

## GRADE 12 PHYSICAL SCIENCES MARCH TEST

### QUESTION 1

Various options are provided as possible answers to the following questions. Choose the correct answer and write **ONLY** the LETTER (A-D) next to the QUESTION NUMBER (1.1-1.7) on your folio paper. Example 1.6. D.

- 1.1 Which of the following pairs of compounds contains members of the same homologous series?
- A  $C_{10}H_{22}$  and  $C_{10}H_{18}$   
 B  $C_{10}H_{18}$  and  $C_{10}H_{16}$   
 C  $C_{10}H_{16}$  and  $C_{10}H_{14}$   
 D  $C_{10}H_{14}$  and  $C_{10}H_{12}$
- 1.2 In which of the following cases would the resultant force acting on an object be equal to 0N?



- A Reaction involving ethane and chlorine  
 B Ethane reacting with oxygen to form ethane-1-thiol and water  
 C Ethane reacting with oxygen to form ethane-1-thiol and water  
 D Ethane reacting with oxygen to form ethane-1-thiol and water
- 1.3 Which of the statements below best describes Weightlessness?
- A An object in free fall under the influence of the force of gravity  
 B An object in free fall under the influence of the force of gravity  
 C An object in free fall under the influence of the force of gravity  
 D An object in free fall under the influence of the force of gravity
- 1.4 The inertia of an object ...
- A increases as the mass of the object increases  
 B increases as the mass of the object decreases  
 C is the resistance to acceleration for the object of mass  
 D increases as the frictional force on the object increases.

- 1.5 An astronaut has a weight  $E_1$  on Earth. What distance, in terms of the radius of the Earth ( $r$ ), will the astronaut be if his weight is a 1/4 of his weight ( $E_1$ ) on the surface of the Earth?

- A  $r$   
 B  $2r$   
 C  $4r$   
 D  $16r$
- 1.6 A box is pushed forward with a force of 100N but does not move. A possible reason for this is that:
- A Frictional force is zero  
 B Frictional force is more than 100N  
 C Frictional force is less than 100N  
 D None of the above
- 1.7 A box is pushed forward with a force of 100N but does not move. A possible reason for this is that:
- A Frictional force is zero  
 B Frictional force is more than 100N  
 C Frictional force is less than 100N  
 D None of the above

[14]

### QUESTION 2

Three organic compounds (A, B and C) with different functional groups are given below.

A: 2,3-dimethyl-2-one



C:  $CH_3CH_2CH_2OH$

- 2.1 Write down the functional group of each of the above compounds. The carbon to form such a variety of organic compounds. (2)
- 2.2 Define the term functional group. (1)
- 2.3 Write down the:  
 2.3.1 IUPAC name of compound A (1)  
 2.3.2 IUPAC name of compound B (2)

# Physical Science Grade12 Caps Exemplar Question Paper

**Elmer Ellsworth Burns**



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