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TOGETHER WE CAN ACHIEVE MORE

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ENGINEERING MANAGEMENT

FINAL TERM

THEORY HAND NOTE

BY

NAFIS SAHRIAR

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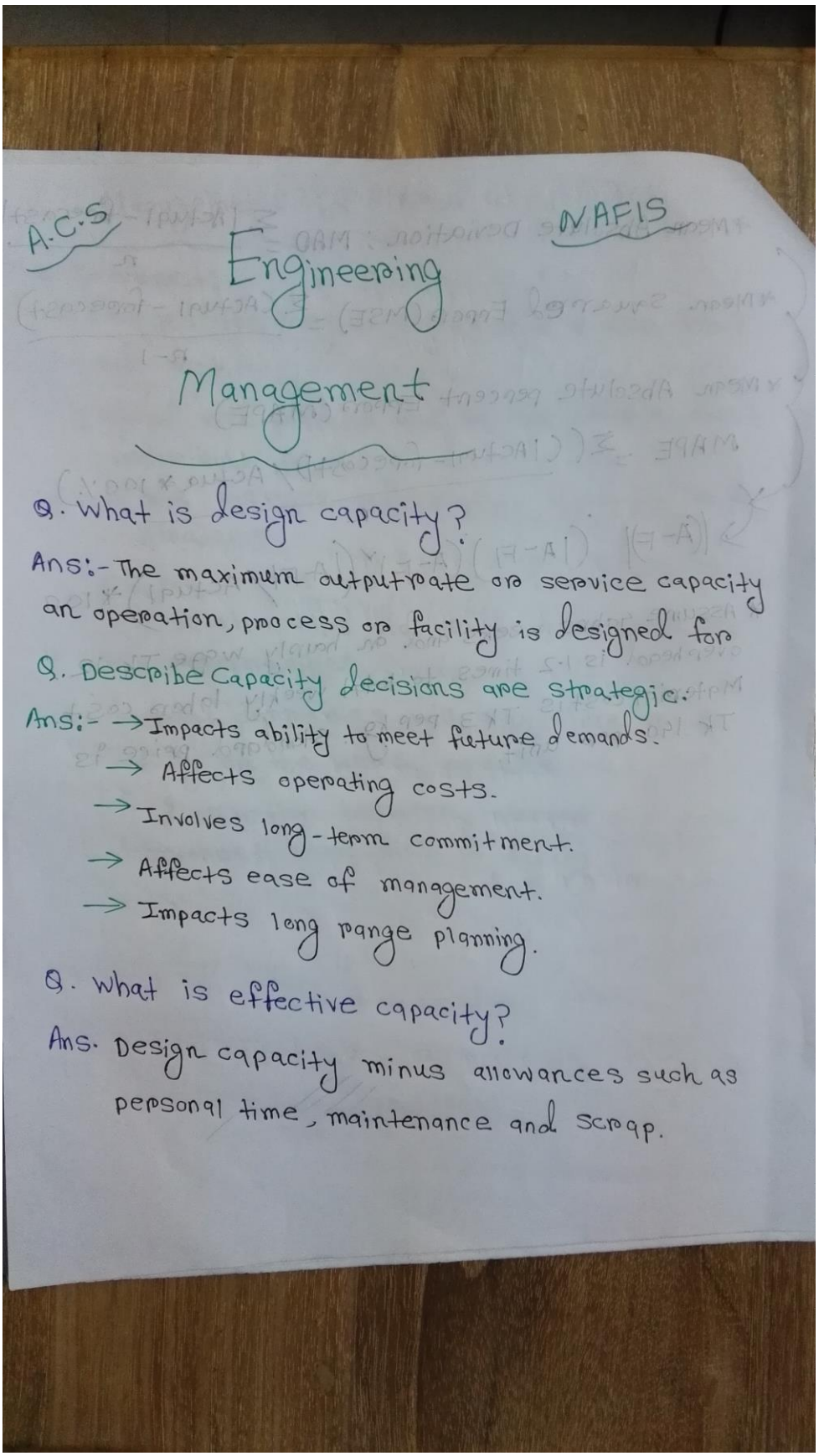

A.C.S

NAFIS

Engineering Management

Q. What is design capacity?

Ans:- The maximum outputrate or service capacity an operation, process or facility is designed for

Q. Describe Capacity decisions are strategic.

Ans:- → Impacts ability to meet future demands.
→ Affects operating costs.
→ Involves long-term commitment.
→ Affects ease of management.
→ Impacts long range planning.

