

1. What is a module in Python?

- A) A built-in function
- B) A file containing Python code that can be reused
- C) A type of loop in Python
- D) A Python data structure

**Answer: B**

2. Which of the following is NOT a correct way to import a module in Python?

- A) import math
- B) from math import pi
- C) import math as m
- D) import \* from math

**Answer: D**

3. What is the purpose of the `__init__.py` file in a package?

- A) It initializes the module
- B) It is required to make Python treat a directory as a package
- C) It contains main functions of the package
- D) It executes automatically when the module is imported

**Answer: B**

4. Which module is used to generate pseudo-random numbers?

- A) random
- B) math
- C) datetime
- D) sys

**Answer: A**

5. What will `random.randint(1, 10)` return?

- A) A floating-point number between 1 and 10
- B) An integer between 1 and 10 (inclusive)
- C) A random decimal number
- D) Always returns 1

**Answer: B**

6. What is Matplotlib used for?

- A) Creating text-based reports
- B) Creating static, animated, and interactive visualizations
- C) Handling mathematical operations
- D) Managing Python modules

**Answer: B**

7. Which function is used to plot a basic line graph in Matplotlib?

- A) `plt.draw()`
- B) `plt.show()`
- C) `plt.plot()`
- D) `plt.graph()`

**Answer: C**

8. To save a Matplotlib plot as an image, which function is used?

- A) `plt.save()`
- B) `plt.export()`
- C) `plt.savefig()`
- D) `plt.store()`

**Answer: C**

9. Which Matplotlib function is used to create a bar chart?

- A) plt.pie()
- B) plt.hist()
- C) plt.bar()
- D) plt.scatter()

**Answer: C**

10. In a scatter plot, what do the points represent?

- A) A continuous function
- B) A relationship between two variables
- C) A distribution of data
- D) A categorical dataset

**Answer: B**

11. What is the main difference between a program and a module in Python?

- A) A program contains only functions, while a module contains only classes
- B) A program is designed to be executed, while a module is designed to be imported and reused
- C) A program must be in Python, while a module can be in any language
- D) There is no difference between a program and a module

**Answer: B**

12. Which of the following Python modules is implemented in C?

- A) sys
- B) os
- C) random
- D) datetime

**Answer: A**

13. What does the `from module import *` statement do?

- A) Imports all functions and variables from the module
- B) Imports only the main function from the module
- C) Imports only the classes from the module
- D) Prevents module name conflicts

**Answer: A**

14. Which function from the `random` module is used to shuffle a list?

- A) `random.mix()`
- B) `random.shuffle()`
- C) `random.reorder()`
- D) `random.permute()`

**Answer: B**

15. What does `math.factorial(5)` return?

- A) 120
- B) 25
- C) 5
- D) 720

**Answer: A**

16. What will `math.ceil(4.3)` return?

- A) 4
- B) 5
- C) 4.3
- D) 3

**Answer: B**

17. Which method from the datetime module is used to get the current date and time?

- A) datetime.now()
- B) datetime.today()
- C) datetime.current()
- D) datetime.getTime()

**Answer: A**

18. The timedelta class in the datetime module is used to:

- A) Measure time intervals
- B) Generate random time values
- C) Convert time zones
- D) None of the above

**Answer: A**

19. Which library must be imported to use Matplotlib?

- A) import matplotlib.graph
- B) import matplotlib.pyplot as plt
- C) import matplotlib.plot
- D) import matplotlib.graphs as mg

**Answer: B**

20. Which type of graph is best for showing the proportion of categories in a dataset?

- A) Bar chart
- B) Histogram
- C) Pie chart
- D) Scatter plot

**Answer: C**

21. What will `plt.xlabel("Time")` do in Matplotlib?

- A) Set the title of the graph
- B) Set the label for the X-axis
- C) Set the label for the Y-axis
- D) None of the above

**Answer: B**

22. How do you add a legend to a Matplotlib plot?

- A) `plt.addLegend()`
- B) `plt.legend()`
- C) `plt.labelLegend()`
- D) `plt.annotateLegend()`

**Answer: B**

23. What function is used to create a histogram in Matplotlib?

- A) `plt.hist()`
- B) `plt.bar()`
- C) `plt.scatter()`
- D) `plt.plot()`

**Answer: A**

24. In a boxplot, what does the median line represent?

- A) The highest value in the dataset
- B) The lowest value in the dataset
- C) The middle value in the dataset
- D) The average of all values

**Answer: C**

25. What function is used to set limits for the X-axis in Matplotlib?

- A) plt.set\_xlim()
- B) plt.axis\_xlim()
- C) plt.xlim()
- D) plt.setXlimits()

**Answer: C**

26. What is the primary use of a scatter plot?

- A) To compare trends over time
- B) To display relationships between two variables
- C) To visualize proportions of categories
- D) To organize numerical data into bins

**Answer: B**

27. Which method in Matplotlib is used to save a figure as an image file?

- A) plt.exportfig()
- B) plt.savefig()
- C) plt.saveplot()
- D) plt.storefig()

**Answer: B**

28. What parameter in plt.bar() is used to change the width of the bars?

- A) bar\_width
- B) w
- C) width
- D) barSize

**Answer: C**

29.What is the file extension of a Python module?

