



Sharp Test Series — Sample Paper

Chapter Test

QUESTION PAPER CODE
SMPLTHY-2026-000115

Total Questions 14	Subjects Biology	Maximum Marks 30	Time 1 Hour 30 Minutes
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Instructions

1. All questions are compulsory unless the section heading says otherwise.
2. Figures to the right indicate full marks.
3. Draw neat, labelled diagrams wherever necessary.
4. In numerical questions, write the formula, the working and the answer with units.
5. Write all your answers in the separate answer booklet.

SECTION A — Multiple Choice Questions

[5]

Attempt **all** questions. Each question carries 1 mark.

- Q.1** Genetically varied offspring are generated by _____. [1]
- (A) homogamy (B) cleistogamy
(C) autogamy (D) xenogamy
- Q.2** When pollen tube enters through micropyle, it is known as [1]
- (A) mesogamy (B) siphonogamy
(C) porogamy (D) chalazogamy
- Q.3** In flowering plant, a mature gametophyte is derived from a pollen mother cell by [1]
- (A) 3 mitosis
(B) 1 meiosis and 3 mitosis
(C) 1 meiosis and 2 mitosis
(D) single meiosis
- Q.4** In Ceratophyllum, pollination is [1]
- (A) hydrophilous (B) chiropterophilous
(C) entomophilous (D) anemophilous
- Q.5** Within the ovule, the female gametophyte is the [1]
- (A) pollen grain (B) anther
(C) tapetum (D) embryo sac

SECTION B — Short Answer Questions

[8]

Attempt **all** questions. Each question carries 2 marks.

- Q.6** Distinguish between zoospores and conidia on any two points. [2]
- Q.7** Distinguish between asexual and sexual reproduction on any two points. [2]
- Q.8** Distinguish between chasmogamous and cleistogamous flowers. Name a plant that bears both. [2]
- Q.9** State any four points of significance of seed and fruit formation to flowering plants. [2]

SECTION C — Short Answer Questions

[9]

Attempt **all** questions. Each question carries 3 marks.

- Q.10** State what each of the following develops into after fertilization: (a) ovary, (b) ovary wall, (c) ovule, (d) integuments, (e) zygote, (f) primary endosperm nucleus. [3]
- Q.11** Draw a neat, labelled diagram of a mature (7-celled, 8-nucleate) embryo sac. [3]
- Q.12** The root-tip cells of a flowering plant have 16 chromosomes ($2n = 16$). State the ploidy and the number of chromosomes in (a) the generative cell of a pollen grain, (b) a cell of the endosperm, (c) a cell of the seed coat. [3]

SECTION D — Long Answer Questions

[8]

Attempt **all** questions. Each question carries 4 marks.

- Q.13** What are outbreeding devices? Explain dichogamy and unisexuality as outbreeding devices, and state which kind of unisexual plant prevents geitonogamy as well as autogamy. [4]
- Q.14** A single microspore mother cell in an anther ultimately gives rise to eight male gametes. Explain step by step how this happens, naming the type of cell division at each step. [4]