# SRM VALLIAMMAI ENGINEERING COLLEGE (An Autonomous Institution)

SRM Nagar, Kattankulathur – 603 203

#### DEPARTMENT OF MECHANICAL ENGINEERING

## **QUESTION BANK**



## M.E. INDUSTRIAL SAFETY ENGINEERING III SEMESTER

1915008 OHSAS 18000 AND ISO 14000

Regulation – 2019

Academic Year 2021 - 2022

*Prepared by* 

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SUBJECT CODE/NAME: 1915008 - OHSAS 18000 AND ISO 14000

**SEM / YEAR** : III/M.E - ISE (II YEAR)

#### **UNIT I - OHSAS STANDARD**

Introduction – Development of OHSAS standard – Structure and features of OSHAS 18001 – Benefits of certification-certification procedure – OH and S management system element, specification and scope - correspondence between OHSAS 18001, ISO 14001:1996 and ISO 9001:1994 – Guidelines (18002:2000) for implementing OHSAS 18001.

|    | 100   |      |               |  |  |
|----|---|------|---------------|--|--|
|    | PART A (2 Marks)  |      |               |  |  |
| 1  | List out the OHSAS Standard.  | BT-1 | Remembering   |  |  |
| 2  | Express a short note on OHSAS policy.   | BT-2 | Understanding |  |  |
| 3  | Explain the benefits of BS OHSAS 18001 Occupational Health and Safety Management. | BT-3 | Applying      |  |  |
| 4  | Bring out the purpose of OHSAS.   | BT-4 | Analyzing     |  |  |
| 5  | Discuss basic elements of OHSAS.  | BT-5 | Evaluating    |  |  |
| 6  | Can you interpret the elements of occupational health and safety?                 | BT-6 | Creating      |  |  |
| 7  | Examine the meaning of OHSAS.   | BT-1 | Analyze       |  |  |
| 8  | Mention any two benefits of certification.  | BT-2 | Understand    |  |  |
| 9  | Write about OHSAS management system elements.                                     | BT-3 | Evaluate      |  |  |
| 10 | Analyse the key elements of a health and safety management system.                | BT-4 | Understand    |  |  |
| 11 | Examine the purpose of a health and safety management system.                     | BT-5 | Application   |  |  |
| 12 | Explain the 5 elements of safety.   | BT-6 | Remember      |  |  |
| 13 | What is the ISO 14001 standard?   | BT-1 | Application   |  |  |

| 14 | Can you brief about the scope of OH and S management system | BT-2 | Understand  |
|----|---|------|-------------|
|    | elements?   |      |             |
| 15 | Identify the features of OHSAS 18001.                       | BT-3 | Evaluate    |
| 16 | Why do you think Is OHSAS 18001 a legal requirement?        | BT-4 | Understand  |
| 17 | Define HSE Management System.                               | BT-1 | Application |
| 18 | Can you explain How is ISO measured?                        | BT-2 | Understand  |
| 19 | What does a safety management system consist of?            | BT-1 | Application |
| 20 | Why is OHSAS 18001 important?                               | BT-1 | Application |

|    | PART B (13 Marks)   |      |               |
|----|---|------|---------------|
| 1  | Explain the need to evaluate OHSMS effectiveness.                                 | BT-1 | Remembering   |
| 2  | Discuss about implement OHSAS 18001 in your organization.                         | BT-2 | Understanding |
| 3  | What are the practical steps to becoming OHSAS 18001 certified?                   | BT-3 | Applying      |
| 4  | Examine the Basic principles and methodology.                                     | BT-4 | Analyzing     |
| 5  | Elaborate List of ISO 14000 series standards.                                     | BT-5 | Evaluating    |
| 6  | Explain BS OHSAS 18001 and correspondence with other management standards.        | BT-6 | Creating      |
| 7  | Brief about OH and S management system element and its Scope.                     | BT-1 | Remembering   |
| 8  | Discuss why do organisations develop an OHSMS.                                    | BT-2 | Understanding |
| 9  | Elaborate The General Characteristics of an OHSMS.                                | BT-3 | Applying      |
| 10 | Discuss in detail about BS OHSAS 18001 requirements.                              | BT-4 | Analyzing     |
| 11 | Explain Inputs and Process of BS OHSAS 18001 requirements.                        | BT-1 | Application   |
| 12 | Discuss about Documentation of roles and responsibilities of BS OHSAS 18001.      | BT-2 | Understand    |
| 13 | What are the between OHSMS and Quality and Environment Management Systems?        | BT-1 | Application   |
| 14 | What are the Steps to OHSAS 18001 Certification.?                                 | BT-1 | Application   |
|    | PART C (15 Marks)   |      |               |
| 1  | Tabulate ISO 14001:1996 explain in detail about its Advantages and Disadvantages. | BT-1 | Remember      |
| 2  | Discuss the correspondence between OHSAS 18001, ISO 14001:1996.                   | BT-2 | Understanding |
| 3  | Point out the Guidelines of OHSAS 18001 and its Purposes.                         | BT-4 | Analyzing     |
| 4  | Explain in detail Development of OHSAS standard in Automobile industry.           | BT-1 | Remember      |

