

**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

<b>Activity</b>	<b>Precedence</b>	<b>Time</b>
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

Name

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13041

Subject

Management

Date

19/4/2020

ELECTRICAL DEPARTMENT

IQRA NATIONAL UNIVERSITY

PESHAWAR HAYATABAD.

Question No 1:-

(1) Engineering Management is :

(A) An art.

(2) Engineer can become good managers only through -----

(C) Effective career planning.

(3) When Engineer enters management what is the most likely problem he finds difficult to acquire.?

(D) All of the above.

(4) Strategic planning is undertaken in which management level ?

(C) Top management level

(5) What management function refers to the process of anticipating problems analyzing them, estimating their likely impact

and determining action that will lead to the desired outcome and goals?

(A) Planning.

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

(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.

(c) Controlling

(8) Strategic planning is undertaken in which management level?

(c) Top 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.

(10) An engineer is required to finish a certain engineering job in specific time.

He is said to be ..... if he finished with in required specific time.

(B) Effective

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

(D) Efficient



Question No 2:- A manger's job is complex and multidirectional and requires a rang of skills. What are those skills discuss in detail?

Answer:- A manger's job is complex and multidirectional requires a rang of skills.

- (i) Technical skills
- (ii) Human skills.
- (iii) Conceptual skills
- (iv) Daignostic skills.

(i) Technical skills:-

Technical skills is understanding of proficiency (talent, ability) in the performance of specific tasks.

→ Specialization knowledge, analytical ability, competent use of tools and

techniques to solve problems in specific discipline.

→ Include mastery of methods techniques and equipment involved in specific function such as engineering manufacturing finance forecasting and marketing skills.

(ii) Human skills :-

- Human skill is ability to work with and through others and to work effectively as a group member.
- The ability to motivate, coordinate, lead, communicate and resolve conflicts.
- He makes employees feel valued and inspired and promote close working relationships that are fun.
- Relies on the quantity of its people for its success.
- Have a good judgment for decisions such as hiring and setting company policy.

- Effective managers are cheer leaders, facilitator coaches and nurturers.
- ~~E~~ Excellent managers don't take people for granted.
- Measure employees satisfaction using formal questionnaire.
- Allow subordinates to express themselves without fear of ridicule and encourage participation.

### (1000) Conceptual Skills :-

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

- The ability to think strategically ~~board~~ (broad long term view).
- knowing where one's department sets to the total organization and how the organization fits into the industry.

the community and the broader business and social environment.

→ Conceptual skills involve the manager's thinking information processing and planning ability.

Conceptual skill is very important for managers at the top. For example Microsoft reflects the conceptual skill of its chairman, Bill Gates. General business goals are clearly stated and communicated throughout the company contributing to Microsoft's leadership reputation and billion dollar revenues. Gates spread his concept for Microsoft by delegating to a cadre of strong managers.

(iv) Diagnostic skill :-

Diagnostic skill managers ability to visualize the most appropriate response.

→ Diagnose and analyze a problem and then developing solution.

For example high ~~turn~~ turnover - possible reason dissatisfaction with pay or not favorable environment or poor interpersonal skill.

Question No 2 (b) :- Briefly explain characteristic of authority?

Answer :- Authority the formal and legitimate right of a manager to make decisions ~~issue~~ issue orders and allocate resources.

Characteristic of authority :-

(i) Responsibility :- Responsibility is the flip side of authority coin. It is the duty to perform the task and activity on employees has been assigned. When managers have responsibility for task ~~come out~~ outcome but little authority the job is possible but difficult. But when managers have authority exceeding responsibility they they may become tyrants.

(ii) Accountability :- It is mechanism through which authority and responsibility are brought into alignment. It mean that people with authority and responsibility are subject to reporting and justifying task outcomes 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.

(iii) Authority is vested in organizational position not people :- Because of the position that manager hold.

(iv) Authority is accepted by employees :- Authority flow top down through the organization. hierarchy employees can comply because they believe that managers have legitimate right to issue order.

(v) Authority flows down the vertical hierarchy & position at the top of the hierarchy are vested with more formal authority than are position at the bottom.

(vi) Delegation of authority :-

Delegation of authority is the process by which a manager assigns a portion of his total work load to others. Subordinates help ease the manager's ~~but~~ burden. In some instances a subordinate may have more expertise than a manager. It also helps develop subordinates. Delegation of authority involves three steps: assigning responsibility, giving the authority to do the job, and establishing subordinate's accountability.

