

ANIMAL HUSBANDRY 2

1. GENERAL COMMENTS

The standard of this year's paper was good for the level of the candidates, and was comparable with previous years. The performance was also comparable to previous years.

2. SUMMARY OF CANDIDATES' STRENGTHS

The candidates did well by answering questions in an orderly manner. A good number of them answered different questions on different pages, as indicated in the instructions on the answer booklets. This is commendable, as it usually reduces the difficulty of marking scripts.

In addition, majority of them wrote the question numbers in the order in which they answered them, behind the answer booklets.

Candidates had very little difficulties answering the following questions:

- a) Ways in which animal production is important
- b) Sources of protein concentrate for poultry production
- c) Nutritional diseases in cattle
- d) Causal organism of the New Castle Disease
- e) Factors to consider when formulating diet for farm animals
- f) Benefits of providing water to livestock
- g) Equipment used in a brooder house

3. SUMMARY OF CANDIDATES' WEAKNESSES

- a) Some of the candidates had difficulties in understanding some of the questions, because some answers provided actually had nothing to do with the said questions. This has been a recurring observation and is worrying.
- b) Some candidates wasted time to answer whole questions, and later cancelled them out possibly because they realized that was not the easiest after all. These could have been avoided if they spent few minutes to read through the questions at the start of the exams, and decision taken on which ones to attempt or not.

- c) Some candidates provided more answers to some questions than were required of them. Some of them also answered more than the four questions they were expected to answer for the paper. This behavior causes them to waste time answering questions which would not contribute to their final grade. Such time could have been spent on improving answers provided for the four main questions. This year, it was ensured that answers which were provided in excess of the required numbers were ignored. This is to inform future candidates to obey instructions on the question papers and on the answer booklets, as those extra answers would add nothing to their scores.
- d) Errors associated with spellings of technical words were very common this year, similar to previous years, and that caused candidates to lose several points.
- e) Areas that posed much challenges to the candidates include:
- (i) Differentiation between rangeland and natural pastures
 - (ii) Definition of the term lactation
 - (iii) Hormones associated with milk let-down in cattle
 - (iv) Ways of controlling parasites in animal production
 - (v) Explanation of terms used in animal production
 - (vi) Benefits of feed additives in poultry diets

4. SUGGESTED REMEDIES

- a) Candidates should be encouraged to understand that examinations must be taken independently, and they should cultivate the habit of doing independent work in the examination hall. Once this mentality is in place, it would motivate them to prepare well as they know they cannot rely on anyone in the examination hall for help.
- b) Candidates need to improve on their reading skills, to enable them build more vocabularies for use under examination situations. They should take their time to study and ***understand*** terminologies associated with animal husbandry, so they could at least answer the questions in a better manner.
- c) At the start of a paper, candidates should ***spend the first five minutes of their time*** to read and understand all the questions, and also decide on questions to attempt, before they start to provide answers to them. This will help minimize incidence of answering whole questions and later cancelling them out.

- d) Teachers need to emphasize the need for candidates to obey instructions during examinations. This will help them to spend good time to answer the right number of questions, rather than *wasting time in providing additional answers* to some questions, which would not add any marks to them. Obeying instructions is part of the training, so they must make it a habit to follow instructions religiously.
- e) Candidates should be advised to convince themselves on which questions they wish to answer, before attempting them. This will help minimize the excessive cancellation of answers to a whole question, after wasting time to write all those answers.

5. DETAILED COMMENTS

Question 1

- (a) (i) **State six ways in which animal production is important.**
 (ii) **Differentiate between *rangeland* and *artificial pasture***
- (b) (i) **Define lactation as used in animal production.**
 (ii) **Mention two hormones associated with milk letdown in livestock.**
- (c) (i) **Name two sources of protein concentrate for poultry production.**
 (ii) **Mention four nutritional diseases in cattle.**

Question 1 was very popular among the candidates, and those who attempted it did quite well, but could have done better if the following points were taken into consideration:

- a. Ways in which animal production is important** – this was one of the popular questions and candidates did not find much challenge attempting it. Some candidates indicated that animal production serves as a source of food, and went ahead to add that it is a source of meat and milk. It should be noted that meat, eggs and milk are foods obtained from animals, thus the earlier response is not different from the others. The expected answers included:

- Source of food
- Source of livestock feed
- Source of raw materials to local industry
- Source of security e.g. geese and dogs
- Used for education/research purposes
- For draught/traction purposes
- Source of manure
- Source of foreign exchange/income
- Kept as pets/companionship
- Means of employment