## UNIT II - OHSAS 18001 POLICY AND PLANNING

Developing OH and S policy—Guidelines — Developments - procedure - Content of OH and S policy — General principle, strategy and planning, specific goals, compliance — methodology. Planning — Guidelines, methodology steps developing action plan — Analysis and identify the priorities, objective and Targets, short term action plan, benefits and cost of each option, Development of action plan.

|    | DADT A (2 ML-)  |      |             |
|----|---|------|-------------|
|    | PART A (2 Marks)  |      |             |
| 1  | How do you develop a health and safety policy?                                  | BT-1 | Understand  |
| 2  | What are HSE policies?  | BT-2 | Remember    |
| 3  | List out the components of a health and safety policy.                          | BT-3 | Analyze     |
| 4  | Differentiate between HSE policy and HSE plan.                                  | BT-4 | Remember    |
| 5  | Write about the OHSAS 18001 fundamentals.                                       | BT-5 | Understand  |
| 6  | Give List of any four Certification process.                                    | ВТ-6 | Understand  |
| 7  | How do you draft a health and safety policy?                                    | BT-1 | Application |
| 8  | Describe the principles of occupational health and safety.                      | BT-2 | Remember    |
| 9  | How to Maintaining of OHS Policies?   | BT-3 | Remember    |
| 10 | Brief how you makes a policy statement effective.                               | BT-4 | Analyze     |
| 11 | Who should write the policy?  | BT-5 | Application |
| 12 | List out the target objective of OHSAS 18001.                                   | ВТ-6 | Analyze     |
| 13 | How can the policy be incorporated into regular workplace duties and actions?   | BT-1 | Understand  |
| 14 | List out the type of issues should the OHS policy statement cover?              | BT-2 | Analyze     |
| 15 | Discuss about a health and safety action plan.                                  | BT-3 | Application |
| 16 | Write about the process OHS Policies.   | BT-4 | Evaluate    |
| 17 | Discuss about the goal, objective and target of OHSAS 18001.                    | BT-1 | Analyze     |
| 18 | List out 5 Steps of a Safety Action Plan.                                       | BT-2 | Remember    |
| 19 | How having a policy and program can help your business.                         | BT-1 | Evaluate    |
| 20 | List out any 4 benefits of an occupational health and safety management system. | BT-1 | Understand  |

|    | PART B (13 Marks)  |      |               |
|----|--|------|---------------|
| 1  | Explain benefits of an OHS management system.                              | BT-1 | Remembering   |
| 2  | Discuss in detail about policy and its needs.                              | BT-2 | Understanding |
| 3  | Elaborate about cost of each option.                                       | BT-3 | Applying      |
| 4  | Write about the objectives of OHSAS 18001.                                 | BT-4 | Analyzing     |
| 5  | Write in detail compliance – methodology.                                  | BT-5 | Evaluating    |
| 6  | Interpret type and issues in the OHS policy.                               | BT-6 | Creating      |
| 7  | Explain advantages of an occupational health and safety management system. | BT-1 | Remembering   |
| 8  | Discuss about basic fundamentals OHSAS 18001.                              | BT-2 | Understanding |
| 9  | Brief in detail about target OHSAS 18001.                                  | BT-3 | Applying      |
| 10 | How HSE policy and plan are different?                                     | BT-4 | Analyzing     |
| 11 | Explain 5 Steps To Implement a Safety Action Plan.                         | BT-1 | Application   |
| 12 | Discuss about principles OHSAS.  | BT-2 | Understand    |
| 13 | Write brief about Analysis and identify the priorities.                    | BT-1 | Application   |
| 14 | Explain in detail about draft a safety policy and health policy.           | BT-1 | Application   |
|    | PART C (15 Marks)  |      | - 1           |
| 1  | Discuss in detail about short term action plan OHSAS with Example.         | BT-1 | Remember      |
| 2  | How do you assess OHSAS planning and its guidelines.                       | BT-2 | Understanding |
| 3  | Discuss about the strategy and planning OHSAS.                             | BT-4 | Analyzing     |
| 4  | Explain in detail about OHSAS policy developments and its procedure.       | BT-1 | Remember      |
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## UNIT III - IMPLEMENTATION AND OPERATION, CHECKING AND REVIEW

