

**CUMULATIVE TEST SERIES**  
**CLASS – XII ( BIOLOGY)**  
**RATIONALE**

Cumulative as the word itself literally means additive and progressive, is not simply a word, but has a deep meaning and a tool in itself. It when used along with the word test, making it 'Cumulative test' is an effective educational tool that can be used by a teacher for not just testing in a formal system of education, but also as a teaching, testing cum learning tool for boosting the effectiveness of learning any concept, as an enhanced learning tool and as a trigger to inculcate 'Creative and Critical Thinking'.

The vision behind making of this:

- a) Making of a standard short duration test (10 to 15 min.).
- b) The manner a short test could be incorporated in the cumulative format.
- c) Making of a cumulative test after completion of two or more short tests.
- d) The formatting of a question is such that it helps:
  - i) Linking the concept with classroom experiences.
  - ii) Linking the concept with life outside classroom.
  - iii) Linking the concept with social structure.
  - iv) In enhancing creative and critical thinking.
  - v) Shifting away from rote learning.
  - vi) Time management skills.
  - vii) Answering skills.

An effort has been made here to exemplify the process of making a representative cumulative test in the field of biology for the class-XII. The present attempt is a representation, where in short duration tests are followed by respective cumulative test (as per the speed of content delivery in the class).It works as follows:

- a) First short test of the concept / unit completed
- b) Second short test of next concept / unit completed.
- c) It is followed by a cumulative test based on the all the concepts / units completed, but with different questions.
- d) Then the concepts of next chapter follow the same pattern as above.
- e) Now the next cumulative test will incorporate the two chapters completed.
- f) And the process goes on.

Generally it's time coincide with the completion of a concept / topic. However the same pattern can be followed for individual chapter, based on need of the students and the desire of the teacher. The precaution that needs to be taken care off is that it should make the teaching learning more joyful rather than just as another cumbersome test.

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**CLASS – XII**  
**BIOLOGY**  
**CHAPTER 01**  
**REPRODUCTION IN ORGANISMS**  
**TEST – 1.1 (ASEXUAL REPRODUCTION)**

**NOTE: Please read the instructions carefully**

- i) The paper is of 10 marks and of 20 minutes.
  - ii) There will be 3 questions of 1 marks each, 2 questions of 2 mark each and 1 questions of 3 mark.
  - iii) There is no overall choice.
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1. 'While individual organisms die without fail, but the species continues'. Which one of the following justifies the given statement? 1
    - a) Individual organisms have no relation to the species.
    - b) Species has its own death rate
    - c) All the individuals of a species may not die at any one given moment
    - d) Individuals are less adapted than species, individual die
  2. 'In general terms, a single celled organism has no natural death'. It indicates that: 1
    - a) A single celled organism can never die
    - b) No one can kill a single celled organism
    - c) A single celled organism have highest adaptability
    - d) A single cell organism undergoes division of cytoplasm into daughter cells
  3. 'Continuity of species has its base in the postulates of cell theory.' Select the postulate/s that justifies the continuity of species. The postulates are: 1
    - i. Cell is the structural and functional unit of life
    - ii. Omnis Cellula-e-Cellula
      - a) (i) justifies but (ii) does not justify
      - b) Both (i) and (ii) justify
      - c) Both (i) and (ii) do not justify
      - d) (i) do not justify but (ii) justifies
  4. In a pond, you may see long filaments, which is a type of green algae consisting of aggregation of cells in a single row, end to end. What sort of strategy can this type of cellular aggregation adopt for rapid multiplication? 2
  5. How the rapid reproductive process of Chlamydomonas and Penicillium does differs from each other? 2
  6. Write a short note on propagules found in the plant world? 3

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**CHAPTER 01**  
**REPRODUCTION IN ORGANISMS**  
**TEST – 1.2 (SEXUAL REPRODUCTION)**

**NOTE: Please read the instructions carefully**

- i) The paper is of 10 marks and of 20 minutes.
- ii) There will be 3 questions of 1 marks each, 2 questions of 2 mark each and 1 questions of 3 mark.
- iii) There is no overall choice.

