

TEST PAPER 12
POOL SAFETY

Your Name _____

INTRODUCTION

Pool safety and personal hygiene must be subjects of vital concern to every pool owner/operator. A drowning is a tragedy which will devastate the lives of all who are involved with the home swimming pool concerned. Hence the pool owner has a responsibility to the whole community to ensure his/her pool is maintained and operated safely at all times.

1 THE POOL OWNER'S RESPONSIBILITY (Three points)

- (1) No protective measures or safety equipment can substitute for _____ particularly with young children. Not even the most competent adult should ever swim alone.
- (2) Young children should be taught to _____ and _____ at the earliest possible age and made aware of water safety. Always remember that young children cannot readily understand the concepts of safety, danger, drowning or even death. They also tend to forget quickly, unless they regularly practice to maintain their awareness and competence.
- (3) Home pool users are urged to undertake a _____ course, as preparation for accidents which may occur. Emergency care of serious injury may be necessary until medical help arrives.

2.

THE POOL OWNER'S LIABILITY (One point)

Where an injury to any person occurs, then the legal liability may fall upon

- (1) _____ at which the injury is sustained. This is possible even if you have taken reasonable precautions to give protection, for example, the provision of adequate pool fencing, 'child-proof' gate locks, etc.

3.

ACCIDENT PREVENTION (One point)

- (1) Accidents usually result from _____.

Conversely, many accidents can be prevented by care and foresight.

In the main, accidents are produced, increased or reduced in severity, by elements under human control so you must keep the possibility of accidents always in mind, and learn what acts and situations are likely to produce accidents. Human error and lack of regard for the obvious are the chief causes of accidents.

4.

POOL FENCING (Eight points)

- (1) This provides protection against unsupervised access to your swimming pool or spa

ONLY WHEN _____

The Fencing of Swimming Pools Act (1987) set the precedent for pool fencing in New Zealand. Subsequent amendments to the Building Act have modified some of the Rules relating to Fencing in general, and many Councils use the Building Act to pass by-laws in their local districts.

- (2) In general terms. Pool fencing must be a minimum of _____ metres high, and the exterior of the fence must provide no hand or foot hold which would enable a child of ...
- (3) _____ Years or under to climb it.

- (4) Gates closure must be _____
- (5) and _____
- (6) The latch being on the inside of the gate out of the reach of children and at a height of no less than _____ mm from ground level.
- (7) The bottom of the fence must be no more than _____ mm from the ground level
- (8) and any vertical bars or boards no more than _____ mm apart.

While the above should be regarded as a minimum standard, the requirements of Local Government Authorities vary greatly. Check with your Local Government Authority and obtain relevant details. It is recommended that some form of additional security such as a chain and padlock be used when the home is vacated for any lengthy period to ensure that the pool gate/s remain closed.

5. POOL ALARMS (Five points)

- (1) These are designed to trigger a _____ should anyone enter the pool while it is unattended.
- (2) The simplest type, operated by a battery consists of _____ (a general description will suffice here)

There are numerous similar devices available on the pool accessory market, but the process involved is much the same for all types: someone falls in, the alarm goes off.

- (3) Any type of alarm system must be _____ frequently to ensure it is in good working order. Batteries have only a limited life, and should be replaced regularly
- (4) Neighbours should be _____ of the alarm's presence, and asked to take appropriate action should it be set off.
- (5) You must remember to (e) _____ whenever the pool is unattended, ensure that it works and can be seen or heard.

No alarm is infallible. It is useful as an additional safety precaution only, and should never be a substitute for proper fencing and/or adequate supervision.

6. POOL SAFETY COVERS (One point)

A safety cover for private swimming pools and wading pools must comply with the appropriate NZS which details the requirements of those covers designed to inhibit access by children up to 5 years of age. Unless a cover complies with this standard, it cannot be correctly referred to as a safety cover. (Other covers used primarily for keeping out debris or to act as solar blankets were discussed in PAPER 4.)

Safety covers complying with the above standard must be performance-tested to prove that a child's face cannot be submerged in water, either as a result of the child's falling between the edge of the cover and the side of the pool, or when the cover is deflected to the extent that water flows onto its surface. The design must incorporate features, which will prevent rainwater being retained on the surface or water from the pool seeping on to the surface of the cover.

An indication of the life expectancy of the cover must be marked on it.

The cover must also be designed so that firstly, it can be handled by one adult, and secondly, that it can be placed in position and fastened or removed within a period of 5 minutes. Unless these conditions are met, the owner of the pool would be discouraged from covering the pool at all times when not in use.

Provided that safety covers are installed correctly, they are useful safety devices where the pool is left unattended for any length of time.