(vii) Centralization :- The process of systematically retaining power and authority in the hands of higher level managers. Decision

(11)

making power and authority are with top managers. In times of crises or risk of organization failure authority may be centralized at the top.

Question No 3 :- How does a project emerge?  
Describe the characteristics.

Answer :- Emergence :

- Any project is an idea.
- Driven by a need.
  - A desire for innovation and creativity.
  - An addition to a school of thought or body of knowledge.

(\*) Characteristics :-

- Project :- A project is a temporary endeavor undertaken to create a unique product or service.
- A group of activity that have to be performed in a logical sequence to meet per set objective outlined by a client.



## \* Temporary :-

→ That every project has a

definite beginning and a definite end.

→ The teams are temporary as well.

→ It end when objectives achieved

→ Temporary does not apply to the outcome.

→ That's why they have social ~~economic~~ economic and environmental impacts.

(\*) Unique product service or result.

→ A product that is quantifiable

→ A capability to perform a service.

→ A result like outcome or documents.

## (\*) Uniqueness :-

An important characteristic

of project deliverables.

For example:

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

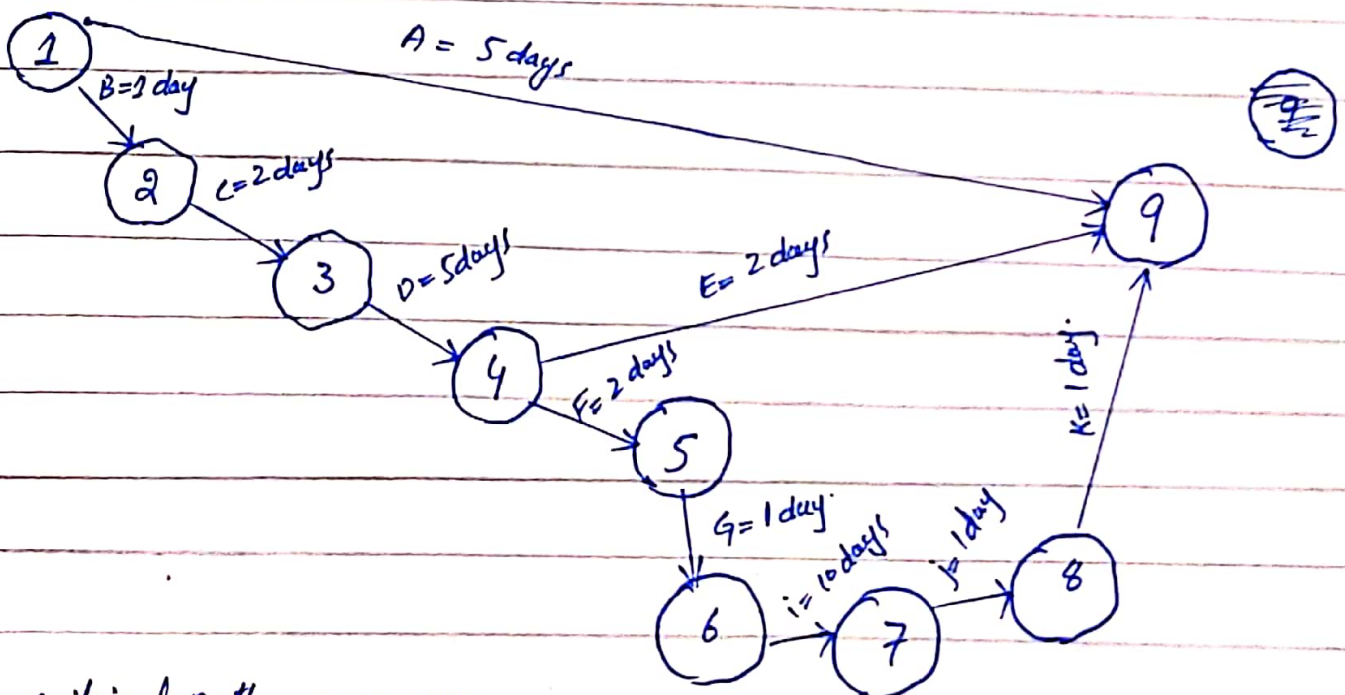
→

They share the following:

- performed by people.
- constrained by limited resources
- planned, executed and controlled.

The primary difference is that operations they are there to sustain the business and once the objectives are met they adopt a new set of objectives and the work continuous whereas project.

Question No 3 (b) Question is written on the top of question paper.



critical path BCDFHIJK = 26 days.