Assignment-1

1. To calculate area of a rectangle:

length = 10 width =

5 area = length *

width print("Area

=", area)

2. To convert miles to km: miles = 10 km = miles * 1.60934 print(miles, "miles is", km, "km")

3. To check palindrome: def is_palindrome(s): return s == s[::-1] s = "radar" print(is_palindrome(s))

4. To find second largest element:

list1 = [5, 2, 8, 3, 10] list1.sort()

print("Second largest:", list1[-

2])

5. Indentation refers to the spaces at the beginning of a code line. It is used to define blocks of code .

6. Set difference:

A = {1, 2, 3, 4} B =

{3, 4, 5} print(A -

B) # {1, 2}

7. Print 1 to 10:

i = 1 while i

<= 10:

print(i)

i += 1

8. Factorial using while loop:

num = 5

factorial = 1 while num > 1:

factorial *= num num -= 1

print("Factorial:", factorial) **9.**

Check positive/negative/zero:

num = -5 if num

> 0:

print("Positive")

elif num == 0:

print("Zero")

else:

print("Negative")

10. Largest of

three: a, b, c = 10,

15, 12 if a > b and a

> c: print("a is

largest") elif b > a

and b > c: print("b

is largest") else:

print("c is largest")

11. Array of ones: import

numpy as np arr =

np.ones((2, 3))

print(arr)

12. 2D random integers:

import numpy as np arr

= np.random.randint(0,

10, size=(3, 3))

print(arr)

13. linspace:

import numpy as np arr =

np.linspace(1, 10, 5)

print(arr)

14. linspace 1 to 100:

```
import numpy as np arr
= np.linspace(1, 100,
10) print(arr)
```

15. Even numbers 2 to 20:

```
import numpy as np arr
= np.arange(2, 21, 2)
print(arr)
```

16. 1 to 10 step 0.5: import numpy as np arr = np.arange(1, 10.5, 0.5) print(arr)

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