ii) New materials are synthesized from proteins; bringing about growth of embryo;

iii) The rate of respiration is faster than that of synthesis of materials for growth;

iv) First leaf carried out photosynthesis leading to growth;

d)
- Presence of absiscic acid
- Embryo not fully developed
- Absence of hormones and enzymes that stimulate germination
- Impermeable seed coat

Question 19

Explain how abiotic factors affect plants. (20 marks)

Candidates were required to explain how abiotic factors affect plants.

Weaknesses

Although a number of candidates were able to describe or name the abiotic factors, they did not know how those factors affect plants. Some candidates mixed up the biotic and abiotic factors.

Expected Response

Wind: In windy conditions, the rate of transpiration increases; wind disperses fruits and seeds; is an agent of pollination;

Temperature: Changes in temperature affect the rate of photosynthesis and other biochemical reactions; increase in temperature increase rate of transpiration;

Light: Green plants need light for photosynthesis; some plants need light for flowering; seed like lettuce require light for germination;

Humidity: When humidity is low, the rate of transpiration increases;

P^H: Each plant require a specific P^H to grow well; (acidic or alkalinity or neutral)

Salinity: Plants with salt tolerant tissues; like mangrove grow in saline areas and plants in estuaries adjust to salt fluctuations;