Organization & Architecture Computer Test August 2016

1. What's single board computer? Give example hardware (3)!
2. Make leap year pseudocode/ algorithm.
3. Make a program to find a leap year. (C/C++/Python/Java)
4. Make a flowchart from question number 2.
5. What is the output of print list [0] if list = ['abcd', 786, 2.23, 'john', 70.2] ?
6. What gets printed? Explain it!

```
nums =
set([1,1,2,3,3,3,4])
print len(nums)
```

7. What gets printed? Explain it!

```
x = True
y = False
z = False

if x or y and z:
    print "yes"
else:
    print "no"
```

8. What gets printed? Explain it!

```
x = True
y = False
z = False

if not x or y:
    print 1
elif not x or not y and
z:
    print 2
elif not x or y or not y
and x:
    print 3
else:
    print 4
```

9. Explain your self, why we should hire you for this position!
10. Make your own program at least 15 or 20 lines of code C/C++/Python/Java. (the more lines the better score).
11. Make a flowchart from question number 10.

Note:

- **Please check the question, if you don't understand ask it before the test start.**
- **Person who give an answer in english will have a bonus score.**
- **Person who finish the test before the time is up will have a bonus score.**
- **Make sure to double check the answer.**

12. The following code will successfully print the days and then the months (True or False)? Explain it!

```
daysOfWeek = ['Monday',
              'Tuesday',
              'Wednesday',
              'Thursday',
              'Friday',
              'Saturday',
              'Sunday']

months =                ['Jan', \
                         'Feb', \
                         'Mar', \
                         'Apr', \
                         'May', \
                         'Jun', \
                         'Jul', \
                         'Aug', \
                         'Sep', \
                         'Oct', \
                         'Nov', \
                         'Dec']

print "DAYS: %s, MONTHS %s" %
      (daysOfWeek, months)
```

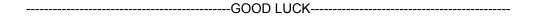13. Which numbers are printed? Explain it!

```
for i in  range(2):
    print i

for i in range(4,6):
    print i
```

14. Make your own sorting program C/C++/Python/Java.

```
Initail Condition [3, 7, 5, 9, 1]
End Condition 1   [1, 3, 5, 7, 9]
End Condition 2   [9, 7, 5, 3, 1]
```

15. Make a flowchart from number 14. (only end condition 2)

--GOOD LUCK--

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