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JAQ-003-2011018 Seat No. _____

B. Sc. (Sem. I) (CBCS) (W.E.F. 2019) Examination

November - 2019

101 (A) : Statistics

(Statistical Method. I)

(New Course)

Faculty Code : 003

Subject Code : 2011018

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

Instructions : (1) All questions are compulsory.
(2) Each question carries equal marks.
(3) Student can use their own scientific calculator.
(4) Graph paper provided on request.

1 (A) Give the answer of following question : **4**

(1) Statistics deal with _____ information.

(2) Statistics does not study _____

(3) The data collected from published reports is known _____ data.

(4) Population figures published by the Census Commissioner are _____ data.

(B) Write any **one** : **2**

(1) Write Statistics meaning

(2) Define: Population, Sample

(C) Write any **one** : **3**

(1) Write the difference between Population inquiry and Sample inquiry.

(2) Write the difference between primary and secondary data.

(D) Write any **one** : **5**

(1) Explain the different sources of secondary data.

(2) Write the characteristics of an ideal questionnaire.

2 (A) Give the answer of following question : **4**

(1) State Sterg's rule _____

(2) If classes 10–20, 20–30, 30–40...are _____ classes.

(3) If the class length of a class is 25 and the mid-value is 52.5,then the lower limit of the class is _____

(4) If the students obtaining the marks less than 25 are 30 and students obtaining marks less than 30 are 55. _____ number of students obtaining marks in the class 25-30.

(B) Write any **one** : **2**

(1) Define : Inclusive class

(2) Define : Class boundary point

(C) Write any **one** : **3**

(1) State the advantages of classification.

(2) There are two section in a question paper and each section has six questions numbered from 1 to 6. The following pairs of observations represent the number of questions attempted in two sections by 26 students. Prepare a bivariate frequency distribution from the raw data :

(5,2) (3,2) (2,6) (6,5) (6,2) (5,3) (4,3) (5,5) (2,5) (2,4) (1,4) (6,4) (3,3)
(5,1) (2,4) (3,5) (6,2) (4,1) (2,3) (3,1) (6,2) (5,2) (5,4) (3,6) (3,4) (4,4)

(D) Write any **one** : **5**

(1) Explain different parts of Tabulation in brief.

(2) 80 members participated in a picnic organized by a college and the average contribution was Rs. 300 as expenditure. There were 60 students and each of them contributed Rs. 325. Teachers contributed little more for the picnic. There was a support staff of 10 males and contributed was not collected from them. 20% of those participated in picnic were females and 2 of them were teachers. Represent the data in a table.

3 (A) Give the answer of following question : **4**

(1) _____ degrees we take equal to the total data in a pie diagram.

(2) Frequency polygon can be drawn with the help of _____

(3) The ogives for more than type and less than type distribution intersect at the _____ point.

(4) With the help of histogram _____ measure central of tendency find.

(B) Write any **one** : **2**

(1) Explain a histogram in brief.

(2) Explain a bar diagram in brief.

(C) Write any **one** : **3**

(1) Explain: Frequency polygon

(2) The following table gives the figures of trade during 2011-2015. The figures of exports and imports are in billion. Present the data by multiple bar diagram.

Year	2011	2012	2013	2014
Export	2.65	2.95	3.75	3.75
Import	1.95	2.50	2.75	2.95

(D) Write any **one** : **5**

(1) Write note on cumulative frequency curve.

(2) 120 students of a college were asked to opt for different work experiences. The details of these options are as under. Represent the data through a pie diagram.

Areas of work experience	Photography	Clay modeling	Kitchen gardening	Doll making	Book binding
Number of students	6	30	48	12	24

4 (A) Give the answer of following question : **4**

(1) If $x = 15 - \frac{1}{2}p$ then it is a function of _____

(2) If $x = (6 + 5p)^2$ then it is a function of _____

(3) If the price of sugar increases from Rs. 4.40 per kilogram to Rs. 5.20 per kg. and its demand decreases from 1200 kg to 800 kg., then elasticity of demand is _____

(4) If the price of Joggery increases from Rs. 2 per kilogram to Rs. 3 per kg. and its supply increases from 2000 kg to 2500 kg., then elasticity of supply is _____

(B) Write any **one** : **2**

(1) Explain demand function.

(2) If the cost function is $C = x^3 + 7x^2 + 5x + 200$, find Marginal cost and Average cost functions.

(C) Write any **one** : **3**

(1) Define elasticity of demand and explain its types.

(2) Supply function of commodity $x = 5 + 2p^2$ find elasticity of supply when $p = 2$ and $p = 3$

(D) Write any **one** : **5**

(1) Obtain relation between Average revenue, Marginal revenue and elasticity of demand.

(2) The demand and supply functions of a commodity are as follows :

$D : x = 2p^2 - 3p - 2$

$S : x = 2p + 5$

Find equilibrium price and equilibrium quantity.

5 (A) Give the answer of following question : **4**

(1) When you enter a text label general alignment is _____

(2) In Microsoft Excel, the symbol we use to make absolute reference is _____

(3) The past icon will not be active unless and until _____

(4) Last column of the sheet in Microsoft Office Excel 2007 is _____.

(B) Write any **one** : **2**

(1) Explain fully connected mesh network topology.

(2) What are the difference between hardware and software?

(C) Write any **one** : **3**

(1) Write require steps to create Column chart(Bar diagram) in MS-Excel

(2) What is network topology? State its name.

(D) Write any **one** : **5**

(1) Explain function units: ALU, CU and CPU.

(2) Explain Star network topology.