**3-9单元课后练习参考答案**

**Unit 3**

**P44**

1.This Memorandum of Understanding (MOU) is entered into by and between Department of Energy and Mineral Resources (hereinafter “DEMR East Java”), located at..... East Java Province, Indonesia and Joint Study Team Comprising China Energy Industrial Co., Ltd (hereinafter “Study Team”), located at ..... Beijing, China.

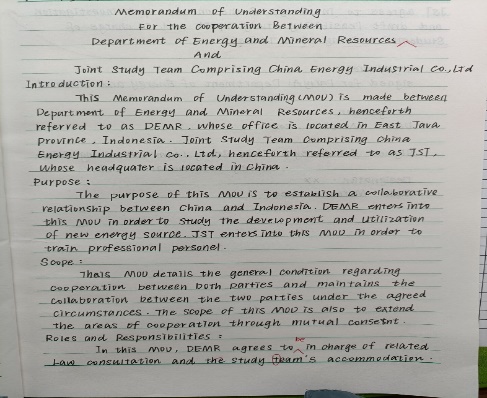
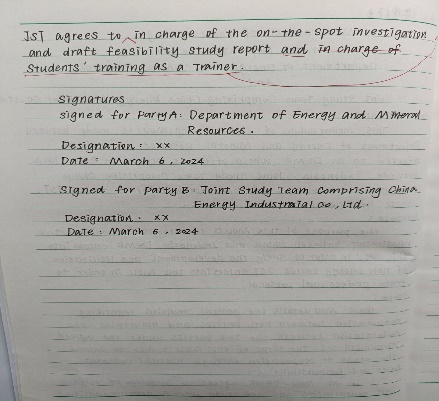
2. The purpose of this Memorandum of Understanding is to establish a collaborative relationship between Department of Energy and Mineral Resources East Java Province, Indonesia and Joint Study Team Comprising China Energy Industrial Co., Ltd.

3. The MOU aims to maintain the collaboration between Party A and Party B under the circumstances as outlined in the agreement.

4. The roles and responsibilities of both parties are detailed as follows: Party A’s roles will include........, corresponding responsibilities are........ Party B’s roles will include........,

corresponding responsibilities are........

完整版如下：



**P45**

Memorandum of Understanding (MOU) for Community Infrastructure Renovation

1.Parties Involved:

This MOU is entered into by and between Party A, representing the management of ABC Community, and Party B, the Engineering and Construction Firm responsible for the renovation projects.

2.Purpose

This Memorandum of Understanding (MOU) is to establish a collaborative relationship between Party A and Party B for the infrastructure renovation in the ABC Community.

3.Project Scope:

The infrastructure renovation project will include:

- Replacement of deteriorated electrical distribution systems.

- Improvements to the lighting system.

- Upgrades to the potable water system.

- Mitigation of safety hazards.

- Enhancements to signage.

- Repairs to sewage and storm drain systems.

- Upgrades to ensure handicapped access to facilities.

- Landscaping improvements.

- Optimization of vehicular and pedestrian access and circulation.

4. Responsibilities:

Party A shall provide overall project oversight, ensure access to the project sites, facilitate the necessary permits, and ensure community cooperation.

Party B shall be responsible for the detailed planning, design, and execution of the infrastructure renovation projects, adhering to agreed-upon standards and timelines.

5. Time

The project is expected to commence on April 15th, 2014 and conclude by April 10th, 2015, subject to adjustments as mutually agreed upon by the parties involved.

6. Dispute Resolution

Any disputes arising from this MOU shall be resolved through negotiation between the parties.

7. Signatures

Signed for Party A: Signed for Party B:

Designation: Designation:

Date: Date:

**Unit 4**

**P54**

1.The estimated costs involved for the construction of the office building is 20 million USD.

2.The construction of the office building is economically viable. The value of the EIRR is higher than the cut-off point.

3.This development is likely to have a negative effect on the overall natural environment.

4. The investment will impact positively upon the overall socio-economic development.

**P55**

**Feasibility Study Report**

**Ecomonic Evaluation**

Based on the results of economic evaluation and supported with the sensitivity analysis, the investment for the improvement of a country road to DC-3 standard is economically viable.

The value of the EIRR is 12% for the project road, which is slightly higher than the cut-off

point of 10% for similar projects in the same area.

When cost increases by 15%, the EIRR will be below the cut-off point. The risks identified

should be mitigated during implementation.

The project will have a negative effect on the environment. Measures have to be taken to mitigate the adverse impact. The project will impact positively upon the social-economic development.

