

OHSAct – JUNE 2015

QUESTION 1 **ACT**

1.1 **Define** the following terms as given in the Act:

1.1.1 Major hazard installation (2)

"major hazard installation" means an installation-

- (a) where more than the prescribed quantity of any substance is or may be kept, whether permanently or temporarily; or
- (b) where any substance is produced, processed, used, handled or stored in such a form and quantity that it has the potential to cause a major incident;

1.1.2 Major incident (1)

"major incident" means an occurrence of catastrophic proportions, resulting from the use of plant or machinery, or from activities at a workplace;

1.1.3 Properly used (2)

"properly used" means used with reasonable care, and with due regard to any information, instruction or advice supplied by the designer, manufacturer, importer, seller or supplier;

1.1.4 Substance (1)

"substance" includes any solid, liquid, vapour, gas or aerosol, or combination thereof;

1.2

Name TWO functions a health and safety representative **may** perform in respect of the section of the workplace for which he or she has been designated. (2)

18(1) (a) review the effectiveness of health and safety measures;

(b) identify potential hazards and potential major incidents at the workplace;

(c) in collaboration with his employer, examine the causes of incidents at the workplace;

(d) investigate complaints by any employee relating to that employee's health or safety at work;

(e) make representations to the employer or a health and safety committee on matters arising from paragraphs (a), (b), (c) or (d), or where such representations are unsuccessful, to an inspector;

(f) make representations to the employer on general matters affecting the health or safety of the employees at the workplace;

(g) inspect the workplace, including any article, substance, plant, machinery or health and safety equipment at that workplace with a view to, the health and safety of employees, at such intervals as may be agreed upon with the employer: Provided that the health and safety representative shall give reasonable notice of his intention to carry out such an inspection to the employer, who may be present during the inspection;

(h) participate in consultations with inspectors at the workplace and accompany inspectors on inspections of the workplace;

- (i) receive information from inspectors as contemplated in section 36; and
- (j) in his capacity as a health and safety representative attend meetings of the health and safety committee of which he is a member, in connection with any of the above functions.

1.3

What records must a health and safety committee keep? (2)

20(2) A health and safety committee shall keep record of each recommendation made to an employer in terms of subsection (1) (a) and of any report made to an inspector in terms of subsection (1) (b).

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QUESTION 2 ACT

You are operating a small sawmill in a forestry area. There are 12 employees in the offices, 88 employees are working at the sawmill and a further 37 employees depart from the sawmill every day to harvest wood in the plantation. In the process of designating health and safety representatives at your workplace, you have consulted and agreed with the employee representatives about the arrangements and procedures of nomination, period of office and their designation.

2.1 Who are eligible to be designated as health and safety representatives? (1)

17(4) Only those employees employed in a full-time capacity at a specific workplace and who are acquainted with conditions and activities at that workplace or section thereof

2.2 How many health and safety representatives must you appoint in the office? (1)

17(5) At least one health and safety representative for every 100 employees or part thereof where more than 20 persons are employed.

2.3 How many health and safety representatives must you appoint in the sawmill? (1)

17(5) At least one health and safety representative for every 50 employees or part thereof

2.4 How will you deal with the appointment of health and safety representatives for the employees that harvest the wood? (1)

17(5)&(6) Employees performing work at a workplace other than that where they ordinarily report for duty, shall be deemed to be working at the workplace where they so report for duty. If an inspector is of the opinion that the number of health and safety representatives for any workplace or section thereof, including a workplace or section with 20 or fewer employees, is inadequate, he may by notice in writing direct the employer to designate such number of employees as the inspector may determine as health and safety representatives for that workplace or section thereof in accordance with the arrangements and procedures referred to in subsection (2).

2.5 Do you have to appoint a health and safety committee in the office? (1)

19(1) An employer shall in respect of each workplace where two or more health and safety representatives have been designated, establish one or more health and safety committees.

2.6 Do you have to appoint a health and safety committee in the sawmill? (1)

19(1) An employer shall in respect of each workplace where two or more health and safety representatives have been designated, establish one or more health and safety committees.

2.7 Who must serve on a health and safety committee? (1)

19(2)

(1) A health and safety committee shall consist of such number of members as the employer may from time to time determine: Provided that-

- (a) if one health and safety committee has been established in respect of a workplace, all the health and safety representatives for that workplace shall be members of the committee;
- (b) if two or more health and safety committees have been established in respect of a workplace, each health and safety representative for that workplace shall be a member of at least one of those committees; and
- (c) the number of persons nominated by an employer on any health and safety committee established in terms of this section shall not exceed the number of health and safety representatives on that committee.

2.8 How many members must you have on the health and safety committee? (1)
19(2)

2.9 How often must the health and safety committee meet? (1)
19(4) A health and safety committee shall hold meetings as often as may be necessary, but at least once every three months.

