

Name: \_\_\_\_\_

**Q.1**

- (i) Give a brief account of the role of **each** of the following in flowering plant reproduction.
1. Petal.
  2. Anther.
  3. Stigma.
- (ii) Name **one** structure through which the pollen tube grows in order to reach the embryo sac.
- (iii) Within the pollen tube the generative nucleus divides to form two male gametes.
1. What type of division takes place?
  2. With what does **each** male gamete fuse in the embryo sac?
  3. Name the product of **each** fusion.
- (iv) As the seed forms following fertilisation, a food store develops in one of two structures. Name any **one** of these structures.

30 marks

**Q.2**

- (b) (i) Describe the development of pollen grains from microspore mother cells.
- (ii) What is meant by the term *fertilisation*?
- (iii) Give a brief account of the process of fertilisation in flowering plants. (27)
- (c) (i) What is meant by the *dormancy* of seeds?
- (ii) Give **one** way in which the dormancy of seeds is of benefit to plants.
- (iii) Suggest **one** way in which a knowledge of dormancy is useful to farmers and gardeners.
- (iv) Water, oxygen and a suitable temperature are all required for the germination of seeds. In the case of **each** of these factors describe its effect on the process of germination.
- (v) Which part of the embryo in a germinating seed gives rise to each of the following parts of the seedling?
1. The root
  2. The shoot. (24)

**Q.3**

The flower is the organ of reproduction in many plants.

- (i) What part of the flower produces pollen?
- (ii) After fertilisation, what part of the flower becomes the fruit?
- (iii) Give **two** methods of seed dispersal in plants.
- (iv) Why is it necessary for plants to disperse their seeds?
- (v) What is the advantage of dormancy to seeds?
- (vi) Give **three** conditions necessary for seeds to germinate. (27)