







Assessment Guide

Basics of Occupational Hazards and Risk Management

NSQF Level – 4

Sector: Cross Sectoral

Occupation: Occupational Safety Health & Environment (OSHE) Engineering & Management

MC Code: SSD/M0101

Version: 1.0







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Micro Credentials Structure

To achieve full certification as Basics of Occupational Hazards and Risk Management, trainees must complete all four units and pass assessments. The assessments will comprise of theory & practical tests.

| Sl. no | Unit No. | Title | Assessment method |
|--------|----------|-----------------------------|---|
| 001 | Module 1 | Identify and assess | The assessment will be made for the |
| | | potential hazard in a | competencies required by the trainee on |
| | | workplace | skills, knowledge & understanding of various |
| | | | types of workplace hazards, their |
| | | | identification, classification, and risk |
| | | | mitigation through planning and |
| | | | management. Candidates will be assessed |
| | | | on their ability to recognize hazards, and risk |
| | | | levels using standard methods. |
| 002 | Module 2 | Evaluate the likelihood and | The assessment will be made for the |
| | | severity of potential harm | competencies required by the trainee on |
| | | | skills, knowledge & understanding of |
| | | | evaluating the likelihood and severity of |
| | | | potential harm in the workplace. The |
| | | | assessment will be based on theory, viva- |
| | | | voice or practical. |
| 003 | Module 3 | Monitor the health of | The assessment will be made for the |
| | | workers who may be | competencies required by the trainee on |
| | | exposed to specific | skills, knowledge & understanding of |
| | | hazards. Address | monitoring the health of workers who may |
| | | psychosocial risks & | be exposed to specific workplace hazards. |
| | | worker mental health | The assessment will also evaluate the |
| | | issues | trainee's understanding of psychosocial |







| | | | risks. The assessment will be based on |
|-----|----------|----------------------------|---|
| | | | theory, viva- voice or practical. |
| 004 | Module 4 | Consider physical layout & | The assessment will be made for the |
| | | design of the workplace. | competencies required by the trainee on |
| | | Devise risk management | skills, knowledge & understanding of how |
| | | strategies | workplace layout and design impact health |
| | | | and safety. Trainees will also be assessed on |
| | | | their ability to propose design-based risk |
| | | | mitigation strategies and engineering |
| | | | controls that improve overall safety. The |
| | | | assessment will be conducted through |
| | | | scenario-based questions, MCQs, practical |
| | | | & viva- voice |

Guidance for assessors

This Micro Credential provides the performance criteria, skills and knowledge required to perform for the job role of Basics of Occupational Hazards and Risk Management at NSQF Level 4. The role is referred to as 'Basics of Occupational Hazards and Risk Management.'

Brief MC description: The Micro Credential describes the various workplaces risks & hazards, their identification, and remedial steps to ensure safety at workplaces and risk management. The MC helps management staff in understanding occupational hazards and timely mitigation through planning & management.

Personal attributes: He/She should be physically & mentally fit and should be able to provide design advice on the suitability of specialized scaffolds to meet the health and safety requirements regarding design and technical advice on scaffolding works.







Introduction to assessments:

The assessment will be made based on the competencies required by the trainees to perform the job role of Basics of Occupational Hazards and Risk Management. The assessment will be based on understanding, practical demonstration and on the job training as defined in the performance criteria & practical skill defined in the Micro Credential. The trainees will be required to complete a number of assignments to show their skills & understanding of the subject through theory, demonstration and practical performances.

Grading and pass percentage

- 1. The assessment consists of two categories:
 - a. Practical Assessment to assess the practical performance skills.
 - b. Theory Assessment to assess knowledge & understanding of the domain.
- 2. The weightage of the assessment will be:
 - a. Practical Assessment 50%
 - b. Theory Assessment 50%
- 3. Performance Criteria (PC) has been assigned marks proportional to its importance. Proportion of marks for Theory and Practical has been marked PC wise.
- 4. Questions on practical & theory will be formed in such a way as to provide an outcome on maximum Performance Criteria and in proportional way within the MC.
- 5. The assessment for the theory part will be based on written questions (short questions, multiple choice & viva, or a combination of them) created/approved by the SSDF.
- 6. The assessment for the practical part will be based on practical conducted for trainees. In case of remote/on-line assessments, the practical's can be carried through proctors or practical questions formulated based on pictorially represented logical questions (based on pictures of practical & logical steps) created/approved by the SSDF.
- 7. The certificate on MC will be issued to successful candidates who score 50% or more than 50%
- 8. Any candidate can ask for re-assessment in the MC to improve his/her performance within three months from the date of publication of the results and after payment of the assessment fee. But if







any candidate wants re-assessment after three months from the date of publication of results, he/she will have to appear in the micro credential.

2.1 Performance/Skill Assessments

The performance/skill assessment will be conducted through demonstration/practical.

Module 1: Identify and assess potential hazard in a workplace

The trainee should demonstrate the ability to identify, assess, and manage workplace hazards by collecting relevant information, conducting regular inspections, and evaluating risks based on severity and likelihood. They must investigate incidents to uncover root causes, develop appropriate control measures, and engage workers in hazard identification and solution development.

