هيئة التقييم
Evaluation Institute

العلوم العامة

الأسئلة المعلنة للعام الدراسي 2010

7

1 **Which of these correctly describes the path of an egg in the female human body?**

- ☐ ovary → uterus → fallopian tube
- ☒ ovary → fallopian tube → uterus
- ☐ fallopian tube → ovary → uterus
- ☐ fallopian tube → uterus → ovary

Key: 2

Strand: Life Science

Standard: 08.1 Know the simple anatomy of the human female and male reproductive systems; know the basic facts about human reproduction and about the growth, development and birth of a baby.

DOK: 01 Understanding

2 **When someone blows air into a balloon, increasing air pressure causes the balloon to expand.**

Which of these causes the air pressure to increase?

- ☐ the elasticity of the balloon
- ☐ the compressible nature of air
- ☐ attractive forces between air particles
- ☒ collisions of air particles against the ballon

Key: 4

Strand: Materials

Standard: 11.3 Explain, in terms of the particle model, a variety of common phenomena, such as the evaporation of a pool of water, thermal expansion, the compressibility of gases (but not liquids and solids) and the regular growth of crystals in a saturated solution.

DOK: 01 Understanding

3 **What is the approximate force of gravity on a 10-kilogram body at the Earth's surface?**

- ☐ 1 N
- ☐ 10 N
- ☒ 100 N
- ☐ 1000 N

Key: 3

Strand: Physical processes

Standard: 16.1 Know that all objects exert a gravitational attraction on other objects, the size of which depends on their mass and distance apart, and that the force of gravity on a mass of 1 kg on the Earth's surface is approximately 10 N.

DOK: 02 Application

4

The gasoline that is used as fuel for a motor vehicle comes from crude oil. Other products resulting from the processing of crude oil into gasoline include kerosene, fuel oil, lubricating oil, and grease.

Name the process that converts crude oil into gasoline and other products.

Answer: _____

What property allows for separation of the different products?

Answer: _____

Key Elements A. Fractional distillation OR any variation of these terms. B. The products have different boiling points / temperatures.	
2 key elements	2 pts
1 key element	1 pt
Incorrect answer	0 pts
No answer	Blank

Points: 2

Strand: Materials

Standard: 12.4 Know that fractional distillation is used widely in the oil industry for separating liquids of different boiling points, and explain how fractional distillation works.

DOK: 01 Understanding

5

Explain the purpose of a circuit breaker in an electrical circuit.

Answer: _____

_____

What is another device used in electrical circuits that has the same purpose as a circuit breaker?

Answer: _____

_____

Key Elements A. A response indicating that the circuit breaker breaks the circuit path when the current exceeds a certain level. (Scoring Note: to receive credit the response must contain both parts, breaking the circuit and when current exceeds certain level.) B. Fuse	
2 key elements	2 pts
1 key element	1 pt
Incorrect answer	0 pts
No answer	Blank

Points: 2

Strand: Physical processes

Standard: 20.7 Be aware of the hazards of mains electricity and explain the purpose of safety devices such as fuses and circuit breakers and how they work.

DOK: 01 Understanding

6

A scientist heated 100 grams of iron nails until they became red-hot. After cooling, the mass of the red solid iron compound was 143 grams.

Which element was responsible for the increase in mass?

Answer: _____

What was the source of the added mass?

Answer: _____

Key Elements A. oxygen B. air / atmosphere	
2 key elements	2 pts
1 key element	1 pt
Incorrect answer	0 pts
No answer	Blank

Points: 2

Strand: Materials

Standard: 13.3 Know that when a substance burns, it combines chemically with the oxygen in the air and that the overall mass of the product(s) is greater than the original mass of the material.

DOK: 02 Application