Q. What is effective capacity?

Ans. Design capacity minus allowances such as personal time, maintenance and scrap.

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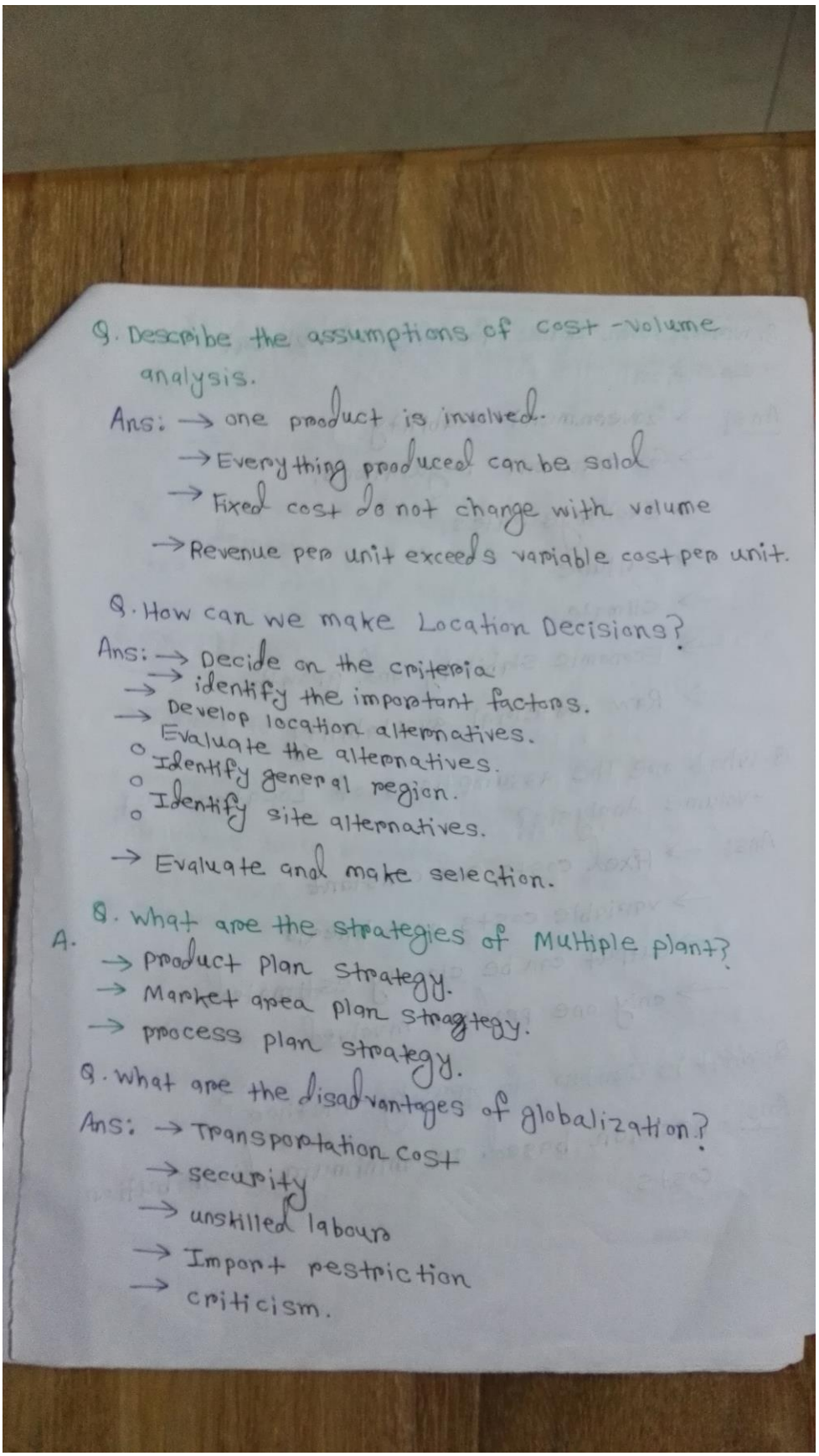

Q. Describe the assumptions of cost-volume analysis.

Ans: → one product is involved.
→ Everything produced can be sold
→ Fixed cost do not change with volume
→ Revenue per unit exceeds variable cost per unit.

Q. How can we make Location Decisions?

Ans: → Decide on the criteria
→ identify the important factors.
→ Develop location alternatives.
- Evaluate the alternatives.
- Identify general region.
- Identify site alternatives.

