(23) Seat No: _____ No. of Printed Pages : 3

SARDAR PATEL UNIVERSITY

OCTOBER : 2016 EXAMINATION, BBA (I.B.) SEMESTER : II (NC)

TUESDAY, 18/10/2016

EVENING SESSON TIME : 2.00 PM. TO 4.00 P.M.

SUBJECT CODE : UM02CBBB06

BUSINESS STATISTICS

TOTAL MARKS : 60

Q-1 (A) Define Statistics and write the scope and limitations of Statistics. [07]

Q-1 (B) If median is 25 and $\sum fi = 100$ for the following data then find missing frequencies and then obtain mean and mode. [08]

Class	0-10	10-20	20-30	30-40	40-50
f	14	?	26	?	15

OR

Q-1 (A) Write the types of data and write the difference between primary data and secondary data. [07]

Q-1 (B) Find Range, Quartile deviation and standard derivation for the following data. [08]

Class	80-90	90-100	100-110	110-120	120-130	130-140	140-150	150-160	160-170
f	6	`8	78	80	100	70	30	10	6

Q-2 (A) Write the meaning and phases of operation research. [04]

Q-2 (B) Solve the following LPP by Graphical Method. [08]

Minimize $Z = 10x + 5y$

s.t.

$3x + 5y \leq 150$

$5x + 4y \geq 100$

$x \leq 30, y \leq 15$

$x \geq 0, y \geq 0$

Q-2 (C) Write the assumptions of Linear Programming. [03]

OR

Q-2 (A) Write the applications and limitations of LPP. [04]

Q-2 (B) Solve the following LPP by Graphical Method [08]

Minimize $Z = 13x + 15y$

s.t.

$2x + yy \leq 110$

$x + 3y \leq 50$

$x + y \leq 25, x \geq 0, y \geq 0$

(P.T.O.)

Q-2 (C) Write the characteristics of operation research. [03]

Q-3 (A) Solve the following transportation problem by (1) NWCM (2) VAM [10]

	P	Q	R	Demand
A	6	8	4	14
B	4	9	8	12
C	1	2	6	5
Demand	6	10	15	

Q-3 (B) Solve the following Assignment Problem. [05]

	I	II	III	IV
A	42	40	41	67
B	57	42	63	58
C	49	52	48	61
D	41	45	60	55

OR

Q-3 (A) Solve the following transportain by using (1) NWCM (2) Matrix Minima Method [10]

	A	B	C	D	Supply
I	21	16	25	13	11
II	17	18	14	23	13
III	32	27	18	41	19
Demand	6	10	12	15	

Q-3 (B) Solve the following assignment problem to maximize profit. [05]

	D_1	D_2	D_3	D_4
P	3	4	11	9
Q	5	7	8	9
R	5	6	6	7
S	4	6	8	8

Q-4 (A) Write the meaning of time series and discuss components of time series. [07]

Q-4 (B) Find trend using three yearly and five yearly moving average method for the following data. [08]

Year	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Profit	112	104	108	121	116	111	132	125	129	139	131

OR

Q-4 (A) Compute seasonal indices for the following data. [07]

Week	January	February	March	April	May
I	161	170	164	153	181
II	165	169	147	158	190
III	162	169	153	145	190
IV	165	170	155	150	180

Q-4 (B) From the following Time series find trend using four yearly moving average. [04]

Year	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Sale	406	520	936	573	488	596	1016	638	563	677	1089	718

Q-4 (C) Write the meaning and uses of time series. [04]

All the Best

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