Module 2: Evaluate the likelihood and severity of potential harm

The trainee should demonstrate the ability to evaluate workplace risks by accurately analyzing both the likelihood of occurrence and the potential severity of harm associated with identified hazards. This includes using standard tools such as risk matrices or scoring systems to categorize risks and prioritize them based on their impact on health, safety, and operations.

Module 3: Monitor the health of workers who may be exposed to specific hazards. Address psychosocial risks & worker mental health issues

The trainee should demonstrate the ability to monitor the health of workers who may be exposed to physical, chemical, biological, or ergonomic hazards by identifying at-risk individuals and ensuring regular health surveillance, screenings, and medical evaluations are conducted in accordance with regulatory guidelines. The trainee must also recognize psychosocial risks such as work-related stress, harassment, fatigue, or isolation, and promote mental health by fostering a supportive work environment, encouraging open communication, and referring affected individuals to appropriate support services.

Module 4: Consider physical layout & design of the workplace. Devise risk management strategies

The trainee should demonstrate the ability to evaluate the physical layout and design of the workplace to identify design-related risks that may impact safety, efficiency, or accessibility. They must assess







factors such as space utilization, equipment placement, lighting, ventilation, workflow, and emergency access. The trainee should apply ergonomic and human-centered design principles to reduce risk and enhance worker comfort.

Performance/Skill Assessments

The assessment will be conducted in a simulated working environment. Due to this fact, the assessors must note that the naturally occurring evidence of competence is unavailable or infrequent. Simulation must be undertaken in a Realistic Working Environment which provides an environment that replicates the key characteristics of the workplace in which the skill to be assessed is normally employed.

Scheduling the practical observations is flexible but to retain integrity of the assessment, they should be conducted as closely as possible to the written assessments.

Trainees are not permitted to use the observation checklist to work when completing the practical tasks but may familiarize themselves with it prior to an assessment.

It will be beneficial to take trainees through what is required in the practical assessments and the way in which each part will be graded. Trainees should have an opportunity to familiarize themselves with the way the tasks are graded.

Trainees may refer to their faculty for guidance on parts of the practical assignments only, though they should be aware that, especially for the practical assessments, the amount of guidance and support they are given may be reflected in the feedback and performance.

Knowledge Assessment

Synoptic test is an MCQ (Multiple Choice Question) test to assess the underpinning knowledge. The synoptic MCQ tests are externally set and externally marked.

This test is to be taken by the trainee after completion of all the units under controlled and invigilated conditions as closed-book test under the supervision of an assessor. Trainees can only achieve whole marks; half marks for partially answered questions are not permitted. Selection of two or more options will be marked as wrong.







The answers should be marked by pen only. The test may be conducted by the assessor in the oral mode, if required, considering the lack of reading and comprehending acumen (skills) of trainees. In such cases, the assessor will mention it on top of the MCQ submitted.

Grading criteria for Performance/Skill Assessments

| MC No. | Title | Performance | Assessment | Min. | Assessment |
|-----------|----------------------|-------------|------------|---------|---------------------|
| | | & Knowledge | Marks | Passing | Result (Total |
| | | Assessment | | marks | Passing Marks) |
| SSD/M0101 | Basics of | 1 hour | 100 | 50% | 50 marks or more |
| | Occupational Hazards | | | | than 50 marks- |
| | and Risk Management | | | | Pass ; Less than 50 |
| | | | | | marks-Fail |

2.2 Viva Assessment

Trainees may be required to take the viva test for their theory or their practical observation test which is an extended part of the practical observation and assessment. The viva assessments are externally set and externally marked.

2.3 Question papers for synoptic test

The question paper of the synoptic test is a confidential document. It will be held under the custody of SSDF/Assessment Agencies. The assessment agencies can be permitted to prepare the question papers and get them approved from SSDF. The centers need to follow the indenting process to obtain the question paper to administer the test.

2.4 Authenticity

Centers are reminded to check for authenticity of work where trainees may be using texts and the internet to complete tasks.

2.5 Feedback

Assessors must provide feedback on every occasion when a skills observation takes place. A proforma for feedback is included in this assessment guide.







2.6 Trainee records of coursework

Trainees should be encouraged to keep their work carefully in a portfolio or scrapbook. This may be an unfamiliar form of record keeping for some, but it is a good discipline which will benefit them when they progress in their learning and training.

2.7 Assessment sheets

The assessment records will be maintained as per the assessment sheet given in this document.

2.8 Codes of practice

Safe working practices, health and safety and codes of practice associated with the industry must always be adhered to.

2.9 Health and safety

The requirement to follow safe working practices is an integral part of all assessments and it is the responsibility of centers to ensure that all relevant health and safety requirements are in place before trainees start practical assessments.

Should a trainee fail to follow health and safety practice and procedures during an assessment, the assessment must be stopped and the trainee be advised of the reasons. In case of doubts, guidance should be sought from the SSDF.

2.10 Verification of assignments

By using marking checklists, verifiers can check that evidence for an assignment is complete and can ensure that allocation of marks has been fair and beyond dispute.

2.11 Internal quality assurance

Approved centers must have effective quality assurance systems to ensure optimum delivery and assessment of MC

Quality assurance includes initial center approval, Micro Credential approval and the Centre's own internal procedures for monitoring quality. Centers are responsible for internal quality assurance and SSDF and Assessment Agency are jointly responsible for external quality assurance.