→ Evaluate and make selection.

Q. What are the strategies of Multiple plant?

A.
→ Product plan strategy.
→ Market area plan strategy.
→ process plan strategy.

Q. What are the disadvantages of globalization?

Ans: → Transportation cost
→ security
→ unskilled labours
→ Import restriction
→ criticism.

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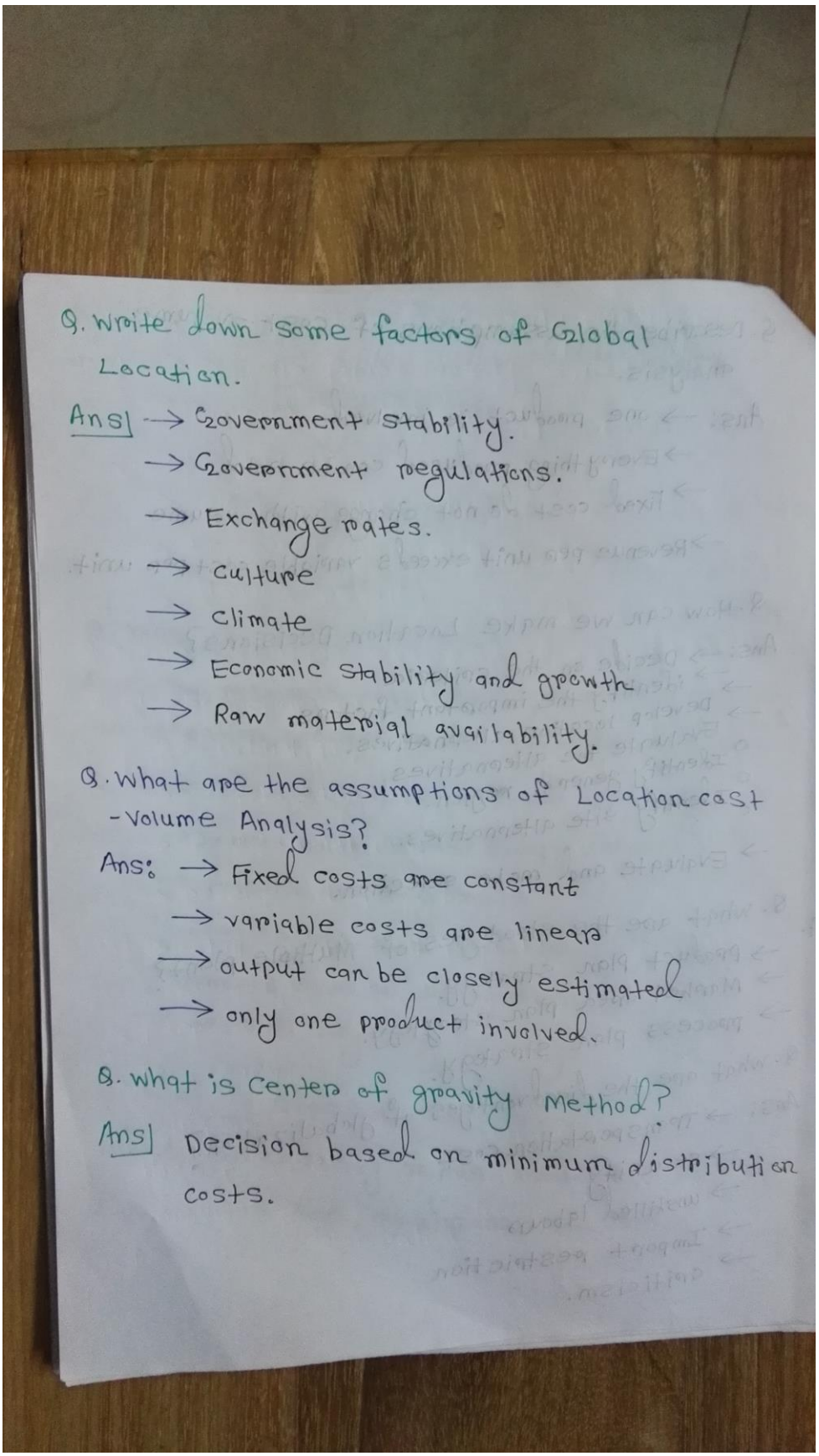

Q. Write down some factors of Global Location.

Ans] → Government stability.
→ Government regulations.
→ Exchange rates.
→ culture
→ climate
→ Economic stability and growth
→ Raw material availability.