1. How do we differentiate between juvenile and reproductive phase? 1  
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2. The biennial crops spend which phase of their life in which year? 1  
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3. ‘Cow is an example of oestrous cycle.’ Justify this statement? 1  
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4. Why is pre-fertilization phase important in sexually reproducing organisms? 2  
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5. Write short note on three types of gametes formed in sexually reproducing organisms? 2  
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6. Some plants are homothallic while others follow heterothallism. What type of plant body do each have? Give one example each. 3  
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**CHAPTER 01**  
**REPRODUCTION IN ORGANISMS**  
**TEST – 1.3 (SEXUAL REPRODUCTION)**

**NOTE: Please read the instructions carefully**

- i) The paper is of 10 marks and of 20 minutes.
- ii) There will be 3 questions of 1 marks each, 2 questions of 2 mark each and 1 questions of 3 mark.
- iii) There is no overall choice.

1. In most of the organisms male gamete are motile and the female gamete is non motile except: 1
  - i) Pterydophytes
  - ii) Algae
  - iii) Fungi
  - iv) Bryophytes
2. Gamete transfer in algae, bryophytes and pterydophytes takes place by: 1
  - a) Water and wind mode
  - b) Wind and insect mode
  - c) Wind mode only
  - d) Water mode only
3. In angiosperms, male gametes are carried by:
  - a) Wind only
  - b) Water only
  - c) Insect only
  - d) Pollen only
4. Mention the criteria that must be fulfilled to be able to follow self-pollination mechanism for gamete transfer? 2
5. Is fertilization always necessary for the formation of next generation? 2
6. Define Syngamy. Mention its types with essential criteria and one disadvantage for each. 3

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**CHAPTER 01**  
**REPRODUCTION IN ORGANISMS**  
**TEST – 1.4 (SEXUAL REPRODUCTION)**

**NOTE: Please read the instructions carefully**

- i) The paper is of 10 marks and of 20 minutes.
- ii) There will be 3 questions of 1 marks each, 2 questions of 2 mark each and 1 questions of 3 mark.
- iii) There is no overall choice.

1. In Pea plant and Hibiscus, the pattern of gamete transfer is: 1
- a) Self-pollination and Self-pollination respectively
  - b) Self-pollination and Cross-pollination respectively
  - c) Cross-pollination and Self-pollination respectively
  - d) Cross pollination and cross pollination respectively
2. In case of algae and fungi: 1
- a) Zygote does not undergoes rest & remains without cell wall after formation.
  - b) Zygote undergoes rest & remains without cell wall after formation.
  - c) Zygote does not undergoes rest & form thick cell wall after formation.
  - d) Zygote undergoes rest & form thick cell wall after formation.
3. In case of algae and fungi: 1
- e) Zygote undergoes mitosis immediately after formation to form adult
  - f) Zygote does not undergoes mitosis immediately after formation to form adult
  - g) Zygote undergoes meiosis immediately after formation to form adult
  - h) Zygote does not undergoes meiosis immediately after formation to form adult
4. Mention the two steps of post fertilization changes? 2
5. Generally embryogenesis involves two basic steps to be followed. Mention their names and one criteria for each. 2
6. How the parts of a flower modify themselves while proceeding from pre-fertilization to post fertilization changes? 3

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**CHAPTER 01**  
**REPRODUCTION IN ORGANISMS**  
**CUMULATIVE TEST – 1**

**NOTE: Please read the instructions carefully**

- i) The paper is of 10 marks and of 20 minutes.
- ii) There will be 3 questions of 1 marks each, 2 questions of 2 mark each and 1 questions of 3 mark.
- iii) There is no overall choice.

1. 'In general terms, a single celled organism has no natural death'. It indicates that: 1
- a) A single celled organism can never die
  - b) No one can kill a single celled organism
  - c) A single celled organism have highest adaptability
  - d) A single cell organism undergoes division of cytoplasm into daughter cells
2. In Pea plant, male gametes are carried by:
- a) Wind only
  - b) Water only
  - c) Insect only
  - d) Pollen only
3. In case of algae and fungi: 1
- a) Zygote undergoes mitosis immediately after formation to form adult
  - b) Zygote does not undergoes mitosis immediately after formation to form adult
  - c) Zygote undergoes meiosis immediately after formation to form adult
  - d) Zygote does not undergoes meiosis immediately after formation to form adult
4. Write a short note on oviparous and viviparous behavior seen in animals? 2
5. 'Fertilization is an essential criteria for formation of next generation. Still nature has its other ways also for the formation of next generation.' Justify the statement? 2
6. Diagrammatically depict the mode of rapid multiplication in Hydra and Bryophyllum with labels. 3

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