Full details and guidance on the internal and external quality assurance requirements and procedures are provided by SSDF from time to time.

The Assessment Agencies are required to retain copies of trainees' assessment records and photographic evidence (in presence of trainee performing task) for three years after assessment. They can be asked by SSDF to provide these evidences as proof of assessment.

2.12 Evidence Collection by the Assessor

- The assessor needs to collect a copy of the attendance for the training done. The attendance sheet needs to be signed by the Training Centre Head.
- The Centre head also needs to declare that all the students appearing in the assessments have a minimum attendance of 70% for the training.
- The assessor needs to verify the authenticity of the candidate by checking the photo ID card issued by the institute as well as any one Photo ID card issued by the Central/ State Government.
- The same needs to be mentioned in the attendance sheet. Wherever required, the assessor can authenticate, and cross verify trainee's credentials in the enrollment form.
- The assessor needs to punch the trainee's roll number on all the final job pieces of learners.
 Different sections can have alpha numbering such as if a student's roll number is 123 then the three pieces submitted by that student can be numbered as 123a, 123b and 123c.
- The assessor needs to take a group photograph of all the students along with the assessor standing in the middle and with the Centre name/banner at the back, as evidence.
- The assessor needs to carry a camera to click photographs of the trainees working on the job and give theory exam as evidence with geo tagged, timestamp.
- The assessor also needs to carry a photo ID card.
- In the Assessment Evidence Form (provided after the practical marks sheet), the assessor should place the final photographic evidence in the space provided as evidence, from appropriate angles/sides of the final job piece submitted.







Trainee Guidance

Information for trainees

The assessment requires a trainee to perform a combination of tasks as given below:

The trainee will be required to demonstrate the occupational skills, knowledge, understanding and competencies mentioned in the Micro Credential.

Before the final assessments

The training partner (TP) will ensure that the trainees are ready for the assessment. The date and time of assessment would be intimated by the SSDF.

The trainee is required to reach the assessment venue at the scheduled date and time. TP is required to circulate/download the information regarding the assessment to the trainee. Failure to reach the assessment venue for the theory or the practical test as per the schedule would be considered absent. In exceptional cases, an assessor can give a maximum of half an hour of concession time for late coming.

The trainee is required to carry their Institutes photo ID card as well as a government issued photo ID card for verification on all days of assessments.

Any misbehavior/unethical practice by a trainee would lead to disqualification of the trainee.

The first assessment will have the theory test followed by practical and may be viva in smaller batches. (20- 30 trainees)

Assessments

Assessments for the job role of Basics of Occupational Hazards and Risk Management are conducted to gauge and assess the trainees' competencies and professional expertise as well as their skill and knowledge in the specified job role for Basics of Occupational Hazards and Risk Management.

During the practical task, trainees will be assessed on their workmanship, quality of finished products, time management, etc., based on the performance criteria (PC), knowledge and understanding and







their professional and soft skills as specified in the Micro Credential. They will be graded for all their assessments based on the approved assessment strategy of the Micro Credential. The performance criteria checklist as a guide for all Micro Credential is given in Practical Observation Checklist. Assessment tools and sample set of practical, theory & viva questions for each MC, assessment evidence, overall summary, and MC wise summary are also listed.







Practical Observation Checklist

| Basics of Occupation | nal Hazards and Risk Management | t | |
|----------------------|---------------------------------|------------|--|
| 1. Learner Name: | 2. Enrolment No: | 3. Centre: | |
| Ouidence to coocea | | | |

Guidance to assessors:

- 1. The assessor must exhibit the observation checklist to the learners before the commencement of the practical and explain to them how the learners will be observed and graded during the practical assessment. However, the learners are not allowed to use the practical observation checklist during the assessment or task.
- 2. The assessor must ensure that all the tools listed in the "List of Tools" are made available by the center to every learner being assessed.

| Performance Criteria | Theory marks | Practical marks | Project Marks | Viva marks |
|---|-----------------|--------------------|------------------|---------------|
| PC-1: Collect and review information about the hazards present or likely to be present in the workplace. | 5 | 5 | - | - |
| PC-2: Identify potential risks to the workers due to hazards and measures for safety to be taken. | 5 | 5 | - | - |
| PC-3: Conduct initial and periodic workplace inspections of the workplace to identify new or recurring hazards. | 5 | 5 | - | - |
| PC-4: Investigate injuries, illnesses, incidents, and close calls/near misses to determine the underlying | 5 | 5 | - | - |







