HDQ-003-0011012 Seat No. _____

B. Sc. (Sem. I) (CBCS) (W.I.F. - 2016) Examination

November / December – 2017

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) Students can use their own Scientific calculator.

1 (a) Give the answer of following questions : **4**

(1) Define : Grouped data.

(2) Define : Primary data

(3) Define : Variable.

(4) Write any two limitations of Statistics.

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

(1) Define meaning of statistics in singular and plural sense.

(2) What is data? State its type.

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

(1) Explain concept of Population inquiry and Sample inquiry.

(2) Write limitation of statistics.

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

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

(2) State the name of the methods of collecting of primary data and explain any one.

2 (a) Give the answer of following questions : **4**

(1) Find the mid-value of the class 225-249.

(2) If the class of frequency distribution are 25 - 29.9, 30 - 34.9, ..., then what is the upper boundary point of the class 25 - 29.9.

(3) The class length of a class is 25 and the mid-value is 52.5, find the upper limit of the class.

(4) The students obtaining the marks less than 15 are 12 and students obtaining marks less than 30 are 31. Find the number of students obtaining marks in the class 15-30.

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

(1) Explain different types of classification.

(2) Price of an item of 25 shops is given below. Prepare frequency distribution with appropriate class interval (class length)

80, 63, 74, 66, 79, 66, 84, 77, 72, 68, 68, 64, 64, 79, 70, 82, 84, 63, 69, 73, 82, 79, 69, 63, 87.

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

(1) State the uses of tabulation.

(2) Information regarding the number of errors per page in a book of 500 pages as under. Find the inclusive frequency distribution from it.

Mid value of a class of number of errors per page	0.5	2.5	4.5	6.5	8.5
Number of pages	380	100	12	6	2

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

(1) Explain different parts of Tabulation in brief.

(2) 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.

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

(1) Which is one dimensional diagram?

(2) How many degrees do we take equal to the total data in a pie diagram?

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

(4) With the help of Histogram which measure central of tendency find?

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

(1) Define: Histogram.

(2) 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

(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 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 answer of following questions : **4**

(1) Explain : Demand function

(2) Explain: Cost function

(3) Find Elasticity of demand for the following data :

Price	20	50
Demand	20	10

(4) Find the demand and supply function :

(i) $x = 7 - 3p$

(ii) $p = 7 + 0.5x$

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

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

(2) If the cost function of an item is $C = 3x^3 + 9x^2 + x + 200$, find marginal cost and average cost.

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

(1) Define elasticity of supply 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 answer of following questions : **4**

(1) A simple table contains data on _____ characteristic.

(2) Microsoft Office Excel is _____.

(3) First cell address of the sheet in Microsoft Office Excel 2007 is_____

(4) By default there are _____ worksheets in a workbook.

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

(1) What is Computer?

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

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

(1) Write required steps to create Pie chart 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.
