

SCIENCE ASSESSMENT

SAMPLE TEST AND PREPARATION GUIDE

Testing is usually offered at the Waterloo Campus, 108 University Ave. E. If you have applied to the College and have received a letter from the Admissions Office indicating that you are required to write the Mathematics, English, or Science assessment (Chemistry and/or Biology), please phone our Testing Hotline at (519) 748-5220, Ext. 2266. You can also phone the hotline if you are thinking of applying and wish to check out your academic readiness for college.

Please check the Testing Hotline or the testing website at <http://www.conestogac.on.ca/testing/pretest.jsp> to determine dates and locations when testing is available:

English – 8:45 a.m.

Mathematics – 10:45 a.m.

Science – 9:30 a.m. or 11:15 a.m.

Please arrive 15 minutes before tests start

It is recommended that if you need to write all 3 tests that you write a maximum of 2 per day.

IMPORTANT INFORMATION:

TESTING FEE - \$30 FOR 1 TEST, \$40 FOR 2 TESTS, \$50 FOR 3 TESTS
(Please note that the Science test is considered 1 test whether you write Biology, Chemistry, or both)

The above fees must be paid by cash or cheque in the classroom. It is possible to pay by debit or credit card if you go to the main office at the Waterloo Campus, Room 1C04.

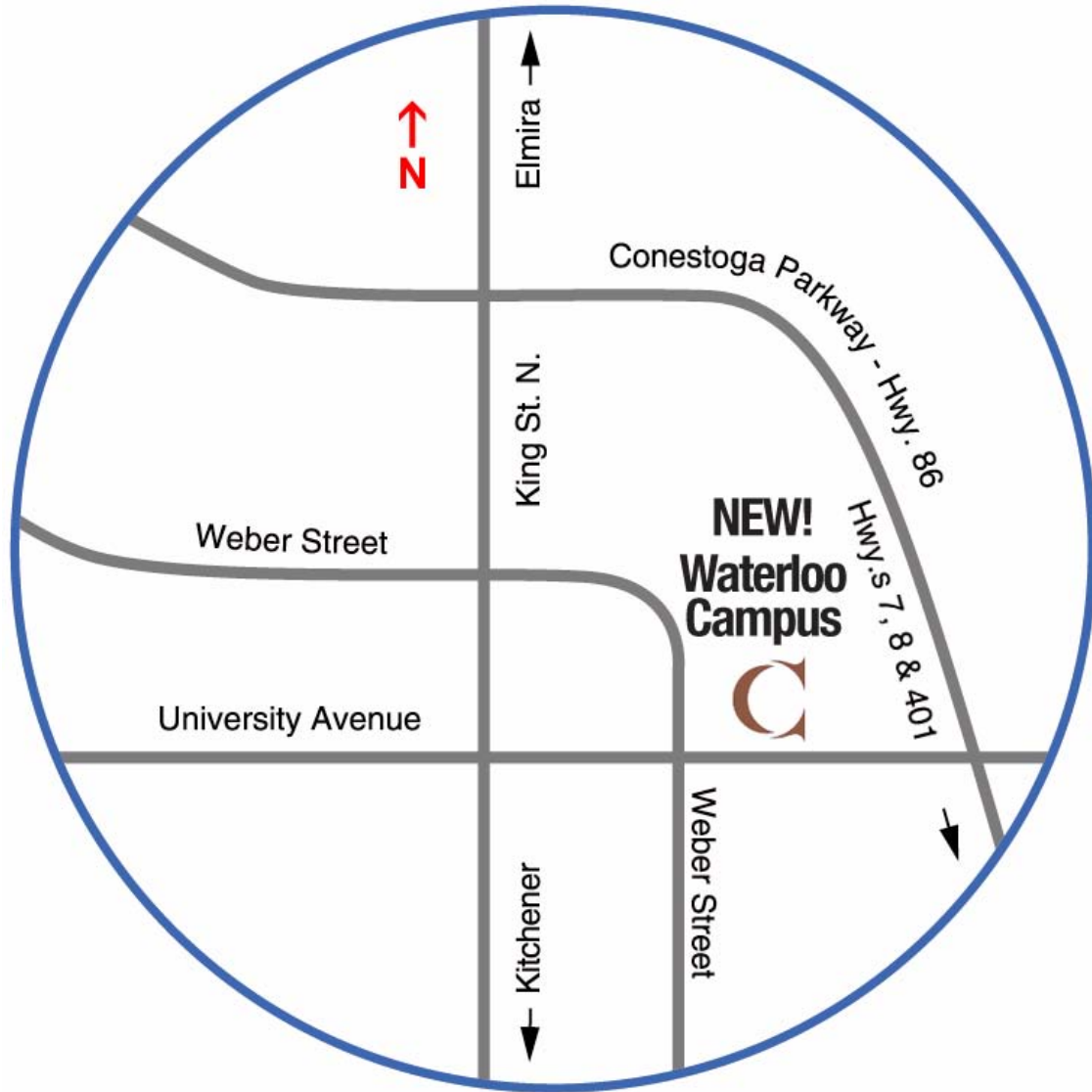
Please arrive at the campus 15 minutes prior to the test in order to pay the testing fee.

