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PRESIDENCY UNIVERSITY BENGALURU

SCHOOL OF ENGINEERING

TEST 1

Winter Semester: 2021 - 22

Course Code: PET 2029

Course Name: Oil & Gas Quality Management

Program & Sem: B. Tech & IV Sem

Date: 27 April 2022

Time: 03.00 PM to 04.00 PM

Max Marks: 30

Weightage: 15 %

Instructions:

- (i) Read the all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and Non-programmable calculators are permitted.

Part A [Memory Recall Questions]

Answer both the Questions. Each question carries Four marks.

(2Qx 4M= 8M)

1. Find out the TRUE or FALSE statement.
 - i. Depreciation varies with product.
 - ii. Critical path method is the traditional method for project schedule presentation.
 - iii. SOW clarifies each stage of project between owner, contractor and engineer.
 - iv. NPV technique takes account of the time value of money.

(C.O.No.1) [Knowledge]

2. Every project has a main driver. Identify and define the major driving force of an Oil and Gas project.

(C.O.No.1) [Knowledge]

Part B [Thought Provoking Questions]

Answer the Question. The question carries 10 marks.

(1Qx10M=10M)

3. Explain the problem in this cartoon showing figure 1 and What is your solution?

(C.O.No.1) [Comprehension]



Figure 1

Part C [Problem Solving Questions]

Answer the Question. The question carries 12 marks.

(1Qx12M=12M)

4. a) Suppose that you are a field engineer. And your manager asked you to make a chart showing the oil and gas field development life cycle process. It must include the relationship between activities. Specifically, he mentioned to make the chart using the oldest and traditional method. Which chart you prefer. Draw the chart for oil and gas field development life cycle process. [6M] (C.O.No.1) [Application]

b) what is depreciation and how the rate of depreciation varies with product. Is the depreciation of a utensil being same as that of truck? Explain with examples.

[6M] (C.O.No.1) [Comprehension]



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**PRESIDENCY UNIVERSITY
BENGALURU**

SCHOOL OF ENGINEERING

TEST 2

Winter Semester: 2021 - 22

Course Code: PET 2029

Course Name: Quality Management Practices in Oil & Gas Industry

Program & Sem: B. Tech (All Branches) & IV sem

Date: 02-JUNE-2022

Time: 03.00PM – 04.00PM

Max Marks: 30

Weightage: 15 %

Instructions:

- (iv) Read the all questions carefully and answer accordingly.
- (v) Question paper consists of 3 parts.
- (vi) Scientific and Non-programmable calculators are permitted.

Part A [Memory Recall Questions]

Answer both the Questions. Each question carries FOUR marks.

(2Qx 5M= 10M)

5. Find out the **TRUE** or **FALSE** statement

- v. The separate project organization is most common in the case of construction companies or consultancy firms that have more than one project running at the same time.
 - vi. The project manager is the key to the success of the project.
 - vii. The size of the quality team differs from one organization to another
 - viii. The selection of the team members is the responsibility of the senior management
 - ix. The contract is considered the backbone of any project. (C.O.No.2) [Knowledge]
6. In each company there must exist a team of total quality management that demonstrates in the project organization and the company organization. Identify the relationship between different departments and the relations between the quality management team and other teams. (C.O.No.2) [Knowledge]

Part B [Thought Provoking Questions]

Answer both the Questions. Each question carries FIVE marks.

(2Qx5M=10M)

7. Due to globalization, you can purchase any machine you want from any place worldwide. So, the client needs a system that gives him or her confidence in the products being purchased. Explain a way for giving guarantee for client. (C.O.No.2) [Comprehension]

8. The effect of defective work is seen in the partial collapse of a parking garage in New York City. The absence of reinforcing steel in three out of six of the cast-in-place column haunches, which supported the main precast girders, was the cause of this accident. What was the reason for this collapse? Something is being sacrificed to save time or cost. Find out the cause behind this. (C.O.No.3) [Comprehension]

Part C [Problem Solving Questions]

Answer both the Questions. Each question carries FIVE marks.

