SWL-18

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number with marker or pen. Cutting or filling two or more circles will result in zero mark in that question.

1.

i. **Level of significance is denoted by**
   (A) $1-\alpha$ (B) β (C) α (D) $1-\beta$

ii. **If $E(\hat{\theta}) = \theta$ then $\hat{\theta}$ is**
   (A) biased   (B) unbiased   (C) consistent   (D) none

iii. **$\sigma/\sqrt{n}$ is equal to**
   (A) $\mu\bar{x}$ (B) $S.E(\bar{x})$ (C) σ^2 (D) S^2

iv. **If P = 0.7 , n = 10 then $E(\hat{p})$ is**
   (A) 0.07   (B) 0.7   (C) 7   (D) 0.35

v. **Population parameters are denoted by**
   (A) Roman letters   (B) Greek letters   (C) Latin letters   (D) English letters

vi. **In normal distribution, μ_3 is**
   (A) -1   (B) zero   (C) +1   (D) $\propto$

vii. **In normal distribution Q. D is**
   (A) $\frac{4}{5}\sigma$ (B) $\frac{2}{3}\sigma$ (C) $\frac{1}{2}\sigma$ (D) 3σ

viii. **The parameters of normal distribution are**
   (A) (n , p)   (B) (μ,σ^2) (C) (μ, p) (D) (np , nq)

ix. **Another name of independent variable is**
   (A) regressand   (B) regressor   (C) predictand   (D) dependent

x. **If two variables are uncorrelated, the value of " r " is**
   (A) -1   (B) +1   (C) zero   (D) 2

xi. **In regression, $\sum(y-\hat{y})$ is equal to**
   (A) -1   (B) +1   (C) zero   (D) $\sum\hat{y}$

xii. **The value of Chi-square cannot be**
   (A) zero   (B) negative   (C) positive   (D) 2

xiii. **For 3×3 contigency table, the number of cells in the table are**
   (A) 3   (B) 6   (C) 9   (D) 4

xiv. **If a straight line is fitted to the time series then**
   (A) $\sum y = \sum\hat{y}$ (B) $\sum y < \sum\hat{y}$ (C) $\sum y > \sum\hat{y}$ (D) $\sum(y-\hat{y})^2 = 0$

xv. **Depression in business is**
   (A) secular trend   (B) seasonal variation   (C) cyclical variation   (D) irregular variation

xvi. **A binary digit is commonly called**
   (A) bit   (B) byte   (C) kilo byte   (D) giga byte

xvii. **Test - statistic , $t = \dfrac{\bar{X}-\mu}{s/\sqrt{n}}$ has d.f .**
   (A) n   (B) n-1   (C) n-2   (D) n+1

322 - 418 -1400****

_____ _____ Annual 2018

| Statistics | (INTER PART II - CLASS 12th) | Time : 2: 40 Hours |

(New Scheme)

Paper : II **SUBJECTIVE** Marks : 68

Note :- Section I is compulsory. Attempt any three Questions from section II.

2. **Write short answers to any Eight parts.** (8 x 2 = 16)

  i. Write properties of normal distribution.

  ii. In normal distribution $\mu_2 = 4$, find μ_3 and μ_4.

  iii. In normal distribution $\sigma = 9$, find quartile deviation.

  iv. In normal distribution $\sigma = 5$, find mean deviation.

  v. In normal distribution $\sigma^2 = 25$, find the value of β_1 and β_2.

  vi. Define statistical inference.

  vii. Define Type – two error.

  viii. Define two tailed test.

  ix Define test statistic.

  x. Define interval estimation.

  xi. Define computer.

  xii. Define the term CPU.

3. **Write short answers to any Eight parts.** (8 x 2 = 16)

  i. Define sampling unit.

  ii. Define finite and infinite populations.

  iii. What are the basic aims of sampling.

  iv. define random sampling.

  v. Define sampling error.

  vi Define sampling distribution.

  vii. Write normal equations for the regression equation $\hat{y} = a + bx$

  viii. Estimate Y for X = 12 from the regression equation $\hat{Y} = -5.08 + 0.727X$

  ix. If C= 130 and d = 3.956, write down the regression equation $\hat{X} = C + dY$

   and estimate X when Y=10.

  x. Interpret the meaning of r = -1 and r = +1.

  xi. Write down any two formulas of correlation co-efficient.

  xii. Given that $Sxy = 72$, $Sx = 4.5$ and $Sy = 18$, Find r_{xy}.

4. **Write short answers to any Six parts.** (6x 2 = 12)

  i. Define the term rank correlation.

  ii. Interpret the meaning when coefficient of association is zero.

  iii. Find the coefficient of association from the following data.,

   (AB)= 528 , (Aβ)=790 , (αB = 25) , ($\alpha\beta$) =175

  iv. What is meant by negative association?

  v. Define the term time series.

  vi. Name four components of time series.

  vii. What is meant by secular trend?

(Turn Over