PFA-1

1. c (15)

The code defines a function ‘func’ that takes two parameters ‘a’ and ‘b’. The purpose of the function is to calculate the greatest common divisor(GCD) of ‘a’ and ‘b’.
So when we call ‘func(30,75)’, here what happens: ‘a’ is not 0, so function calls itself recursively with ‘a=30’ and ‘b=75%30’, which evaluates to ‘b=15’.
‘a’ is not 0, so again the function calls it self recursively with ‘a=15’ and ‘b=30%15’, which evaluates to ‘b=0’.
Now ‘a’ is 0, so the function returns the value of ‘b’ which is 15.
therefore output of ‘func(30,75)’ is ‘15’.

2. b (filter)

3. a (tuple)

4. d (error)

5. a (raise)

6. c (datetime)

7. c (208)

```
print (4**3+(7+5)**(1+1))
          (4**3+(12**2))
            (4**3+(144))
              (64+144)
                208
```

8. d (none)

It should be strptime()

9. b (immutable)

Once tuple is created, its contents can’t be modified.

10. A (range)

11. C (lambda function)

12. C (both A&B)

13. B (dump()method)

14. A (load())

15. A (Alphabets)

16. d (both a&b)

a- ‘for ship,captain in captains.items():’ unpacks the keys and values of the dictionary using the ‘items()’ method and assigns them to the variables ‘ship’ and ‘captain’. then it prints the values in the required format.

b- ‘for ship in captains: print(ship, captain[ship])’ iterates over the keys of the ‘captains’ dictionary using a for loop and print the keys and corresponding values of the dict in the required format.

17. d (Captains={})

18. b (Captains[“Enterprise”]= “Picard”
Captains[“Voyager”]= “Janeway”
Captains[“Defiant”]= “Sisko”)

because it uses the square bracket notation to access the dictionary by key and assign the corresponding value. This is the standard way to add a key-value pair to a dictionary in Python.

19. b (for ship,captain in captains.item():
print (f “The{ship}is captained by {captain}”)

This code will iterate through the items in the dict and unpack each key-value pair into the variables ‘ship’ and ‘captain’. Then, it will use an f-string to print out a sentence that includes the ship name and captain name in a readable format.

20. c (del captains [“Discovery”]

This code will remove the key “Discovery” and its corresponding value from the ‘Captains’ dictionary using the ‘del’ keyword. The syntax is ‘del dict_name[key]’, where ‘key’ is the item you want to remove.