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B.Electrical Engineering

Semester:

8th

Subject:

Engineering Management and Economics

Assignment

Submitted to:

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Q1:

Engineering Management is:

⇒ Answer:

option (B) Both science and art.

Q2:

Engineers can become good managers only through.

⇒ Answer:

option (C) Effective career planning.

Q3:

When engineer enters management, what is the most likely problem he finds difficult to acquire?

⇒ Answer:

option (D) All of the above.

Q4:

Strategic planning is undertaken in which management level?

⇒ Answer:

option (C) Top management level.

Q5:

What management function refers to the process of anticipating problems analyzing them estimating their likely impact and determining actions that will lead to the desired outcomes and goals?

⇒ Answer:

option (A) planning.

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Q6:

What refers to the establishing interrelationships between people and things in such a way that human and materials resources are effectively focused toward achieving the goal of the company?

⇒ Answer:-

option (D) organizing.

Q7:

Actual performance normally is the same as the plan and therefore it is necessary to check for deviation and to take corrective action. This action refers to what management function?

⇒ Answer:

option (C) controlling.

Q8:

Strategic Planning is undertaken in which management level?

⇒ Answer:

option (C) Top management level.

Q9:

For a project manager to achieve his given set of goals through other people he must have a good _____

⇒ Answer:

option (A) Interpersonal skills.

Q10: An engineer is required to finish a certain engineering job in specific time.

He is said to be — if he finished the job within the required specific time.

→ Answer:

option (B) Effective

Q11: If an engineer provide less input (labor and materials) to his project and still come out with the same output, he is said to be more _____

→ Answer:

option (D) Efficient.

Q2:

a) A Manager's job is complex and multidimensional and requires a range of skills. what are those skills. discuss in detail.

→ Answer:

Those skills are ---

(1) Conceptual skills.

(2) Human skill.

(3) Technical skill.

(4) Diagnostic skill.

→ (1) Conceptual skill:-

is the ability to see the organization as a whole and the relationship among its parts.

Conceptual Skill is involves the managers thinking information processing and planning abilities.

Knowing the ones department fits into the total organization and how to the organization fits into the industry the community and the broader business and social environment.

The ability to think strategically (broad long) term view.

⇒ Conceptual Skill is very important for manager at the top. For example Microsoft reflects the conceptual skill of its chairman Bill gates. General bussiness goals are clearly stated and communicated throughout the company. Contributing to microsoft leadership reputation and billion dollar revenues. gates spread his concept for microsoft by delegating to a cadre of strong managers. Scott eki, senior vice-president for sales and marketing, pointed out Each part of the company has a life of its own now, but Bill is the glue that holds it all together.

Many of the responsibility of top managers such as decision making resource allocation, and innovation - require a broad view.

(2) Humman Skill:-

⇒ is the ability to work with and through other and to work effectively as a group member.

- ⇒ The ability to motivate, coordinate, lead, communicate, and resolve conflicts.
- ⇒ Allows subordinates to express themselves without fear of ridicule and encourage participation.
- ⇒ Relies on the quality of its people for its success.
- ⇒ Likes other people and is liked by other.
- ⇒ Have good judgment for decisions such as hiring and setting company policy.
- ⇒ He makes employees feel valued and inspired and promote close working relationships that are fun.
- ⇒ Effective managers are cheer leaders, facilitators, coaches and nurturers.
- ⇒ Excellent managers don't take people for granted.
- ⇒ Measure employees satisfaction using formal questionnaire.
- ⇒ Tries to increase the frequency, quality and degree of informationness (news, letters, etc)
- ⇒ Getting things done through people.
- ⇒ Technical Skill.

is the understanding of and proficiency (skill, ability, talent) in the performance of specific tasks.

Includes mastery of method, techniques and equipment involved in specific function such as engineering manufacturing finance. forecasting and marketing skills.

Specialized knowledge, analytical ability competent up use of tools and techniques to solve problems in specific discipline.