(2Qx5M=10M)

9. ABC is a contractor and has received a contract to construct a building with an estimated total cost of 20 million. Client will reimburse all the costs incurred by ABC. ABC will make a profit of 15% on the actual cost of project. If ABC completes the project within 3 years from the date of contract, ABC will receive an incentive where the amount is decided by both parties and agreed in contract. Identify the type of contract and explain the advantage of the type of contract identified. (C.O.No.2) [Application]
10. Documentation is important in managing quality in any business. It leads to consistency, repetition, and ensuring quality of the products. Apply your knowledge of Quality Management Systems and explain. (C.O.No.3) [Application]



**PRESIDENCY UNIVERSITY
BENGALURU**

SCHOOL OF ENGINEERING

ENDTERM EXAMINATION

Winter Semester: 2021 - 22

Course Code: PET 2029

Course Name: Quality Management Practices in Oil & Gas
Industry

Date: 1st July 2022

Time: 09.30 AM to 12.30 PM

Max Marks: 100

Weightage: 50 %

Instructions:

(vii) Read the all questions carefully and answer accordingly.

(viii) Scientific and Non-programmable calculators are permitted.

Part A [Memory Recall Questions]

Answer all the Questions. Each question carries FIVE marks.

(5Qx 5M= 25M)

11. Find out the **TRUE** or **FALSE** statement. (C.O.No.4) [Knowledge]
- The probability of delay is high and also has a direct impact on the project completion time
 - The risk management of a project is the process of identifying risks that could affect the project and how to control them.
 - The first step of risk assessment is to define the expected risks during the project execution
 - Delphi technique is probably the most popular technique for identifying risks.
 - Risk management is an ongoing process during the implementation of a project until the end of that project
12. Fill in the blanks (C.O.No.1) [Knowledge]
- _____ is different from the daily activity in operation management.
 - The _____ has to coordinate between the members of the project to reach the goal of the project
 - It is preferred to apply the Japanese proverb, "think slowly and execute quickly," especially in the _____ study stage
 - SOR stand for _____
 - 3Ms of project management is _____
13. Project management is characterized by multiple areas or topics that must be managed at the same time. Identify those areas (C.O.No.1) [Knowledge]
- The purpose of _____ is to ensure that all elements of the project that are interdependent have a good correlation between them

- ii. The purpose of _____ is to ensure that all work required has been known with specific planning
- iii. The purpose of _____ is to ensure that the project will be finished according to the scheduled time
- iv. The Purpose of _____ is to make sure that the time required at each of the activities of the project, the resources should be allocated to the execution of the activity by the individuals, materials, and equipment
- v. The purpose of _____ is to use ordered steps and reasonable tools that allow making good use of manpower

14. The most important thing in preparing the time schedule is to identify the activity and determine the time required for its implementation with the identification of relations between the activities. How to determine the activities and knowledge of time of each activity. Identify the terminologies and methods (C.O.No.1) [Knowledge]

- i. In some cases, activity A may begin and, after a certain time period, activity B begins. This period is called the _____
- ii. The _____ is the oldest and most traditional method used to present project schedules to this day
- iii. This kind of method depends on the definition of each activity by an arrow, and the point of connecting arrows called nodes, which are drawn as circles.
- iv. This method is the most common one. In this method, every activity is presented by a box or a rectangle
- v. This method is to establish a model of the project that includes a list of all activities required to complete the project, the time duration that each activity will take to completion, and the dependencies between the activities.

15. Define the following (C.O.No.1,2, & 3) [Knowledge]

- i. What is DSP?
- ii. What is bidding?
- iii. What is tendering?
- iv. What is TQM?
- v. What is FIDIC contract?

Part B [Thought Provoking Questions]

Answer all the Questions. Each question carries TEN marks.

(4Qx10M=40M)

16. "We are a day late and four hundred million dollars short". Interpret the statement which is given in the figure. 1 and describe your solution for the problem. (C.O.No.2) [Comprehension]



"We're a day late and four hundred million dollars short."

Figure:1

17. Due to a population increase a new school is being built, called Happy Kids High School. They need someone to maintain the classrooms and bathrooms. They have to do something for getting someone for the maintenance. What might they have done for publishing the request for inviting other parties to submit a proposal? Describe and differentiate the various types of it. (C.O.No.2) [Comprehension]
18. One major quality blunder occurred when constructing a shopping mall in Qatar. After pouring the concrete for the columns and the slab, they found around 40 percent of the columns had a strength lower than the allowable strength. Describe the reason behind this quality blunder. Check whether they have sacrificed the quality to save money or time? Explain it with the help of quality management requirements? (C.O.No.3) [Comprehension]
19. The quality control is responsible from any level from the manager to lower levels in the organization. And it should be done in a definite way to achieve the required quality for the final products. Explain why quality is important with the help of figure (2) provided below.



