

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2023  
(Third Semester)

Branch – BOTANY

**REPRODUCTIVE PLANT BIOLOGY**

Time: Three Hours

Maximum: 50 Marks

**SECTION-A (5 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. Pollination which occurs in closed flower is known as
  - (i) Allogamy
  - (ii) Cleistogamy
  - (iii) Protogyny
  - (iv) None of the above
2. Phytochrome is a
  - (i) Flavoprotein
  - (ii) Glycoprotein
  - (iii) Lipoprotein
  - (iv) Chromoprotein
3. During microsporogenesis, meiosis occurs in
  - (i) Endothecium
  - (ii) Microspore mother cells
  - (iii) Microspore tetrads
  - (iv) Pollen grains
4. During formation of which of the following free nuclear division occurs?
  - (i) Flower
  - (ii) Gametes
  - (iii) Endosperm
  - (iv) Fruit
5. Development of fruits without fertilization is called
  - (i) Apospory
  - (ii) Parthenogenesis
  - (iii) Parthenocarpy
  - (iv) Polygamy

**SECTION - B (15 Marks)**

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a) Explain the Cross-Pollination.  
OR  
b) How do Flowers Attract Pollinators?
7. a) Outline Photoperiodism.  
OR  
b) Describe the Role of Phytochrome in Flowering Plants.

Cont...

8. a) Summarise about the Nemece Phenomenon.  
OR  
b) Explain the Pollen compatibility.
9. a) Narrate on Endosperm Haustoria.  
OR  
b) Briefly explain the Ruminant Endosperm.
10. a) Outline the Methods of Break Dormancy.  
OR  
b) Analyse the Factors Affecting of Seed Germination.

**SECTION -C (30 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11. a) What is Inflorescence? Explain their Types.  
OR  
b) Elucidate about Self Pollination and their Advantages and Disadvantages
12. a) Discuss the Biochemical composition of Phytochromes.  
OR  
b) Highlight about the Circadian Rhythms in Plants.
13. a) Explain the Structure and Development of Male Gametophytes.  
OR  
b) Interpret the Structure of Ovules.
14. a) Elaborate the Development of Endosperm.  
OR  
b) Explain the Development of Embryo in Dicot Plant.
15. a) Compare the types of Seed Germination.  
OR  
b) Enumerate the Development of Fruits.

Z-Z-Z

END