Integrated Science

Examination structure

Time: 1 ½ hours

The examination paper consists of THREE SECTIONS.

SECTION A consists of **THIRTY** multiple choice questions. You must **ANSWER ALL** the questions in this section by shading the letter corresponding to the correct answer. **USE THE ANSWER SHEET PROVIDED.**

SECTION B consists of **FIVE** questions. You must **ANSWER ALL** the questions in the space provided.

SECTION C consists of **THREE** questions. You must answer **ALL THE PARTS** of any **TWO** questions on the foolscap provided.

Revision Check list

Healthy life style

- Explain the importance of maintaining a healthy body
- The importance of i) exercise ii) proper hygiene iii) proper diet iv) preventing injury v) visiting the doctor.
- Define the terms: nutrient, food, nutrition, and malnutrition
- List the six nutrients and their functions
- List 3 major sources of each nutrient
- Define deficiency disease
- Know the causes of : scurvy, night blindness, beri-beri, kwashiorkor, rickets, marasmus
- List the 6 food groups
- List the major nutrient for each food groups
- Define terms: diet, meal, balance diet, junk food, empty calories and snacks

Light and the eye

- Recall the 5 senses and the corresponding organs
- State light is a form of energy
- Define refraction and reflection
- Be able to draw: a parallel beam, converging beam, diverging beam, a ray, a concave mirror, convex mirror, a plane mirror
- Draw a concave and convex lens and show what happens to a parallel beam of light that passes through them

- Recall the use of a prism and the colours of ROYGBIV
- Know how a rainbow is formed and the colours seen
- What is white light
- How is a shadow formed
- Be able to label the diagram of the eye
- Know the functions of the parts of the eye
- Define accommodation
- Know the role of vitamin A in the eye
- Describe the changes of the eye due to changing light intensity
- Know the eye diseases glaucoma, cataract, near and far sightedness
- How to correct near and far sightedness using lenses

Sound and the ear

- Define sound as a form of energy
- How is a sound formed
- Define frequency
- What are the units of frequency
- Define pitch
- What happens to the pitch of a sound when frequency i) increases ii) decreases
- Know the factors affecting the pitch of a sound
- Know that sound travels through solids, liquids and gases but not a vacuum
- Why does sound not travel through a vacuum
- Know the relative speeds of sound through solids , liquids and gases
- How is sound intensity measured
- What is noise and its effects of the environment and people
- Identify the parts of the human ear
- The functions of the parts of the ear
- Explain how the ear works to allow sound to be heard
- State the approximate audio frequency spectrum for humans and other animals
- Know pitch can be varied of a string or rubber band (describe how to change the pitch of a rubber band or string)
- How to care for the ear

Taste, smell and the tongue

- List the four main types of substances which the tongue can taste
- Name foods which possess the various taste
- Know the importance of smell to taste
- Explain why the sense of taste diminishes with a cold

The components of air

- List the gases which make up the air
- Interpret pie charts with show the composition of gases

- List the noble gases in air
- Know what inert means and what an inert gas
- State 3 uses of each noble gas
- State 3 uses and properties of: carbon dioxide, oxygen, and nitrogen
- Know the test for: carbon dioxide, oxygen, hydrogen

Properties of gases

- Know how to remove trapped air from object
- Demonstrate that objects contain air
- State the response of air to heating and cooling
- Know why hot air is denser than cool air
- Know that hot air rise and cool air falls
- Describe a convection current
- Define: convection, conduction and radiation
- Know 2 examples of: convection, conduction and radiation
- Define a good conductor and an insulators
- Know examples of conductor and insulators
- Define ventilation
- Discuss i) good ventilation ii) the features of a building iv) how the features of a building may aid or prevent good ventilation

Acids, bases and salt

- Define physical and chemical changes
- Give 2 examples of physical and chemical changes
- Know the properties of acids and bases
- Know common examples of: acids, bases and salts
- Define an indicator
- Know the colour changes of common indicators
- What is the pH scale, what is the pH scale range
- What is the range of acids and bases on the pH scale
- Define neutral
- What is the pH of neutral on the pH scale
- Define neutralization
- Know the word equation the reaction of acid + base→ salt + water
- Identify instances where neutralization is used to solves problems