→ Diagnostic Skill:

Managers ability to visualize the most appropriate response.

→ Diagnose and analyze a problem and then developing a solution.

→ For example high turnover - possible reason dissatisfaction. with pay or not favorable environment or poor interpersonal skills find solution by interviewing of employees.

→ For example in favorable situation - sales increases at higher rate than anticipated causes, low price or greater demand than predicated or high price by a competitor diagnostic skill.

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part (B)

Briefly explain characteristic of authority:-

→ Answer:

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part (B)
Briefly explain characteristic of authority:-

→ Answer:

→ Characteristic of authority:-

→ Authority is vested in organizational position not people because of the position that manager hold.

(2) Authority is accepted by employees:-

Authority flows top down through the organization's hierarchy; employees comply because they believe that managers has have legitimate right to issue orders.

(3) Authority flows down the vertical hierarchy:

positions at the top of the hierarchy are vested with more formal authority that are positions at the bottom.

(4) Responsibility:-

is the flip side of authority coin. it is the duty to perform the task or activity an employees has been assigned. when managers have responsibility for task outcomes but little authority. the job is possible but difficult. But the managers have authority exceeding responsibility they may become tyrants.

(5) Accountability:-

is the mechanism through which authority and responsibility are brought into alignment. it means that people with authority and responsibility are subject to reporting and justifying task outcomes to

to those above them in the chain of command. Employees must be aware that they are accountable for a task and accept the responsibility and authority for performing it.

(6) Delegation of authority:-

is the process by which a manager assigns a portions of his total work load to others. Subordinates help ease the managers Burdon. In some instances, a subordinate may have more expertise than a manager. it also helps develop subordinate. Delegation of authority involves three steps, assigning responsibility, giving the authority to do the job and establishing subordinates accountability. problem with delegation are that subordinate will do too well and pose threat to manager advancement no reward for accepting additional responsibility other view is that subordinates satisfactory performence is not a threat but an accomplishment by both (subordinate did the job manager trained him).

(7) Decentralization:-

The process of systematically delegating of power and authority throughout the organization to middle and lower level managers. Decision making power and authority are delegating as far down the chain of command as possible. The greater the complexity and decenter uncertainty of the environment, the greater is the tendency to decentralize. Successful organization are usually decentralized.

(8) Centralization:-

The process of systematically retaining power and authority in the hands of subject-level managers. Decision making power and authority are with top managers. In time of crises or risk of organization failure authority may be centralized at the top.

(9) Coordinating Activities:-

The fifth major element of organizing is coordination. It is the process of linking the activities of the various departments of the organization. The reason for coordination is that departments and work group are activities of each department focus on the attainment of

organizational goals. Some of the useful devices for maintaining coordination are among units are rules, procedures liaison roles, task force sops etc.

(10) Differentiating between positions:-

The last building block of organization structure is differentiating between line and staff position. Line managers work directly toward organizational goals, whereas staff managers advise and assist.

→ Q3:

(a) How does a project emerge? Describe its characteristics:-

Answer:-

* Driven by a need.

* A desire for innovation and creativity.

* An addition to a school of thought or a body of knowledge.

→ Project Defined as:

A project is a temporary endeavor undertaken to create a unique product service or a result.

* A group of activities that have to be performed in a logical sequence to meet pre-set objectives outlined by a client.

* A project can be defined an activity with a specific goal occupying a specific period of time.

* A project is a human activity that achieves a clear objective against a time scale.

* A unique set of co-ordinated activities with definite start and finish points undertaken by an individual or organization to meet specific performance objective within defined schedule cost and performance parameters

(1) Temporary:-

That every project has a definite beginning and a definite end.

The teams are temporary as well.

it ends when objectives achieved they are no more achievable valid can you think an example.

Temporary does not apply to the outcome that's why they have social economic and environment impacts. unique product services or results.