| and health program shortcomings. PC-5: Assess the consequences of a potential risk and determine the likelihood of a risk occurring & reoccurring. PC-6: Develop measures and response to each risk based on its severity & impact. PC-7: Involve workers in measures & control, provide employees with opportunities to identify and solve workplace problems. PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation & rescue plans. | hazards, their causes, and safety | | | | |
|---|---|----|-------------|---|---|
| of a potential risk and determine the likelihood of a risk occurring & reoccurring. PC-6: Develop measures and response to each risk based on its severity & impact. PC-7: Involve workers in measures & control, provide employees with opportunities to identify and solve workplace problems. PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | and health program shortcomings. | | | | |
| the likelihood of a risk occurring & reoccurring. PC-6: Develop measures and response to each risk based on its severity & impact. PC-7: Involve workers in measures & control, provide employees with opportunities to identify and solve workplace problems. PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | PC-5: Assess the consequences | | | | |
| the likelihood of a risk occurring & reoccurring. PC-6: Develop measures and response to each risk based on its severity & impact. PC-7: Involve workers in measures & control, provide employees with opportunities to identify and solve workplace problems. PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | of a potential risk and determine | 5 | 5 | | |
| PC-6: Develop measures and response to each risk based on its severity & impact. PC-7: Involve workers in measures & control, provide employees with opportunities to identify and solve workplace problems. PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | the likelihood of a risk occurring & | 5 | 5 | - | - |
| response to each risk based on its severity & impact. PC-7: Involve workers in measures & control, provide employees with opportunities to identify and solve workplace problems. PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | reoccurring. | | | | |
| severity & impact. PC-7: Involve workers in measures & control, provide employees with opportunities to identify and solve workplace problems. PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and well-being. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | PC-6: Develop measures and | | | | |
| PC-7: Involve workers in measures & control, provide employees with opportunities to identify and solve workplace problems. PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | response to each risk based on its | 5 | 5 | - | - |
| control, provide employees with opportunities to identify and solve workplace problems. PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 5 5 5 | severity & impact. | | | | |
| opportunities to identify and solve workplace problems. PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and well-being. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 5 | PC-7: Involve workers in measures & | | | | |
| workplace problems. PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | control, provide employees with | | | | |
| PC-8: Analyze the workplace & consult employees in ergonomic design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | opportunities to identify and solve | 5 | 5 | - | - |
| consult employees in ergonomic design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 5 5 5 | workplace problems. | | | | |
| design to reduce the risk of injury and promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 5 5 | PC-8: Analyze the workplace & | | | | |
| promote long- term health and well-being. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | consult employees in ergonomic | | | | |
| promote long- term health and wellbeing. PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | design to reduce the risk of injury and | 5 | 5 | _ | _ |
| PC-9: Plan & implement preventive measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | promote long- term health and well- | 3 | J | | _ |
| measures to reduce risks and reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 4 3 | being. | | | | |
| reporting of any incidents. PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | PC-9: Plan & implement preventive | | | | |
| PC-10: Prepare to have multiple plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | measures to reduce risks and | 4 | 3 | - | - |
| plans or options based on various scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | reporting of any incidents. | | | | |
| scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | PC-10: Prepare to have multiple | | | | |
| scenarios & by leveraging best practices. PC-11: Plan for emergency situation 3 4 | plans or options based on various | 3 | 3 | - | - |
| PC-11: Plan for emergency situation 3 4 | scenarios & by leveraging best | - | _ | | |
| 3 4 | practices. | | | | |
| | PC-11: Plan for emergency situation | 3 | Λ | _ | _ |
| | & rescue plans. | 3 | | _ | - |
| MC Total Marks 50 50 | MC Total Marks | 50 | 50 | - | - |







Tools, materials, and consumable list

List of Tools and Equipment

Batch Size: 30

| S. No | Tools/Equipment Name | Specifications | Quantity for specified Batch Size |
|-------|--|----------------|------------------------------------|
| 1. | Safety goggles | Nos | 2 |
| 2. | Full face shield | Nos | 1 |
| 3. | Leather gloves | Nos | 2 |
| 4. | Puncture resistant gloves | Nos | 2 |
| 5. | Chemical resistant gloves | Nos | 2 |
| 6. | Electrically insulated latex gloves | Nos | 2 |
| 7. | Safety helmet/hard hats | Nos | 2 |
| 8. | Ear plugs | Nos | 2 |
| 9. | Safety shoes | Nos | 2 |
| 10. | Safety gumboots | Nos | 2 |
| 11. | High visibility jackets | Nos | 2 |
| 12. | N95 masks | Nos | 2 |
| 13. | Double filter half face mask | Nos | 2 |
| 14. | Double filter full face mask | Nos | 2 |
| 15. | SCBA- Self-contained breathing apparatus | Nos | 1 |







| 16. | Safety harness | Nos | 1 |
|-----|---------------------------------------|-----|---|
| 17. | Lanyard | Nos | 1 |
| 18. | Fall arrestor | Nos | 1 |
| 19. | CO2 Fire extinguisher | Nos | 1 |
| 20. | Dry Chemical Powder Fire extinguisher | Nos | 1 |
| 21. | Fire hydrant system | Nos | 1 |
| 22. | Multiple gas detector | Nos | 1 |
| 23. | TDS Meter | Nos | 1 |

Classroom Aids:

The aids required to conduct sessions in the classroom are:

- 1. Black/White board
- 2. Marker
- 3. Projector
- 4. Computer with relevant software