Due to the stringent requirements of AS/NZ2020, very few safety covers are marketed, owing to the high purchase cost and consequent low market demand. If you are purchasing one, make sure it complies with AS/NZ2020. Otherwise its use as a safety protection device will be very much negated, and indeed, may even endanger the child's life by trapping him below the water surface.

As with any safety device, a safety cover should be

(1) _____
to ensure that it is still capable of supporting a child's weight.

7. LADDERS, GRAB RAILS AND HAND RAILS (Four Points)

(1) Are thoughtfully positioned ladders, grab rails and hand rails are an important part of pool safety. YES/NO

(2) In the shallow end of the pool beside the steps, a correctly positioned stair hand rail can provide _____ and

(3) _____, especially for children and the elderly.

(4) In the deep end, a ladder for entry and exit, and a correctly positioned handrail at water level will provide _____ for children and the elderly.

The use of grab rails in conjunction with niche steps cast into the pool walls is an alternative to a ladder

A range of shapes, sizes and modes of attachment allow for ladders, grab rails and hand rails to be installed at the time of construction of the pool or at any later stage. They are normally manufactured from stainless steel tube.

8. SKIMMER BOX DESIGN HAZARD (Three points)

(1) In some older fibreglass pools, skimmer boxes may have been moulded into the side of the pool shell during manufacture. Some types feature an easily removable lid and weir guard, making a tempting seat for a child when the lid and guard are removed, and having a ready resemblance to a child's trainer potty.

Pool owners often remove skimmer box lids and debris guards for cleaning. This makes the moulded fibreglass inlet a serious hazard. The awesome power of the pump filter is more than enough to cause internal injury.

(2) If you come across this type of skimmer box, leave the lid and debris guard in place as far as possible to avoid a devastating accident. Look at fastening the lid down by some means. Should you advise the pool owner of the potential EXTREME DANGER to young children? YES / NO

(3) Main Drains fitted to concrete swimming pools may cause additional safety infractions – they MUST be _____ suction source (such as a skimmer) and NEVER be the sole source of water drawn from the pool. The main drain has been responsible for numerous drownings due to suction effect on swimmer's bodies, and (much worse) the disemboweling of a number of small children.

THE MAIN DRAIN IS A POTENTIAL KILLER OF SMALL CHILDREN!

Plumb up this component safely with a vacuum break as part of the installation, and with due consideration to the risk.

9. SAFE PRACTICES

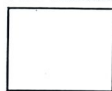
If _____ common sense safety rules such as those discussed in this section are followed, a home swimming pool can provide an immense amount of enjoyment for the whole family with little risk or danger involved.

NZ POOL INDUSTRY ASSOCIATION INCORPORATED
DIPLOMA COURSE 2021

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CONDUCT (Thirteen points)

Comment briefly on the following:

(1) Supervision:

(2) Behaviour

(3) Diving

(4) Learn to Swim

(5) Resuscitation

(6) Glass

~~GLASS~~

(7) Alcohol

~~ALCOHOL~~

(8) Underwater Swimming

(9) Eating

(10) Tiredness, Water Temperature

(11) Storms

(12) Absent Owner

(13) Hot Tub to Swimming Pool

10 GOOD HOUSEKEEPING AROUND THE POOL (Fifteen points)

This is very important in order to prevent accidents. Comment briefly on the following:

(1) Loose Objects

(2) Warning Signs

(3) Lighting

(4) Resuscitation/CPR Information Notice

(5) Water Quality

(6) Rescue Aid

(7) Clear Fences

(8) Floating Objects

(9) Open Gates

(10) Extension Leads

(11) Overhead Wires

(12) Security of Fencing

(13) Portable Wading Pools

(14) Pool Markings

(15) First Aid Kit Location



SAFETY WITH ELECTRICITY (Six points)

It is vital that any electrical equipment associated with the swimming pool be installed correctly and maintained in first class condition in accordance with New Zealand Standard NZECP 3:2000 (Check with NZ Standards for updates), because minimum clothing, bare feet and wet skin effectively lower the body's electrical resistance.

Hence the effects of an electrical shock on a person in or near a swimming pool are likely to be even more serious than in other locations.

Any electrical installation can suffer deterioration due to the elements and to chemical action. Therefore it is recommended that a qualified Electrician carry out a safety inspection at intervals of about two years.

Even a small voltage in the water may cause drowning due to loss of muscular control. This means if you fit any device that has an electrical charge introduced into the pool – like a saline chlorinator - you must ensure that the pool accessories such as pool ladders etc. are EARTHED! The process known as "Voltage Leak" can possible introduce a low voltage charge into the pool which is potentially fatal to some (*younger, older) swimmers.

