

AGRICULTURE

Paper 0600/01
Multiple Choice

<i>Question Number</i>	<i>Key</i>	<i>Question Number</i>	<i>Key</i>
1	C	21	D
2	D	22	B
3	C	23	C
4	C	24	C
5	A	25	A
6	A	26	D
7	B	27	B
8	D	28	D
9	C	29	A
10	B	30	C
11	D	31	A
12	A	32	D
13	B	33	C
14	B	34	B
15	B	35	A
16	A	36	A
17	D	37	C
18	C	38	B
19	D	39	B
20	D	40	C

General Comments

To perform well on this question paper candidates need to have a good knowledge of the basic facts and should make sure that they understand all the terms mentioned in the syllabus. This paper always includes very good diagrams which can be helpful to students; they should be encouraged to look at each diagram carefully to find relevant information before answering the questions that are linked to the diagram.

Candidates would benefit from paying greater attention to certain areas of the syllabus, notably livestock anatomy and physiology (questions 18,19,21) and some aspects of plant structure and function (questions 9,10,11). As in the past, items with a numerical element (29,32) caused problems for candidates. Most candidates however had little difficulty with items 1,4, 5,6,8,13,14,17,20,22,26,30,31,36,39 and 40, and these items require no further comment.

Comments on specific items

Item Number

2. *Organic farming* is farming that is carried out without the use of chemical fertilisers or pesticides but this was not particularly well understood as only 53% of candidates gave the correct answer whilst the remaining candidates were evenly divided between the other options.
3. The very clear diagram illustrates a practical technique that should be familiar to all candidates. There could be no doubt that the two bottom layers were gravel and sand which together made up 70% of the sample. Thus the soil was of a type that is easily leached, easy to work and easy to warm up.
7. Only 35% of candidates knew that the tuber of an Irish potato is a modified stem. All four of the named plants are referred to in **Section 2.2** of the syllabus.
9. The correct answer is respiration but more than 20% of candidates suggested photosynthesis.
10. Only half the candidates gave the correct answer. A and C were both clearly parts of wind pollinated flowers rather than an insect pollinated flower such as the bean.
11. The function of phloem is not well understood by students.
12. Only a third of candidates gave the correct figure. Students need to be able to remember that compound fertilisers contain the elements nitrogen, phosphorus and potassium (N:P:K) and that the figures on the fertiliser packet are percentages, always given in the same order with nitrogen first and potassium last.
15. Although many gave the correct answer **B**, a substantial minority gave **D**.
16. This proved to be a difficult question for candidates, possibly because they didn't understand that herbicides used in cereal crops would damage broad leaved bean plants in the neighbouring field if the spray managed to drift into it. In effect, the question was asking "what would cause the least spray drift?" A coarse spray, i.e. one with large droplets too heavy to drift, was the correct answer. A spray well above the crop is much more likely to drift.
18. 30% of candidates named **X** as the cervix when the correct answer was the vagina.
19. The correct order for the parts of the digestive system is stomach, small intestine, caecum and large intestine.
21. The *oestrus cycle* is the interval between the start of heat periods.
23. It should have been understood that rats are mainly attracted to animal houses in their search for food. Consequently, prevention of access to food reduces the number of rats in a livestock house and thus the risk of disease spread.
24. The 'licks' are provided for cattle as a source of minerals. Sodium was the only mineral listed. The other substances could only be provided by food materials.
25. Although the overall response was good, almost a quarter of candidates thought that grass does not supply water when in fact the moisture content is around 80%.
27. Since all the calves were polled, it is clear that 'polled' is the dominant condition. Hence the allele for the horned condition is recessive.
28. The high disease resistance and low calf mortality should have pointed to **Z** as the best choice.
29. Less than half of candidates gave the correct answer **A**. Assuming that *stocking rate* and *carrying capacity* (both syllabus terms) were understood, it appears as though the calculation caused problems. A simple approach is to multiply the number of sheep by two to give the required area. Thus for **A**, $65 \times 2 = 130$. Since paddock **A** is only 125 hectares, it will be overstocked.



32. This was an instance of candidates not being aware of everyday measurements. If a fence is only 0.5 m (50 cm) high, it is clear that cattle and goats could almost walk over it, whilst for chickens it is no higher than a normal perch. Thus the fence is only suitable for rabbits. This is also supported by the fact that about 25 cm of fence is below ground to prevent burrowing.
33. Most gave the correct answer, but some suggested using soil rather than stones.
34. Careful study of the diagrams and a little thought would have indicated the benefit of lighter weight.
35. Although generally well answered, a substantial minority chose **D**, water of a quality for human consumption.
37. The diagrams were very clear and it was surprising that only half of the candidates were able to work out that **C** was the correct choice.
38. The most common wrong answer was **D**. Candidates who have either had the opportunity to use a saw or have seen one used would have been more likely to have understood the benefit of well angled teeth to make a good groove for the saw to pass through.

AGRICULTURE

Paper 0600/02
Core Theory

General comments

This paper is set as an option to paper 3 although some questions have parts in common. It examines the core syllabus and is set to differentiate between grades G to C. It is particularly important that the core paper is accessible to this ability range thus diagrams and clear introductions are provided to prompt candidates into making relevant responses. Candidates should be trained to read these introductions before answering questions. They should be told, also, to look at the mark allocation for each question. Not all questions have spaces for written answers; some ask candidates to label diagrams, an instruction some candidates missed.

Candidates are expected to have practical experience of Agriculture and questions are set to test this in the theory paper.

The paper consists of nine structured questions. Each structured question starts with parts aimed at grades G-F, followed by a middle section aimed at F-D. The final part, that includes open-ended responses, is aimed at grades D-C. The command words such as, 'state' and 'list' introduce low-level question parts. 'Suggest' and 'explain' indicate that higher-level answers are required. It is important that candidates are taught the significance of these command words. State, describe, explain and suggest all have specific and different meanings; see syllabus appendix, page 42.

Some questions require a definition of a syllabus term which is indicated by *italic* type. The definitions need to be concise and use words that are chosen carefully to prevent other meanings.

When answering data analysis questions candidates must take care to respond to the data given and not base their judgements on what they know.

When answering questions that require extended writing, candidates need to be aware that they must write sentences, a requirement for a C grade, and not give one word responses. Explanations have to clearly relate to and explain the facts. Questions asking for suggestions and opinions **do** require supporting factual knowledge; superficial answers do not gain credit.

Comments on specific questions

Section A

Question 1

- (a) A simple introductory question that stimulated a wide variety of answers. Candidates who had not read the introduction lost marks for referring to milk. 'Pulling carts or ploughs' was rejected as power is not a product like skin, meat and dung.
- (b) This is a style of question not used previously in this paper. Most candidates ticked 'chewing cud' as a correct answer. Many muddled the terms 'rumen' and 'caecum'. Another source of error was the failure to realise the significance of 'true' stomach. Wrong answers did not lose marks unless five or more of the options were ticked.
- (c) How to recognise ill health in a cow was well understood. Both behavioural and visual symptoms were credited providing they were accurate. Runny or smelly excreta did not gain credit, blood-stained or worm infected excreta did.

