Solutions and commentary for exam 2023-04-13 in DA2005

Part A: multiple choice

1. B

2. A

3. A, B, C.

4. C

5. A, D, E

6. E

7. E

8. D

Part B: coding questions

9. A. Example solution:

```
def my_special_sum(l):
    s = 0
    for i in l:
        if i % 2 == 0:
            s += i
        else:
            s -= i
    return s
```

B. Example solution:

```
def my_special_sum(l):
    s = 0
    idx = 0
    for i in l:
        if type(i) != int:
            print('invalid datatype at list at index:', idx)
            continue
        if i % 2 == 0:
            s += i
        else:
            s -= i
        idx += 1
    return s

print(my_special_sum([7.0,6,2,4]))
```

10.

- The return value is a list, not a string.
- The i variable is global. Python will signal an error because a global variable is assigned without having a `global i` statement. But even if one got that right, the function will not function correctly in subsequent calls.

11. Example solution

```
def rev(s):
    if s == '':
        raise ValueError('Empty string given to rev')
    reversed_s = ''
    for char in s:
        reversed_s = char + reversed_s
    return reversed_s
```

12. Example solution

```
def construct_dict():
    d = {}
    while True:
        k = input('Provide key:')
        if k == 'quit':
            break
        if k in d:
            print('The key is already in the dictionary.')
            continue
        v = input('Provide value:')
        d[k] = v
    return d
```

13. Example solution

```
def common_max(list1,list2):

    # Store the values occurring in both list1 and list2 in cs
    cs = []
    for x in list1:
        if x in list2:
            cs.append(x)

    if cs == []:
        return 0
    else:
        return max(cs)
```