**P 515/1 AGRICULTURE**

**SECTION A**

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| 1. A 2. A 3. C 4. B 5. B 6. B 7. A 8. D 9. B 10. D 11. C 12. A 13. C 14. A 15. B | 1. A 2. C 3. B 4. C 5. C 6. A 7. C 8. D 9. C 10. C 11. B 12. A 13. B 14. B 15. A |

**31. a) what is the effect on elongation of the stem segments of**

**i)** GA and IAA separately

|  |  |
| --- | --- |
| GA | IAA |
| GA stimulates less cell division and growth than IAA | IAA stimulates more cell division than GA |
| Promotes only cell elongation of plant stems | -Causes cell elongation, photoperiodic response and Geo tropism  -Causes cell division  -Stimulates cambial growth. |

(ii) GA and IAA combined?

-Stimulates rapid cell division and growth thus the highest mean stem segment elongation.

**(b) What type of interation is shown by the two growth substances?**

Antagonistic

**(c) Over which period of the experiment do the plant growth substances have their greatest effect?**

Suggest a reason for your answer. (2marks)

By 40 days of incubation, because hormonal action is slow, the hormones have been accumulated that area test effect of hormones be noted.

**d) i) state two other effects of IAA in plants other than stem elongation**

-Stimulates fruit growth and parthenocapic fruit

-Inhibits abscion (leaf /fruit)

-Inhibits development of lateral buds

-Kills plants by disrupting

-Stimulates root development

**e) For each effect in (di) state a commercial application of IAA**

1. Stimulate fruit growth and pathenocapie fruit( development of seedless fruits)
2. Inhibition of abscission-reduce leaf and fruit fall in fruit trees.-Enables continuous production of seedless fruits.
3. Enables fruits reach maturity.
4. Kills plants by disrupting growth-( in form of selection herbicides (weed killers)
5. Stimulates root development (growing of seedlings from cuttings such as clonal coffee)

**32a) Explain why prices of agricultural commodities fall just after harvesting.**

* Agricultural products are produced seasonally this causes surpluses at harvest time which must be sold by the farmers.
* Farmers are not able to store the products for long because they do not have good storage facilities.
* Most Agricultural products are perishable and must be consumed or sold quickly or they involve very expensive storage facilities such as cold rooms which farmers cannot afford.
* There are many small farmers therefore no single famer can influence the marketing and market price of the commodities. They tend to release their products at once finish after harvesting
* Agricultural products are bulk and of low value so farmers fail to transport their products to good markets.
* Lack of processing plants, makes farmers to sell off at low prices as mkts are over flooded of agricultural products.

**b) ways in which prices of agricultural commodities can be determined .**

* Using forces of demand and supply.
* Government setting up fixed prices through price control mechanisms
* Through auctions
* By bargaining /haggling
* Through international commodity agreement such as ICO
* Through resale price maintenance
* Through contract agreements/ contract pricing
* Through cost production plus profit method

**33a) Describe five stages undergone by a seed during germination**

* The planted seed absorbs in water through the microphyle and testa by imbibation
* The absorbed water activates enzymes which in turn cause chemical changes in the seed converting the nutrients stored into simple substances for use by the embryo.
* The soluble products of digestion /chemical breakdown are transported to the growth regions of the embryo to synthesise new cells and enzymes
* The radical emerges out through the seed coat into primary roots while plumule, emerges and grows into schools.
* Which get light and development into leaf premodia leaves

Insist on the order of the stages order.

5 ordinary stages @1mark

=05 marks

**b) Explain the five practices carried out to ensure uniform germination of seeds**

* Plant seeds at the same time so that they emerge from the same soil at the time.
* Prepare the field to a uniform tilth to allow uniform planting.
* Planting seeds at uniform and correct depth so that the seedlings have the same distance to reach the soil surface.
* Select and plant seeds of the same size, variety and age to allow uniform germination.
* Plant seeds when the soil has the light and uniform moisture content to allow access to water for each seed.
* During irrigation, supply uniform amounts of water to each seeds.
* Treats seeds against soil born pests and diseases to avoid destruction of some seeds.

Any 5 explained practices

1@ =05 marks

**34a) Explain the appropriate practices in cattle dipping for effective tick control.**

* Maintaining a dipping routine so that tick population is constantly suppressed and to avoid development of resistance to accaricides.
* Dipping animals when it’s going to rain soon to avoid washing accaricides from animals.
* Poor mixing of accaricides in right concentration to kill ticks.
* Ensuring the correct level of accaricide in the tank for complete submersion of animals
* Do not use accaricide for so long as it becomes diluted and in effective to kill ticks
* Ensuring that accaricide is properly mixed before dipping starts to have well distributed drug in the solution.
* Using the right accaricide for the most common ticks on the farm.
* Frequently checking the concentration and toping up to maintain the right concentration and tick control.
* Preventing conditions that dilute accaricide such as leaking loof, flooding, cracking, of wall.
* Foot bath be provided to enable ,reduce dirt from hooves of cattle before dipping.

6 practices @ 1 mark=6 marks

**b) Suggest factors considered when choosing a good site for dip construction.**

* Well drained / raised ground to avoid run off flooding around the tank dilutes dip wash.
* Near reliable water source to be used in the tank without much tiresome collection.
* The site should have firm and compacted soil to hold the dip without sinking or leaking.
* The site should have enough space for the collection and drainage yards and soak pit (to avoid contamination of pastures by accaricides)
* In the Centre of the grazing land to reduce day walking animals on the dipping day.

Any 4 good sites @ 1 mark =04marks

**35a) what is vaccination:**

The practice of artificially inducing and building up the animal’s body immunity against specific infectious diseases to ensure that animals do not have an outbreak.

**b) The infective organism is attenuated, weakened or killed.** When it’s introduced in the body it stimulates the body, s immune system to produce antibodies which the organism in case of attack by the disease causing organism.

**C) Seven precautions considered before and during vaccination in poultry**

* Do not mix vaccines together while administering
* Vaccines should be handled in packed thermos flasks with ice to avoid exposure of vaccines to high temperature
* Store vaccines in deep freezers or refrigerators
* Strictly follow the manufactures instructions.
* Do not vaccinate birds when they are sick or under stress.
* Use only distilled water for reconstituting vaccines.
* Reconstituted vaccines should be used as quickly as possible not to be stored for long
* Clean and disinfect the equipment to be used in vaccination.
* Antistress medicine such as antibiotics and vitamins should be given to the chicken 3 days before vaccination
* All birds in the poultry house should be vaccinated at once.
* Vaccinated when it is cool especially in the evening.

7\*1=7 marks

**END**