

PRE-ADMISSION SCIENCE ASSESSMENT SAMPLE ASSESSMENT AND PREPARATION GUIDE

Assessments are currently being held online via Accuplacer and Examity platforms

If you have applied to the College and have received a message from the Admissions Office indicating that you are required to write the Mathematics, English, or Science assessment (Chemistry and/or Biology), they will have provided you with an online Qualtrics form to fill out that will come to the test centre office. From there the test centre will coordinate the setup of your test with Accuplacer and Examity.

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

IMPORTANT INFORMATION:

ASSESSMENT FEE - \$30 FOR 1, \$40 FOR 2, \$50 FOR 3 ASSESSMENTS
(Please note that Science is considered 1 assessment whether you write Biology, Chemistry, or both) The above fees are paid online.

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 get setup 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. Please note the following are samples of the types of question you will encounter on the assessment and may not reflect exactly the difficulty of the assessment.

If you have a documented disability and require accommodations, please contact accessibility@conestogac.on.ca

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) | |