



Roll No.....

End Semester Examination, December 2024

B.El.Ed. -V Semester

Biology III (SEED367A)

Time: 2.5 hrs.

Max Marks: 50

Note: **All Questions are compulsory.** Marks are indicated against each question.

PART-A

Q.1 Answer the following questions (any five) **2x5**

- (a) What do you mean by the term 'ascent of sap' in plants. [CO-1] [L-1] 2
(b) What is cellular respiration, and where does it primarily occur in the cell? [CO-1] [L-1] 2
(c) Write the function of the phloem tissue in plants. [CO-1] [L-1] 2
(d) Fill in the blanks: [CO-1] [L-1] 2
i) _____ is the process by which plants lose water vapor through stomata.
ii) The primary site of photosynthesis in plants is the _____.

(e) Match the following: [CO-1] [L-1] 2

Column A	Column B
1. Xylem	A. Photosynthesis
2. Phloem	B. Nerve impulse transmission
3. Hormonal regulation	C. Transport of water in plants
4. ATP generation	D. Transport of food in plants
	Gas exchange in leaves

- (f) Give one example each of the following for the process of reproduction: [CO-1] [L-1] 2
i) Isogamy
ii) Grafting
(g) What is the difference between the process of respiration and photosynthesis in plants?
[CO-1] [L-1] 2

PART-B

Q.2 Explain Gregor Mendel's Laws of Inheritance. How did Mendel's experiments with pea plants help establish the foundation of modern genetics? [CO-2] [L-2] 10

OR

Differentiate between genotype and phenotype? Using a Punnett square, explain how a heterozygous pea plant for flower color (Pp) will cross with a homozygous recessive (pp) plant, and determine the possible offspring. [CO-2] [L-3]

10

Q.3 Discuss various modes of asexual reproduction by giving examples in each. [CO-3] [L-2] 10

OR

Analyse how sexual reproduction leads to genetic variation among organisms. Discuss the other advantages and disadvantages of sexual reproduction. [CO-3] [L-4] 10

Q.4 What do you mean by birth control? Explain various methods of birth control. [CO-4] [L-2] 10

OR

- i) What are the problems and strategies of reproductive health in Indian people?
ii) Differentiate between Vasectomy and Tubectomy. [CO- 4] [L-3] 10

Q.5 Explain the process of DNA replication and protein synthesis. Discuss the role of genes in heredity and how mutations can impact genetic information. [CO- 2] [L-2] 10

OR

Diagrammatically explain the structure and functions of different plant tissues, including xylem, phloem, and stomata. [CO- 1] [L-2] **10**