04





| Asses | ssment | Method/Tools | | |
|-----------------------------------|---|--|-----------|--|
| PC-1: work | | and review information about the | hazard | s present or likely to be present in the |
| A. Pra | ctical Qu | uestion | | (5*1=5 Marks) |
| instru Ques Descr inforn | re newly cts you to tion: ibe the nation. Ind | step-by-step approach you wou | e environ | Before any work starts, the supervisor ment. to collect and review hazard-related how you would ensure the accuracy and |
| B. Mu | ltiple Ch | oice Question | | (5*1=5 Marks) |
| 01 | Which o workpla | | ensive a | pproach for identifying hazards in the |
| | | A. Employee surveys | | B. Workplace walkthroughs |
| | | C. Historical accident records | | D. Hazard identification through risk matrix |
| 02 | When re | eviewing a workplace for potential ha | azards, v | what is the most crucial initial action? |
| | | A. Assessing the adequacy of personal protective equipment (PPE) | | B. Reviewing past incident reports |
| | | C. Inspecting workstations for ergonomic risks | | D. Identifying potential sources of energy release |
| 03 | Which d | ata source is most dependable whe | en review | ring chemical hazards in a workplace? |
| | | A. Safety Data Sheets (SDS) | | B. Employee reports |
| | | C. Environmental impact assessments | | D. Regulatory compliance reports |

What is a key element of hazard review for a construction site?







| | | A. Evaluating noise levels | | B. Assessing machinery vibration |
|--------------------------|---|---|------------|---|
| | | C. Ensuring proper ventilation. | | D. Identifying structural integrity risks |
| 05 | How do | you prioritize the hazards identified | during a | workplace review? |
| | | A. Based on the frequency of occurrence | | B. Based on severity and likelihood of impact |
| | | C. Based on historical data alone. | | D. Based on the ease of mitigation |
| PC-2: | Identify | potential risks to the workers due | to hazar | ds and measures for safety to be taken. |
| A. Pra | ctical Qu | uestion | | (5*1=5 Marks) |
| and w Quest Identi | re working orkers are t ion: fy the pot | e not wearing dust masks. | situation | t is accumulating near cutting machines, . What immediate and long-term safety |
| B. Mu | ltiple Ch | oice Question | | (5*1=5 Marks) |
| 06 | What is | the most effective method for identi | fying risl | ks associated with electrical hazards? |
| | | A. Insulating the wiring | | B. Conducting a risk assessment based on exposure. |
| | | C. Using non-contact voltage testers | | D. Installing warning signage on equipment |
| 07 | | of the following measures is most surfaces? | effective | e in preventing fall-related accidents on |
| | | A. Personal fall arrest systems | | B. Warning signs at entrances |
| | | C. Using guardrails only. | | D. Installing non-slip surfaces on floors |
| 80 | | risk control measure is considered al exposure | l most e | effective in the hierarchy of controls for |







| | | A. Substitution of hazardous materials | | B. Administrative controls (e.g., job rotation) |
|-------------------------|--|---|----------|--|
| | | C. Providing personal protective equipment (PPE) | | D. Installing local exhaust ventilation systems |
| 09 | Which warehou | , , | ks due | to manual handling of materials in a |
| | | A. Ergonomic assessment of workstation setups | | B. Reviewing accident logs |
| | | C. Employee feedback through interviews | | D. Monitoring load weights and handling frequencies |
| 10 | When e | | zards in | a laboratory, which of the following is |
| | | A. Ensuring laboratory layout conforms to safety standards | | B. Using a risk matrix to rank exposure levels |
| | | C. Regularly disinfecting surfaces | | D. Identifying potential vectors of transmission |
| | | | | |
| | Conduc ring haza | | spectio | ns of the workplace to identify new or |
| recur | | rds. | spectio | ns of the workplace to identify new or (5*1=5 Marks) |
| A. Pra | ring haza nctical Qu are perio | uestion | | |
| A. Pra | ring haza nctical Qu are period performin | uestion dic workplace inspections necessar | | (5*1=5 Marks) |
| A. Pra | ring haza nctical Quare perior performin ltiple Ch | uestion dic workplace inspections necessaring such inspections?" oice Question | y, and w | (5*1=5 Marks) That key elements would you include |
| A. Pra "Why while B. Mu | ring haza nctical Quare perior performin ltiple Ch | uestion dic workplace inspections necessaring such inspections?" oice Question periodic workplace inspection, whi | y, and w | (5*1=5 Marks) That key elements would you include (5*1=5 Marks) |
| A. Pra "Why while B. Mu | ring haza nctical Quare perior performin ltiple Ch | dic workplace inspections necessaring such inspections?" oice Question periodic workplace inspection, while hazards A. High-risk machinery | y, and w | (5*1=5 Marks) that key elements would you include (5*1=5 Marks) e following should be prioritized to assess |







| | | A. Randomly inspect different departments | | B. Reviewing past inspection reports |
|---------|-----------------|--|-----------|---|
| | | C. Asking employees for immediate feedback | | D. Using a checklist designed for specific hazards |
| 13 | Which in areas? | nspection technique is most approp | oriate fo | r identifying chemical hazards in storage |
| | | A. Visual inspection for spills or leaks | | B. Gas detector monitoring |
| | | C. Manual checks of storage containers for proper labelling | | D. Auditing the safety training records |
| 14 | How free | , | ns be co | onducted to ensure that new hazards are |
| | | A. Annually | | B. Quarterly |
| | | C. Monthly | | D. Continuously, on an ongoing basis |
| 15 | What is | the primary purpose of conducting | both init | ial and periodic inspections? |
| | | A. Ensure employee compliance. | | B. Evaluate the effectiveness of previous controls |
| | | C. Create reports for regulatory compliance. | | D. Implement new safety policies |
| | _ | ite injuries, illnesses, incidents, ards, their causes, and safety and | | se calls/near misses to determine the program shortcomings. |
| A. Prac | ctical Que | estion | | (5*1=5 Marks) |
| | • | ting a workplace incident, what step ecurring?" | os would | I you take to identify the root cause and |
| B. Mult | iple Cho | ice Question | | (5*1=5 Marks) |