Q. What are the assumptions of Location cost -volume Analysis?

Ans: → Fixed costs are constant
→ variable costs are linear
→ output can be closely estimated
→ only one product involved.

Q. What is Center of gravity Method?

Ans] Decision based on minimum distribution costs.

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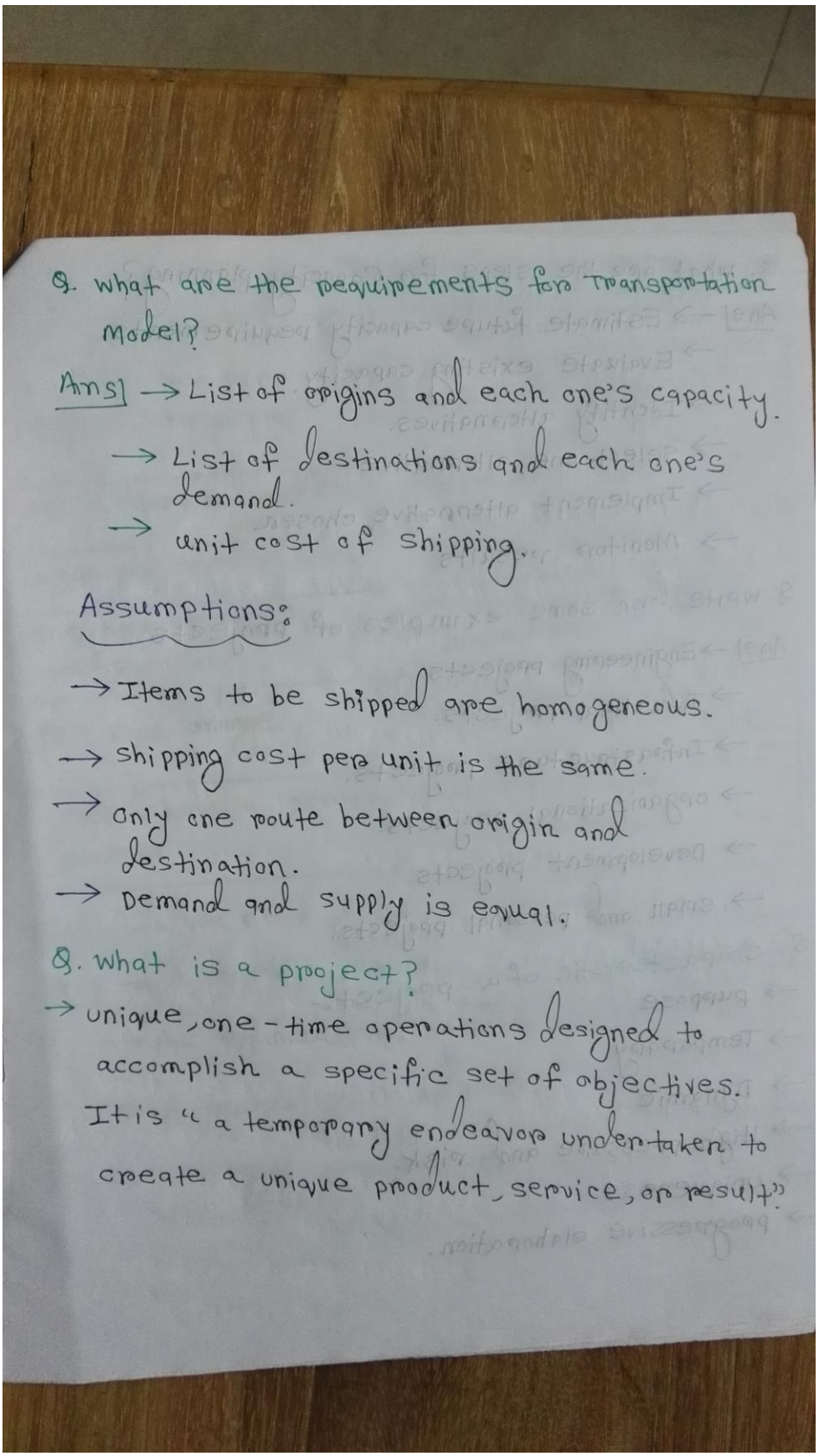

Q. what are the requirements for Transportation model?

Ans] → List of origins and each one's capacity.

→ List of destinations and each one's demand.

→ unit cost of shipping.

Assumptions:

→ Items to be shipped are homogeneous.

→ shipping cost per unit is the same.

→ only one route between origin and destination.

→ Demand and supply is equal.