**Unit 5**

**P66**

1.Procurement of a generator.

2.Future Trading Company has allocated funds to be used for the acquisition of a generator.

3. Bidding will be conducted in accordance with the Open Domestic Bidding Procedures.

4. The tender document may be purchased upon payment of a non-refundable fee of 30 USD. The method of payment is by cash.

5. Bids must be delivered to Future Trading Plaza before 10 a.m., 10th August, 2022.

完整版如下：

BID NOTICE UNDER OPEN DOMESTIC BIDDING

Procurement of a Generator

Future Trading Company has allocated funds from the company itself to be used for the acquisition of a generator.

The Entity invites sealed bids from eligible bidders for the provision of the above supply.

Bidding will be conducted in accordance with the methods and procedures contained in the Public Procurement and Disposal of Public Assets Act, 2003 (the Act) and the Regulations made under the Act and is open to all bidders.

The Bidding documents can be obtained by interested bidders upon payment of a non-refundable fee of USD 30.00. The payments must be paid by cash.

Bids must be delivered to Future Trading Plaza. Deadline is 10 a.m., 10th August, 2022.

**P68**

BID NOTICE UNDER OPEN INTERNATIONAL BIDDING

Construction of a 20 km road

Construction Reference Number: 123456

1. ABC International Bank has allocated funds to be used for the construction of a 20 km road.

2. Bidding will be conducted in accordance with the Open International Bidding Procedures.

3. The Bidding documents may be obtained by interested bidders upon payment of a non-refundable fee of USD 100 at Administration Plaza from 8 a.m. to 5 p.m. on working days. All payments must be made with a credit/debit card.

4. Bids must be delivered to Administration Plaza before 10 a.m. 10th August, 2022. All bids must be accompanied by a Bid Security of 800,000 USD.

5. Bids will be opened in the presence of the bidders’ representatives who choose to attend at Administration Plaza at 10 a.m. on 10th August, 2022.

**Unit 6**

**P85改错**

1. Apply two beads of sealant before securing cover.

2. Conduct inspections to determine quality of welds and verify compliance with specified tolerances.

3. Prepare Construction Progress Schedule.

4. Store millwork under shelter

5. Apply selected pattern and color vinyl wall covering in Building B remodeled classrooms.

6. Concrete surfaces.

7. Within manufacturer‘s recommended temperature limits:

8. Fill each joint solid with mortar.

9. Remove rejected materials.

10. Install glass on both sides of main entrance.

11. Replace rejected materials at no additional cost.

12. Replace rejected materials at no additional cost.

13. Brick shall be made of clay and shale.

14. Paint exposed millwork.

15. Face brick shall be standard size.

16. Brick shall be laid plumb and true with all joints completely filled with mortar.

17. Brick shall be laid plumb and true with all joints completely filled with mortar.

18. Lay brick in running bond.

**P86**

2.01

注意书上括号里要求用imperative mood（祈使句）写句子，这里是个错误，应该是用indicative mood（陈述句）组句。

All reinforcing steel shall be new, clean deformed bars of the size specified on the drawings; free from oils, dirt, and any residue that might prevent proper bonding to the concrete, mortar, or grout.

所有钢筋必须是新的、干净的变形钢筋，其尺寸应符合图纸规定；钢筋上不得有油、污垢以及任何可能妨碍钢筋与混凝土、砂浆或灌浆料正常粘合的残留物。

3.02

注意书上括号里要求用indicative mood（陈述句）写句子，这里是个错误，应该是用imperative mood（祈使句）组句。所以括号里的要求是和上面的2.01写反了。

Overlap splices of reinforcing bars minimum 30 bar diameters.

钢筋的重叠拼接最小为 30 个钢筋直径。

**P87**

此题无参考答案。

另建议熟悉Section B里面6个sample的施工规范类型。

P74 Sample 1: descriptive specification

P76 Sample 2: reference Standard Specification

P77 Sample 3: proprietary specification

P79 Sample 4: closed proprietary specification

P80 Sample 5: open proprietary specification

P81 Sample 6: performance Specification

**Unit 7**

**P96**

1.此题答案略。可以看下Roles and Responsibility的解释（P90）

2.

1）Excavated soil shall be used for back-filling.

2）Tandem drum rollers shall be used for compaction.

3）Plastering material shall be as per the technical specification.

4）The curing period for concrete shall be a minimum of 7 days.

