

Department of Electrical Engineering**Engineering Management and Economics
Assignment**

Spring-2019-20, Dated 13-4-2020

Instr: Dr. Jehanzeb Khan**Time= 5 Days****Marks 30**

Q.1:

10

1. Engineering Management is:

A. An art

B. Both science and art

C. A science

D. Neither art nor science

2. Engineers can become good managers only through _____.

A. Experience

B. Taking master degree in management

C. Effective career planning

D. Trainings

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

A. Learning to trust others

B. Learning how to work through others

C. Learning how to take satisfaction in the work of others

D. All of the above

4. Strategic planning is undertaken in which management level?

A. Lower management level

B. Middle management level

C. Top management level

D. Lowest management level

5. What management functions 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?

A. Planning

B. Leading

C. Controlling

D. Organizing

6. 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?

A. Planning

B. Leading

C. Controlling

D. Organizing

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

A. Organizing

B. Planning

C. Controlling

D. Staffing

8. Strategic planning is undertaken in which management level?

A. Lower management level

B. Middle management level

C. Top management level

D. Lowest management level

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

A. Interpersonal skills

B. Communication skills

C. Leadership

D. Decision- making skills

10. 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.

A. Efficient

B. Effective

C. Reliable

D. Qualified

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

A. Managerial skill

B. Economical

C. Effective

D. Efficient

Q.2 a) A Manager's job is complex and multidimensional and requires a range of skills. What are those skills, discuss in detail.

5 Marks

b) Briefly explain characteristics of authority.

5 Marks

Q.3: a) How does a project emerge? Describe its characteristics.

5 Marks

b) An international Conference is planned in Iqra national University. The activities listed down with their predecessors and time taken. Prepare a network diagram and determine the critical path.

5 Marks

Activity	Precedence	Time
A Date, topics & Speaker	-	5 days
B Prepare logo & brochures	-	1 day
C Send letters to speakers	B	2 days
D Get confirmation from Speakers	C	5 days
E Send letters to participants	C,D	2 days
F Obtain travel plan from speakers	D	2 days
G Arrange Accommodation	F	1 day
H Get handouts from speakers	F	4 days
I Finalize Registration	G,H	10 days
J Setting of Hall	I	1 day
K Conduct of Program	J	1 day

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Q1

- (1) (B) Both Science and art.
 - (2) (A) Experience.
 - (3) (D) All of the above
 - (4) (C) Top management level
 - (5) (A) Planning
 - (6) (B) Leading
 - (7) (C) Controlling
 - (8) (C) Top management level.
 - (9) (C) Leadership
 - (10) (B) Effective
 - (11) (D) Efficient.
- ↑ ← → X

Q/2 (a) A manager's job is complex and multidimensional and requires a range of skills. What are those skills discuss in detail

Ans A manager's job is complex and multidimensional and requires a range of skills

1. Human skill
2. Conceptual 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 involves the manager's thinking information processing and planning abilities
- Knowing where one's department fits in to the total organization and how to organization fits in to the ~~total~~ ~~organization~~ industry. The community and social environment.
- The ability to think strategically. (board long term view)

Human Skills:-

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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.
- Allow subordinates to express themselves without fear of ridicule and encourages participation.
- Relies on the quality of its people for its success.
- Have good judgment for decision such as hiring and setting company policy.
- Likes other people and is liked by others.
- He makes employees feel value and inspired and promote close working relationship that are fun.
- Effective managers are cheer leader, facilitators, coaches.
- Tries to increase the frequency, quality and,

degree of informativeness (news letter etc.)

"Getting things done through people".

Technical Skill:-

is the understanding of proficiency

(Skill, ability, talent) in the performance of specific task

- Includes mastery of methods, technique and equipment involved in specific function such as engineering manufacturing, finance forecasting and marketing skills.
- Specialized knowledge, analytical ability competent use of tools and technique to solve problem in specific discipline.

Diagnostic Skills:-

Manages ability to visualize

The most appropriate response

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

For Example:-

High turn-over possible reason dissatisfaction

with poor interpersonal skill, find solution by interviewing of employees.
or not favorable environment or poor interpersonal skill, find solution by interviewing of employees.

For example:-

In favorable environment situation - Sales increase at higher rates than anticipated
cause low price or greater demand than predicted
or high price by a competitor
diagnostic skill.

(b) Briefly explain characteristic of authority:-

Ans: Authority:-

A formal and legitimate right of
a manager to make decision issue order
and allocate resources.

Characteristic of Authority:-

1- Authority is vested in organizational positions not people;

Because of the position that manager holds.

2) Authority is accepted by employees:-

Authority flows top down through the organization;

hierarchy, employees comply because they believe that managers have legitimate right to issue orders.

3) Authority flow down The vertical hierarchy - positions at the top of the hierarchy are vested with more formal authority than are positions at the bottom.

4) Responsibilities:

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

5) Accountability:

The mechanism through which authority and responsibility are brought in to alignment. It means that people with authority and responsibility are subjects to reporting and justifying task outcomes to those above them in the chain of commands. Employees must be aware that they are accountable for task and accept the responsibility.

authority for performing.

6) Centralization:-

The process of systematically retaining power and authority in the hands of higher level managers decision making power and authority are with top managers.

In times of crises and risk of organization failure, authority may be centralized the top.

Q/3

(a) How does a project emerge? Describe its characteristic

Ans: EMERGENCY:- Any project is an Idea.

- 1- Driven by a need.
- 2- A desire for innovation and Creativity
- 3- An addition to a school of thought or a body of knowledge

Characteristic of projects:- A project is a temporary endeavour undertaken to create a unique product service or a result.

- ① A group of activities that have to be performed in a logical sequence to meet pre-set objectives outlined by a "Client"
- ② A project can be defined as an activity with a specific goal occupying a specific period of time.
- ③ A project is a human activity that achieves a clear objective against a time scale.

Temporary:-

- That every project has a definite beginning and a definite end
- ① The team are temporary as well
 - ② It ends when objectives are achieved they are no more valid.

Unique product services or results:-

- ① A product that is quantifiable
- ② A capability to perform a service
- ③ A result like outcome or result.

Uniqueness:-

An important characteristic of project deliverable.

For Example:-

① The presence of repetitive element does not change the fundamental uniqueness of the project work.

② organizations achieve their objective either through project or operation.

They share the following.

- ① performance by people.
- ② constrained by limited resources.
- ③ planned, executed and controlled.

The primary difference is that operations. They are there to sustain the business and once the objective are met, they adopt a new set of and the work continues whereas project (temporary and unique). They are concluded once the objectives are achieved.