Q. what is a project?

→ unique, one-time operations designed to accomplish a specific set of objectives. It is "a temporary endeavor undertaken to create a unique product, service, or result"

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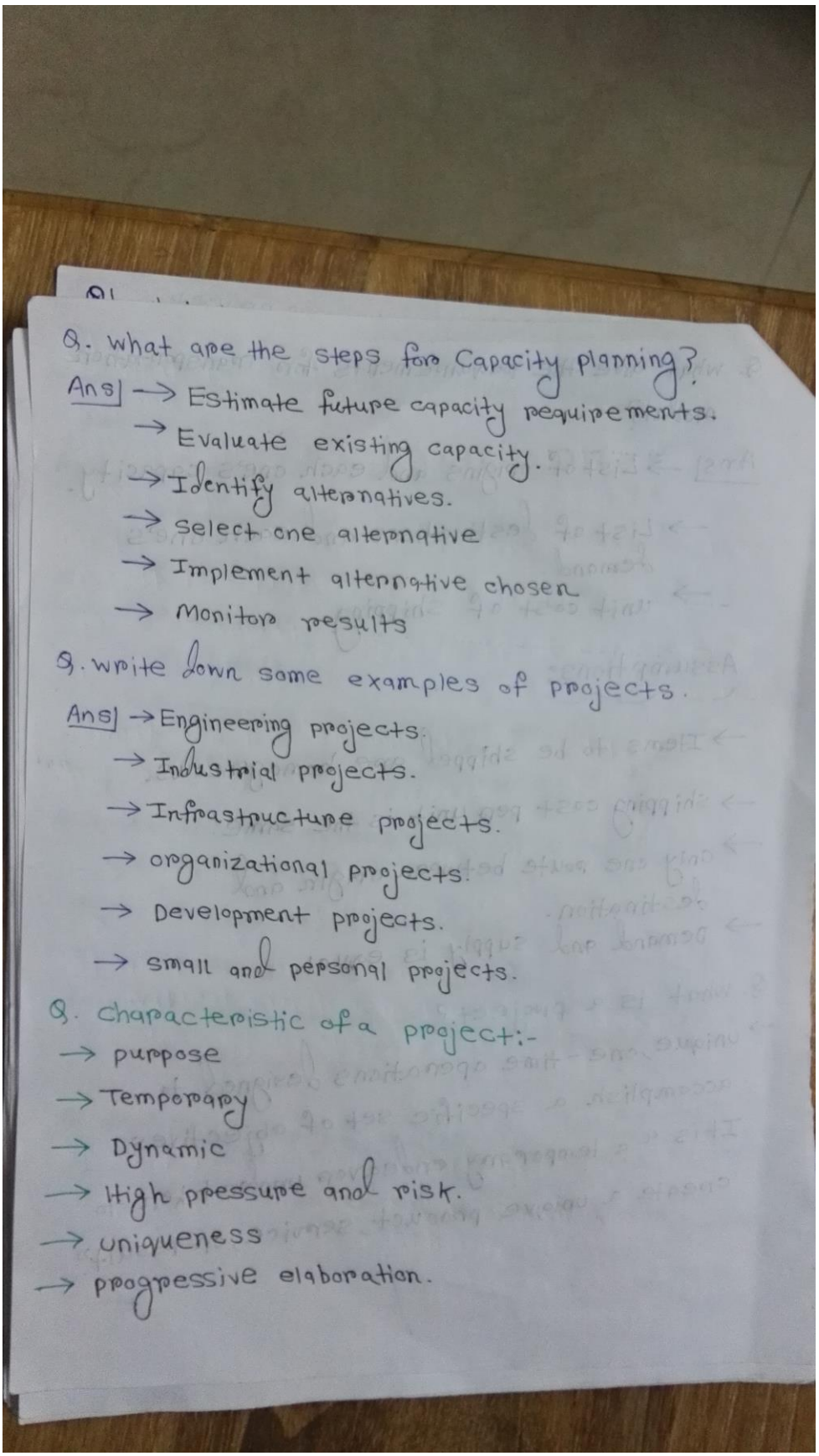

Q. What are the steps for Capacity planning?

Ans] → Estimate future capacity requirements.
→ Evaluate existing capacity.
→ Identify alternatives.
→ Select one alternative
→ Implement alternative chosen
→ Monitor results

Q. write down some examples of projects.

Ans] → Engineering projects.
→ Industrial projects.
→ Infrastructure projects.
→ organizational projects.
→ Development projects.
→ small and personal projects.