- Means of transportation
- Source of by-products for energy e.g. Biofuel and biogas
- Used for medicinal purposes
- Sports/recreational purposes
- For religious/sociocultural practises
- For measuring social status/prestige

ii. Differences between rangeland and artificial pasture – this question was not too challenging to most of the candidates, but others failed to indicate that rangeland is *natural* in nature, while artificial pasture was constructed by man. It should also be noted that **these are planted for animals to graze**. If that is not added, such grassland could be a football field or lawn. Thus, rangeland is an area of land covered with naturally growing grasses, legumes and few low trees (shrubs) suitable for feeding livestock *while* artificial pasture refers to an area of land covered with grasses and legumes which has been sown by humans for feeding animals.

b. Definition of the term lactation – this question was not so challenging, but some candidates failed to indicate that in lactation, the milk is produced by a female animal after parturition. Others also indicated that lactation is taking of milk by a young animal from the mother's teat. That is incorrect because such explanation is for suckling, but not lactation. Lactation therefore refers to the production and release of milk by the dam (a female animal which has given birth) under the influence of hormones after parturition

ii. Hormones associated with milk let down in livestock – this question in itself was not challenging to the candidates, but the challenge was with the spelling of the names of the hormones. Most of the candidates could not write the names correctly, hence they were marked down. They were expected to write oxytocin and prolactin as the correct answers.

c. Sources of protein concentrate for poultry production – This was one of the most popular questions, and candidates did not struggle at all to provide correct answers such as fish, groundnut, soya bean, cotton seed, meat, feathers, Bambara, palm kernel, insects, eggs, milk, sunflower, blood, coconut, cowpea, pigeon pea, animal offal etc.

ii. Nutritional diseases in cattle – This question also did not pose much challenge to the candidates. Some of the expected answers are ketosis, bloat, scurvy, pellagra, osteoporosis, beriberi, anaemia, osteomalacia, obesity, goitre, etc.

Question 2

- (a) **Discuss the Newcastle disease under the following headings:**
 - (i) **causal organism;**
 - (ii) **mode of transmission;**
 - (iii) **two symptoms;**
 - (iv) **two control measures.**
- (b) **Mention six ways of controlling parasites in animal production.**
- (c) **Explain each of the following terms as used in animal production:**
 - (i) **culling;**
 - (ii) **quarantine.**
- (d) **State two factors to consider when formulating diet for farm animals.**

a. Discussion of Newcastle Disease under some headings

- i. Causal organism** – the causal organism of the new castle disease is virus, and this was not a challenge at all to most of the candidates.
- ii. The mode of transmission of the Newcastle disease** – this was not so challenging, except that those who said contact with the animal were marked down because it should have been ‘contact with the *affected* animal’ or with *contaminated* equipment
- iii. Symptoms** – This question was quite challenging to some candidates because it demanded unique symptoms of the disease, but not the general symptoms of diseases such as loss of appetite etc. the expected answers include coughing sneezing, release of greenish diarrhoea, paralysis, blindness, torticollis, backward somersaulting, etc
- iv. Control measures** – this was not challenging as almost all the candidates who attempted this question got the answer right. They provided responses such as routine vaccination, ensure good sanitation, isolate sick birds, bury/burn dead birds, provide footbaths, cull sick birds, use UV light at the breeding unit, keep visitors/stray animals away.

b. Ways of controlling parasites on animal farm – This question did not pose much challenge to the candidates, as a lot of them got the answers correct. Some of the expected answers include dipping, dusting, deworming etc. It should be noted that

drenching and deworming refer to the same treatment, so candidates who wrote both answers scored for only one of them. Other expected responses are:

- Spray the farm with recommended chemicals/bathing with acaricides/fumigate pen
- Keeping clean surrounding
- Avoiding overcrowding/use the right stocking density
- Providing clean feed
- Providing clean/fresh water
- Regular cleaning of equipment
- Quarantining of new stock of animals
- Avoid stray animals on the farm
- Provide appropriate housing to prevent animals from straying
- Adopt regular handpicking of ecto-parasites like ticks/grooming
- Practice rotational grazing
- Raise feeders and drinkers to reduce feed and water contamination
- Regular changing of litter materials
- Avoid grazing wet pasture
- Liming of pasture to control snails/use of molluscicide
- Proper construction of farmhouse to eliminate hiding places of parasites

c. Explanation of terms as used in animal production

i. Culling – it is the *permanent removal* of sick or unproductive animals from the flock to prevent wastage of feed or avoid spread of diseases. It should be noted that this is not the same as isolation, thus candidates who defined isolation instead of culling, did not score. Whereas culling is a permanent removal of the animal from the flock, isolation is a temporal removal of the animals from the flock.

