



MOMETRIX
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01	☐ A	☐ B	☐ C	☐ D	☒ E
02	☒ A	☐ B	☐ C	☐ D	☐ E
03	☐ A	☐ B	☐ C	☐ D	☒ E
04	☐ A	☐ B	☐ C	☐ D	☒ E
05	☐ A	☒ B	☐ C	☐ D	☐ E
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07	☒ A	☐ B	☐ C	☐ D	☐ E
08	☐ A	☐ B	☒ C	☐ D	☐ E
09	☒ A	☐ B	☐ C	☐ D	☐ E
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13	☒ A	☐ B	☐ C	☐ D	☐ E

14	☒ A	☐ B	☐ C	☐ D	☐ E
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26	☐ A	☒ B	☐ C	☐ D	☐ E

27	☐ A	☐ B	☐ C	☒ D	☐ E
28	☐ A	☐ B	☐ C	☐ D	☒ E
29	☐ A	☒ B	☐ C	☐ D	☐ E
30	☐ A	☐ B	☐ C	☐ D	☒ E
31	☒ A	☐ B	☐ C	☐ D	☐ E
32	☐ A	☐ B	☒ C	☐ D	☐ E
33	☐ A	☐ B	☐ C	☐ D	☒ E
34	☐ A	☐ B	☐ C	☐ D	☒ E
35	☐ A	☐ B	☐ C	☐ D	☒ E
36	☐ A	☐ B	☒ C	☐ D	☐ E
37	☒ A	☐ B	☐ C	☐ D	☐ E
38	☐ A	☐ B	☐ C	☒ D	☐ E
39	☐ A	☐ B	☒ C	☐ D	☐ E

PRACTICE QUESTIONS

Agriscience and Technology Careers

AGRISCIENCE—AND— TECHNOLOGY—CAREERS— AGRISCIENCE—F

Agriscience and Technology Careers - Agriscience
Foundations

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

WEB www.mometrix.net

SUPPORT support@mometrix.net

Before you begin

What this is

9 practice questions for Agriscience and Technology Careers **AGRISCIENCE-AND-TECHNOLOGY-CAREERS-AGRISCIENCE-F**, each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, **AGRISCIENCE-AND-TECHNOLOGY-CAREERS-AGRISCIENCE-F**
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1

SINGLE CHOICE

Which soil texture class contains the highest proportion of sand particles and typically has the largest particle size?

- ☐ A Clay
- ☐ B Silt
- ☒ C Sand
- ☐ D Loam

ANSWER C

WHY Sand has the largest particle size among the three primary soil separates (sand, silt, clay). Clay particles are the smallest, silt is intermediate, and loam is a balanced mixture of all three. Sandy soils drain quickly but hold fewer nutrients than finer-textured soils.

QUESTION 2

SINGLE CHOICE

Which digestive system is characteristic of ruminant animals such as cattle and sheep?

- ☐ A Monogastric stomach with a single chamber
- ☒ B Four-chambered stomach including the rumen, reticulum, omasum, and abomasum
- ☐ C Gizzard-based system for grinding feed
- ☐ D Caecal fermentation without a true stomach

ANSWER B

WHY Ruminants possess a four-chambered stomach consisting of the rumen, reticulum, omasum, and abomasum. This allows microbial fermentation of fibrous plant material before true digestion in the abomasum. Monogastric animals like swine have a single-chambered stomach.

QUESTION 3 SINGLE CHOICE

Which type of simple machine is used on a lever where the fulcrum is positioned between the effort and the load?

- ☒ **A** First-class lever
- ☐ **B** Second-class lever
- ☐ **C** Third-class lever
- ☐ **D** Fourth-class lever

ANSWER A

WHY In a first-class lever, the fulcrum is located between the effort and the load, as seen in a seesaw or crowbar. In second-class levers, the load is between the fulcrum and effort (wheelbarrow), and in third-class levers, the effort is between the fulcrum and load (tweezers). Fourth-class levers are not standard classifications.

QUESTION 4 SINGLE CHOICE

Which plant process converts light energy into chemical energy stored in glucose?

- ☐ **A** Respiration
- ☐ **B** Transpiration
- ☒ **C** Photosynthesis
- ☐ **D** Fermentation

ANSWER C

WHY Photosynthesis is the process by which plants use sunlight, water, and carbon dioxide to produce glucose and oxygen. Respiration breaks down glucose to release energy. Transpiration is the loss of water vapor from leaves, and fermentation is an anaerobic metabolic process not used by plants for energy capture.

QUESTION 5

SINGLE CHOICE

Which agricultural biotechnology technique involves inserting genetic material from one organism into another to produce desired traits?

- ☐ A Selective breeding
- ☒ B Genetic engineering
- ☐ C Cross-pollination
- ☐ D Tissue culturing

ANSWER B

WHY Genetic engineering directly modifies an organism's DNA by inserting genes from another species to confer traits such as pest resistance or herbicide tolerance. Selective breeding and cross-pollination rely on natural reproduction, while tissue culturing propagates plants from cells but does not transfer genes between species.

QUESTION 6

SINGLE CHOICE

Which term describes the difference between total revenue and total costs in an agricultural enterprise?

- ☐ A Gross income
- ☒ B Net profit
- ☐ C Variable cost
- ☐ D Fixed cost

ANSWER B

WHY Net profit is calculated as total revenue minus total costs. Gross income refers to total revenue before expenses, variable costs change with production levels, and fixed costs remain constant regardless of output. Understanding profit is essential for evaluating the financial success of an agribusiness.

QUESTION 7 SINGLE CHOICE

Which reproductive process in plants involves the transfer of pollen from the anther to the stigma?

- ☐ A Germination
- ☒ B Pollination
- ☐ C Fertilization
- ☐ D Photosynthesis

ANSWER B

WHY Pollination is the transfer of pollen from the male anther to the female stigma. Fertilization follows, in which the male gamete unites with the female gamete to form a zygote. Germination is the sprouting of a seed, and photosynthesis is energy production, not reproduction.

QUESTION 8 SINGLE CHOICE

Which food preservation method uses high temperatures to destroy microorganisms and extend shelf life of products such as canned vegetables?

- ☐ A Refrigeration
- ☐ B Freezing
- ☒ C Pasteurization
- ☐ D Irradiation

ANSWER C

WHY Pasteurization uses controlled high temperatures to kill pathogens and spoilage organisms, commonly applied to milk, juice, and canned products. Refrigeration and freezing preserve food by slowing microbial growth but do not destroy organisms. Irradiation uses ionizing radiation, not heat, to control pathogens.

QUESTION 9

SINGLE CHOICE

Which agricultural career is primarily responsible for studying soil properties and providing recommendations for improving crop production?

☐ A☒ B☐ C☐ D

ANSWER B

WHY Soil scientists investigate physical, chemical, and biological soil properties and make recommendations for managing soil effectively. The other careers focus on engineering, food service, or equipment sales rather than soil analysis.