Q. Characteristic of a project:-
→ purpose
→ Temporary
→ Dynamic
→ High pressure and risk.
→ uniqueness
→ progressive elaboration.

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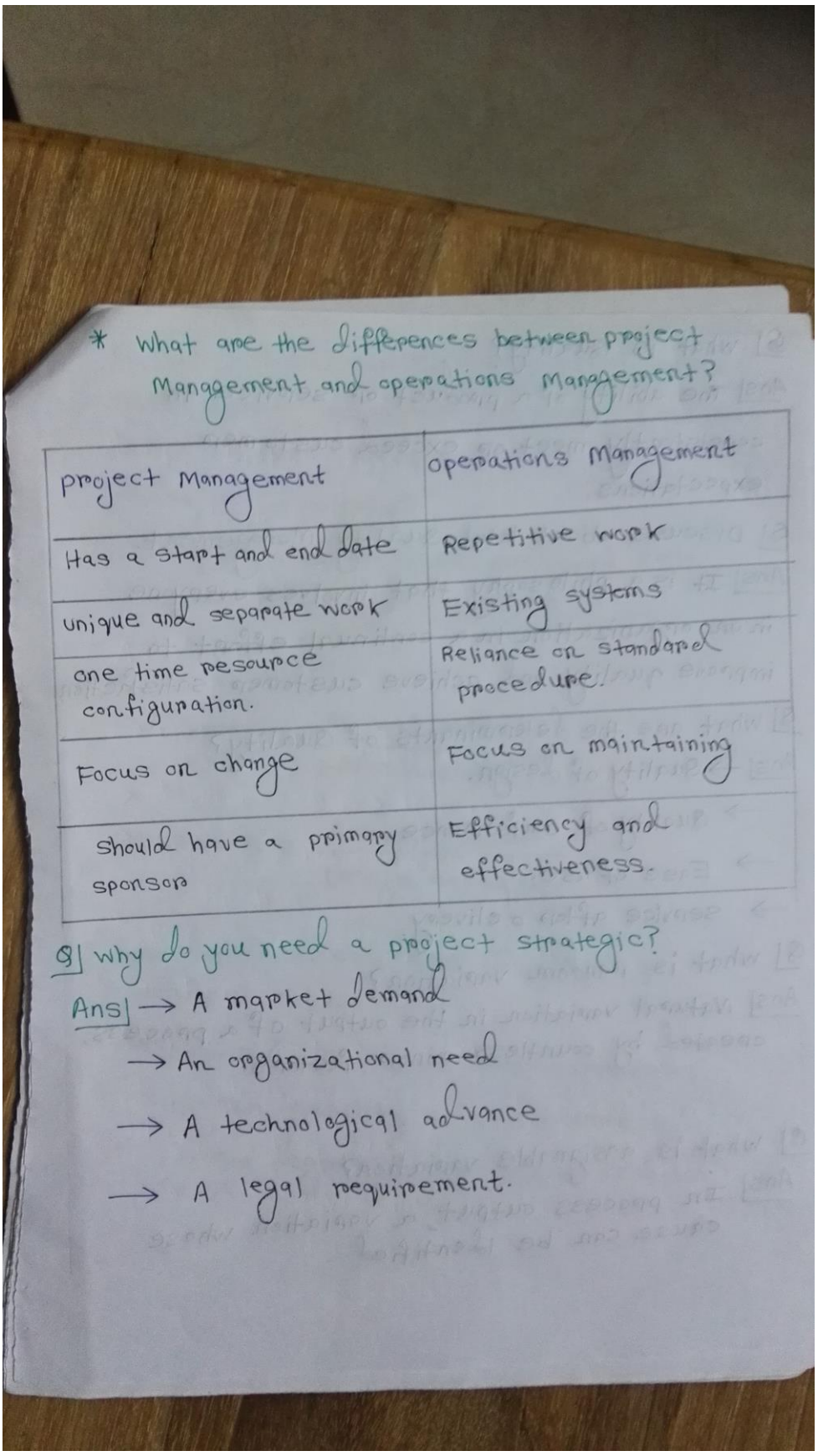

* What are the differences between project Manggement and operations Manggement?

project Management	operations Management
Has a start and end date	Repetitive work
unique and separate work	Existing systems
one time resource configuration.	Reliance on standard procedure.
Focus on change	Focus on maintaining
Should have a primary sponsor	Efficiency and effectiveness.

Q] why do you need a project strategic?

Ans] → A market demand

→ An organizational need

→ A technological advance

→ A legal requirement.

