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Assignment no. 3

Q.1) Draw an Explain product life cycle.

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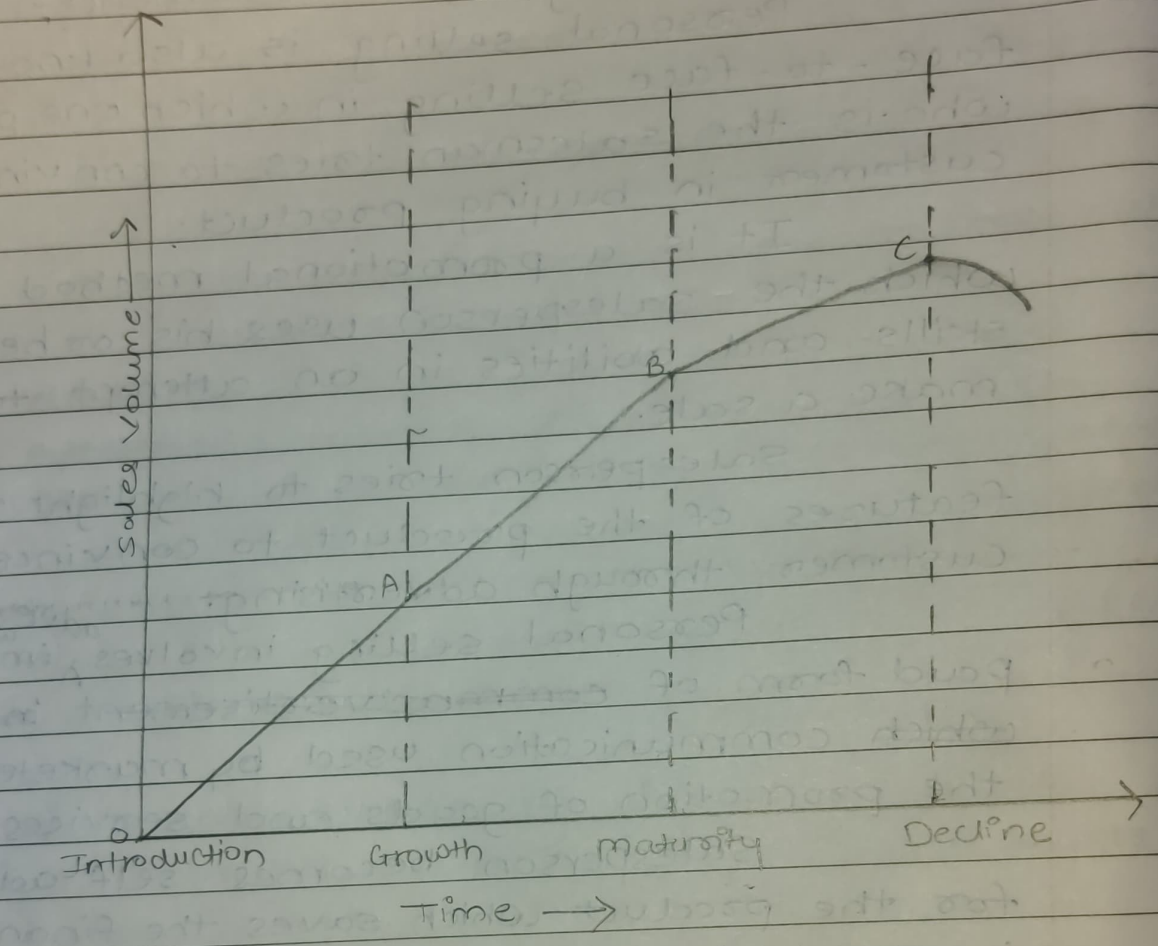

- Product Life Cycle (PLC):-
  A manufacturer should know that products have life cycles.
- This knowledge is of utmost importance for guiding marketing decisions in product planning.
- The product life cycle (PLC) has four stages:

a) Introduction. b) Growth.
c) Maturity. d) Decline.

a) Introduction:- The product is brought into market; sales are slow as demand is developed and production is improved technically.

b) Growth:- The product catches on; sales rises rapidly and the total market expands.

c) Maturity:- Growth in sales volume levels off; competitors enter the market; many are of replacement type.

d) Decline:- Sales fall off as new products enter the market, consumer's tastes change.

~~Q.2) Which factors are effecting in product design process?~~

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Q.4 b) Which are the responsibility of product design and development process?

→ 1) To translate design into working drawings, specifications in a way satisfactory to production department.

2) To translate company's policy in relation to design of product.

3) To enhance company's reputation by minimising wastage of time in assembling and reducing the cost.

4) To lay down and specify standard of ~~pro~~ product quality.

5) To prepare estimate of purchase, carry out development and research and keep and store files, records of all drawings.

6) To supervise work done and maintain discipline in department and to train design and drafting people.

Q5) What are the requirements of good design of product?

→ A good product design must fulfil following essential requirements :-

a) The product should satisfy customers by fulfilling their need and expectations :-

(i) It should function properly.
(ii) It should be of proper quality.
(iii) Easy to use.
(iv) Easy to repair and service.
(v) Should be able to withstand rough handling.
(vi) Good aesthetic view.
(vii) Should have good utilisation.

B) The product when manufactured and sold should give adequate profit :-

(i) It should be able to manufacture at ~~responsible~~ reasonable price so that it can compete other products in the market.
(ii) A good design has minimum number of parts.
(iii) It should adopt latest technology so that manufacturing requires minimum cost per unit of production.

Q.7) Explain the procedure of product development?

→ After the design of product, product development phase is started. Product development is done in following steps:-

a) Develop the method for production using simplification, standardisation, and specialisation technique.

b) Finalise the requirements of equipments needed for manufacture.

c) Finalise specifications of the material required to be purchased.

d) Job requirement of workers and their training.

e) System for exercising control is evolved.

f) Prototype is prepared by design department, and method for product developed and is modified if necessary on basis of experience.

g) Few products are manufactured and their performance is observed. If modification need arise in design of product and accordingly is modified.

h) Green signal is then given for starting the product in full swing.

Q.6) Explain the process of standardisation & simplification.

→ * standardization:-

- It is the setting up of standards for quantity, quality, raw material, sizes, performance, etc. of any product.
- It is done after considering various scientific procedures and is helpful for

checking the quality performance and value of the product.

- It is the best method for achieving interchangability, manufacture of mass-production and it is a greatest factor in the growth of industry.
- It promotes the manufacture of more regular, reliable and improved product at low cost.
- Advantages:-

a) Better quality of products.
b) Use of automatic machines is easily possible.
c) It helps in reduction of stock, investment and storage space.
d) Better customer's satisfaction is possible.

* simplification:-

- The concept of simplification is closely related to standardization.
- simplification means making improvement in methods by eliminating unnecessary parts of the job by combining and rearranging other elements of job and making them easier to perform.
- It reduces range of products, their types, sizes and also reduces their complexity of manufacturing procedure.
- Due to lack of simplification, some people do not like to purchase foreign products such as automobiles, watch ~~and such~~ because their spare parts are not easily available

and it is difficult to repair.

- Advantages:-

a) Less supervision is required.
b) Less chance of errors.
c) Reduces wastage of labours and materials.
d) Less storage is required.
e) Better quality of products is available.