ii. Quarantine – Is the isolation of new stock of animals which have been brought to the farm to check them for signs of diseases. It should be noted that sick animals are not quarantined, but rather isolated. This implies that candidates who indicated that quarantine involves isolation of sick animals, were marked down.

d. Factors to consider when formulating diet for farm animals – this question was not challenging, as most of the answers presented were correct. Some of the expected answers are; age of the animal, breed of animal, cost of feed ingredient, purpose of keeping animals, composition of ingredient, availability of feed ingredient, physiological state of animals, etc.

Question 3

- (a) What is meant by the term *artificial insemination*?
 (b) Copy and complete the table below showing the crossing between two parents of N'dama cattle with genotypes RRdD x RrDd.

	RD	Rd	RD	Rd
RD				
Rd		RRdd	RRDd	
rD		RrDd	RrDD	
rd				

- (c) Determine the ratio of the genotype obtained from the crossing in (b).
 (d) Enumerate three equipment used in bee keeping.
 (e) Mention three ways of reducing worm infestation in farm animals.
 (f) State three benefits of feed additives in poultry diets.

- a. **Explanation of the term artificial insemination** – It should be noted that this is different from natural mating, and thus it should be made clear in the explanation that, it is done by man. Repetition of the term “artificial” in the explanation is also not acceptable. Thus, artificial insemination is the introduction of semen into the reproductive tract/vagina/womb of female animals on heat other than natural means.
- b. **Completion of Table of crossing between two N'dama cattle** – Candidates who knew crosses in genetics did not face any challenge with this question.
- c. **Ratio of the genotypes** – Once the crosses were successfully obtained, finding the ratio did not pose much challenge to the candidates. This question expected the candidates to indicate the number of times each of the crosses obtained, appeared in the table as follows:

	RD	Rd	RD	Rd
RD	RRDD	RRDd	RRDD	RRDd
Rd	RRDd	RRdd	RRDd	RRdd
rD	RrDD	RrDd	RrDD	RrDd
rd	RrDd	Rrdd	RrDd	Rrdd

- d. **Equipment used in bee keeping** – the candidates scored good marks for this question. The only challenge was with the proper spelling of the names of the equipment. Some of the equipment are hives, veil, hand gloves, boots, buckets/containers, brush, lighter, queen catcher, ladder, etc.

- e. **Ways of reducing worm infestation in farm animals** – This question was popular among the candidates. The expected answers include use of rotational grazing, provision of clean feed, ensure routine deworming e.g. drenching, regular cleaning of feed troughs, regular cleaning of drinkers/water troughs, proper disposal of excreta / dropping/litter material, avoid grazing animals early in the morning, ensure proper cooking of meat meal before feeding to animal, avoid grazing animals at waterlogged areas/drain pasture to kill snails, etc.
- f. **Benefits of feed additives in poultry diet** – candidates were expected to state some benefits derived from using additives in feed of animals. Some of the expected answers are stimulation of appetite, protection from toxic substances, control acid-base balance, improve nutritional quality of feed etc. It should be noted that feed additives do not supply feed nutrients as those roles are played by feed ingredients.

Question 4

- (a) **Explain each of the following terms as used in animal husbandry:**
 (i) **pasture;**
 (ii) **forage;**
 (iii) **fodder.**
- (b) **State five ways in which pastures are important in animal production.**
- (c) **Distinguish between a *gene* and a *genotype*.**
- (d) **Mention four disadvantages of introduction as a practice used in animal improvement programmes.**

This question was not so popular among the candidates. However, the few who attempted it did quite well.

a. Explanation of terms as used in animal husbandry

- i. **Pasture** – This is an area of land on which forage plants are grown for feeding livestock. It should be noted that pasture is not synonymous to forage, and so the two should not be interchanged.
- ii. **Forages** – these are plants that are cultivated for their vegetative parts to be used for feeding livestock. Candidates did not find much challenges attempting this question.
- iii. **Fodder** – unlike forage, fodder are plants which are harvested and carried to animals to feed on. In this case, the animals do not go to the pasture to graze, but the forage is harvested and sent to them.

