

IPSLE

SCIENCE

To be implemented from the Year of Examination 2018

I PURPOSE

The purpose of the examination is to assess pupil's attainment in science with respect to the following areas:

1. Scientific knowledge
2. Application of process skills/scientific knowledge/concepts in new situations

However, not all aspects of the attainment can be assessed by the paper. The aspects which can be assessed are reflected in the assessment objectives.

II ASSESSMENT OBJECTIVES

The skills and abilities which pupils are expected to demonstrate are given in the objectives stated below.

A. Knowledge with Understanding

Pupils should be able to demonstrate knowledge and understanding of scientific facts, concepts and principles.

B. Application of Knowledge and Process Skills

Pupils should be able to:

- a. apply scientific facts, concepts and principles to new situations.
- b. Interpret information (including pictorial, tabular and graphical) and investigate using one or a combination of the following process skills:
 - Inferring
 - Predicting
 - Analysing
 - Evaluating
 - Generating possibilities
 - Formulating hypothesis
 - Communicating

The weighting for the assessment objectives are as shown.

Assessment Objectives	* Weighting (%)
Knowledge with Understanding	40
Application of knowledge and Process Skills	60
Total	100

** Weightings may vary based on the professional judgement of the panel of examiners.*

III EXAMINATION FORMAT

The examination consists of one written paper comprising two booklets, Booklet A and Booklet B as shown below.

Booklet	Item Type	Number of questions	Number of marks per question	Weighting (%)	Duration
A	Multiple-choice	30	2	60	1 hour 45 minutes
B	Open-ended	10 – 12	2 – 5	40	

Booklet A consists of 30 multiple-choice questions and Booklet B consists of 10 – 12 open-ended questions. The weighting for Booklet A is 60% and that for Booklet B is 40%.

Each multiple-choice question carries 2 marks and each open-ended question carries 2 to 5 marks.

The duration of the paper is 1 hour 45 minutes.

IV TOPICS AND WEIGHTING

The items set will be based on the topics stated below:

Life Science (45 – 55%)	Physical Science (45 – 55%)
<ul style="list-style-type: none">• Diversity of living things (General characteristics and classification)	<ul style="list-style-type: none">• Diversity of non-living things (General characteristics and classification)• Diversity of materials
<ul style="list-style-type: none">• Cycles in plants and animals (Life cycles, Reproduction)	<ul style="list-style-type: none">• Cycles in matter and water (Matter, Water)
<ul style="list-style-type: none">• Plant system (Plant parts and functions, Respiratory and circulatory systems)• Human system (Digestive system, Respiratory and circulatory systems)• Cell system	<ul style="list-style-type: none">• Electrical System
<ul style="list-style-type: none">• Interaction within the environment	<ul style="list-style-type: none">• Interaction of forces (Magnets, Frictional force, gravitational force, force in springs)
<ul style="list-style-type: none">• Energy forms and uses (Photosynthesis)	<ul style="list-style-type: none">• Energy forms and uses (Light and heat)• Energy conversion

V SUMMARY OF KEY QUANTITIES

When applicable, the following metric units and symbols or abbreviation will be used in the examination.

Quantity	Unit	Symbol or Abbreviation
Length	millimetre centimetre metre kilometre	mm cm m km
Mass	gram kilogram	g kg
Time	second minute hour day week month year	s min h - - - -
Temperature	degree Celsius	°C
Area	square centimetre square metre square kilometre	cm ² m ² km ²
Volume and capacity	cubic centimetre cubic metre millilitre litre	cm ³ m ³ ml l