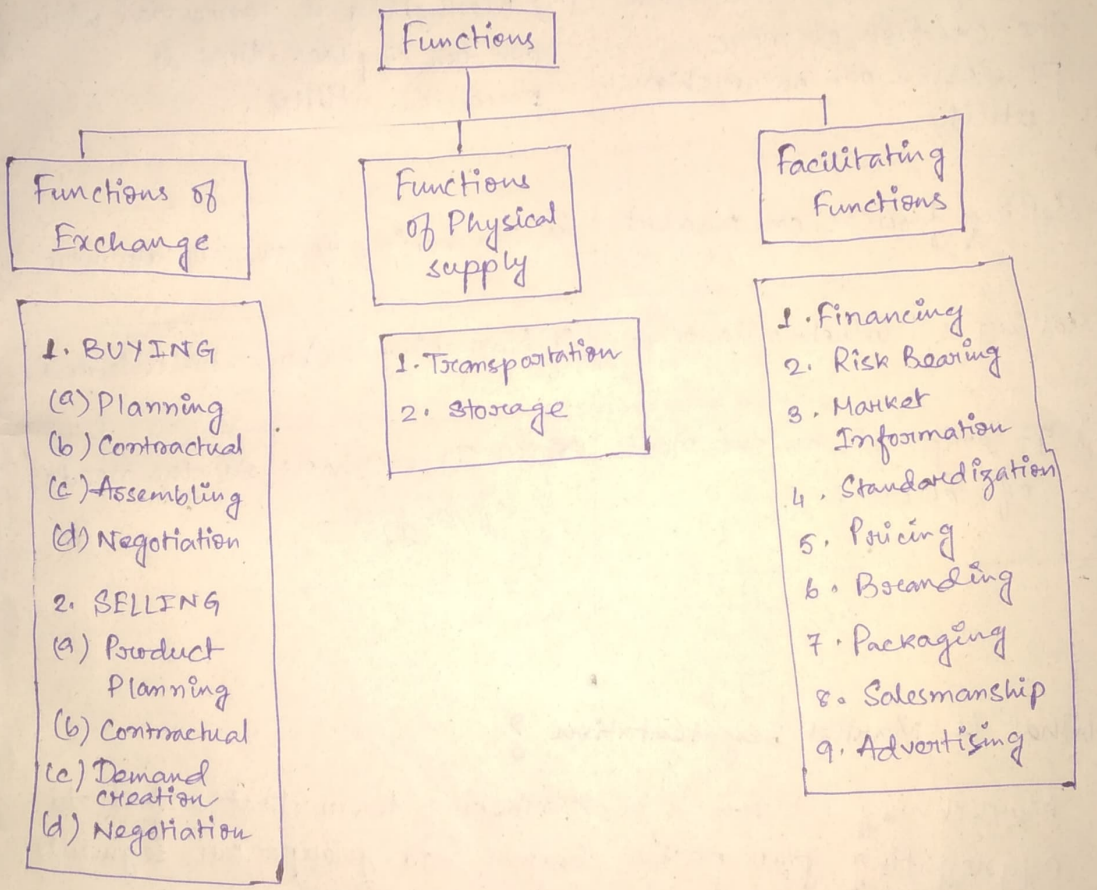
① (a) Define Marketing ⊛

⇒ Marketing refers to activities a company undertakes to promote the buying or selling of a product or service. Marketing includes advertising, selling & delivering products to consumers or other businesses. Some marketing is done by affiliates, on behalf of a company.) ✗

(b) What are the ⊛ main functions of marketing?.

⇒ The main three functions of marketing includes —
(i) Functions of exchange, (ii) Functions of physical supply,
(iii) Facilitating Functions



*(a) Define Marketing.

Ans According to American Marketing Association, Marketing is the process of planning & executing the conception, pricing, promotion & distribution of ideas, goods, service or create exchanges that satisfy individual & organizational goals.

(2) (a) How does marketing differ from selling ?

Ans

SELLING	MARKETING
(1) Selling is more the exchange of goods for money between the seller & the buyer.	(1) Marketing is more comprehensive term. It includes not only selling but also all other activities which help the movement of goods from the center of production to the center of consumption.
(2) Selling comes at the end of manufacturing cycle.	(2) Marketing comes at the begining of manufacturing cycle.
(3) Selling is concerned with the creation of more possession or ownership utility.	(3) Marketing is concerned with creation of place, time & possession utility.
(4) Selling focuses on product.	(4) Marketing focuses on customers.
(5) Selling is Product-oriented.	(5) Marketing is Consumer-oriented.
(6) It emphasis on the needs of sellers.	(6) It emphasis on the needs of buyers.

(b) What is Market Segmentation ?

Ans Market Segmentation is a marketing term that refers to aggregating prospective buyers into groups or segments with common needs & who respond similarly to a marketing action. Market segmentation enables companies to target different categories of consumers who perceive the full value of certain products & services differently from one another.

3. The following table gives the number of missing rivets (defects) noted at final inspection of the 25 bus bodies:

21, 20, 19, 22, 45, 21, 22, 15, 18, 27, 15, 12, 38, 12, 18, 30, 24, 19, 13, 10, 25, 29, 31, 18, 22. Draw the control chart.