- b. **Ways in which pastures are important in animal production** – candidates were expected to provide some benefits of pastures. It is known that pastures provide feed for livestock, but it should be noted that the feed supplies protein, carbohydrates etc to the animals, so candidates who listed sources of protein or carbohydrate in addition to provision of feed did not score additional points. The expected answers include
- Source of feed
 - Serve as green manure
 - Legumes serve as cover crops to control soil erosion
 - Legumes fix nitrogen into the soil
 - Help in conservation of soil moisture
 - Used as bedding materials in pens
 - Some grasses are used to roof farm houses
 - Cultivated pastures ensure availability of feed throughout the year
 - Cultivated pastures save time and energy in searching for feed for animals
- c. **Distinction between gene and genotype** – this question did not pose much challenge to the candidates. It should however be noted that questions of this nature require that candidates should be able to indicate correctly what both gene and genotype are, before they score full marks. If one of the terms is wrong, the candidate scores no marks for the other which might be correct. Candidates should therefore convince themselves before attempting such questions. In addition, there should be a conjunction (e.g. whiles, but, however) between the two words before the candidate can score full marks. Thus a gene is the unit of inheritance and is located in the chromosomes of living cells *While* a genotype refers to the genetic constitution of an individual organism/the inheritable characters that cannot be seen/hidden.
- d. **Disadvantages of introduction as a practice in animal improvement** – candidates were to indicate some challenges associated with the introduction of new stock into an environment. Those who knew what was expected of them had no challenge with the question. Some of the expected answers include introduction of new diseases, the new animal may fail to adapt to the new environment, introduction of undesirable traits, etc

Question 5

- (a) **State four benefits of providing water to grazing livestock.**
- (b) **List four factors to be considered when buying gilts for rearing.**
- (c) **State two ways by which a farmer could differentiate male and female grasscutters.**
- (d) **State five characteristics of a suitable sheep pen.**
- (e) **Mention five advantages of the battery cage system of rearing chicken.**

This was one of the popular questions because, a significant number of the candidates attempted it. Performance was also quite good.

- a. **Benefits of providing water to grazing animals** – candidates did not find any challenge at all in attempting this question. Some of the expected answers are for cooling of the body, aiding digestion, increase milk production, lubricate the throats of animals to avoid chocking, dilutes/clears some toxins from the body, minimizes constipation etc.
- b. **Factors to be considered when buying gilts for rearing** – for this question, it should be noted that gilts are young sows which are used for breeding purposes. Therefore, candidates who wrote age, sex and purpose of rearing the animals scored no points. Expected answers include health condition, breed, body conformation, number of teats, tolerance to pests, etc.
- c. **Ways by which farmers can differentiate male and female grasscutters** – This question expected candidates to indicate some parameters that could be used to differentiate male from female grasscutters. Candidates who wrote answers like by the use of head size, distance between anus and the genitalia for instance were marked down. Expected answers include males have bigger heads than females, the distance between the anus and the genitalia is longer in the male than in the female, males have testicles which can be felt after 4 months, etc.
- d. **Characteristics of a suitable sheep pen** – this question did not pose much challenge to the candidates as a high percentage of those who attempted it scored high marks. Some of the expected answers include
 - It should have east-west orientation
 - Should be airy/well ventilated
 - Sides facing direction of strong winds should be partially blocked
 - Should have good bedding materials
 - Floor should not be slippery
 - Should be roofed to protect against bad weather
 - Floor should have a gentle slope to facilitate cleaning
 - Should not have crevices to harbour pests
 - Should be strong/firm
 - Should have feed and water troughs at vantage points
- e. **Advantages of the battery cage system of rearing chicken** – the battery cage is a type of intensive system of animal production, so it was expected that the advantages should be compared with other intensive systems of poultry production. Some of the

expected answers include minimizing of egg pecking, reduction in spread of diseases, better feed utilization, requires small land area etc. Those who compared with the extensive or semi-intensive systems were marked down.

Question 6

- (a) Draw and label an egg of a hen.**
- (b) Give four examples of equipment used in a brooder house.**
- (c) Copy and complete the table of vaccination for poultry below**

This question was another popular one among the lot, as a high proportion of the candidates responded to it.