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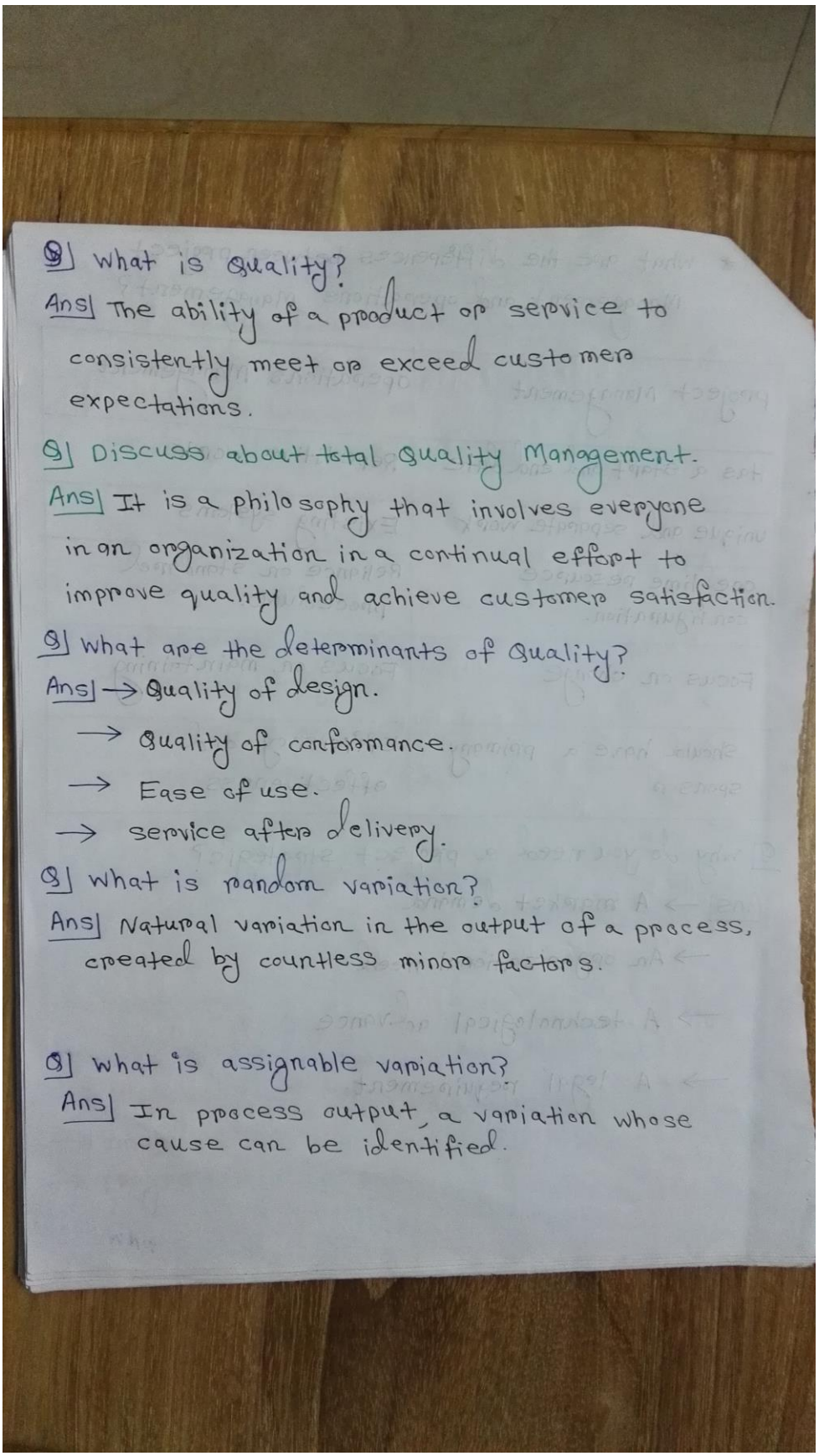

Q] What is Quality?

Ans] The ability of a product or service to consistently meet or exceed customer expectations.

Q] Discuss about total Quality Management.

Ans] It is a philosophy that involves everyone in an organization in a continual effort to improve quality and achieve customer satisfaction.

Q] What are the determinants of Quality?

Ans] → Quality of design.

→ Quality of conformance.

→ Ease of use.

→ service after delivery.

Q] What is random variation?

Ans] Natural variation in the output of a process, created by countless minor factors.

Q] What is assignable variation?