2.10 Who may the health and safety committee co-opt on the committee? (1)
19(6) (a) A health and safety committee may co-opt one or more persons by reason of his or their particular knowledge of health or safety matters as an advisory member or as advisory members of the committee.

(b) An advisory member shall not be entitled to vote on any matter before the committee.

[10]

QUESTION 3 DMR

3.1 Define the term 'bench saw' as given in the Driven Machinery Regulations, 1988 as amended. (2)

"bench saw" means a circular saw working in a bench (including a rack-bench) for the purpose of ripping, deep cutting or cross cutting but does not include a swing-saw or any other saw which is moved towards the wood.

3.2 What steps must you take in the following cases of moving or revolving components of machinery which are not in such a position or of such construction that they are as safe as they would be when securely fenced or guarded:

3.2.1 Set screws or keys on revolving shafts. (1)

2(b) To be counter sunk, enclosed or otherwise guarded.

3.2.2 A square projecting shaft or spindle end projecting more than a quarter of its diameter. (1)

2(c) To be guarded by a cap or shroud.

3.2.3 Driving belts or chains. (1)

2(d)&(e) To be guarded – if overhead, the guard to prevent injuries when broken.

3.3 Name TWO conditions under which the saw blade of a power-driven circular saw shall not be used. (2)

3(1) (a) A speed in excess of manufacturer's rated max speed

3(1) (b) blade which is damaged, dull or not regular or not correctly sharpened and set.

3.4 What must be guarded on a band knife? (1)

4 All moving parts except working portion of the blade.

3.5 What steps must you take to make a wood moulding machine safe if work cannot be performed when the machine is effectively guarded? (2)

6 Wood to be held in a jig or holder or operator must use a suitable spike or push stick.

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QUESTION 4 GMR & HCSR

GMR

4.1 The sum of the power generated by machinery requires that a certificated engineer must be designated in a full time capacity for your factory.

4.1.1 Once the certificated engineer is designated, what must you do? (1)

2(9) Forthwith forward a copy of letter of appointment to Regional Director.

4.1.2 Under what conditions will the designation in 4.1.1 not be required? (1)

2(10) Elevators, escalators, electrical installations in shops, offices or domestic premises, domestic appliances, machinery for building or earth moving work, or refrigeration, cooling air-conditioning or freezing plant inspected and maintained by qualified persons on agreement.

4.1.3 For what period may you use machinery in the absence of a certificated engineer if such absence is due to circumstances beyond your control? (1)

2(12) One month in any continuous period of six months.

4.1.4 What must you do about the supervision of the machinery in the absence of a certificated engineer? (1)

2(12) Designate a person referred to in paragraph (a) of definition of competent person.

4.1.5 Notwithstanding the power generated by machinery or the maximum demand, for what type of installations is such designation not required? (2)

2(12) refrigeration, cooling air-conditioning or freezing plant inspected and maintained by qualified persons on agreement.

HCSR

4.2 Define the term 'hazardous chemical substance (HCS)' as given in the Regulations for Hazardous Chemical Substances, 1995, as amended. (2)

HCS means any toxic, harmful, corrosive, irritant or asphyxiant substance, or mixture of such for which an occupational exposure limit is prescribed or creates a hazard.

4.3 In terms of section 10(3) of the Act, every person who sell or supply any hazardous chemical substance for use at work, shall, as far as is reasonably practicable, provide the person receiving such substance, free of charge, with a material safety data sheet or sufficient information as regards the protection of the health and safety when properly used. Name FOUR of the items which must be included in the information or data sheet. (2)

- 9A(1) a) product and co identification
b) composition/information on ingredients
c) hazards identification
d) first-aid measures
e) fire-fighting measures
f) accidental release measures
g) handling and storage
h) exposure and control/personal protection
i) physical and chemical properties
j) stability and reactivity
k) toxicological information

- l) ecological information
- m) disposal considerations
- n) transport information
- o) regulatory information
- p) other information

[10]

QUESTION 5 PER

5.1 Define the following terms as given in the Pressure Equipment Regulations, 2009:

5.1.1 Pressure equipment (2)
 means a steam generator, pressure vessel, piping, pressure accessory and safety accessory, transportable gas container, and fire extinguisher and includes, but not limited to, an accumulator, a hot-water geyser and hyperbaric chambers

5.1.2 Steam generator (2)
 means any apparatus to convert water continuously into steam at a pressure higher than that due to the atmosphere and where the heat is derived from a source other than steam, and includes any super heater or economiser which is an integral part of a steam generator or is separately fired therefrom, fired steam and hot water boilers, waste-heat boilers, waste-incineration boilers, and electrode or immersion-type electrically heated boilers.

