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PAGE NO: 01

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

Question No : 2

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

Answer:

Management Skills

It can be defined as abilities that an executive should possess in order to fulfill specific tasks. Management skills can be developed through learning & practical experience as a manager. Good management skills are vital for any organization to succeed & achieve its goals & objects.

TYPES OF MANAGEMENT SKILLS

According to American social & organizational psychologist Robert Katz, there are three basic types of management skills.

* Technical Skills

Technical skills involve skills that give that managers the ability and the knowledge to use a

variety of techniques to achieve their objectives. these skills are not limited to operating machines, softwares, production tools and pieces of equipment but also the skills needed to boost sales, design different products & services and market those services & products.

* Conceptual Skills

The skills managers present in terms of knowledge & abilities for abstract thinking and formulating ideas. the manager is able to see an entire concept, analyze and diagnose a problem and find creative solutions.

* Interpersonal Skills

The skills that present the managers abilities to interact, work and relate effectively with people. these skills enable the managers to make use of human potential in the company and motivate the employees for better results.

Question No : 2

(b) Briefly explain characteristics of authority?

Answer:

Characteristics of Authority

Legitimacy, dominance, informality, rationality and accountability are the characteristics of Authority.

1. Legitimacy

It determines the effectiveness of authority. Hence it is the hall mark of the concept of authority. According to Robert Dahl "A commands B and B feels A has perfect right to do so and to which he has complete obligation to obey. Power of this kind is often said to be legitimate.

2. Dominance

Authority is capacity of the individual to command others. An individual or a group which possesses authority exercises dominance over other individuals. Authority is a command of superior to an inferior.

3. Informality

It is not a formal power as it lacks characteristics which are the main features of powers.

According to Fredrick "Authority is not a power but something that accompanies power". It is the quality in men and things which adds to their power, something which creates power but it is not itself power.

4. Rationality

It is the main characteristic of authority. Fredrick says "the man who has authority possesses something that I would describe as the capacity for reasoned elaboration for giving convincing reasons for what he does or proposes to have others to do."

5. Accountability

The individual or a group of individuals who possess authority are responsible to some higher authority. It is the most significant characteristic of authority.

Question No: 3

(a) How does a project emerge?
Describe its characteristics.

Answer:

Project

The word project originally mean "something that comes before anything else happens".

It is a temporary endeavor undertaken to create a unique product, service or result. It is planned to achieve a particular aim.

The aim of a project is to attain its objectives and then terminate.

It means of organizing some activities that cannot be addressed within the normal operational limits.

Characteristics

→ It is temporary means that every project has a definite beginning and a definite end.

→ Project always has a definitive time frame.

→ A project creates unique deliverables, which are products,

services or results.

→ A project creates a capability to perform a service.

→ Project is always developed in steps and continuing by increments means progressive elaborations.

→ Scope which defines what will be covered in a project.

→ Resource which means what can be used to meet the scope.

→ Quality which means the spread or deviation allowed from a desired standard.

→ Risk means defines in advance what may happen to ~~drive~~ the plan off course, and what will be done to recover the situation.

→ A purposeful as it has a rational & measurable purpose and logical as it has a certain life cycle.

→ Structured as it has inter-dependencies between its tasks and activities.

Question NO : 3

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

Note: List of activities, their predecessors, and time are given in Question Paper.

Answer:

NETWORK DIAGRAM

