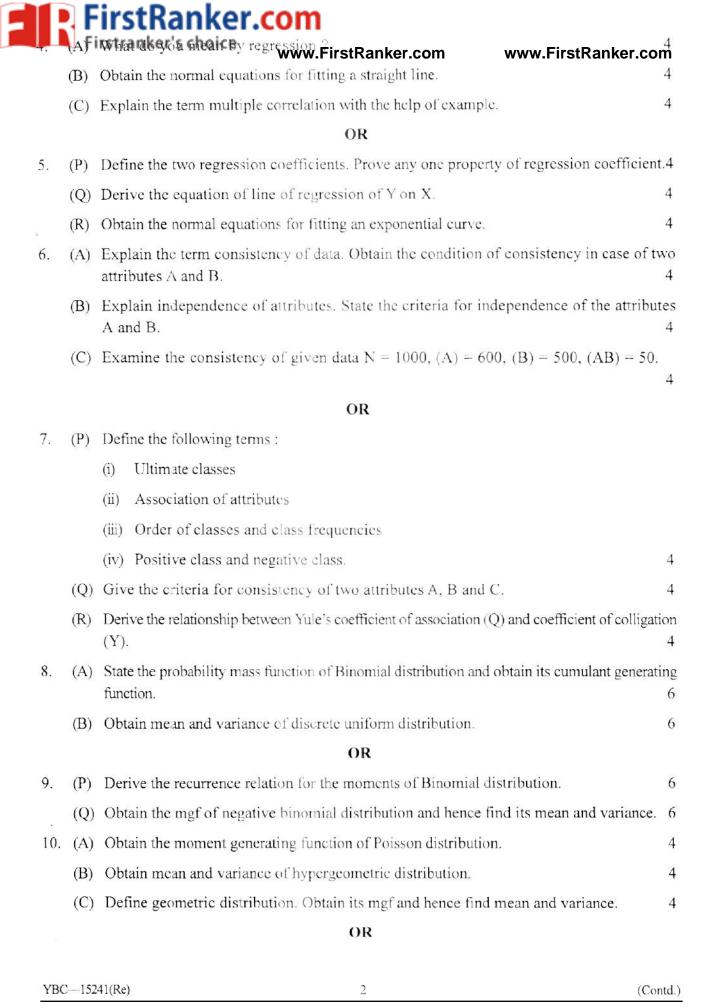


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B.Sc. (Part—I) Semester—II Examination STATISTICS

Tim	e : Th	iree I	Hours] [Maximum Mar	ks: 80
			Note: - All questions are compulsory.	
1.	(A)	A) Fill in the blanks:		
		(i)	Karl Pearson's coefficient of correlation is also called as correlation coef	ficient.
		(ii)	The point of intersection of two lines of regression is	
		(iii)	Mean, mode and median of the normal distribution are	
		(iv)	In Poisson distribution mean and variance are	2
	(B)	Cho	pose the correct alternative :	
		(i)	For perfect negative correlation $r = $	
			(a) $+1$ (b) -1	
			(c) 0 (d) ∞	
		(ii)	The term regression was first studied by:	
			(a) Karl Pearson (b) Bernoulli	
			(c) Sir Francis Galton (d) R.A. Fisher	
		(iii)		
			(a) Binomial (b) Poisson	
		('- \)	(c) Exponential (d) Negative binomial	
		(1V)	For normal distribution $\beta_2 = \underline{}$	
			(a) -3 (b) $+3$ (c) 0 (d) 1	2
	(C)	Ans	swer the following questions in one sentence each:	2
	(0)	(i)	What do you mean by dichotomous classification?	
		(ii)	What is a correlation coefficient?	
			State the continuous distribution for which mean is equal to variance.	
			What do you mean by standard normal variate?	1
2.	(A)			4
۷.	` ′			
	(B)		rive the formula for Spearman's rank correlation coefficient.	4
	(C)	Der	fine intraclass correlation with example.	4
3.	(D)	OR		
	(P)		scribe the Scatter diagram.	. 4
	(Q)) Show that Karl Pearson's coefficient of correlation is independent of change scale.		
	(R)			
	197 . 51			4
YBC	<u>—152</u>	41(Re))	(Contd.)





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(Q) Show that mean and variance of the geometric distribution

$$p(x) = q^{x}p$$
 $x = 0, 1, 2,$

are respectively qp⁻¹, qp⁻².

4

6

100

- (R) Define Hypergeometric distribution and show that it tends to Binomial distribution under certain condition.
- 12. (A) State the pdf of continuous uniform distribution and obtain its mgf. 6
 - (B) State the pdf of normal distribution and obtain its mode.

OR

- 13. (P) State the pdf of univariate gamma distribution and obtain its mean and variance. 6
 - (Q) State any four chief characteristics of normal distribution. 6

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