| | | f the following is the most effective conjury? | way to i | nvestigate the underlying cause of a | |
|----|--|--|-----------|---|--|
| | | A. Reviewing the incident report | | B. Interviewing the injured employee and witnesses. | |
| | | C. Implementing corrective actions immediately. | | D. Assessing historical safety data for trends | |
| 17 | Which | method is most appropriate for inve | stigatin | g a near-miss incident? | |
| | | A. Incident root cause analysis | | B. Analysing work shifts and schedules | |
| | | C. Implementing immediate changes to procedures. | | D. Documenting and filing an incident report. | |
| 18 | After investigating an incident, what should be the first step in addressing safety program shortcomings | | | | |
| | | A. Identifying corrective actions | | B. Enhancing worker training programs | |
| | | C. Revising safety policies | | D. Auditing management involvement | |
| 19 | Which | tool is commonly used to trace the i | root cau | se of an incident in a systematic manner? | |
| | | A. Fishbone diagram (Ishikawa) | | B. Risk matrix | |
| | | C. Job Safety Analysis (JSA) | | D. Failure Mode and Effects Analysis (FMEA) | |
| 20 | In the inv | vestigation of workplace illnesses, v | vhat is t | he most critical aspect to examine? | |
| | | A. Personal hygiene practices of the affected employee | | B. The chemical composition of substances managed | |







| | | C. Patterns in pi incidents | revious illnes: | S | D. The ergonomic setup of workstations |
|---------------------|-----------|--|-----------------|------------|--|
| PC-5: A: & reocc | | e consequences of | a potential ris | k and de | etermine the likelihood of a risk occurring |
| A. Pract | tical Que | estion | | | (5*1=5 Marks) |
| Scenari | o: | | | | |
| | onth. The | | • | - | g machine has short-circuited twice in the ilation and there are flammable materials |
| Questic | n: | | | | |
| | - | r, how would you as actions would you r | | quences | s and the likelihood of this risk reoccurring? |
| B. Multi | ple Cho | ce Question | | | (5*1=5 Marks) |
| | Which m | | used to assess | the likel | ihood and severity of a potential risk in the |
| | | A. Bowtie Analysis | | | B. Risk Assessment Matrix |
| | | C. Root Cause Anal | ysis | | D. Fault Tree Analysis |
| | | ssessing the conse | quences of a | chemica | al spill, which factor is most important in |
| | | A. The quantity involved | of chemica | l | B. The toxicity of the chemical |
| | | C. The response emergency teams | e time o | f | D. The weather conditions during the spill |
| 23 | What is t | the primary purpose | of determining | g the like | elihood of a risk reoccurring |







| | | A. Decide on the necessary level of insurance coverage | | B. Allocate resources for risk mitigatio effectively | n |
|----------|---------------|--|-----------|--|---|
| | | C. Meet regulatory compliance requirements | | D. Design workplace training programs | |
| 24 | Which | of the following is essential when as | sessing | the consequences of a high-risk scenario | ? |
| | | A. The fiscal impact of potential losses | | B. The availability of backup resources | |
| | | C. The reputation damage to the organization | | D. The potential for worker injury of fatality | r |
| 25 | Which industr | · | occurre | ence probability of a risk in a high-hazar | d |
| | | A. Monte Carlo Simulation | | B. Delphi Method | |
| | | C. Event Tree Analysis | | D. Sensitivity Analysis | |
| PC-6: D | evelop n | neasures and response to each ris | sk base | d on its severity & impact | |
| A. Pract | tical Que | estion | | (5*1=5 Marks) | |
| | | cide what control measures to impl uence the type and urgency of the re | | when a risk is identified in the workplace e?" | ? |
| B. Multi | ple Cho | ice Question | | (5*1=5 Marks) | |
| 26 | Which ri | sk response strategy involves transf | erring th | ne risk to a third party? | |
| | | | | | |
| | | A. Risk avoidance | | B. Risk retention | |







| 27 | What is the primary goal of the mitigation measures for high-impact risks | | | | |
|----|--|--|-----------|--|--|
| | | A. Reduce the cost of safety equipment. | | B. Eliminate the risk entirely | |
| | | C. Reduce the likelihood and severity of the risk | | D. Transfer the responsibility to contractors | |
| 28 | When a | assessing the effectiveness of risk m | itigatio | n, which factor is most crucial | |
| | | A. The cost of implementing mitigation strategies | | B. Employee training hours on risk | |
| | | C. Post-mitigation incident frequency | | D. Speed of risk response actions | |
| 29 | Which | approach is most effective for mitiga | ating ris | ks associated with high-risk machinery? | |
| | | A. Implementing machine guards and safety interlocks | | B. Providing extensive PPE to operators | |
| | | C. Conducting regular training sessions on machinery operation | | D. Installing warning signs in high-traffic areas | |
| 30 | When developing response measures, which factor should primarily determine the type of response? | | | | |
| | | A. Employee involvement in the response process | | B. The severity and impact of the potential risk | |
| | | C. The number of workers exposed to the risk | | D. The location of the hazard within the workplace | |







