

U.G. 5th Semester Examination - 2021**STATISTICS****(HONOURS)****Discipline Specific Elective (DSE)****Course Code : STATH-DSE-2****[PRACTICAL]****(Operations Research-Lab)**

Full Marks : 25(20+5)

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give answers in their own words as far as practicable.**Notations and symbols have their usual meaning.*

1. A team of five horses and five riders has entered a jumping show contest. The number of penalty points to be expected when each rider rides any horse is given in the following table. How should the horses be allotted to riders so as to minimize the expected loss of the team?

		Rider				
		R_1	R_2	R_3	R_4	R_5
Horses	H_1	5	3	4	7	1
	H_2	2	3	7	6	5
	H_3	4	1	5	2	4
	H_4	6	8	1	2	3
	H_5	4	2	5	7	1

5

2. A company purchases 10,000 units per year for use in the production shop. The unit cost is Rs. 10 per year, holding cost is Rs. 0.80 per month and cost of making a purchase is Rs. 200. Determine the following if no shortages are allowed:

- (i) The optimum order quantity.
 (ii) The number of orders per year.
 (iii) The time between orders.

5

3. Practical Note book

5

4. Viva-voce

5

[Internal Assessment: 5]