Ans

$$\text{control limit, } CL = \bar{c} = \frac{\text{no. of missing rivets}}{\text{no. of bus}}$$

$$= \frac{546}{25} = 21.84.$$

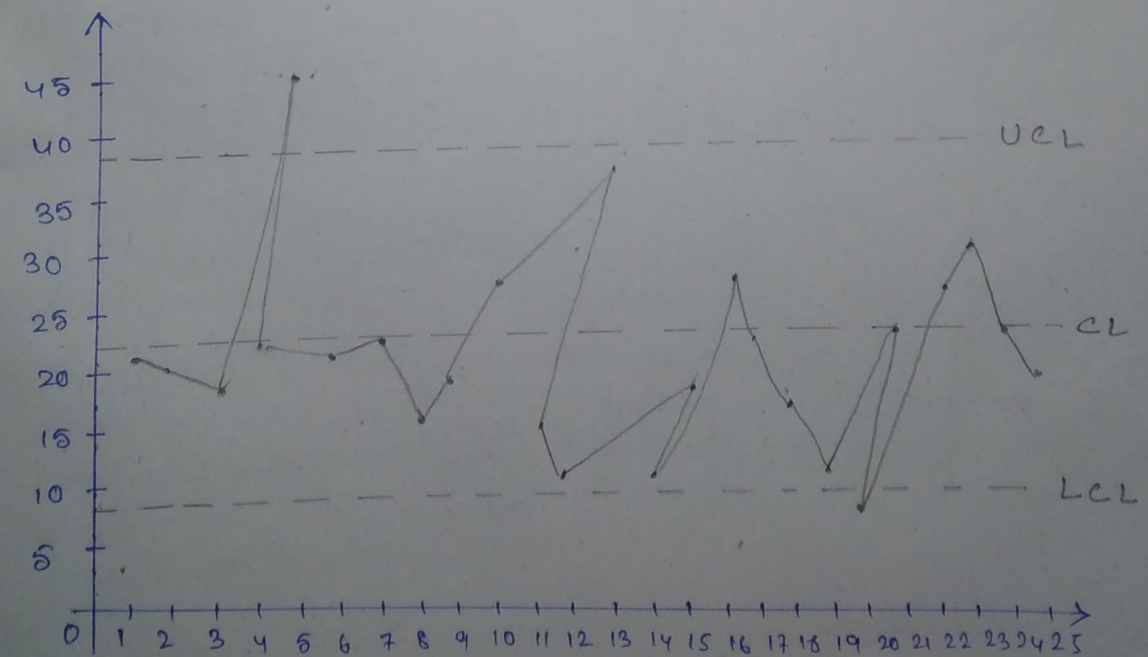
$$UCL = \bar{c} + 3\sqrt{\bar{c}} = 21.84 + 14.02 = 35.86.$$

$$LCL = \bar{c} - 3\sqrt{\bar{c}} = 21.84 - 14.02 = 7.82.$$

The control chart is

No. of bus	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
No. of missing rivets	21	20	19	22	45	21	22	15	18	27	15	12	38	12	18	30	24	19	13

no. of bus	20	21	22	23	24	25
No. of missing rivets	10	25	29	31	18	22



(4) (a) What is Work Measurement ?

⇒ Work Measurement is a technique to establish the time required for a qualified workers to carry out a specified job at a defined level of performance.

(b) Why is it important for the organization ?

Ans It's importance for the organization is as follows —

(i) To compare the efficiency of alternate methods. When two or more methods are available for doing the same job, the time for each method is found out by work measurement.

(ii) Standard time is used as a basis for wage incentive schemes.

(iii) It helps for the estimation of cost. Knowing the time standards, it is possible to work out the cost of the product.

(iv) It helps to plan the workload of man & machine.

(v) It helps in better production control.

(vi) It helps to control the cost production.

(vii) It helps to fix the delivary date to the customer.

(viii) It can help to determine the requirement of men & machine.

5. An 8 hours work measurement study in a plant reveals the following: Units produced = 320 nos. Idle time = 15%, performance ratings = 120%, Allowances = 12% of normal time. Determine the standard time per unit produced

Solution

Idle time = 15% , performance rating = 120%

∴ Working time = (100 − 15)% = 85%

∴ Observed time = $\left(8 \times 60 \times \frac{85}{100}\right)$ min = 408 min

No. of units produced = 320

allowances = 12% of normal time.

Now, Normal time = [(observed time × performance rating)/100]

$= \left(\frac{408 \times 120}{100}\right)$ min = 489.6 min.

∴ Normal time = 489.6 min

Normal time / unit = $\frac{489.6}{320}$ = 1.53 min.

∴ allowence = 12% of normal time

$= \left(\frac{12}{100} \times 1.53\right)$ = 0.1836 min

Now,

Standard time = Normal time + different allowences

Standard time = (1.53 + 0.1836) min = 1.7136 min

Standard time ≈ 1.714 min (Ans)

6. (a) What is Performance rating ?

Ans The Society of Advancement of Management (SAM) national committe defines the Performance rating as, "the process during which the time study engineer compares the performance of the operator under observation with the observer's own concept of proper (normal) performance. It can also be considered as the efficiency of the worker.

The performance rating or efficiency

$$= \frac{\text{Observed performance}}{\text{Normal performance}} \times 100$$

(b) Why is it required ?

Ans The time taken for a job varies from person to person attributed to various ~~reas~~ reasons such as environment factors & human factors. Sometimes, we come across some complaints such as the worker is intentionally doing delay or the observer's judgement is prejudiced. To overcome such dispales, the normal rating is compared with performance rating to ~~standardise~~ standardise the time & hence fix up the target of an element or job.

8. Discuss the elements of TQM concepts.

Ans According to Mike Hick (2005), the core elements in Total Quality Management (TQM) are:

(•) continuous process improvement
(•) customer focus
(•) defect prevention
(•) universal responsibility

Continuous improvement is a top to down process. It is initiated & directed from the top, but implemented from the button. The selection of improvement projects is specific & focused. The problem areas must be identified, prioritised, critical processes selected for improvement, & improvement goals set for the project team. This is a button up process, which requires the involvement & ~~commited~~ commitment of the staff.