- a. **Diagram of the egg of a hen** – candidates were expected to draw and label the egg of chicken. There were no challenges at all with this question.
- b. **Examples of equipment used in brooder house** – this question was not challenging, but some candidates did not seem to know the difference between brooder house and a hatchery. Whereas a brooder house is a place where chicks are raised by providing them with warmth and all necessary conditions for growth, a hatchery is a place where fertilised eggs are incubated to produce chicks. Therefore, candidates who listed incubators and candlers as facilities at the brooder house were marked down. It was expected of candidates to have provided responses such as feeder/hopper, heating unit/hover, water trough, shovel/spade, broom, debeaker, hypodermic syringe/needle, buckets, wheel barrow, partitioning board/ring guard, etc
- c. **Completion of table on vaccination of poultry birds** – this question was not a challenge at all to candidates who knew what was expected of them.
- d. **Artificial methods of semen collection** – this question also posed no challenges to the candidates, so those who knew what was expected of them did the needful. Some of the expected answers are by the massage method, electro-ejaculator, the use of artificial vagina etc.

ANIMAL HUSBANDRY 3

1. GENERAL COMMENTS

The standard of the paper was similar to that of the previous years in terms of the content and rubrics. Performance of candidates was slightly higher compared to the previous year.

2. SUMMARY OF CANDIDATES' STRENGTHS

Most candidates adhered to the rubrics of the paper. Some handwritings were clear. Some answers were brief and targeted the expected outcome. Certain answers were very innovative and some grammatical constructions also need to be recommended.

3. SUMMARY OF CANDIDATES' WEAKNESSES

Few candidates answered about two or three questions on the same page. Some after answering question never continued on the next page but move further to some two or three pages away without referencing the initial source. The sentence construction of others leaves much to be desired as they are full of grammatical errors. Some candidates spelt technical words wrongly. Candidates also repeat the same questions they have answered on another page.

4. SUGGESTED REMEDIES

Teachers should take candidates through how to answer questions based on the instructions provided on the cover page. Students should also be urged to read the instructions carefully before starting to answer the items to avoid committing errors to lose marks.

5. DETAILED COMMENTS

Question 1

- (a) (i) State four ways by which specimen A could break in deep litter house
- (ii) Name one nutrient that is obtained from the outer covering of specimen A.
- (b) (i) Mention three uses of specimen B in livestock production
- (ii) State three problems that could be associated with specimen B in poultry farm

(c) Mention four sources of specimen C in livestock production

(a) (i) **Causes of egg breakage in the deep litter house:** This question was well answered by most candidates. They were able to state expected answers such:

- Deficiency of calcium/nutritional deficiency/lack of vitamin D
- Poor nesting facilities/faulty cage
- Poor handling
- Overcrowding of birds/stressful conditions
- Trampling during stampede
- Egg pecking by hen
- Insufficient litter material
- Late collection of eggs

(ii) **Major nutrient obtained from specimen A (Egg):** This part was also well answered by candidates. Only few wrote protein. They provided the correct answer as calcium.

(b) (i) **Uses of specimen B (Fresh poultry droppings):** This item was also well answered by most candidates as they provided the expected responses such as

- As manure/organic fertilizer/soil amendment
- Source of feed
- Substrate for maggot production
- Raw material for biogas production
- Fish pond fertilization

(ii) **Problems associated with specimen B:** An average number of candidates were able to respond to this item correctly. They were expected to have stated

- Attract flies
- Source of pollution on the farm
- Its disposal increases cost of production
- Medium for growth of pathogens/transmission of diseases
- The stench can disturb neighbours
- Its decomposition produces ammonia gas which can blind birds/cause respiratory conditions

(c) **Sources of water in livestock production:** This part was answered by almost all candidates very well. Only few got it wrong as they thought it was the source of water in the body of farm animals so decided to write from feed and from metabolism. The expected responses are river, stream, brook, spring, pond, well, borehole, rainfall, dam, sea, lake etc.

Question 2

- (a) State one major mineral supplied by each of specimens D and E
- (b) (i) Mention the food nutrient commonly supplied by both specimens F and G
- (ii) Classify specimens F and G into the following categories
 - (α) Plant origin
 - (β) animal origin
- (c) (i) State four functions of the major nutrient supplied by specimen F
- (ii) Describe the preparation of specimen F after harvesting of its raw material.

(a) **Major nutrient supplied by specimen D (Bone meal):** Most candidates gave the correct answer as calcium. Some candidates however could not spell calcium correctly; they wrote “cacium”.

