Pabna Cadet College

Fortnightly Examination - 2021

Third Term Second Phase

Subject: Statistics (MCQ)

Class: XII

Time: 15 minutes

Full Marks: 10

Answer all the questions.

1. Which one is a correct condition of a pdf?

a. $\displaystyle\int_0^1 f(x)dx = 1$

b. $P(X) \geq 0$

c. $\displaystyle\int_a^b f(x)dx = 1; a \leq x \leq b$ *

d. $\displaystyle\int_0^{Median} f(x)dx = 0.55$
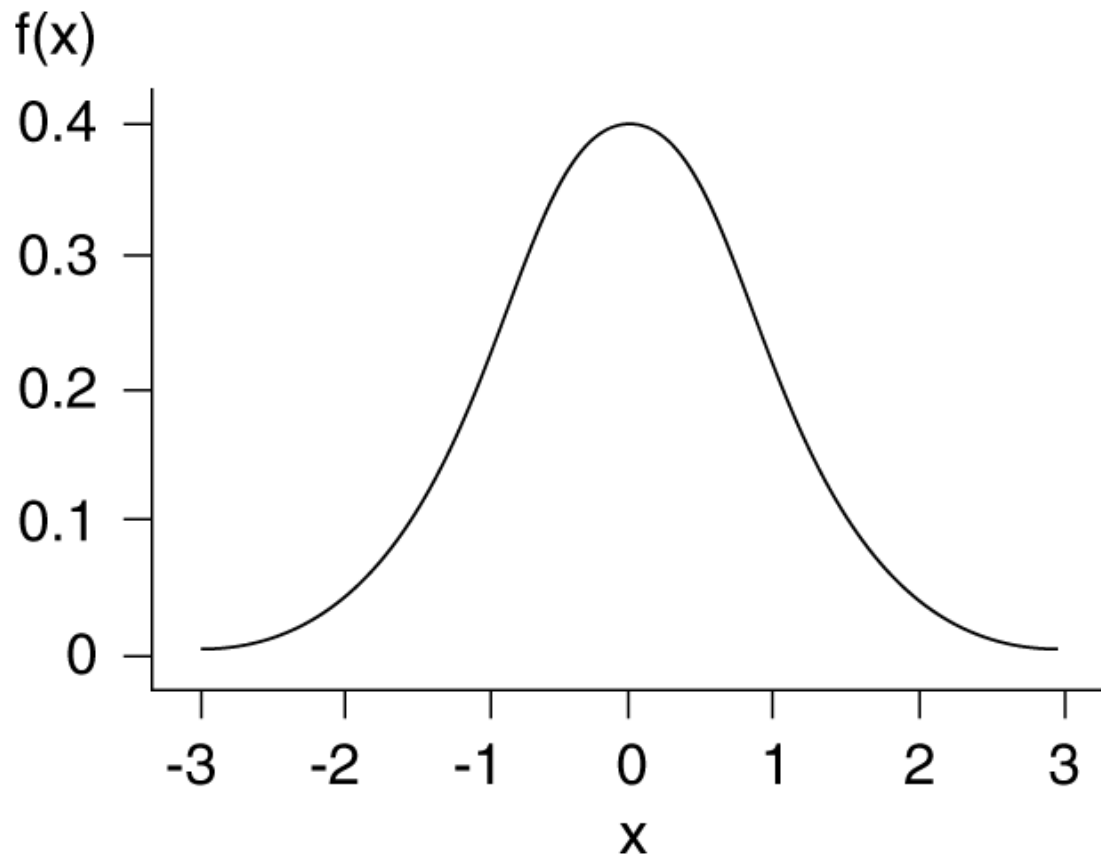
2. What are highest and lowest possible values of F(x)?