5.2

Before certain pressure equipment, such as pressure cylinders, may be placed in the market, it requires a permit issued by an organisation approved by the chief inspector.

5.2.1 Who must obtain such certificate? (1)
5(3) The importer or manufacturer

5.2.2 When must such certificate be obtained? (1)
5(3) Before the pressure equipment is placed in the market.

5.3 Who must ensure that new pressure equipment put on the market complies with the Pressure Equipment Regulations? (1)
3(1) Any person who manufactures, imports, sells, offer or supplies

5.4 Irrespective of compliance to the various standards incorporated into the regulations for pressure equipment, what must all pressure equipment be subjected to? (1)
3(3) & 4(1) Conformity assessed to SANS 347

5.4 You may not use a steam generator unless you have a certificate of registration issued by the provincial director of the Department of labour. After registration and when in use, name TWO cases you have to immediately notify the provincial director in writing. (2)
8(7) a) when no longer in use
 b) right of control transferred to another user
 c) when user moves steam generator to another position on the premises

[10]

QUESTION 6 EMR

6.1 Define the terms 'Miniature substation' as given in the Electrical Machinery Regulations, 2011. (1)
 A substation that a person cannot enter

- 6.2 Who may enter a premises housing switchgear or transformers? (1)
6(2) A person authorised thereto by the employer
- 6.3 All electrical machinery must be provided with controlling apparatus and protective devices.
- 6.3.1 Name TWO functions such apparatus must be able to perform. (2)
7(1) & (3) The door or cover cannot be opened unless switch is off
 Cannot be switched on unless the door or cover is locked
- 6.3.2 Describe the marking or labelling requirements for such apparatus. (1)
7(4) Permanently marked to identify system or machine it controls, also at back if accessible
- 6.3.3 What must you do to enable persons to work safely on electrical machinery which have been switched off? (1)
7(5) Post a notice warning against reclosing
- 6.4 Electrical machinery is in operation in an area in your factory which has been classified as a hazardous location.
- 6.4.1 You do not have a certificate for every electrical item installed in this area to certify that the components comply with the safety standards for hazardous locations. What is acceptable in lieu of such certificates? (1)
9(3) Permanent labelling which contains all relevant information as approved by CI
- 6.4.2 Under what conditions may you repair or adjust the electrical machinery in this area? (1)
9(6) When rendered dead and effective measures taken to ensure it remains dead
- 6.5 What are the requirements for overhead service connections to supply electricity from the supplier's conductors to a premises? (2)
20 Overhead conductors only connected to a point of support
 Conductors comply with safety standard and by means of a safe connection

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QUESTION 7 EIR

- 7.1 Define the following terms as given in the Electrical Installation Regulations, 2009:
- 7.1.1 Installation work (3)
 a) installation, extension, modification or repair
 b) connection of machinery to supply terminals of machinery
 c) inspection, testing and verification to issue a CoC
- 7.1.2 Point of outlet (1)
 Any termination of an electrical installation to connect machinery without tools
- 7.1.3 Supply terminals (1)
 Terminals /connection clamps on machinery to terminate external supply conductors
- 7.2 You increased the capacity of your factory by changing and upgrading some of the existing equipment and added a new plant where you installed new machinery. The offices were extended and a new ablution block was built for the new plant. Due to the size of the factory, you have also extended the 11 kV part of the electrical installation by adding a mini-substation.
- 7.2.1 What must you do with regards to general control over all the electrical installation work during the project? (1)
5(4) A registered person to exercise general control over electrical installation work being carried out

7.2.2 What must you do with regards to the design of the part of your electrical installation where the voltage exceeds 1 kV? (1)

5(5) A competent person to approve the design. GMR (b), (c), (d) or Pr registered person

7.2.3 How will you ensure that you will have a certificate or certificates of compliance for the entire premises which are the existing part where no changes took place, the existing altered and upgraded parts and the new extensions? (3)

9(2) a) new part comply with standard

b) existing part comply with general safety principles of current standard

c) extensions and alterations comply with standard and existing as in (b)

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QUESTION 8 LER

8.1 Define the following terms as given in the Lift, Escalator and Passenger Conveyor Regulations, 2010:

8.1.1 Competent lift service provider (1)

A person that employs competent lift mechanics and a competent operator, or a competent lift mechanic who is self-employed and who undertakes to contract with the user to perform maintenance, examinations and tests in terms of regulation 7 (maintenance)

8.1.2 Inspection service provider (1)

A person that employs a registered lift inspector who undertakes to contract with the user to perform inspections and is accredited by the accredited authority

8.2 You may not install or modify a lift unless the installation or modification meets the requirements of the SANS standards and specifications incorporated into the regulations. The office building at the factory has a lift and the board room is on the third floor. The office block is getting a face-lift and the board of directors instructed management to install a large mirror in the lift and to clad the lift floor and sides with the same marble used in the foyer. What safety factors must be considered for this facelift to be executed? (3)

4 The modification is in accordance with the relevant incorporated safety standard, specifically with the aggregate safety factor of at least 10 of the ropes. The requirements of the NBR are complied with

8.3 The regulations require that the user of a lift or escalator shall ensure that it is inspected and tested as prescribed in the relevant health and safety standards incorporated into the regulations.

