

DEPARTMENT : MECHANICAL

SEMESTER : 7

SUBJECT NAME: OPERATION RESEARCH

SUBJECT CODE: 2171901

FACULTY NAME: Assist. Prof. Kedar H Badheka

ASSIGNMENT: 11

UNIT: 6 Exercise on Replacement theory

1. A firm is considering replacement of a machine whose cost price is Rs.12200& the scrap value Rs.200.The running costs are found from experience to be as follows. When should the machine be replaced?

YEAR	1	2	3	4	5	6	7	8
RUNING	200	600	700	1000	1200	1800	2500	4000
COST								

2. A Machine cost Rs. 500. Operation and Maintenance cost are Zero for the First Year and Increase by Rs. 100 Every Year. If Money is Worth 5% every Year, Determine the Best age at which the Machine Should be Replaced. The Resale Value of the Machine is Negligibly Small. What is the weighted average cost of owning and operating the Machine?

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