

Question 1

Explain the functions of the following hormones in plant growth and development:

- a) Ethylene [5]
- b) Auxins [5]
- c) Cytokinin [5]
- d) Abscisic acid. [5]
- e) Gibberellin. [5]

Question 2

- a) Describe the process of pollen blasting in a maize crop, growing under hot and dry climate conditions. [6]
- b) Describe the photoperiodic response of the following cereals when grown under hot and dry conditions.
 - i. Maize [7]
 - ii. Cotton [6]
 - iii. Sorghum [6]

Question 3

Discuss the physiological effects of water stress on plant growth legume crops that are grown in Zimbabwe. [25]

Question 4

Describe the physiology of a maize crop under the following growth stages:

- a) Germination stage [6]
- b) Flowering stage [6]
- c) Cob and kernel development stage. [7]
- d) Maturity stage. [6]

Question 5

Discuss the factors that affect radiation use efficiency in crops. [25]

Question 6

Describe how the following factors may improve water use efficiency of crops:

- a) Crop canopy structure. [4]
- b) Fertilizer. [4]
- c) Light intensity. [4]
- d) Genotype. [5]
- e) Planting date. [4]
- f) Planting density. [4]

END OF EXAMINATION PAPER