Guidelines for structure and Responsibilities, Top Management, middle level management, coordinator and employees - Developing procedures, identifying training needs, providing training, documentation of training, Training methodology consultation and communications. Checking and Review; performance measurement and monitoring, Proactive and Reactive monitoring, measurement techniques, inspections, measuring equipment - Accidents reports, Process and procedures, recording, investigation corrective action and follow up - records and records management. Handling documentation, information, records.

|    | PART A (2 Marks)   |      |             |
|----|--|------|-------------|
| 1  | Describe internal Audit.   | BT-1 | Understand  |
| 2  | Brief about Corrective actions.  | BT-2 | Remember    |
| 3  | How Create a culture of continual improvement in implement OHSAS 18001.        | ВТ-3 | Analyze     |
| 4  | Discuss About Implementation and Operation.                                    | BT-4 | Remember    |
| 5  | Quote the implementation management.   | BT-5 | Understand  |
| 6  | Brief the roles of operational management.                                     | BT-6 | Understand  |
| 7  | Classify the role of top management?   | BT-1 | Application |
| 8  | Discuss about Implementation and Operation                                     | BT-2 | Remember    |
| 9  | List out the role of middle management in the implementation of total quality. | BT-3 | Remember    |
| 10 | Write down the steps of corrective action.                                     | BT-4 | Analyze     |
| 11 | How training needs are identified?   | BT-5 | Application |
| 12 | Elaborate about implementation coordinator.                                    | BT-6 | Analyze     |
| 13 | List out the first step in the implementation process                          | BT-1 | Understand  |
| 14 | What are the different types of training needs analysis?                       | BT-2 | Analyze     |
| 15 | Outline the concept of implement a successful strategy.                        | BT-3 | Application |
| 16 | List out the stages of implementation.   | BT-4 | Evaluate    |
| 17 | Elaborate the role of an operations coordinator.                               | BT-1 | Analyze     |
| 18 | What are implementation skills in operation ?                                  | BT-2 | Remember    |
| 19 | Mention few implementation skills.   | BT-1 | Evaluate    |
| 20 | How do you implement a new procedure?  | BT-1 | Understand  |

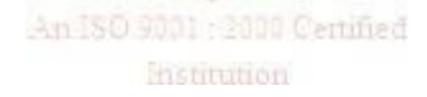
|    | PART B (13 Marks)  |      |               |
|----|--|------|---------------|
| 1  | How to determine training needs? Explain in detail.  | BT-1 | Remembering   |
| 2  | Elaborate Training and professional development.   | BT-2 | Understanding |
| 3  | Explain the steps for effective accident Investigation.  | BT-3 | Applying      |
| 4  | What critical safety and health issues should be addressed, and allocated adequate resources, in the safety and health policy? | BT-4 | Analyzing     |
| 5  | Discuss in detail about Benefits of Records Management.  | BT-5 | Evaluating    |
| 6  | Explain Preparation of operational documentation.  | BT-6 | Creating      |
| 7  | What are the Issues in monitoring and measuring a process?   | BT-1 | Remembering   |
| 8  | Explain the Standard Operating Procedures: Developing and Implementing.  | BT-2 | Understanding |
| 9  | Explain Preparation of operational documentation.  | BT-3 | Applying      |
| 10 | Discuss about monitoring and performance review.   | BT-4 | Analyzing     |
| 11 | How to Analyze the monitor workplace operations?   | BT-1 | Application   |
| 12 | Elaborate Proactive Vs Reactive Health And Safety Management.  | BT-2 | Understand    |
| 13 | Explain in detail about Process Documentation.   | BT-1 | Application   |
| 14 | Discuss Steps for Writing an Effective Accident Report.  | BT-1 | Application   |
|    | PART C (15 Marks)  |      |               |
| 1  | State and explain the types of methods used to measure performance.  | BT-1 | Remember      |
| 2  | Elaborate Steps For An Effective Records Management.   | BT-2 | Understanding |
| 3  | How will you Developing Effective Policy, Procedures and<br>Standards  | BT-4 | Analyzing     |
| 4  | Explain the implementation of measurement system analysis for assessment of machine and part variations in turning operation   | BT-1 | Remember      |

