AGRICULTURAL SCIENCE - PRACTICAL ASSESSMENT
GUIDELINES FOR TEACHERS

The Rules and Programme for Secondary Schools sets out the syllabus in Agricultural Science. It states:

"The examination in Agricultural Science will consist of
(a) a written examination and
(b) an assessment of the work of the candidate during the course.

The assessment will be based on material set out in the syllabus, and marks, to a total of 100, will be awarded under the headings set out hereunder.

(1) Identification of plant and animal types associated with agriculture.

(2) Practical experience with crops, livestock, house and farmyard layout.

(3) Investigations carried out relating to ecology, soil science, animal physiology, plant physiology, genetics and microbiology."

The following guidelines are issued to assist teachers in their assessment of the work of the candidate during the course.

Candidates will present their coursework in the normal way. Monitors will monitor the teachers’ assessments by review of the coursework and by interviewing a sample of candidates.

1. Identification of plant and animal types associated with agriculture (20)

The candidate will indicate his/her ability to name five common plants related to his/her experience of agriculture (tillage land, pasture land, noxious plants, etc.) and name the families to which they belong.

<table>
<thead>
<tr>
<th>Name of plant</th>
<th>1 mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of family</td>
<td>1 mark</td>
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</tbody>
</table>

The candidate will indicate his/her ability to name three common food-producing animals (identification of bodily characteristics of the breeds) and seven other animals related to agriculture (parasites, soil-borne organisms, etc.).

<table>
<thead>
<tr>
<th>Name and bodily characteristic of food animal</th>
<th>1 mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name and importance of other animal</td>
<td>1 mark</td>
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2. Experience (35)

The candidate will record his/her practical experience arising from one or more of the following:
(i) a farm visit
(ii) experience on a family or adopted farm
(iii) laboratory investigation (indoor or outdoor)
Candidates must demonstrate that they have gained practical experience to be awarded marks in the following sections.

(a) Crops - at least two of the following: cereal OR root/ potato OR grassland: varieties, rotation, cultivation practices, establishment, harvesting and yield.
15 marks

(b) Livestock: types of enterprise, breeds, husbandry, disease control, housing.
15 marks

(c) Home/farmyard layout: the candidate will present a sketch plan indicating the principal buildings and layout of a farm, including aspect, roadways, fencing, shelter, grazing methods (strip/paddock, etc.)
5 marks

3. Investigations (45)

Evidence of at least one laboratory or field investigation undertaken by the candidate in each of the categories below. Each investigation to be presented under the following broad headings - aim, method, recording, results, conclusion.

(a) Ecology: named habitat, field techniques used (quadrat, transect, etc.), biotic and abiotic factors, recording of data, results, conclusion.
10 marks

(b) Soil Science: soil formation, soil texture, soil structure (profile, mechanical analysis, sedimentation), soil composition (water, air, etc), chemical properties of soil, soil-borne organisms.
10 marks

(c) Animal Physiology: the structure and function of one of the principal body systems in a farm animal.
10 marks

(d) Plant Physiology: the structure and function of the plant (examples might be drawn from plant/water relationships, plant nutrition, plant growth, plant reproduction)
5 marks

(e) Genetics: any aspect of breeding or variation in plants or animals.
5 marks

(f) Microbiology; any one of the following – silage, milk, soil.
5 marks