⇒ that a product is quantifiable tangible (For example)

⇒ A capability to perform a service (For example)

⇒ A result like outcomes. (For example)

(2) Uniqueness:-

An Important characteristic of project deliverable (For example)

The presence of repetitive element does not change the fundamental uniqueness of the project work.

organization achieve their objective either through project or operations.

They share the following.

performed by people.

constrained by limited resources.

Planned executed and controlled.

The primary difference is that.

operation (ongoing) and repetitive

They are there to sustain the business and once the objectives are met they adopt a new set of objective and the work continues where project (temporary and unique)

⇒ Project Characteristics:-

All projects have characteristics in common that set them apart from other operations.

(2) Uniqueness:-

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⇒ Project Characteristics:-

All projects have characteristics in common that set them apart from other operations.

(1) Defined start and finish.

(2) Time frame for completion.

* A point where it starts time zero

* A point where it finishes delivery.

* The implication is a time scale.

(3) Uniqueness:-

A unique need distinguished from day to day operations. But potential repetition not barred subject to consideration of special circumstances.

Can include contingency planning where start date is unknown

(4) Involvement of several people:-

The project team. Those affected by the project (e.g. new plant operators) provision for specific skills and approaches.

(5) Limited Resources:-

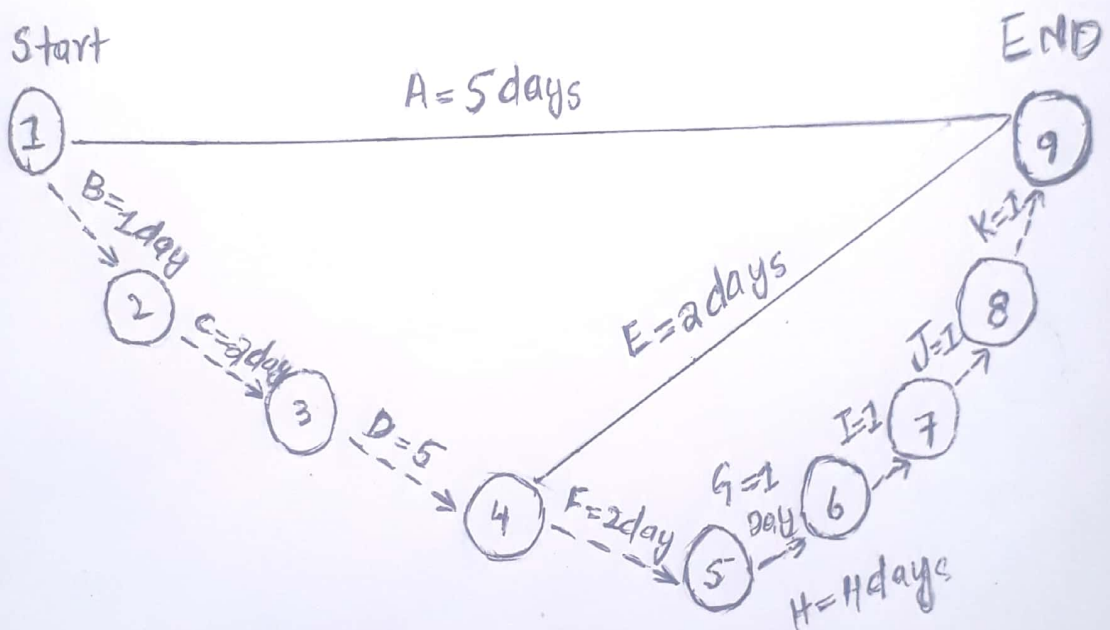
People, materials, money and time all constrained potential tradeoff between these people possible potential of technology almost limitless.

(6) Sequencing of activities:- Interdependence
of some activities.

- * Step by step progress.
- * opportunity for overlapping.
- * Need for careful planning of step order.

Q3 (part B)

Answer:-



Critical path: B C D F H I J K = 26 day