(b) (i) **Food nutrients supplied by both specimen F (Groundnut cake) and G (Fish meal):** This part was well answered by most candidates but few. The expected answer was protein. However, others decided to be specific and not general. Hence stated the answer as follows;

Specimen F – protein

Specimen G – protein

They attracted the marks alright but they were expected to lump it up as one (ie Protein) because the question said the common nutrients to both. Others wrote protein for F and carbohydrate for G which earned them a zero score

(ii) **Classification of specimen F (Groundnut cake) and G (Fish meal) into plant and animal origins:** this item was well answered by almost all candidates. They were able to mention

F – Plant origin

G – animal origin

(c) (i) **Functions of major nutrient supplied by F:** This part was also well answered by candidates. They realised that the major nutrient was protein so they were able to provide the functions of protein as follows:

- Repair worn out tissues
- Improves growth
- Production of enzymes
- Production of hormones
- Energy production
- Production of animal products e.g. milk, egg etc.
- Protection of the body
- Provides immunity

(ii) **Preparation of specimen F (Groundnut cake) after harvesting:** This part was poorly answered by most candidates. The few who answered it did not also follow the sequence. They were expected to produce the following stages:

- Wash
- Dry
- Dehusk/shelling
- Dry
- Roast the groundnut
- Grind the groundnut
- Press out the oil from the groundnut
- Fry the groundnut paste as cake
- Dry the cake
- Bag appropriately
- Store

Question 3

- (a) (i) State four functions of specimen H in farm animals
- (ii) Mention five methods of preserving specimen H
- (b) (i) Give three examples of farm animals that possess specimen J
- (ii) State three functions of specimen J in farm animals

(a) (i) **Functions of specimen H (Rumen):** Most of the candidates were able to provide the expected answers such as:

- Receives and stores feed temporarily
- Degrades cellulose with the help of microorganisms/bacteria/fungi
- Digestion of crude fibre
- Synthesis of microbial protein
- Absorption of nutrients from the wall of the rumen
- Production of volatile fatty acids e.g. acetic acids

- Assists in the act of rumination by refining the coarse pieces of feed to allow bacteria and digestive juice to act on it
- Production of vitamin B complex/Vitamin K

(ii) **Methods of preserving specimen H (Rumen):** This part was also well answered as candidates mentioned drying, smoking, canning, freezing, boiling, canning, salting etc.

(b) (i) **Examples of animals that possess specimen H (Rumen):** This part was also well answered by almost all the candidates. They were able to mention cattle, sheep, goat and camel.

(ii) **Functions of specimen J (Reticulum) in farm animals:** This part was poorly answered by most candidates. They were rather giving answers related to the functions of the rumen. They were expected to have given responses such as:

- Provides to and fro passage to feed material
- Helps in the process of regurgitation and rumination
- Helps mix feed material as it passes through the reticulum
- The honeycomb pattern helps to retain undesirable objects such as nails mistakenly swallowed along with feed

Question 4

- (a) State three functions of each of specimens K and L in farm animals
- (b) Mention two other organs that perform a similar function as specimen L
- (c) State four benefits of raising specimen M
- (d) Mention three other farm animals that have similar digestive system as specimen M

(a) **Functions of specimen K (Liver) and L (Kidney):** An average number of candidates lost marks here because, some mistook specimen K s kidney and L as liver and hence wrote down their functions as such.

Specimen K (Liver) is expected to function as

- Secretion of bile juice for digestion of fat
- Storage of bile in the gall bladder
- Transport of bile to the small intestine through the bile duct
- Storage organ for excess carbohydrate in the form of glycogen
- Transportation of absorbed nutrients in the different parts of the body

- Deamination
- Detoxification
- Storage of iron

Functions of specimen L (Kidney) are as follow:

- Excretion
- Removal of unwanted/excess nitrogenous wastes like urea
- Detoxification
- Removal of excess glucose
- Maintenance of acid/base balance
- Osmo-regulation of the body

(b) **Other organs which perform similar function as specimen L (Kidney):** This part was also well answered by candidates. Answers provided include lungs, skin, large intestines and liver.

(c) **Benefits of raising specimen M (Rabbit):** This part was also well answered by candidates. They were able to state the expected responses such as:

- Meat production
- Pelt production/Skin production/Fur production
- Milk production
- Research/educational purposes
- Employment
- Pet/companionship
- Recreation
- Manure production
- Income

(d) **Farm animals that have similar digestive system as specimen M (Rabbit):** This sub question was also well answered by most candidates. Expected responses include horses, guinea pigs, mule, ass, donkey and grasscutter