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PBL-003-0011012

Seat No. _____

B. Sc. (Sem. I) (CBCS) Examination

November / December - 2018

Statistics - 101

(New Course)

Faculty Code : 003

Subject Code : 0011012

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

Instructions : (1) All questions are compulsory.
(2) Each question carries equal marks.
(3) Students can use their own scientific calculator.

1 (a) Give the answers of following questions : **4**
(1) The data collected from published reports is known _____ data.
(2) Statistics does not study _____.
(3) Define : Primary Data.
(4) Define : Grouped Data.

(b) Write any **one** : **2**
(1) What is data ? State its type.
(2) Define : Population, Sample.

(c) Write any **one** : **3**
(1) Write the difference between Population inquiry and Sample inquiry.
(2) Write limitation of statistics.

(d) Write any **one** : **5**
(1) State the name of the methods of collecting of primary data and explain any one.
(2) Write the characteristics of an ideal questionnaire.

2 (a) Give the answers of following questions. **4**
(1) If classes 10-20, 20-30, 30-40.....are _____ classes.
(2) State Sterg's rule _____.
(3) The class length of a class is 25 and the mid-value is 52.5, find the upper limit of the class.
(4) Find the mid-value of the class 225-249.

(b) Write any **one** : **2**
(1) Define : Class boundary point.
(2) Explain different types of classification.

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

(1) State the uses of tabulation.

(2) Following are the ages (in years) of employees working in a factory :

32	34	48	31	34	27	57	36	49	51
45	29	36	46	46	49	51	47	50	30
35	41	36	47	30	35	48	53	37	47
45	30	50	44	49	43	42	46	28	48
52	36	43	38	39	50	49	34	36	50

Construct a frequency distribution by classifying these data into 7 classes.

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

(1) On the basis of the study of different branches of a co-operative bank of certain city, the following information is obtained. In this bank out of 20 employees working as security persons, 7 males are married and out of 6 females, 4 are married. 12 peons out of 20 male peons are married and 10 female peons are married. Out of 40 clerks, 25 are females and of them 12 are married whereas 7 male clerks married and out of 8 managers, all 3 female managers are unmarried. Express this information in a table.

(2) Explain different parts of tabulation in brief.

3 (a) Give the answers of following questions : **4**

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

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

(3) Which is one dimensional diagram ?

(4) Which value is obtained by the point of intersection of "less than" and "more than" cumulative frequency curves, drawn on the same graph paper ?

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

(1) Draw a histogram of the following frequency distribution :

Class	20-25	25-30	30-40	40-60	60-90
Frequency	8	10	40	32	24

(2) Explain a bar diagram in brief.

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

(1) Explain : Frequency polygon.

(2) The data on monthly expenses of two different families living in a city are given below. Present it through divided bar diagram.

Monthly Expenses (Rs)	Food	Clothing	Education	Fuel	Rent	Other
Family A	810	270	280	180	160	90
Family B	700	200	200	300	400	200

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

(1) Write a note on cumulative frequency curve.

(2) The information regarding the production (in lakh Rs.) and sales (in lakh Rs.) for a factory during five years is given below. Present it in a suitable diagram.

Year	2001	2002	2003	2004	2005
Production (Lakh Rs.)	12	15	13	14	16
Sales (Lakh Rs.)	14	13	14	16	15

4 (a) Give the answers of following questions : **4**

(1) Explain : Cost function.

(2) Explain : Demand function

(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) Find Elasticity of Demand for the following data :

Price	20	50
Demand	20	10

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

(1) If the cost function of an item is $C = \frac{x^2}{20} + 10x + 100$, find marginal cost when $x = 20$ units are produced.

(2) Explain relatively elastic supply $(\in > 1)$ and relatively inelastic supply $(\in < 1)$.

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

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

(2) Supply function of commodity $p = \frac{x + 40}{6}$ find elasticity of supply when $x = 32$.

(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 : $(x + 10)(p + 20) = 300$

S : $x = 2p - 8$

Find equilibrium price and equilibrium quantity.

5 (a) Give the answers of following questions. **4**

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

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

(3) The post 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) What are the differences between hardware and software ?

(2) What is Computer ?

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

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

(2) Write requires steps to create Pie chart in MS-Excel.

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

(1) Explain Star network topology.

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