PARKING

A paid parking system is enforced at most campuses Monday to Friday, from 8:00 a.m. to 4:00 p.m. The cost for a day pass is \$7.00. At the Waterloo Campus, the large lot off of Marsland Drive has the parking pass dispenser.

IDENTIFICATION

All persons referred for testing must present personal identification to the test administrator (photo ID or ID with a signature on it). Failure to provide proper identification will result in the test date being rescheduled.



Waterloo Campus
108 University Avenue East
Waterloo, Ontario
N2J 2W2
(519) 885-0300

PREPARATION AND REVIEW BOOKLET

This booklet is designed to help you prepare for your English, Mathematics and/or Science Skills Assessment.

HELPFUL HINTS

1. Get a good night's sleep before the test and arrive early for the testing session.
2. Don't let the thought of taking a test make you too nervous. Rest assured a little nervousness is natural and even helpful.
3. Be on time! This will give you the opportunity to familiarize yourself with the test room and calm the butterflies!
4. Listen carefully and follow directions.
5. Ask questions if anything is unclear. The test administrator is there for that purpose.
6. The tests are multiple choice. You will be required to choose the best answer to a question from several choices. You may mark an answer even if you are not perfectly sure it is right.
7. If one question is too hard, leave it and go on to the next. You can always come back and try it again if there is time.
8. If you come to a section in the test that you cannot do, don't give up. There may be parts of the test which are easier for you. Keep working.
9. Work steadily, and complete as many questions as you can.

If you are an applicant with special needs (eg. Physically disabled, blind or visually impaired, deaf or hard of hearing) and require some form of test accommodation, please contact the **DISABILITY SERVICES OFFICE** at (519) 748-5220, Ext. 3232. This office is located at our Doon Campus.

SAMPLE SCIENCE (BIOLOGY) ASSESSMENT

1. Blood flows directly from the right ventricle in the human heart to the:
 - a) left atrium
 - b) left ventricle
 - c) lungs
 - d) right atrium

2. Genes are located in (on) the:
 - a) centriole
 - b) mitochondrion
 - c) endoplasmic reticulum
 - d) chromosomes

3. A constant body temperature is characteristic of:
 - a) mammals and reptiles
 - b) birds and reptiles
 - c) mammals only
 - d) mammals and birds

4. The basic functional unit of the nervous system is the:
 - a) neuron
 - b) spinal cord
 - c) nerve
 - d) dendrite

5. The pH of blood is slightly basic. Which of the following would be most appropriate?
 - a) 6.4
 - b) 4.6
 - c) 7.4
 - d) 13.8

6. Which aspect of a protein determines whether it will function as an enzyme?
 - a) interior
 - b) surface
 - c) weight
 - d) colour

7. Granules which are the sites of protein synthesis within a cell are:
 - a) chloroplasts
 - b) mitochondria
 - c) endoplasmic reticula
 - d) ribosomes