**P97**

**Construction Method Statement**

**METHODOLOGY AND SEQUENCE OF WORK**

**Placing of asphalt base course**

1.The thickness of bituminous base course shall be as per the approved shop drawing and project specification.

2. Pavers shall be used to lay the bituminous material.

3. Steel wheel tandem vibratory rollers and pneumatic tire rollers shall be used to achieve compaction of the bituminous material.

4. A tandem vibratory roller operating in the static mode shall be used to carry out initial compaction or breakdown rolling.

5. Tandem vibratory rollers operating in the vibratory mode, followed by pneumatic tire rollers shall be used to carry out subsequent compaction to achieve the required degree of compaction as per project specification.

6. A tandem vibratory roller operating in the static mode shall be used to carry out a final “finishing” roll to remove any remaining roller marks.

**Unit 8**

**P110**

Identify the sample section: Quality Planning

Subheading 1: Establishment of Quality Standards

Subheading 2: Identification of Quality Metrics

Subheading 3: Creation of Quality Checklist

Subheading 4: Problem Correction/Remediation

**P113**

Identify the sample section: Quality Assurance Standards

**P117**

Quality Management Plan

Project Name: Virtual Simulation Classroom Construction

Published Date: 04/15/2024

Table of Contents

1. Introduction

2. Purpose and Objectives

3. Quality Management Scope

4. Quality Planning

4.1 Quality Standards

4.2 Hardware Installation Quality Plan

4.2.1 Circuit Installation

4.2.2 Floor Installation

4.2.3 Suspended Ceiling Installation

4.2.4 Clapboard Installation

4.2.5 VR Glasses Setup

4.1.6 Touch Screen Installation

4.2.7 Projector Configuration

4.3 Software Installation Quality Plan

4.3.1 Simulation Training System Installation

4.3.2 Circuit Simulation Software EWB Setup

5. Quality Control

6. Quality Assurance

7. Quality Management Roles & Responsibilities

8. Quality Measurement & Tools

9. Conclusion

Quality Control

This project is a construction of five virtual simulation classrooms, which will include the installation of hardware and sortware, such as circuit, floor, suspended ceiling, clapboard, VR glasses, projector, Simulation Training System of Practice Management and Circuit Simulation Software EWB.

The quality control of the virtual simulation classrooms construction project focuses primarily on the installation of hardware and software, and the acceptable standards and performance. The quality performace standards for this project are in accordance with the organizational standards apllied to all hardware and software installaion for virtual simulation classrooms. After the completion of the installation, the project will be sumitted to the project manager for performance testing and checking, to ensure compliance with established quality standards.

**Unit 9**

**P135**

Heading: Hazard Identification

**P136**

Heading: Emergency Drill

**P139**

HSE Management Plan

Organization: ABC Ltd.

Project Name: Installation of 10 Electrical Transformers

Published Date: 04/15/2024

Table of Contents

1. Introduction

2. Project Overview

3. HSE Policy and Objectives

4. Legal and Regulatory Requirements

5. Hazard Identification Management

5.1 Electrical Shocks

5.2 Burns

5.3 Electrocution

5.3 Burns and Electrocution

5.4 Leakage of Oil

5.5 Other Potential Hazards

6. Risk Assessment and Control

7. Emergency Response Plan

8. Training and Competency

9. HSE Monitoring and Measurement

10. Communication and Consultation

11. Document Control

12. HSE Management Plan Review and Improvement

Hazard Identification Management

The project is 10 electrical transformers installation on work site near Freetown, Sierra Leone. Unquestionably, installing electrical transformer should be very careful because the site work of this job will face many potential risks or hazards. All contractors and subcontractors involved in this project are required to carry out hazard identification.

For all the phases of the project, safety officers will have knowledge of potential hazards through such sources as:

* Legal and regulatory requirements;
* Records of incidents, accidents and non-conformances;
* Workplace knowledge and other data;
* Professional judgement.

The potential hazards related to this project are as follows:

* Electrical shocks;
* Burns;
* Electrocution;
* Burns and electrocution;
* Leakage of oil；
* Other potential hazards.

The occurrence incidence of these potential hazards is of high level. So the following control activites must be carried out under the responsibility of the installation manager and superintendent of this project:

* Test the insulation performance of the electrical transformers once a week;
* Install leakage protection device around the electrical transformers;
* Check the operation performance of the electrical transformers every two weeks;
* Train and communicate with the relevant employees related to the installation work.

All the control activities must be witnessed and analysed by senior personnel, in order to draw all possible lessons.