

NAME: ..... SIGNATURE: .....

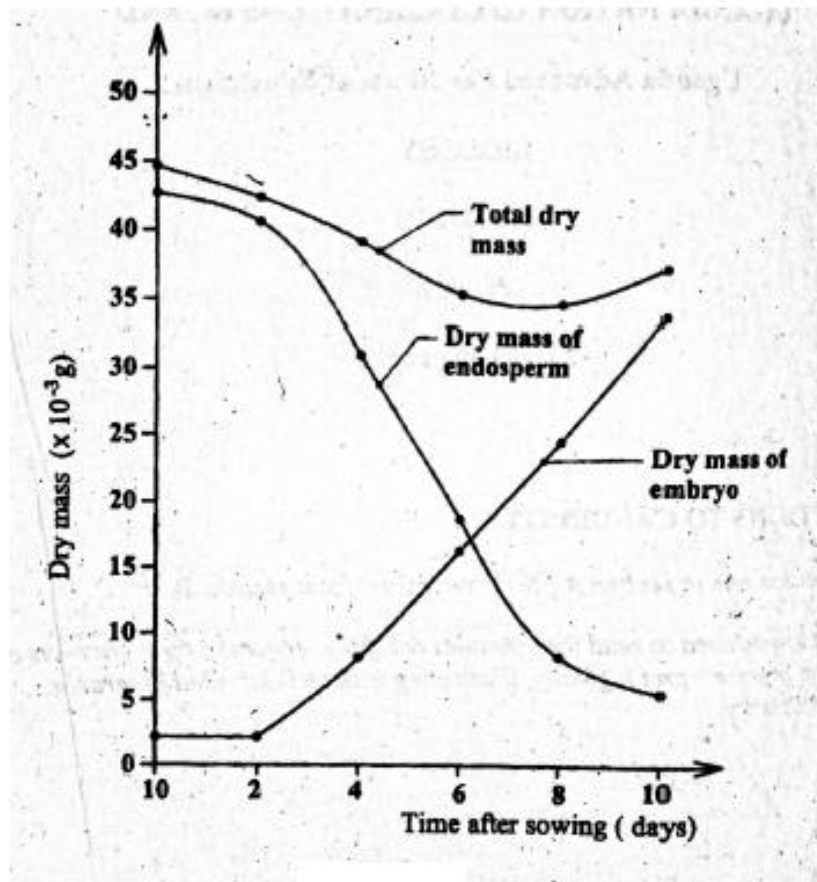
## S.6 GROWTH &amp; DEVELOPMENT TEST P2 2023

TIME: 60 MINUTES

INSTRUCTIONS: Attempt all questions.

## SECTION A (40 MARKS)

1. A study was conducted on the germination and early growth of sorghum. The grains were soaked in cotton wool in a greenhouse and at two-day intervals, samples were taken and separated into two components, of endosperm and embryo(seedling), which were then oven dried and weighed. Figure 1 shows the variation of total dry mass of endosperm and embryo. Use the information to answer that follow.



- (a) Explain the variation of
- Dry mass of endosperm (10 marks)
  - Dry mass of embryo (07 marks)
  - Total dry mass of sorghum seedling. (08 marks)
- (b) Explain why the following were done.
- Oven-drying the seeds (01 mark)
  - Separating the seed components (01 mark)
  - Sowing seeds in a greenhouse (01 mark)
- (c) From the information given, name the method used to measure growth and give its limitation. (03 marks)
- (d) (i) Name two internal factors in the seeds that would affect the results above. (02 marks)
- (ii). Suggest precautions that could have been taken to ensure reliable results. (02 marks)
- (e) What conclusion can be drawn from the graph after 8 days? (01 mark)
- (f) Explain what would happen if the experiment continued for another 10 days. (04 marks)

END!!!

*“Success is through repeated practice”*