

First Year MHA Degree Supplementary Examinations March 2026
Operations Research
(Common for 2013 and 2016 Scheme)

Time: 3 Hours

Max Marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary • Simple calculator shall only be permitted

Essays:**(2x20=40)**

1. The following data gives activities and duration of each activity of a project.

Activity	1-2	1-3	2-3	2-4	3-4	4-5
Duration	20	25	10	12	6	10

- a) Draw the network for this project
 b) Find the critical path and duration of the project
 c) Find the free float and total float for each activity

2. What is Assignment Problem. Solve the following Assignment Problems.

	Job 1	Job 2	Job 3	Job 4
Worker 1	16	10	14	11
Worker 2	14	11	15	15
Worker 3	15	15	13	12
Worker 4	0	0	0	0

Short Essays:**(2x10=20)**

3. Explain the scope and limitations of OR in healthcare
 4. What is Simulation. Explain Monte-carlo simulation technique

Short notes:**(8x5=40)**

5. Describe the phases of an OR
 6. Differentiate between Feasible solution and optimal solution
 7. What are the limitations of the Simplex Method
 8. Explain ABC analysis
 9. Explain decision making under Risk
 10. Explain Queuing models
 11. Pure Strategy and Mixed Strategy
 12. Discuss uses of simulation in health care
