BBC-90

M.A./M.Sc. IVth Semester (Reg / Pvt. / ATKT)

Examination, 2020

Mathematics

Paper - VIII

Operations Research - II

[Maximum Marks : Reg.= 85 Pvt.= 100

Note :- All questions from each section carry equal marks. All questions are compulsory and answer limit are approximately 250 words. Start the answer of each section from new page. Maximum limit of pages of answer booklet are approximately 16 pages. Answer should be written by the student in his/her own handwriting mandatory. The first page of answersheet should be download by the student from university website www.bubhopal.ac.in is mandatory.

1. Write all steps of MODI method.

2. Write steps for Hungarian Assignment method.

3. A small project consists of seven activities for which the relevant data are given below :

Activity	Preceding Activities	Activity Duration (Days)
A	—	4
B	—	7
C	—	6
D	A, B	5
E	A, B	7
F	C, D, E	6
G	C, D, E	5

   (i) Draw the network and find the project completion time.

   (ii) Calculate total float for each of the activities and highlight the critical path.

   (iii) Draw the time scaled diagram.

4. Write the advantages and limitation of simulation.

5. Obtain the optimal strategies for both-person and the value of the game for zero-sum two - person game whose. Pay off matrix is as follows :

$$\begin{bmatrix} 1 & -3 \\ 3 & 5 \\ -1 & 6 \\ 4 & 1 \\ 2 & 2 \\ -5 & 0 \end{bmatrix}$$

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