P P SAVANI UNIVERSITY

Third Semester of B.Sc. IT Examination

Nov-Dec 2021

SESH2060 Statistics

03.12.2021, Friday

Time: 9:00 a.m. To 11:30 a.m.

Maximum Marks: 60

Instructions:

- The question paper comprises of two sections.
 Section I and II must be attempted in same answer sheets.
- Make suitable assumptions and draw neat figures wherever required.
 Use of scientific calculator is allowed.

SECTION - I

1				<u> </u>	ECTIO	-													
1000	Answer any six of the followings.																		
)	Write the definition of statistical data.																		
i)	What will be the mode of 2, 2, 3, 4, 6 and 3?																		
i)	Write the definition of quartile deviation.																		
v)	What is the method to find the coefficient of correlation and write its formula?																		
7)	How to find median if mode and mean of a distribution is given?																		
i)	Define standard deviation and write the formula for discrete distribution.																		
ii)	Define z-score of statistical data?																		
ii)	State the different types of correlation.																		
	Answer any th																		
2	Calculate mea		an and i		ie follo	_													
	X	0-10		10-20	10-20		30		30-40		40-50								
	Frequency		12			20		25		23									
3	Find the range and coefficient of range of the following.																		
	Marks	10-2	0		20-30		40		40-50		50-60								
	Number of	8		10	10			8		4									
	Students						-												
4	Calculate the standard deviation for the discrete frequency distribution. (Assumed mean																		
	< 0.3																		
	60).		1 = -																
	Salary	45	50	55	60		65	70	75		80								
		45	50	55 8	60		65	70	75		80								
5	Salary Number of	3	5	8	7	follow	9	7	_										
5	Salary Number of persons	3 coefficie	5	8	7	follow 17	9	7	_	47									
5	Salary Number of persons Compute the	3 coefficie	5	8 rrelation f	7	_	9	7 a.	_	47									
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5	Salary Number of persons Compute the of Marks in accounts Marks in accounts	3 coefficie	5	8 rrelation f 35 20	7 For the	17	9	7 a.	_										
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1)) i)	Salary Number of persons Compute the of Marks in accounts Marks in statistics Answer any si What is the privite one exaluate the view write the means and the constitution of the constit	coefficie 48 45 x of the robabilit mple ea ralue of an and vistant prinsity furnisity	following of get ch when $P(A \cap B)$ ariance such to nction.	rrelation f 35 20 SE ngs. ting at lease re the prob (x), if $P(A)of uniformthat f(x)$	For the stone bability $= 0.3$, a probability $= px$	17 40 N – II head if y of arrow properties, $P(B^c)$ ability $f(B^c)$ $f(B^c)$ $f(B^c)$ $f(B^c)$	ying dat if you to n event i) = 0.4, distrib < x < 3	a. 23 25 25 25 25 25 27 28 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	as? one. B) = 0.	45	7								
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	Answer any three of the followings.	2
Q-2	Find the probability of an ace and a jack card from a pack of cards in two consecutive draws,	[08]
1	the cards drawn not being replaced.	1001
Q - 3	Derive the mean and variance of Poisson distribution.	[08]
Q - 4	The mean and variance of a binomial variate are 8 and 6. Find $P(X \ge 2)$.	[08]
Q - 5	An ambulance service company claims that on an average it takes 20 minutes between a call	[08]
	for an ambulance and the patient's arrival at the hospital. If in 6 calls the time taken (between a call and arrival at hospital) are 27, 18, 26, 15, 20, 32. Can the company's claim be accepted? (Note: $t_{\alpha} = 1.476$).	