## **UNIT IV - ISO 14001**

EMS, ISO 14001, specifications, objectives, Environmental Policy, Guidelines and Principles (ISO 14004), clauses 4.1 to 4.5. Documentation requirements, 3 levels of documentation for an ISO 14000 based EMS, steps in ISO 14001. Implementation plan, Registration, Importance of ISO 14000 to the Management. Auditing ISO14000- General principles of Environmental Audit, Auditor, steps in audit, Audit plan.

|    | PART A (2 Marks)   |      |             |  |  |
|----|--|------|-------------|--|--|
| 1  | Examine is environmental management system ISO 14001.            | BT-1 | Understand  |  |  |
| 2  | Define EMS procedures.   | BT-2 | Remember    |  |  |
| 3  | What is the ISO 14001 standard?                                  | BT-3 | Analyze     |  |  |
| 4  | Discuss about legal requirements for ISO 14001.                  | BT-4 | Remember    |  |  |
| 5  | List out the principles of the ISO 14001.                        | BT-5 | Understand  |  |  |
| 6  | Discuss concept of environmental management.                     | BT-6 | Understand  |  |  |
| 7  | List out the steps in ISO 14001.                                 | BT-1 | Application |  |  |
| 8  | Give some importance of environmental management system.         | BT-2 | Remember    |  |  |
| 9  | Illustrate difference between ISO 14000 and 1400.                | BT-3 | Remember    |  |  |
| 10 | What is an environmental audit?                                  | BT-4 | Analyze     |  |  |
| 11 | Discuss about the objective of environmental management.         | BT-5 | Application |  |  |
| 12 | Explain procedures for Implement EMS.                            | BT-6 | Analyze     |  |  |
| 13 | List out few benefits of ISO 14001.                              | BT-1 | Understand  |  |  |
| 14 | Discuss the three components of environmental management.        | BT-2 | Analyze     |  |  |
| 15 | Provide short notes on ISO 14001 audit.                          | BT-3 | Application |  |  |
| 16 | What is the aim of an ISO 14001 environmental management system? | BT-4 | Evaluate    |  |  |
| 17 | Describe the types of environmental management.                  | BT-1 | Analyze     |  |  |
| 18 | Name some levels of documentation for an ISO 14000 based EMS.    | BT-2 | Remember    |  |  |
| 19 | List out any four Steps to ISO 14001 Certification.              | BT-1 | Evaluate    |  |  |
| 20 | Examine the purpose of ISO 14001.                                | BT-1 | Understand  |  |  |
|    |  |      |             |  |  |

|    | PART B (13 Marks)  |      |               |
|----|--|------|---------------|
| 1  | Who should complete an environmental audit? explain in detail.                   | BT-1 | Remembering   |
| 2  | Discuss The Benefits of ISO 14000 certification.                                 | BT-2 | Understanding |
| 3  | Write in detail about Other issues of. ISO 14000.                                | BT-3 | Applying      |
| 4  | Explain the Environmental Policy of the EMS ISO 14001:2015.                      | BT-4 | Analyzing     |
| 5  | Elaborate 4.2.3 Control of documents ISO 9001 requirement.                       | BT-5 | Evaluating    |
| 6  | Discuss in detail about steps for ISO 14001 Certification.                       | BT-6 | Creating      |
| 7  | Write in detail about Costs of ISO 14000 certification.                          | BT-1 | Remembering   |
| 8  | Brief about Internal Audits in the EMS and its Five Main Steps.                  | BT-2 | Understanding |
| 9  | Discuss in detail ISO 9001-Clause 4.1.   | BT-3 | Applying      |
| 10 | List out Top tips for implementing ISO 14001 in detail.                          | BT-4 | Analyzing     |
| 11 | Explain in detail Purposes and Advantages of the ISO 14001 Audit.                | BT-1 | Application   |
| 12 | Discuss about Clause 5.2: Environmental policy.                                  | BT-2 | Understand    |
| 13 | What is ISO 14004:2016? Explain in detail.                                       | BT-1 | Application   |
| 14 | List out in detail about 4.2 Documentation requirements.                         | BT-1 | Application   |
|    | PART C (15 Marks)  |      |               |
| 1  | Write your understanding about on ISO 14000 based EMS and how you will evaluate. | BT-1 | Remember      |
| 2  | Give a detailed report on Audit plan.  | BT-2 | Understanding |
| 3  | Give your suggestions for improving Auditing ISO14000.                           | BT-4 | Analyzing     |
| 4  | Elaborate specifications of ISO 14001.   | BT-1 | Remember      |