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| Marks) |
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| 35 | What is the most effective way to ensure continuous worker engagement in safety initiatives | | | | |
|-----------|---|--|-----------|---|--|
| | | A. Holding mandatory monthly safety training sessions | | B. Providing regular feedback on identified hazards and implemented solutions | |
| | | C. Offering incentives for completing safety courses | | D. Instituting penalties for non- compliance with safety standards | |
| | | the workplace & consult employees ong-term health and well-being. | in ergo | nomic design to reduce the risk of injury | |
| A. Pract | ical Qu | estion | | (5*1=5 Marks) | |
| sitting a | t their w | ace, several workers have complaind orkstations. ould you take to address this issue th | | ut back and neck pain after long hours of ergonomic improvements?" | |
| B. Multi | ple Cho | pice Question | | (5*1=5 Marks) | |
| 36 | Which (| of the following is the most crucial fac | ctor in c | lesigning ergonomic workstations? | |
| | | A. Ensuring the workspace accommodates all employees. | | B. Using adjustable equipment to cater to various postures | |
| | | C. Focusing on aesthetics and visual appeal | | D. Reducing the cost of furniture and equipment | |
| 37 | What is | s the primary purpose of involving em | ployee | s in ergonomic design consultations | |
| | | A. Meet regulatory compliance standards | | B. Reduce the risk of long-term health issues like musculoskeletal disorders | |
| | | C. Promote organizational productivity | | D. Minimize workspace clutter | |
| 38 | | workplace design feature is most likenments? | ly to re | duce repetitive strain injuries in office | |
| | | A. Adjustable chairs and desks | | B. Ergonomic keyboards and mouse setups | |







| | | C. Implementing regular short breaks | | D. Providing training on body posture |
|----------------------|---|---|-----------|--|
| 39 | Which | type of employee feedback is most va | aluable | when analysing ergonomic risks? |
| | | A. Responses from medical professionals on employee injuries | | B. Direct input from employees regarding discomfort during their daily tasks |
| | | C. General workplace surveys on productivity | | D. Reports from safety auditors on equipment use. |
| 40 | What | is the main benefit of implementing e | ergonon | nic design changes in the workplace |
| | | A. Immediate reduction in operational costs | | B. Increased worker satisfaction and productivity |
| | | C. Improved workplace aesthetics | | D. Minimization of the number of workstations needed |
| PC-9: P | lan & in | nplement preventive measures to re | educe r | isks and reporting of any incidents. |
| | | | | |
| A. Pract | tical Qu | estion | | (3*1 = 3 Marks) |
| "You are | e assign | | | starting work, what steps will you take to |
| "You are ensure t | e assign the area | ed to a new section of the workshop. | | starting work, what steps will you take to |
| ensure t | e assign the area | ed to a new section of the workshop. is safe and all preventive measures a | are in pl | starting work, what steps will you take to ace?" (4 Marks) |
| "You are ensure t | e assign the area iple Cho | ed to a new section of the workshop. is safe and all preventive measures a pice Question | are in pl | starting work, what steps will you take to ace?" (4 Marks) |
| "You are ensure t | e assign the area iple Cho Which | ed to a new section of the workshop. is safe and all preventive measures a pice Question strategy is most effective in preventin A. Relying solely on personal | are in pl | starting work, what steps will you take to ace?" (4 Marks) place accidents? B. Developing a comprehensive hazard identification and risk assessment |







| | | A. React to incidents after they occur | | B. Identify and control risks before incidents occur |
|----|--------|---|---------|---|
| | | C. Allocate resources for emergency situations | | D. Educate employees on regulatory compliance |
| 43 | Which | of the following is most crucial for a s | succes | sful incident reporting system? |
| | | A. Ensuring reports are submitted anonymously | | B. Maintaining a strict disciplinary approach for violators |
| | | C. Making incident reporting easy, accessible, and non-punitive | | D. Limiting the number of people who can submit reports |
| 44 | When | planning preventive measures for a wor | kplace, | which factor is most important to consider? |
| | | A. The age and experience of the employees | | B. The potential impact of the risk on health and safety |
| | | C. The industry-specific regulations and standards | | D. The available budget for implementing measures |
| 45 | How ca | an the effectiveness of preventive meas | ures be | evaluated? |
| | | A. By reviewing employee satisfaction surveys | | B. By tracking incident rates before and after implementation |
| | | C. By conducting regular internal audits | | D. By relying solely on external safety consultants' feedback |







