



# AJEENKYA

## D Y PATIL UNIVERSITY

### End Term Examinations (December 2018)

**School :** School of Engineering      **Program:** M. Tech. (Automotive Product Engineering)

**Course:** Automotive Project Management

**Course Code:** APE603

**Semester:** III

**Max Marks:** 50

**Duration (mins) :** 120 min

- Note : 1. Figures to the right indicates full marks.  
2. Solve any Five of the following

Q 1. Maximize  $Z=6x+11y$ ,

Subjected to the constraints,  $2x+y \leq 104$ ,

$$x+2y \leq 76,$$

$$x,y \geq 0, \text{ with simplex method.}$$

(10 M)

Q 2. Explain the Concept of duality and solution of dual problems.

(10 M)

Q 3. Write a brief note on Optimality test of transportation problems by MODI method.

(10 M)

Q 4. a) A project schedule has the following characteristics.

| Activity | Time | Activity | Time |
|----------|------|----------|------|
| (1-2)    | 2    | (4-8)    | 8    |
| (1-4)    | 2    | (5-6)    | 4    |
| (1-7)    | 1    | (6-9)    | 3    |
| (2-3)    | 4    | (7-8)    | 3    |
| (3-6)    | 1    | (8-9)    | 5    |
| (4-5)    | 5    |          |      |

i) Construct the PERT network and find critical path and time duration of the project.

ii) Total float for each activity

(10 M)

Q 5. What are the different strategies for “two person zero sum game” ? Explain in brief.

(10 M)

Q.6. Explain in detail Monte Carlo method.

(10 M)

Q.7. Write a short note on,

a)JIT

b) Kanban

(10 M)