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Question 1

Question 2

Question 3

Question 4

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Qtext:-

a. Let X be a random variable which follows binomial distribution with n = 500 and p = 0.25. Then find the following **4 M**

i). P (X > 290)

ii) P (X = 250)

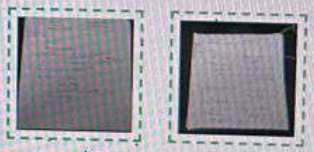
iii). P (120 < X < 180).

b.The rain fall (in cms) in a Country during every July month is normally distributed with mean and standard deviation of rainfall are respectively as 12cms and 1.25cms. For the July month of 2022, calculate the probabilities of having rainfall **4 M**

i) more than 15 cms

ii) in between 13cms and 18cms.

iii) of 12 cms



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Question 1

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Qtext:-

a. Probability distribution of two random variables X and Y are given below.

Y	X			
	0	1	2	3
0	0.15	0.30	0.05	0
1	0.05	0.15	2k	0.05
2	0	0.05	0.10	k

i).Find the probability P(Y > X).

ii).Validate the statement" X and Y are independent" **4 M**

b. Consider the following probability distribution. **4 M**

X	-2	-1	1	2
P(X)	0.20	0.40	0.25	0.15

i)."Probability distribution is not valid because x is negative". Validate.

ii).If the distribution is valid then find E(X) ,$E(X^2)$ and hence variance of X.

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Question 1

Question 2

Question 3

Question 4

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Qtext:-

a. If two events, A and B, are such that P(A) = 0.3, P(B) = 0.5, and P(A ? B) = 0.15, find the Following

i) P(A|A ? B) ii) P(A|A ? B) iii) P(A ? B|A ? B) 4 M

b. An e ?commerce company has three delivery boys A, B and C who delivers 30%, 40% and 30% of items daily from the warehouse. It is observed that they take more time than the expected with probabilities 5%, 10% and 3% respectively. 3 M

a).Find that the probability that the delivery is always delayed by the company.

b).The probability that the delay in delivery is by A

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Question 1

Question 2

Question 3

Question 4

View Uploaded Answer Sheets

Qtext:-

a. Let A be an event of a student passing the examination and B be the event of getting preplacement offer(PPO) with probabilities 3/4 and 1/8 respectively in a university. Then find the probability that a student

i).passing the examination and also getting PPO

ii).failing in the examination but getting PPO

iii).neither passing the examination nor getting PPO **4 M**

b.Consider the following data and answer the questions if possible. Otherwise state reasons. **3 M**

Marks (X)	25	35	45	55	65	75
Number of Students	10	20	25	35	5	5
Grade	E	D	C	B	A	A+

i).Find $P(X > 55)$

ii).Find $P(X < 35)$

iii).Find $P(35 < X < 65)$

It seems like you have not uploaded any images/files for this question.