

Important QnA Histogram for Class 12 IP

Important QnA **Histogram** for Class 12 IP which is part of Chapter 3 Plotting with Pyplot. So here we go!

Important QnA Histogram for Class 12 IP - Objective type questions (1 Mark)

Fill in the blanks, MCQs and True/False

[1] A _____ is a tool that summarize discrete or continuous data.

--> Histogram

[2] The numerical data shown by the number of data points that fall within a particular range is called _____.

--> bins

[3] A histogram is a similar to a vertical bar graph. [True/False]

[4] Which of the following data can be shown by histogram?

a) The quantity like weight, height, time

b) The categories

c) The uncountable data

d) All of these

[5] The histogram was introduced by _____

--> Karl Pearson

[6] A _____ function is used to create histogram.

--> hist()

[7] How many parameters a hist() function can have?

a) 2

b) 3

c) 4

d) 5

[8] A _____ is a Boolean parameter of hist() function which is by default False.

--> cumulative

[9] A _____ parameter is just a number or series or arrays to be plotted on histogram.

--> x

[10] Which of the following is traditional bar-type histogram?

- a) x
- b) bins
- c) histtype**
- d) orientation

[11] Which of the following parameter have values like horizontal or vertical?

- a) x
- b) bins
- c) histtype
- d) orientation**

[12] Which of the following is the correct statement to create a histogram with ndarray x and bins value 30?

- a) hist(x,bins:30)
- b) hist(x,bins=30)**
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- c) hist(x,bins-30)
- d) hist(x,bins,30)

[13] A _____ value should be specified to histtype to generate a lineplot that is by default unfilled.

--> step

[14] You cannot create horizontal stacked histogram. (True/False)

[15] Which of the following is correct to generate horizontal stacked histogram?

- a) `hist([x,y], histtype='barstacked', orientation = 'horizontal')`
- b) `hist([x,y], histtype='horizontal', orientation='barstacked')`
- c) `hist([x,y], histtype='horizontal', orientation='landscape')`
- d) None of these

Histogram for Class 12 IP - Conceptual Descriptive/Subjective Questions

[Refer these notes to write answers.](#)

[1] Describe the histogram. How to plot data on histogram?

[2] Explain `hist()` function in detailed.

[3] Clarify the situations when you need to use `bar()` charts and when you need to use `hist()` chart?

[4] What is the significance of the cumulative histogram? Elaborate your answer with an example.

[5] How to change the edgecolor and color of histogram bar?

[6] Explain the following parameters of `hist()` function with example.

1. bins
2. histtype
3. orientation

[7] How to save the histogram as image?

Histogram for Class 12 IP - Application-based questions

[1] Write code to plot following data on histogram:

24,17,14,22,25,26,38,42,24,12,28,19,32,21,35,28,21,31,18,19

```
import matplotlib.pyplot as mp
l=[24,17,14,22,25,26,38,42,24,12,28,19,32,21,35,28,21,31,18,19]
mp.hist(l)
mp.show()
```

[2] Generate random numbers from 1 to 70 and plot it on the histogram. Change the outline color to black and the bar color should be yellow.

```
import matplotlib.pyplot as m
import numpy as np
x=np.random.randn(70)
m.hist(x,20,edgecolor="black",facecolor="yellow")
m.show()
```

[3] Display the above data in cumulative mode on histogram.

```
import matplotlib.pyplot as m
import numpy as np
x=np.random.randn(70)
m.hist(x,20,cumulative= True, edgecolor="black",facecolor="yellow")
m.show()
```

[4] Write python code to create histogram based on given data:

rcb: 78,63,49,41,68,101,56,79,68,96

mi: 45,85,98,102,42,50,43,48,63,39

```
import matplotlib.pyplot as m
rcb=[78,63,49,41,68,101,56,79,68,96]
mi=[45,85,98,102,42,50,43,48,63,39]
m.hist([rcb,mi],cumulative='true')
m.show()
```

[5] Draw histogram for the following code:

```
import matplotlib.pyplot as m
english=[77,66,88,99,55,44,33,79,68,83]
maths=[56,89,70,50,60,65,90,80,47,82]
m.hist([english,maths], orientation='horizontal')
m.show()
```