UNIVERSITY OF THE PUNJAB, LAHORE

Examination B.A/B.Sc. (Part-II) Statistics (Sample Paper)

Students will be given hundred (75) MCQs and a specified time for each question. Following is the sample for the same.

(MCQs)

Note: Attempt ALL questions. All questions carry equal marks.

In all bellow θ is parameter (population characteristic) and $\hat{\theta}$ represents a sample estimate, OLS represent ordinary least square estimator.

Q.	Some possible answers are given for each of the followings, encircle (or tick) the correct answer.	Difficul ty level	ke y	Syllabus portion
1.	Sample is the portion of a population that represents almost all the properties of the population under study.	easy	В	Sampling & sampling distributions
	A) small B) small enough			
	C) sufficiently large D) maximum portion			
2.	A systematic random sample does not yield good results if	easy	A	Sampling & sampling distributions
	A) variation in units is periodic			
	B) variation in units is constant			
	C) variation in samples is constant			
	D) each sample results in different output			
3.	The mean of a chi-square distribution is equal toand its variance is equal to	Difficult	D	Hypothesis testing
	A) $\overline{x}, \sigma^2/n$ B) zero, σ^2/n			
	C) 2n,n D) n, 2n			
4.	The test statistic to be used to test $H_o: \sigma^2 = c \operatorname{vs} H_o: \sigma^2 \neq c$ with usual notations is	modera te	A	Hypothesis testing
	A) $\chi^2 = [(n-1)s^2]/c$ B) $\chi^2 = [(n-1)s^2]/c^2$			
	C) $\chi^2 = [ns^2]/c$ D) $\chi^2 = [(n-1)s]/c$			
5.	the mean of the <i>t</i> -distribution is when $v \ge 2$ and the mean is for $v = 1$ where v is degree of freedom	Difficult	В	Hypothesis testing
	A) zero, 1 B) zero, undefined			
	C) undefined,1 D) 1,zero			
6.	The F-distribution is skewed to the But as the degrees of freedom v_1 and v_2 become large, the F-distribution approaches the distribution.	modera te	С	Hypothesis testing

	A) right, poisson B) left, poisson			
	C) right, normal D) left, normal			
7.	The between samples sum of squares is calculated by the formula where r and c represent the number of rows and columns respectively.	modera te	В	ANOVA
	A) $c \sum_{j=1}^{k} (\overline{X}_{,j} - \overline{X}_{,j})^2$ B) $\sum_{j=1}^{k} (\overline{X}_{,j} - \overline{X}_{,j})^2$			
	C) $r \sum_{j=1}^{k} (\overline{X}_{i.} - \overline{X}_{})^2$ D) $r \sum_{j=1}^{k} (\overline{X}_{.j} - \overline{X}_{})^2$			
8.	The between samples sum of squares is calculated by the formula where r and c represent the number of rows and columns respectively.	modera te	A	ANOVA
	A) $\frac{\sum_{j} T_{.j}^{2}}{r} - \frac{T_{}^{2}}{n}$ B) $\frac{\sum_{j} T_{.j}^{2}}{c} - \frac{T_{}^{2}}{n}$			
	C) $c(\frac{\sum_{j}T_{.j}^{2}}{r}) - \frac{T_{}^{2}}{c}$ D) $(\frac{\sum_{j}T_{.j}^{2}}{r}) - \frac{T_{}^{2}}{c}$			
9.	Randomized complete block design is a	easy	С	Design of experiments
	A) three restrictional design B) no restrictional design			
	C) one restrictional design D) two restrictional design			
10	A replication is used to decrease the and thereby to increase , which is a measure of the variability of the experimental error	difficult	D	Design of experiments
	A) sample size, precision B) labor, sample size			
	C) error, efficiency D) experimental error, precision			