



CHRISTIAN SOCIAL SERVICES COMMISSION

An Ecumenical Body of Tanzania Episcopal Conference and Christian Council of Tanzania

P.O. Box 9433, Dar es Salaam, Tanzania

CSSC SOUTHERN HIGHLAND ZONE

AGRICULTURE MARKING GUIDE

CODE 034

Section 1: Multiple Choice

i	ii	iii	iv	v	vi	vii	viii	ix	x
C	B	B	B	A	B	B	B	C	C

Section 2: Matching Items

LIST A	i	ii	iii	iv	v
LIST B	B	I	G	C	F

3. Timely Planting

Definition: Timely planting means early planting or planting at the right time.

Importance of timely planting:

- Ensures high yield and better market prices (crops are harvested and marketed when prices are high).
- Crops utilize nitrogen efficiently, which is available at the beginning of the rain.
- Crops get enough moisture and escape environmental stress.
- Makes maximum use of rainfall and suitable soil temperature.
- Crops escape serious pest attacks and disease infestation.
- Crops establish earlier than weeds, allowing for better weeding and good condition for storage/processing.

4. Animal Reproduction

(a) Five signs of an animal on heat:

- Restlessness
- Mounting others
- Clearance discharge
- Swollen vulva
- Standing to be mounted

(b) Four phases of the estrus cycle in a cow:

- Pro-estrus
- Oestrus
- Met-estrus
- Di-estrus

5. Mating and Artificial Insemination (AI)

(a) Best mating option for 1 bull with 22 cows: Artificial insemination

Reasons:

- Avoids bull exhaustion
- Higher conception rate
- Better disease control

(b) Materials/equipment used in AI:

- Semen straw
- AI gun
- Liquid nitrogen tank
- Gloves
- Lubricant

6. Soil Erosion and Management

(a) Definition of soil erosion: A process whereby soil particles are transported from one place to another by either water or wind.

Soil erosion control methods mentioned: Cover crops, contour farming, mulching, composting.

(b) Advice to farmers on soil improvement:

- Educate farmers on benefits of cover crops.
- Apply compost and green manure.
- Replant nitrogen-fixing plants.
- Avoid over-irrigation and apply fertilizers in small, frequent doses.
- Use mulch or cover crops to slow water movement and reduce nutrient loss.
- Use raised beds, organize manure, and manage drainage channels.

7. Horticulture in Tanzania

(a) Improved seedbeds

(b) Examples of gardening in used/recycled containers:

- Gardening in used tyres
- Gardening in used bottles
- Gardening in used sacks
- Gardening in used bags
- Gardening in ready-made pots
- Multi-storey garden

(c) Importance of horticulture in Tanzania:

- Provides nutritious food (vegetables, fruits, spices)
- Provides income
- Provides employment
- Stimulates industrial growth
- Provides business opportunities
- Conserves soil

8. Agriculture and Its Relationship with Other Fields

Definition: Agriculture is the science and art of raising crops and keeping livestock.

(a) Relationship with Biology: Knowledge of living things helps in managing crop and livestock pests, and developing improved crop varieties and animal breeds.

(b) Relationship with Chemistry: Helps farmers conduct soil tests, determine fertilizer amounts, and supports manufacturing of fertilizers and agrochemicals (herbicides, pesticides, etc.).

(c) Relationship with Physics: Principles help make different machines like tractors, planters, and harvesters.

(d) Relationship with Computer Science: Makes farmers' work easier and more efficient through easy monitoring and managing crops/livestock.

(e) Relationship with Mathematics: Essential for calculations in land measurement, input ratios, and profit analysis.

(f) Why agriculture is the backbone of the nation (Yes):

- Provides food for human beings
- Provides raw materials for industries
- Provides foreign exchange
- Provides medicine for curing diseases (e.g., Neem plant)
- Provides recreational purposes

9. Poultry Keeping

(a) Behavior of chicks related to brooder temperature:

- Too cold: Chicks huddle together under the heat source, keep loudly, and are actively seeking warmth.
- Just right: Chicks are evenly distributed, active, eating/drinking, and making soft, contented sounds.
- Too hot: Chicks pant, spread wings, move away from the heat source, and may stand at the edge of the brooder.

(b) Six equipment found in a poultry house:

1. Drinkers (waterers)
2. Feeders (trough or hanging)
3. Brooder (heat source – electric or gas)
4. Nesting boxes (for laying eggs)
5. Perches/roosts
6. Egg trays/collection baskets

(c) Note on warmth maintenance: Poor warmth management can lead to bad habits such as cannibalism and feather pecking.

Section C (15 Marks)

10. Soil

Definition of soil: Soil is the topmost part of the earth in which plants and animals are active / which supports plants and animals.

Five importance of soil:

- Medium for plant growth
- Provides habitat for microorganisms
- Provides foundation for different structures (e.g., buildings)
- Helps hold water
- Helps remove carbon dioxide from the atmosphere (through photosynthesis by plants and bacteria)