| A. Pra | actical Qu | estion | | (3*1 = 3 Marks) | | | |
|--------|----------------------------|---|-----------|---|--|--|--|
| - | s it necess single plan | eary to prepare multiple plans for different w?" | orkplace/ | risk scenarios instead of relying | | | |
| B. Mu | ıltiple Cho | oice Question | | (3 Marks) | | | |
| 46 | Which scenar | of the following is the best approach for pre ios? | paring mu | ultiple safety plans for various | | | |
| | | A. Developing a single plan that covers all potential risks | | B. Creating specific response plans for diverse types of emergencies | | | |
| | | C. Relying on employee discretion during emergencies | | D. Limiting planning to high-risk scenarios only | | | |
| 47 | What is t | What is the main benefit of having multiple emergency response plans? | | | | | |
| | | A. It simplifies the training process for all employees | | B. It ensures the organization can adapt to a wide range of emergency scenarios | | | |
| | | C. It reduces the cost of emergency supplies | | D. It guarantees the elimination of all risks | | | |
| 48 | Which o | f the following is an example of a best pract | ice in em | ergency response planning? | | | |
| | | A. Relying on a single escape route for all emergencies | | B. Testing and revising plans regularly based on simulated scenarios | | | |
| | | C. Providing employees with emergency plans once and not updating them | | D. Avoiding complexity in the plans to minimize confusion | | | |
| 49 | How sho | How should an organization prioritize the development of multiple safety plans? | | | | | |
| | | A. By considering the incidents first and then addressing others | | B. By creating the most detailed plans for rare incidents | | | |
| | | C. By focusing only on regulatory compliance | | D. By consulting with external experts for each specific scenario | | | |
| 50 | | omplex workplace environment, what is gency plans | the prim | ary purpose of having multiple | | | |







| | | A. Provide a clear plan for every situation | n | B. Allow flexibility and adaptability in responding to unforeseen events |
|----------|------------|--|-------------|--|
| | | C. Allocate resources based on historical incidents | | D. Minimize the cost of training employees on emergency preparedness |
| PC-11: I | Plan for 6 | emergency situations & rescue plans | | |
| A. Pract | tical Que | estion | | (4*1 = 4 Marks) |
| | | ow you would respond to a fire emergend equipment would you use?" | cy in your | work area. What steps would you |
| B. Multi | iple Choi | ce Question | | (3 Marks) |
| 51 | Which is | the most crucial factor when planning a | n emerger | ncy evacuation plan? |
| | | A. The number of employees in the workplace | | B. The design and layout of the building or work area |
| | | C. The availability of first-aid kits | | D. The cost of evacuation equipment |
| 52 | When d | eveloping a rescue plan for confined s ? | paces, wh | nich aspect is most important to |
| | | A. Employee training on confined space entry and exit protocols | | B. Establishing clear communication lines between rescuers and workers |
| | | C. Ensuring availability of protective gear for rescuers | | D. All the above |
| 53 | What is | a critical consideration when planning fo | r fire emer | gencies in a workplace? |
| | | A. The presence of fire extinguishers | | B. The design of fire exits and their accessibility |
| | | C. The frequency of fire drills | | D. The number of fire marshals in the workplace |
| 54 | Which | of the following is a primary element in ar | effective | emergency response plan? |
| | | A. Detailed instructions for managing all types of incidents | | B. Roles and responsibilities clearly defined for all employees. |
| | | C. Exclusive reliance on automated systems for emergency response | | D. Overlapping responsibilities for all employees. |







| 55 | In the context of rescue operations, what is the most important consideration for ensuring the | | | | | |
|----|--|--|--|---|--|--|
| | safety of | rescuers | | | | |
| | | A. Ensuring rescuers are trained in first aid | | B. Using appropriate rescue equipment for the specific hazard | | |
| | | C. Setting up safe zones to manage hazards effectively | | D. All the above | | |







Assessment Evidence Form

| Trainee name: | Trainee roll number: |
|---|---|
| Centre name/ Code Date: | |
| This is to confirm that the trainee has handed over th separate sheet can be used). | e final job to the assessor. (For each task |
| | |
| | |
| Assessor to affix photographs of the | practical output (end product) |
| | |
| | |
| Trainee's signature: | |
| Trainee's name (please print): | |
| Assessor's signature: | |
| Assessor's name (please print): | |
| Centre Head's seal and signature: | |







| Assessment summary |
|--|
| Assessor's comments |
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| This is to confirm that the trainee has undertaken the assessment for the job role of Basics of Occupational Hazards & Risk Management |
| Trainee's signature: |
| |
| Trainee's name (please print): |
| Assessor's signature: |
| Assessor's name (please print): |
| Centre Head's seal and signature: |
| Trainee's photo ID (other than the Institute ID): |
| Assessment completion date: |
| 33 BASICS OF OCCUPATIONAL HAZARDS & RISK MANAGEMENT |







Assessment Summary Sheet

| Safety Skill Development Foundation Result Analysis Summary | | | | | | | | |
|---|----------------|----------|----------------------|-------------------------------------|----------------------------|--------|--|--|
| Batc | h ID | | | | | | | |
| Micro Credential Code | | | | | | | | |
| Micro Credential/Code Name | | | | | | | | |
| Training Centre Name & Address: | | | | | | | | |
| Program Date | | | | | | | | |
| Master Trainer/SME Name | | | | | | | | |
| Master Assessor/SME Name | | | | | | | | |
| S. No. | Candidate Name | Roll No. | Theory (50 Marks) | Skills (Practical) (50 Marks) | Total (Theory + skills) | Result | | |
| 1 | | | | | | | | |
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(Note: Passing Criteria will be overall 90% and above for Master Trainer / Master Assessor).