8. Organelles associated with cellular respiration are called:
- a) mitochondria
 - b) Golgi apparatus
 - c) chloroplasts
 - d) lysosomes
9. The ability of cell membrane to allow certain substances to enter or leave the cell is called:
- a) diffusion
 - b) purposeful passage
 - c) osmosis
 - d) selective permeability
10. The most common method of cell division in the body is called:
- a) osmosis
 - b) mitosis
 - c) meiosis
 - d) halitosis
11. A nerve cell is smaller than a(n):
- a) virus
 - b) atom
 - c) proton
 - d) tissue
12. A person standing facing you has his heart located:
- a) above the stomach
 - b) above the brain
 - c) behind the spinal cord
 - d) below the ovary
13. The cell nucleus is located:
- a) outside the cell membrane
 - b) inside the mitochondria
 - c) next to the protons and neutrons
 - d) in the cytoplasm
14. Which of the following is the highest level of complexity in the human body?
- a) molecule
 - b) cell
 - c) organ
 - d) tissue

15. Your blood flows throughout your body because of a(n):
- a) temperature gradient
 - b) pressure gradient
 - c) concentration gradient
 - d) electrical gradient

Answers:

- | | |
|--------|---------|
| 1. (c) | 9. (d) |
| 2. (d) | 10. (b) |
| 3. (d) | 11. (d) |
| 4. (a) | 12. (a) |
| 5. (c) | 13. (d) |
| 6. (b) | 14. (c) |
| 7. (d) | 15. (b) |
| 8. (a) | |

SAMPLE SCIENCE (CHEMISTRY) ASSESSMENT

1. Iron rusting is an example of what kind of change?
 - a) chemical
 - b) physical
 - c) nuclear
 - d) biological

2. A structure consisting of nucleus with electrons orbiting around it is a(n):
 - a) molecule
 - b) organism
 - c) cell
 - d) atom

3. A bond that is formed between two atoms of opposite charge is called:
 - a) impossible
 - b) ionic
 - c) maternal
 - d) covalent

4. Atoms which have gained or lost electrons are:
 - a) molecules
 - b) ions
 - c) neutrons
 - d) neutral

5. Arrange the following components in descending order of relative size (largest first, smallest last):
- | | |
|--|------------------------------|
| 1) glucose molecule ($C_6H_{12}O_6$) | 3) water molecule (H_2O) |
| 2) electron | 4) carbon atom |
- a) 1, 3, 4, 2
b) 2, 1, 3, 4
c) 3, 1, 2, 4
d) 4, 1, 3, 2
6. When sugar is dissolved in water, the water is called the:
- a) solution
b) solvent
c) solute
d) syrup
7. A bond that is formed through a sharing of electrons by two atoms is:
- a) impossible
b) covalent
c) unlikely
d) ionic
8. Compounds releasing hydroxyl ions (OH^{-1}) when dissolved in water are:
- a) alcohols
b) acids
c) salts
d) bases
9. When heat is applied to a liquid, the molecules of the liquids:
- a) come closer together
b) increase in weight
c) are converted to heat energy
d) move faster
10. Which of the following is NOT true of an ion?
- a) it has an unequal number of protons and electrons
b) it has an electrical charge
c) it has the same number of electrons and protons
d) it is an atom that has gained or lost electrons
11. If the atomic weight of an element is eight, and if it contains four protons in the nucleus, what else do we know about the atom?
- a) there are eight electrons in its shell
b) the atomic number is eight
c) there are four electrons in the nucleus
d) there are four neutrons in the nucleus

12. Many hydrogen ions will be yielded by:

- a) strong acids
- b) weak bases
- c) strong bases
- d) weak acids

For questions 13-15 indicate whether the following are:

- a) atoms
- b) molecules
- c) ions

13. CO_2 _____

14. H^+ _____

15. O _____

Answers

- | | |
|--------|---------|
| 1. (a) | 9. (d) |
| 2. (d) | 10. (c) |
| 3. (b) | 11. (d) |
| 4. (b) | 12. (a) |
| 5. (a) | 13. (b) |
| 6. (b) | 14. (c) |
| 7. (b) | 15. (a) |
| 8. (d) | |