8.3.1 Once a lift is in operation, at what intervals must an inspection and test be carried out and a comprehensive report be completed? (1)

6(1)(e) At intervals not exceeding 24 months, or at shorter intervals according to in-house risk assessment

8.3.2 Who must carry out the comprehensive inspection and tests and complete the report? (1)

6 An inspection service provider

8.3.3 Name TWO other reasons when a lift must be inspected and tested and a comprehensive report be completed. (2)

6(1) (b) after any modification

c) after any failure

d) when there was a change in competent lift service provider

- 8.4 The regulations require that the user of a lift shall maintain it at regular intervals. Who must carry out these examinations and maintenance and at what intervals? (1)
7(1) A competent lift service provider at least once a month or intervals prescribed by the manufacturer. [10]

QUESTION 9 Constr

- 9.1 Define the term *method statement* as given in the Construction Regulations, 2003. (1)
 A document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment

- 9.2 You are using a suspended platform to carry out maintenance work to the outside of the factory buildings.

- 9.2.1 Who must issue a certificate of system design for the use of the suspended platform? (1)
15(2)(b) A professional engineer, certificated engineer or a professional technologist

- 9.2.2 What are the requirements for the outriggers for the suspended platform? (1)
15(5) a) constructed of steel or any other material of similar strength and have a safety factor of at least four in relation to the load it is to carry, and
 b) have suspension points provided with stop devices or other effective devices at the outer ends to prevent the displacement of ropes

- 9.3 A contractor must ensure that his material hoist and its tower are constructed of sound material in accordance with the generally accepted technical standards, strong enough for the purpose it is installed and free from defects.

- 9.3.1 What are the requirements for a door or gate of the material hoist? (1)
17(2)(c) Door or gate at least 2 100mm in height at each landing which shall be kept closed, except when the platform is at rest at such a landing

- 9.3.2 Who may operate the material hoist? (1)
17(6) Only a person who is competent in the operation of the hoist

- 9.3.3 May a person ride with the load on the material hoist? (1)
17(7) No

- 9.4 You are using an explosive power tool on the premises. What are the requirements regarding its-

- 9.4.1 Cleaning (1)
19(2)(b) Cleaned daily before use and as often as may be necessary for its safe operation

- 9.4.2 Safety devices (1)
19(2)(c) To be in proper working order prior to use

- 9.4.3 Storage (2)
19(2)(d) Tool and cartridges to be locked up in a safe place inaccessible to unauthorised persons

[10]

QUESTION 10 MHIR & FR

MHIR

- 10.1 Define the following terms as given in the Major Hazard Installation Regulations, 2001:

10.1.1	Temporary installation	(2)
	An installation that can travel independently between planned points of departure and arrival for the purpose of transporting any substance, and which is only deemed to be an installation at the points of departure and arrival, respectively	
10.1.2	Emergency plan	(1)
	A plan in writing which, on the basis of identified potential incidents at the installation, together with their consequences, describes how such incidences and their consequences should be dealt with on-site and off-site	
10.2	You supply a substance to a factory which causes that installation to be classified as a major hazard installation.	
10.2.1	What must you provide to the user regarding that substance?	(1)
	8(1) To supply with the substance a material safety data sheet as per regulation 7 of GAR's	
10.2.2	The user informed you of an incident concerning the substance you provided which brought the emergency plan into operation. What must you do?	(1)
	8(2) Assess the circumstances and substance involved and inform all persons being supplied with that substance, of the potential dangers surrounding it	
10.2.3	As the supplier of this hazardous substance to a major hazard installation, what service must you provide to the user and on what basis?	(1)
	8(3) A readily available service on a 24-hour basis to provide information and advice in the case of a major incident with regard to the substance supplied	
	FR	
10.3	Define the following terms as given in the Facilities Regulations, 2004:	
10.3.1	Drinking water	(1)
	Water that complies with SABS 241	
10.3.2	Hot water	(1)
	Water at a temperature more than 25 °C	
10.4	When must you provide running hot water at your sanitary facilities?	(1)
	2(4) Under circumstances contemplated in Part 4 of part P of SABS 0400	
10.5	As the employer you have to make available an adequate supply of drinking water for your employees at their workplace. What marking is important regarding drinking water?	(1)
	7 Clearly and conspicuously mark such, taps and pipes that is not fit for human consumption	
		[10]
TOTAL:		100