

Faculty of Sciences
B.Sc (Statistics) III-Year, CBCS-VI Semester
Backlog Examinations, Dec/Jan 2019-20

PAPER: DESIGN OF EXPERIMENTS, VITAL STATISTICS, OFFICIAL STATISTICS
AND BUSINESS FORECASTING

Time: 3 hours

Max Marks: 60

Section-A

I. Answer any Three of the following questions. (3x5=15 Marks)

1. What are the different assumptions involved in ANOVA?
2. Define i) Experiment ii) Treatment iii) Experimental unit with an example.
3. Write the advantages of L.S.D
4. Explain the functions of CSO
5. Define vital statistics and write its uses.
6. Define Abridged life tables.

Section-B

II. Answer all of the following questions. (3x15=45 Marks)

7. (a) Describe the complete layout of R.B.D
(OR)
(b) Explain the principles of design of experiments.
8. (a) Derive the efficiency of L.S.D over R.B.D and C.R.D.
(OR)
(b) Explain the utility and difficulties in the estimation of national income.
9. (a) Explain the measures of mortality.
(OR)
(b) Describe the construction of life tables.



Faculty of Science**B.Sc (Statistics) III-Year, CBCS-VI Semester Backlog Examinations, Dec/Jan 2019-20****PAPER: OPERATIONS RESEARCH**

Time: 3 Hours

Max Marks: 60

Section-A

I. Answer any Three of the following questions (3x5=15 Marks)

1. Explain meaning and scope of OR.
2. Explain slack and surplus variables
3. Define duality with one example
4. Explain Matrix minimum method
5. Define degeneracy in transportation problem.
6. Explain the unbalanced assignment problem.

Section-B

II. Answer the following questions (3x15=45 Marks)

7. (a) Explain the simple algorithm in solving the linear programming problem.

(OR)

(b) Define an artificial variable with an example and also explain Big - M Method in solving LPP.

8. (a) Show that the dual of the dual is primal with an example.

(OR)

(b) Explain the MODI method in finding the optimum solution for a given transportation problem.

9. (a) Explain the assignment problem is a special case of transportation problem and linear programming problem.

(OR)

(b) Find the optimal sequence, idle time, total elapsed time to the following sequencing problem.

Jobs	A	B	C	D	E	F
Machine (M ₁)	7	3	5	8	2	6
Machine (M ₂)	8	2	7	6	9	4