a. $0, 1$*
b. $-1, 1$
c. $-\infty, +\infty$
d. $0, \infty$

3. How mnay types of random variable are there?
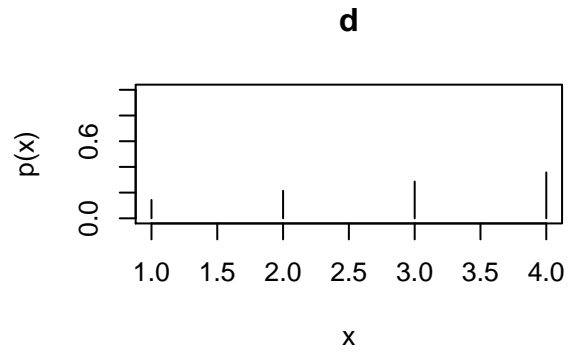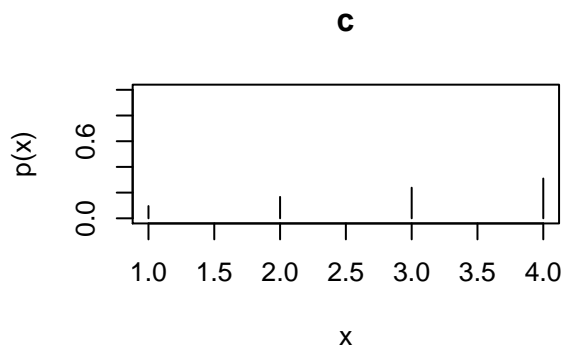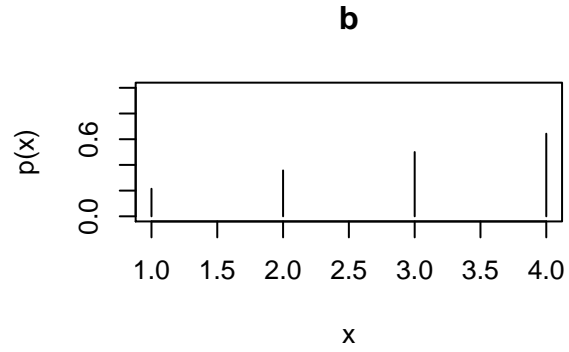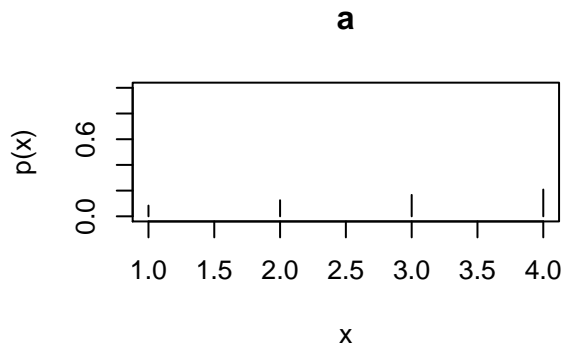
a. 1
b. 2*
c. 3
d. 4

4. The figure is an example of a

a. probability density function
b. probability mass function
c. could be both
d. none

Answer the questions 5-8 according the following information.

$f(x) = \frac{x+1}{14}; x = 1, 2, 3, 4$

5. Which plot represents the pmf?

a

b

c

d

6. What is P(X=2)?

a. $\frac{2}{13}$

b. $\frac{4}{14}$ *

c. $\frac{5}{14}$

d. $\frac{1}{7}$

7. What is P(X=5)

a. $\frac{5}{14}$

b. $\frac{1}{7}$

c. 0*

d. 1

8. $P(2 \leq X \leq 5) =$?

a. $\frac{6}{7}$ *

b. $\frac{5}{7}$

c. 1

d. $\frac{14}{17}$

Answewr the question 9-10 qccording to the following information.

$P(x,y) = \frac{x+2y}{16}$

9. $P(X) =$?

a. $\frac{x+2y}{3}$

b. $\frac{2x+y}{3}$

c. $\frac{2x+3y}{3}$

d. $\frac{x+y}{3}$ *

10. $P(X|Y=0) =?$

a. $\frac{x+2y}{4y+1}$

b. 1

c. x

d. 0