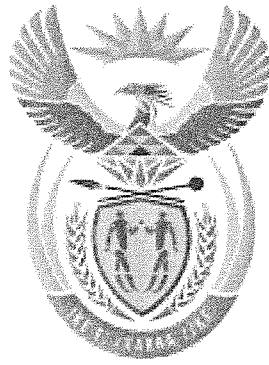
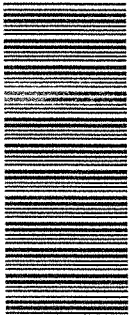


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# higher education & training

Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

**T1250(E)(J21)T  
AUGUST EXAMINATION**

**NATIONAL CERTIFICATE**

**PLUMBING THEORY N1**

**(11022041)**

**21 July 2014 (Y-Paper)  
13:00–16:00**

**This question paper consists of 5 pages.**

**DEPARTMENT OF HIGHER EDUCATION AND TRAINING**  
**REPUBLIC OF SOUTH AFRICA**  
NATIONAL CERTIFICATE  
PLUMBING THEORY N1  
TIME: 3 HOURS  
MARKS: 100

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**INSTRUCTIONS AND INFORMATION**

1. Answer ALL the questions.
  2. Read ALL the questions carefully.
  3. Number the answers according to the numbering system used in this question paper.
  4. Write neatly and legibly.
-

**QUESTION 1**

Complete the following sentences by using the words provided in the list below. Write only the word(s) next to the question number (1.1–1.10) in the ANSWER BOOK.

workplace; trip hazards; cleanliness; accidents; ongoing; orderly; neat; aisle markings; maintenance

House keeping is not just (1.1 ...). It includes keeping work areas (1.2 ...) and (1.3 ...), maintaining halls and floors free of slips and (1.4) ...and removing of waste materials. It also requires paying attention to important details such as layout of the whole (1.5 ...), (1.6 ...). The adequacy of the storage facilities and (1.7 ...). Good house keeping is also a basic part of (1.8 ...) and (1.9 ...) prevention. Effective house keeping is an (1.10 ...) operation.

(10 × 1) [10]

**QUESTION 2**

2.1 State THREE ways towards care and maintenance of hammers. (6)

2.2 With aid of a sketch, show how a club hammer is different from ball pein hammer. (4)  
[10]

**QUESTION 3**

3.1 Explain the following terminology:

3.1.1 Ferrous metals

3.1.2 Non-ferrous metal

3.1.3 Galvanising

3.1.4 Atmospheric corrosion

(4 × 2) (8)

3.2 Give chemical symbol of the following:

3.2.1 Gold

3.2.2 Copper

(2 × 1) (2)  
[10]

**QUESTION 4**

- 4.1 Give FIVE properties of good solder. (5)
- 4.2 Name FIVE components of gas welding. (5)
- [10]

**QUESTION 5**

- 5.1 Name and explain each of the THREE phases of a water cycle. (9)
- 5.2 What is the chemical equation of water? (1)
- [10]

**QUESTION 6**

Make a single line labeled diagram of a push through geyser without anti-siphon loop. [15]

**QUESTION 7**

Give full meaning of the following standard sanitary abbreviations in relation to drainage:

- 7.1 ABC
- 7.2 CE
- 7.3 IE
- 7.4 SW
- 7.5 WHB
- 7.6 WT
- 7.7 VP
- 7.8 U
- 7.9 UPVC
- 7.10 SP

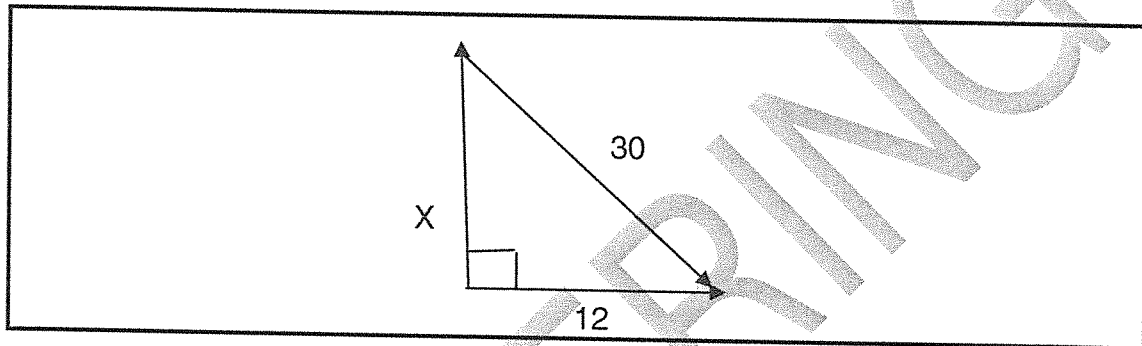
(10 × 1) [10]

**QUESTION 8**

Draw a fully labeled sketch to illustrate how to fix a box gutter against a parapet wall.

**[15]****QUESTION 9**

- 9.1 Using Pythagoras theorem, calculate the length of  $x$  in a given right angled triangle.

**(5)**

- 9.2 Calculate the head of water if the intensity in the water is  $445 \text{ Kn/m}^2$ .

**(5)**

**NOTE:** Using the formula: intensity of pressure = head of water  $\times 9,8 \text{ m}$

**[10]****TOTAL: 100**