on time"
l=s.split()
l=[x[-1] for x in l if len(x)<5]
print("length of l is", len(l))
print("".join(l))
```

(d)

```
def func(a,b):
    print("In the function:", a,b)
a=100
b=200
print("Outside the function:", a,b)
func(b,a)
```

2 + 2 + 2 + 2 = 8 marks [CO2,3,4]