

CLASS 14

Replacement Problem – Introduction:

- In Industries, all equipments are put to continuous use which• reduces the efficiency of the equipment. The study of replacement is concerned with situations that arise when some items such as machines, electric-light bulbs, etc., need replacement due to their deteriorating efficiency, failure or breakdown.

- The deteriorating efficiency or complete breakdown may be either gradual or all of a sudden. In all such situations, there is a need to formulate a most economic replacement policy for replacing faulty units or to take some remedial special action to restore the efficiency of deteriorating units.

- A replacement is also needed for the equipment if the cost incurred in operating and maintaining the equipment exceeds the benefit derived out of it.

- The objective of the Replacement problem is therefore to determine the optimal time at which the equipment is to be replaced with new one.