

"LA LUTTE CONTINUE JUSQU'AU DERNIER JOUR"

S.6 BIOLOGY PAPER 2

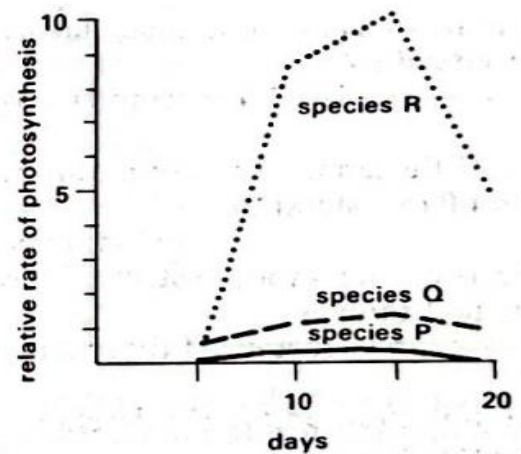
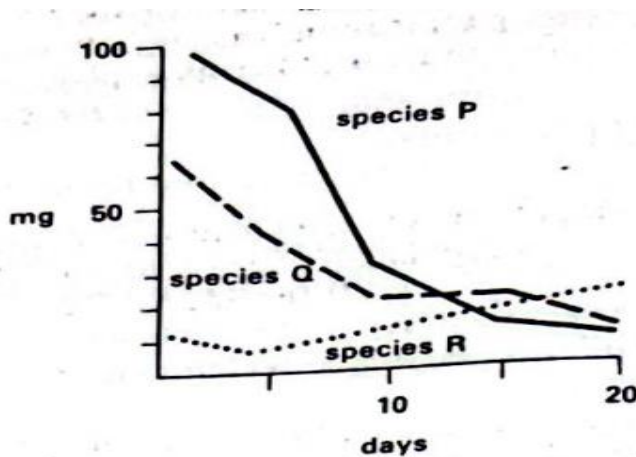
NOVEMBER, 2024

Question one is compulsory, Attempt any three questions in section B.

1. The graphs below show changes which occur in dry matter and photosynthetic activity with time from the start of germination, in the cotyledons of seeds of three species of plant, species P, species Q and species R.

dry matter

relative photosynthetic rate



- a) Compare the changes in dry matter in species Q and R. (07 marks)
- b) Explain the differences in the changes in dry mass of species Q and R after 10 days. (08 marks)
- c) Explain the changes in the rate of photosynthesis in species R. (09 marks)
- d) Suggest reasons for the differences in the rate of photosynthesis of the species. (06 marks)
- e) With reasons, state the type of germination of Q and R (04 marks)
- f) How are seed adapted for germination. (06 marks)

SECTION B

2. a) Compare organisms in Kingdom fungi and kingdom plantae. **(08 marks)**
- b) Account for the success of organisms in Kingdom fungi. **(08 marks)**
- c) Explain the role of fungi in crop production. **(04 marks)**
3. a) Explain any two evidences to show that translocation occurs in the phloem. **(05 marks)**
- b) Explain how pressure gradient is developed between the source and the sink according to the mass flow hypothesis. **(09 marks)**
- c) How may absorbed nitrogen be assimilated into proteins in a plant. **(06 marks)**
4. a) How is the structure of the voluntary muscle adapted to its function. **(08 marks)**
- b) Explain the series of events that occur in the muscle fibre when the end plate potential exceeds threshold value. **(12 marks)**
5. a) Of what importance is osmoregulation to organisms. **(04 marks)**
- b) Compare osmoregulation in a fresh water teleost and marine water teleost. **(08 marks)**
- c) Explain why plants lack special excretory organs. **(08 marks)**
6. a) Describe how each of the following factors affect growth in plants.
- i) Temperature **(05 marks)**
- ii) Amount of soil water. **(08 marks)**
- b) Explain the significance of larval forms in life cycle of many insects. **(07 marks)**

END, success, Babalanda series