Strand 1: Conservation of resources

1.1: Conserving animal feed: Hay

Section A

1. B.
2. C.
3. D.
4. B.
5. D.

Section B

1. Allows grass to mature and provide feed later; ensures livestock have reserve forage during drought.
2.
   - Baling - Easy to transport and store; helps preserve forage for use in dry season.
   - Stacking - Simple and low-cost; provides bulk feed reserves during drought.
3. Conserved forage ensures animals have feed during drought; prevents starvation and reduces mortality.
4.
   - Cut grass at the right stage before it fully dries in the field.
   - Dry forage properly to prevent mould.
   - Store in a clean, dry, well-ventilated shed.
5. Prevents spoilage of older hay; maintains freshness and quality of stored feed.
6. Ensures feed availability during drought; reduces livestock deaths and economic losses; improves farm resilience and productivity.
7. Harvest when forage is still green and nutritious, not after it dries in the field. This preserves nutrients and prevents loss of quality. It also ensures better feed value during storage.
8. Organise demonstrations on hay making and storage.
   Create awareness campaigns or posters encouraging conservation practices.

1.2 Conserving leftover foods

Section A

1. A.

2. B.
3. C.
4. C.

Section B

1. To minimise food wastage; to save money; it saves on time when using it to make a new dish; it is labour saving.
2.
   (a) (i) Deep fried sweet potatoes (ii) Beef samosas, beef sandwich, beef pilau (iii) Fruit salad, fruit punch (iv) Egg sandwich, scotch eggs.
   (b)
   - Ensure the food has no signs of souring, mould or fermentation.
   - Cut the leftover foods into small portions for quick reheating.
   - Never recook the food, only reheat.
   - Raw ingredients to be added should be cooked first.
   - Reheat leftover foods only once.
3. To prevent wastage; to prevent contamination; to prevent loss of nutrients.
4.
   (a) To allow quick reheating
   (b) To make it more appealing.
5. To improve flavour; to improve the nutritional value; to improve the colour.
6. Store the cakes in airtight containers to protect them from absorbing moisture.

1.3: Integrated farming

Section A

1. C.
2. A.
3. B.
4. B.

Section B

1.
   - Using poultry manure on the garden with vegetables recycles farm waste and reduces the need to buy commercial fertilisers
   - Using pond water for irrigation ensures efficient use of available water resources instead of it going to waste.
2. A correctly labelled diagram should show the three components (fish pond, cowshed, vegetable garden) with arrows indicating the flow of resources between them, for example:
   - Cowshed → manure → vegetable garden
   - vegetable garden → crop residues/vegetable waste → fish pond (as fish feed)
   - Fish pond → water → vegetable garden (for irrigation)

Award 1 mark for each correctly labelled component, 1 mark for correct connections.

3. poultry keeping; vegetable/crop production; beekeeping; rabbit keeping; small-scale fish rearing.
4.

(a) Poultry provides food such as meat and eggs; poultry manure used to improve soil fertility for crops or generates income.

(b) Livestock provide manure used to fertilise crops; livestock are a source of food and income; livestock waste can be used to produce biogas.

5. Poultry keeping; crop production; fish rearing (aquaculture); livestock keeping; agroforestry; beekeeping (apiculture).
6.
    (a) The project provides food for the school community; generates income for the school; it gives learners skills needed in agriculture.
    (b) Collect the poultry droppings regularly from the poultry unit, allow the manure to decompose properly (compost it) before use, apply the manure to the vegetable garden to improve soil fertility and crop growth.