

M.C.A.- I (Two Year Programme) (CBCS Pattern) Sem-I
PSMCAT104.1 - Paper-IV - Elective-I : Operational Techniques

P. Pages : 1

Time : Three Hours



GUG/W/22/13638

Max. Marks : 80

- Notes :
1. All questions are compulsory and carry equal marks.
 2. Draw neat and labelled diagrams wherever necessary.
 3. Avoid vague answers and write answers relevant and specific to questions only.

Either:

1. a) What is Operational Research? Explain Operational Techniques in detail. **8**
- b) Discuss the Different Phases of Operation Research Study in detail. **8**

OR

- c) List and Explain Scope and Limitations of Operational Research. **8**
- d) Explain Mathematical Modelling of Real Life problem in detail. **8**

Either:

2. a) What is Linear programming? How the Linear Programming gets work? **8**
- b) What is Allocation models? Explain Requirement Applications in detail. **8**

OR

- c) Discuss Formulation in detail. **8**
- d) List and Explain solution by Graphical methods. **8**

Either:

3. a) Explain North West corner Cell Method in detail. **8**
- b) Discuss in brief about Least Cost Cell method. **8**

OR

- c) Explain Vogel's approximation method in detail. **8**
- d) What is Assignment Problem? Explain Hungarian method in detail. **8**

Either:

4. a) What is Network Analysis? Explain PERT method in detail. **8**
- b) What is Queueing Theory? Explain Poisson Queueing System in detail. **8**

OR

- c) Discuss in brief Cost Models in Queueing. **8**
- d) Explain Element of a Queueing System in detail. **8**

5. Attempt all the questions.

- a) Explain in brief about the Basics of Operational Research. **4**
- b) Give the difference between Linear programming and Allocation Models. **4**
- c) List and Explain Transportation problems. **4**
- d) Explain Non Poisson Queuing System in detail. **4**