The swimming pool electrical installation will include the filtration pump motor and may include lighting and power outlets. The following electrical safety practices must be borne in mind at all times, and kept within the appropriate ZONES as required by the Act.



Comment briefly on the following

:

(1) Minimum Electrical Wiring and Equipment Only

(2) Lighting

(3) Overhead Wires

(4) Electrical Appliances

(5) Extension Leads

(6) Pool Owners Responsibility



12 SAFETY WITH CHEMICALS (Eleven points)

The chemicals used in pool maintenance require extreme care in handling and use if potential hazards are to be avoided. Pool test chemicals should also be used carefully.

Comment on the following simple precautions which can reduce hazards presented by pool chemicals.

(1) Storage

(2) Container Use

(3) Mixing Chemicals

(4) Scoops

(5) Dissolving Chemicals

(6) Spillage

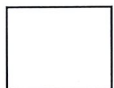
(7) Disposal of Containers

(8) Disposal of Test Samples

(9) Dispensing Chemicals

(10) Children and Chemicals

(11) Fire Extinguishers



13 RESCUE AND FIRST AID (Six points)

When a person has been overcome by drowning, electrocution or by breathing a noxious gas or air deficient in oxygen, rescue must be followed by immediate resuscitation as soon as the victim is in a safe area.

(1) If the oxygen supply is not restored within 4 minutes,

—

The air you breathe out is not spent. That is to say it is not completely devoid of oxygen. The amount of oxygen it still contains will support life and the amount of carbon dioxide it contains will not harm the victim.

(2) Mouth-to-mouth or mouth-to-nose must be used

(3) Both mouth-to-mouth and mouth-to-nose methods are equally effective YES / NO

- (4) Mouth-to-nose cannot be used if _____
- (5) All home swimming pools should display in a prominent place a _____
- (6) All parents, pool owners and users should learn _____

The technique of external cardiac resuscitation, if applied within three minutes of cardiac arrest, will frequently cause an arrested heart to beat again. Hence this also is an extremely valuable technique to know how to apply, and is it highly desirable that it also is learnt on a manikin under supervision.

14 PRIORITIES IN AN EMERGENCY (Five points)

- (1) _____
- (2) _____
- (3) _____
- (4) _____
- (5) _____

15 SAFE RESCUE (Four points)

To ensure the maximum degree of safety for the rescuer, dry (on-shore) methods of rescue should be considered first. Comment briefly on this

- (1) _____

Aids can be:

- (2) _____
- (3) _____

A distressed victim may not grasp an aid, and the rescuer may consider it necessary and safe to make a contact rescue. A small child distressed in water, which is shallow to the adult rescuer, would be one such circumstance.

- (4) In order to calm a distressed victim it is usually necessary to _____

16 MOUTH-TO-MOUTH RESUSCITATION (Two points)

All pool owners should be able to resuscitate a nearly drowned victim. Resuscitation should commence immediately.

Quantify the rates:

Approximately (1) _____ breaths per minute (every 4 seconds) for adults

Approximately (2) _____ breaths per minute (ever 3 seconds) for children and infants.

REMEMBER!
ACCIDENTS ARE GENERALLY NOT ACCIDENTAL!
AN ADULT AT MUST SUPERVISE CHILDREN WHO ARE NOT COMPETENT SWIMMERS ALL TIMES.

17. FIRST AID AFTER CONTACT WITH CHEMICALS (Five points)

What to do if arms, legs etc. splashed with pool chemicals:

(1) _____

What to do if EYES are splashed:

(2) _____

What to do if SWALLOWED

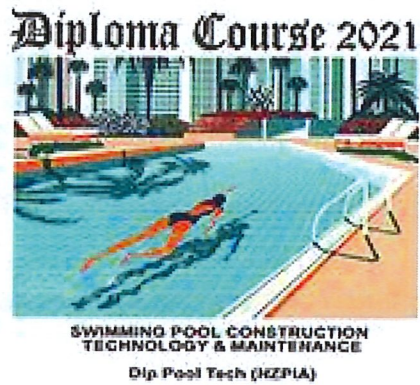
(3) DO NOT _____

(4) DO _____

Call a doctor immediately or contact the Poisons Information Centre. **0800 POISON** (0800 764 766)

(5) What is the FREECALL NUMBER for New Zealand Poison Center 0800 _____

ALWAYS BE PREPARED FOR AN EMERGENCY. TECHNICAL SKILL IS ACHIEVED ONLY BY REPEATED PRACTICE.



End --