BWP-11-19

Statistics	(C)	L.K.No. 1127	Paper Code No. 6185
Paper I	(Objective Type)	Inter -A- 2019	Session (2015 -17) to (2018 – 20)
Time :	20 Minutes	Inter (Part - I)	(New Pattern)
Marks :	17		

Note : Four possible choices A , B , C ,D to each question are given. Which choice is correct fill that circle in front of that Question No. Use Marker or Pen to fill the circles. Cutting or filling two or more circles will result in Zero Mark in that Question.

Q.No.1 (1)	Frequency is denoted by : (A) q (B) p (C) f (D) c.f.
(2)	Class Interval of the groups $40-44, 45-49, 50-54,$ ------ is : (A) 4 (B) 40 (C) 5 (D) 44
(3)	The word "Statistic" comes from Latin Word : (A) Status (B) Statistik (C) Statista (D) Statistique
(4)	The mean of 10 Numbers is 9, then sum of these numbers is : (A) 10 (B) 70 (C) 90 (D) 80
(5)	M.D. of the values 5, 5, 5 and 5 is : (A) 5 (B) 0 (C) 20 (D) None of these
(6)	H.M. cannot be computed if any value of x in the data is : (A) $x > 0$ (B) $x < 0$ (C) $x = 0$ (D) None of these
(7)	Sum of Deviations from Mean is : (A) -1 (B) 0 (C) +1 (D) None of these
(8)	For a set of 10 numbers, $\Sigma(x-\bar{x})^2 = 360$ then S.D. is : (A) 36 (B) 6 (C) 12 (D) 8
(9)	Base Year Weighted Index is : (A) Paasche's (B) Laspeyre's (C) Fisher's (D) Marshall - Edgeworth's
(10)	Link Relatives can be obtained dividing P_n by : (A) p_o (B) q_o (C) q_n (D) P_{n-1}
(11)	The Second Moment about Mean is : (A) Mean (B) Variance (C) S.D. (D) 0
(12)	If $P(A \cup B) = P(A) + P(B)$, then Events A and B are called : (A) Mutually Exclusive (B) Not Mutually Exclusive (C) Independent (D) None of these
(13)	$E(x-\mu)$ is equal to : (A) Zero (B) Mean Deviation (C) Variance (D) S.D.
(14)	Parameters of Hypergeometric Distribution are : (A) 2 (B) 3 (C) 1 (D) 4
(15)	${}^3P_2$ is equal to : (A) 3 (B) 5 (C) 6 (D) 1
(16)	The Binomial Distribution is negatively skewed if : (A) $P < \frac{1}{2}$ (B) $P = \frac{1}{2}$ (C) $P > \frac{1}{2}$ (D) $P = 1$
(17)	If x and y are two independent random variables, then E(xy) is equal to : (A) E(x) + E(y) (B) E(x) E(y) (C) E(x) – E(y) (D) None of these

B

Roll No.	1127 - 6000	Session (2015 -17) to (2018 - 20)	Inter (Part - I)
Statistics (Subjective)	Inter - A -2019	Time 2 : 40 Hours Marks : 68	(New Pattern)

Note : It is compulsory to attempt any (8 – 8) Parts each from Q.No.2 and Q.No.3 while attempt any (6) Parts from Q.No.4. Attempt any (3) Questions from Section – II .Write same Question No. and its Part No. as given in the Question Paper.

Section - I

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22 x 2 = 44

Q.No.2	(i)	Give the name of two methods for collecting Secondary Data.		
	(ii)	Why are Averages called Measures of Central Tendency?		
	(iii)	Define Population with examples.	(iv)	Write down the name of Averages.
	(v)	Write down two desirable properties of good average.	(vi)	If Laspeyre's Index = 140, Paasche's Index = 150 then find Fisher Index
	(vii)	Explain the term Mode.	(viii)	If $\Sigma Wx = 320$ and $\Sigma W = 40$ find $\bar{X}w$
	(ix)	Define Quantity Index Numbers.	(x)	Define Weighted Index Numbers.
	(xi)	Explain Link Relatives.	(xii)	Write down any formula of CPI
Q.No.3	(i)	Define Classification.	(ii)	Define Histogram.
	(iii)	State Addition Law of Probability for Mutually Exclusive Events.	(iv)	Calculate Range for Data : 13 , 3 , 7 , 15 , 17 , 5 , 23 , 27
	(v)	Define Mean Deviation.	(vi)	Give two properties of Standard Deviation.
	(vii)	What are Moments?	(viii)	What is Kurtosis?
	(ix)	What is Probability?	(x)	What is Trial?
	(xi)	What is Conditional Probability?	(xii)	What are types of Dispersion?
Q.No.4	(i)	What is a Random Experiment?	(ii)	Define Discrete Random Variable.
	(iii)	Define Mathematical Expectation.	(iv)	If $E(x) = 1.1$, $E(x^2) = 2.1$ find $Var(x)$?
	(v)	If $E(x) = 1.1$, find $E(3x+5)$?	(vi)	If $n = 4$, $p = \frac{1}{2}$ find $P(x=3)$?
	(vii)	Define Bernoulli Trials.	(viii)	What is Hypergeometric Experiment ?
	(ix)	How many and what are the parameters of Hypergeometric Distribution ?		

Section - II

Q.No.5 (a) Calculate H.M. for the following Frequency Distribution. (04)

Heights (Inches)	60 – 62	63 – 65	66 – 68	69 – 71	72 – 74
Frequency	05	18	42	27	08

(b) Using the basic definition, compute G.M. for the following values : 0.5 , 1.0 , 2.7 , 3.48 , 4.71 (04)

Q.No.6 (a) Given the Data on Income. (04)

x	1 – 10	11 – 20	21 – 30	31 – 40
f	13	10	5	2

Find Mean Deviation and Coefficient of Mean Deviation.

(b) Find Quartile Deviation and Coefficient of Quartile Deviation for data given in Q.No.6 (a) (04)

Q.No.7 (a) Compute Fisher Price Index Number for the year 2016 taking year 2015 as base. (04)

Commodity	Prices		Quantities	
	2015	2016	2015	2016
A	14	20	100	150
B	10	15	150	180
C	12	10	200	300

(b) A digit is selected at random from first 10 natural numbers. Find the Probability that selected digit is : (i) Even Number (ii) Greater than 5 (04)

Q.No.8 (a) The Probability Distribution of a Discrete Random Variable x is given by : (04)

$$f(x) = \binom{3}{x}\left(\frac{1}{4}\right)^x \left(\frac{3}{4}\right)^{3-x} \quad \text{for } x = 0,1,2,3 \text{ find } E(x) \text{ and } E(x^2)$$

(b) A Continuous Random Variable has the probability function $f(x) = Cx$ for $0 < x < 2$ Find the value of C . Also find $P(1 < x < 1.5)$ (04)

Q.No.9 (a) Assuming that each baby has Probability 0.35 of being male. Find the probability that a family of 5 children will have : (i) At most one boy (ii) At most one girl (04)

(b) A Random Variable " x " follows Hypergeometric Distribution having $n = 5$, $N = 12$ and $K = 3$ then find : (i) $P(x \leq 1)$ (ii) $P(x > 1)$ (04)