- A) .mod
- B) .py
- C) .pym
- D) .module

**Answer: B**

30.What happens if a module is imported multiple times in Python?

- A) It will be reloaded each time
- B) It will be imported only once
- C) It will cause an error
- D) It will overwrite the previous import

**Answer: B**

31.Which keyword is used to check the available functions in a module?

- A) view()
- B) help()
- C) dir()
- D) list()

**Answer: C**

32.How do you check the location of an imported module?

- A) module.location()
- B) module.\_\_file\_\_
- C) module.getpath()
- D) module.path()

**Answer: B**



33. Which function is used to generate a random float between 0 and 1?

- A) `random.rand()`
- B) `random.uniform(0,1)`
- C) `random.random()`
- D) `random.float()`

**Answer: C**

34. What does `random.seed(5)` do?

- A) Generates 5 random numbers
- B) Resets the random number generator to a fixed state
- C) Increases randomness
- D) Limits the range of random numbers

**Answer: B**

35. What does `random.choice([1, 2, 3, 4, 5])` do?

- A) Returns a random number from 1 to 5
- B) Returns all elements shuffled
- C) Returns a random element from the given list
- D) Returns a sorted list

**Answer: C**

36. The function `random.shuffle()` works on:

- A) Strings
- B) Tuples
- C) Lists
- D) Dictionaries

**Answer: C**

37. Which function is used to find the square root of a number?

- A) `math.sqrt()`
- B) `math.pow()`
- C) `math.sqr()`
- D) `math.square()`

**Answer: A**

38. What does `math.pow(2,3)` return?

- A) 6
- B) 8.0
- C) 8
- D) 9

**Answer: B**

39. What is the value of `math.pi`?

- A) 3.1415
- B) 2.718
- C) 3.14
- D) 22/7

**Answer: A**

40. Which function is used to calculate the Greatest Common Divisor (GCD)?

- A) `math.lcm()`
- B) `math.gcd()`
- C) `math.common()`
- D) `math.greatest()`

**Answer: B**

41. What will `math.ceil(4.8)` return?

- A) 4
- B) 5
- C) 4.8
- D) 6

**Answer: B**

42. Which function is used to get the current date?

- A) `datetime.date.now()`
- B) `datetime.date.today()`
- C) `datetime.now()`
- D) `date.current()`

**Answer: B**

43. Which format does `datetime.date(2024, 5, 15)` represent?

- A) May 15, 2024
- B) 15-05-2024
- C) 2024-05-15
- D) 2024/15/05

**Answer: C**

44. Which class in the `datetime` module is used to represent time intervals?

- A) `datetime.TimeDelta`
- B) `datetime.time()`
- C) `datetime.duration()`
- D) `datetime.timedelta()`

**Answer: D**

45. What will `datetime.datetime.strptime("2024-05-15", "%Y-%m-%d")` return?

- A) A string
- B) A datetime object
- C) A list
- D) An integer

**Answer: B**

46. Which function is used to display a Matplotlib plot?

- A) `plt.draw()`
- B) `plt.render()`
- C) `plt.show()`
- D) `plt.display()`

**Answer: C**

47. Which type of chart is best for showing trends over time?

- A) Pie Chart
- B) Histogram
- C) Line Chart
- D) Scatter Plot

**Answer: C**

48. What does `plt.title("Sales Data")` do?

- A) Sets the X-axis label
- B) Sets the graph title
- C) Creates a legend
- D) Changes the background color

**Answer: B**

49. What does `plt.grid(True)` do?

- A) Adds a grid to the plot
- B) Saves the plot as an image
- C) Changes the plot background color
- D) Enables interactive mode

**Answer: A**

50. Which function is used to create a scatter plot?

- A) `plt.scatter()`
- B) `plt.dotplot()`
- C) `plt.points()`
- D) `plt.scatterplot()`

**Answer: A**

51. What does `plt.bar(x, y, width=0.5)` control?

- A) The color of bars
- B) The height of bars
- C) The width of bars
- D) The X-axis labels

**Answer: C**

52. What is the main use of a histogram?

- A) To display parts of a whole
- B) To show the distribution of numerical data
- C) To compare categories
- D) To track trends over time

**Answer: B**

53.How do you create a horizontal bar chart?

- A) plt.barh()
- B) plt.hbar()
- C) plt.barchart(horizontal=True)
- D) plt.bar(horizontal=True)

**Answer: A**

54.What is the purpose of plt.legend()?

- A) To set the title of the graph
- B) To provide labels for multiple data series
- C) To create a 3D plot
- D) To remove the grid

**Answer: B**