"With the money we'll save by shutting down quality control, we can issue some truly spectacular apologies."

Figure: 2

(C.O.No.3) [Comprehension]

Part C [Problem Solving Questions]

Answer all the Question. The question carries SEVEN marks.

(5Qx7M=35M)

20. Draw a decision tree for purchasing clothes for party. Use at most 3 options and 4 levels. Explain the diagram as well. (C.O.No.2) [Application]
21. Illustrate the oil field recovery stages and time period of each activity using the most traditional method which is used to present project schedules to this day. (C.O.No.1) [Application]
22. Contracts are the one of the most important aspects in the construction industry where the relationships between the three parties are intertwined. From the figure given below, prepare a brief note on how a contract can cause impact on whole project and a contract with the supplier of materials for the contractor. (C.O.No.3) [Application]

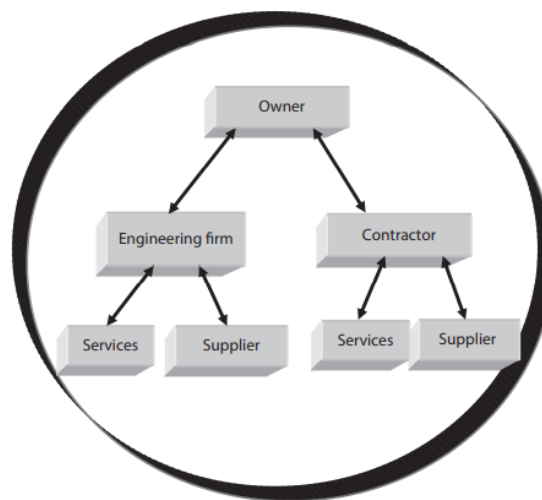


Figure: 3

23. The uncertainty is like the black box, in which no one can know what will happen. In the statement given, Uncertainty indicates what? Apply the knowledge of Risk management process and prepare an explanation on controlling the uncertainties and to predict what could happen and avoid it in reasonable time.

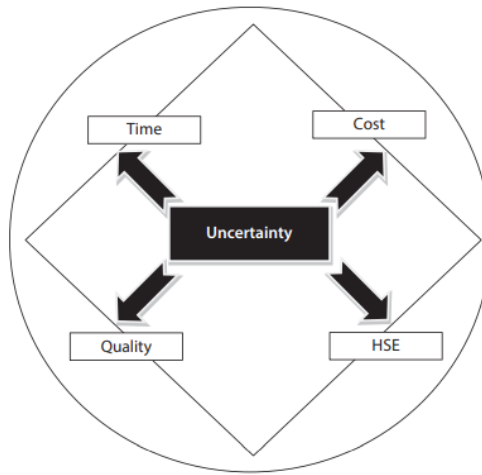


Figure: 4

(C.O.No.4) [Application]

24. The probability of success is small because the occurrences of achieving the project objectives within the time and cost should happen. Therefore, our goal is to locate our project in this zone of intersection. So, the success of project requires each element of the project to work cohesively. What if any of the particular element doesn't happen as planned. Dramatize the importance of project manager on identifying areas of planning that contain risk? Prepare a list of areas in project that are not specific and acts as a source of risk.

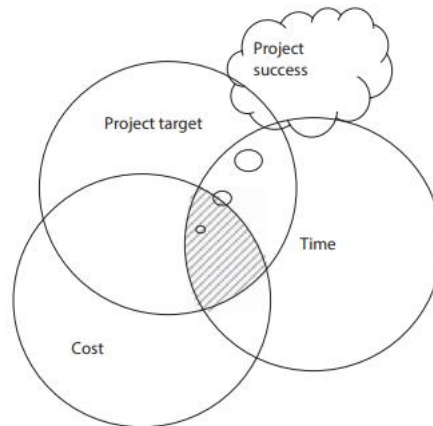


Figure:5

(C.O.No.4) [Application]