

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA IN MECHANICAL ENGINEERING
SEMESTER- VI

Subject Name: **Operations Management Practice (Elective Practice -II)**

Subject Code: **2361926**

NOTE:- Following are the minimum experiences required, but the college can do more experiences if possible.

LABORATORY EXPERIENCES :			
Experience Type	Experience Number	Description of Laboratory Experience	Hrs.
Preparatory	01	1. Appreciate main objectives of learning this subject: a. Develop the ability to analyse the objectives and constraints for given situation / task. b. Develop the ability to use available resources optimally. c. Appreciate the need of higher mental ability and skill level to work with complex systems. 2. Recall and strengthen know-how for various mathematical and statistical fundamentals.	2
Problem solving (Each student should be given different data / values for same kind of problem/s)	02	Maximization problem solution using simplex method. (one each for requirement, approximation and equality for 2 variables & max. 3 constraints)	4
	03	Minimization and maximization problem solving using graphical method (2 problems).	4
	04	Transportation problem solving (for max. 4 sources and 4 destinations).	2
	05	Transshipment problem solving – simple.	2
	06	Assignment problem solving (for max. 4 activities).	2
	07	Replacement problem solving	2
	08	Sequencing problem solving (for max. 4 jobs and 3 machines).	2
	09	Inventory model calculations & problem solving(For two inventory models).	4

Download, seminar presentation, (Copy downloaded content and seminar of whole batch In one /one set of CD/DVD)	10	a) Prepare and present seminar individually in your batch. (Seminar topic has to be given by teacher). b) Download individually visual aids, movies, content and other related content for the given case/situation. (Case/situation has to be given by teacher)Present and discuss the same in your batch. c) Each student should present one case which focus on improvement of productivity and utilization of resources.	4
Assignments (Home Assignment)	11	Solve the given tutorials and assignments. One assignment must be on preparation of chart / diagram / poster / graph / drawing / etc on half imperial size of drawing sheet.(For subject OM).	-
		Total	28

Notes:

A. FOR STUDENTS.

- a. It is advised that student download this copy of syllabus and plan to achieve the objectives of learning this subject.
- b. Attach copy of syllabus as part of term work.

B. FOR STUDENTS AND SUBJECT TEACHER/S.

- a. Term work report content of each experience should also include following.
 - i. Experience description / data and objectives.
 - ii. Skill/s which is / are expected to be developed in student after completion of experience.
 - iii. Steps / procedure to execute experience.
- b. Term work report of student of regular mode should exclude Distance Learning manual, photocopies, printed content(except visual aids), etc. Focus should be on developing the termwork as original efforts of students.
- c. Term work content of industrial visit report should also include following.
 - i. Brief details of industry visited.
 - ii. Type ,location, products, rough layout, human resource, etc of industry.
 - iii. Details, description and broad specifications of machineries/ processes observed.
 - iv. Safety norms and precautions observed.
 - v. Student's own observation on Industrial environment, productivity concepts, quality consciousness and quality standards, cost effectiveness ,culture and attitude.
 - vi. Any other details / observations asked by accompanying faculty.

- d. Term work should also include experience logbook duly certified by subject teachers.
- e. Term work is to be defended (along with term work) with practical examination by external and internal examiners .Practical examination will include followings:
 - i. Viva
 - ii. Solving given problems.

Reference Books:

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| 1. Production & operations management | Chase and Aquilano (Lrwin publication) |
| 2. Operations management: Problems and model | Elwood S. Buffa (John Willy & sons) |
| 3. Operations research | S.D.Sharma |
| 4. Operations research | N.R. Dave, Manglani (C. Jamnadas & co.) |
| 5. Production and operations management | Everette, Adam Jr., Ronald J. Ebert (PHI publi.) |
| 6. Operations research | Taha H.A. (PHI publication) |

Additional Reference Books:

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| 1. Principles of operation research | Harvey M.Wagner |
| 2. Operations research | M.M.Metwally, H.U.Tama schke, G.R.West (J.K.Publishers) |
| 3. Productivity Engineering & Management | Sumenath (TMGH publication) |
| 4. Purchasing and inventory control | K.S.menon (Wheeler publisher) |
| 5. Production and inventory control | George W.Plosse (PHI publication) |