Ans] In process output, a variation whose cause can be identified.

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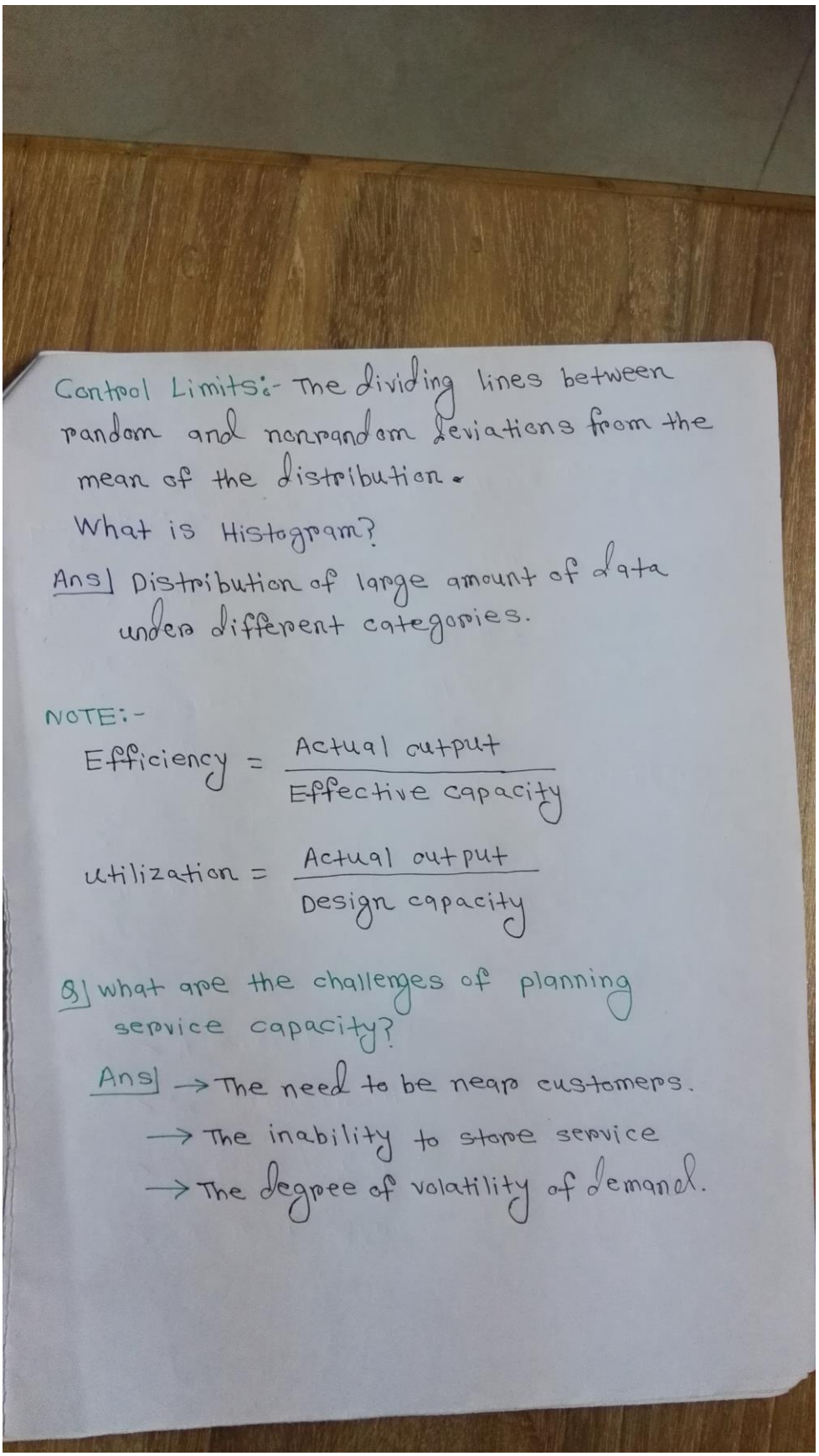

Control Limits:- The dividing lines between random and nonrandom deviations from the mean of the distribution.

What is Histogram?

Ans| Distribution of large amount of data under different categories.

NOTE:-

$$\text{Efficiency} = \frac{\text{Actual output}}{\text{Effective capacity}}$$

$$\text{utilization} = \frac{\text{Actual output}}{\text{Design capacity}}$$

Q| what are the challenges of planning service capacity?

Ans| → The need to be near customers.

→ The inability to store service

→ The degree of volatility of demand.