## UNIT V- ENVIRONMENT IMPACT ASSESSMENT

ISO 14040(LCA), General principles of LCA, Stages of LCA, Report and Review. ISO 14020 (Eco labeling) – History, 14021, 14024, Type I labels, Type II labels, ISO 14024, principles, rules for eco labeling before company attempts for it. Advantages. EIA in EMS, Types of EIA, EIA methodology EIS, Scope, Benefits. Audit-methodology, Auditors Audit results management review-Continual improvement.

|    | PART A (2 Marks)   |          |             |
|----|--|----------|-------------|
| 1  | Examine is iso14040.   | BT-1     | Understand  |
| 2  | Discuss about the three types of ISO 14020 Environmental labels. | BT-2     | Remember    |
| 3  | Why is eco Labeling important?                                   | BT-3     | Analyze     |
| 4  | How do you analyze LCA and interpretation.                       | BT-4     | Remember    |
| 5  | Discuss about environmental Labeling.                            | BT-5     | Understand  |
| 6  | Explain ISO 14021.   | BT-6     | Understand  |
| 7  | What are the 4 stages of LCA?                                    | BT-1     | Application |
| 8  | How is lifecycle assessment valuable?                            | BT-2     | Remember    |
| 9  | State the EIA Stands for and its meanings?                       | BT-3     | Remember    |
| 10 | List out is a functional unit in LCA.                            | BT-4     | Analyze     |
| 11 | Outline the concept of ISO 14024.                                | BT-5     | Application |
| 12 | Show the difference between EIA and EMP.                         | BT-6     | Analyze     |
| 13 | Does LCA important?.   | BT-1     | Understand  |
| 14 | Give some two benefits of becoming eco certified?                | BT-2     | Analyze     |
| 15 | Brief about LCA report.  | BT-3     | Application |
| 16 | Why EMS is required?   | BT-4     | Evaluate    |
| 17 | Brief out first stage of EMS process.                            | BT-1     | Analyze     |
| 18 | What is the difference between QMS and EMS?                      | BT-2     | Remember    |
| 19 | Which EMS model is most well known?                              | BT-1     | Evaluate    |
| 20 | What is eco certified?   | BT-1     | Understand  |
|    | PART B (13 Marks)  | <u> </u> | 1           |
| 1  | Explain in detail about life cycle assessment.                   | BT-1     | Remembering |
|    |  |          |             |

| 2  | Elaborate the different types of eco labels .                                    | BT-2 | Understanding |
|----|--|------|---------------|
| 3  | Discuss in detail about LCA Methodology and 4 Stages of Life Cycle Assessment.   | BT-3 | Applying      |
| 4  | Explain in detail about EIA process.   | BT-4 | Analyzing     |
| 5  | Can you explain Monitoring and Post-auditing in Environmental Impact Assessment. | BT-5 | Evaluating    |
| 6  | Discuss Economic Analysis of Eco labels.   | BT-6 | Creating      |
| 7  | Explain in detail EIA Auditing Process   | BT-1 | Remembering   |
| 8  | Elaborate Eco label and its Innovation Life Cycle                                | BT-2 | Understanding |
| 9  | Discuss in detail about EMS and its Process                                      | BT-3 | Applying      |
| 10 | Express your views on approach to LCA has been formalised in ISO norms 14040/44. | BT-4 | Analyzing     |
| 11 | List out The most common the advantages and disadvantages of eco labels.         | BT-1 | Application   |
| 12 | Explain Semi Type I Eco label  | BT-2 | Understand    |
| 13 | Write brief about iso14024   | BT-1 | Application   |
| 14 | What is EIA & EMS and its Difference?  | BT-1 | Application   |
|    | PART – C (15 Marks)  |      |               |
| 1  | Explain in detail about ISO 14040(LCA).  | BT-1 | Remember      |
| 2  | Elaborate Type II labels ,and ISO 14024.   | BT-2 | Understanding |
| 3  | Analyze detail about Audit-methodology   | BT-4 | Analyzing     |
| 4  | Give your views on Stages of LCA and its report.                                 | BT-1 | Remember      |

