

| Biology Annual & Weekly Syllabus Split-Up - 2025-26<br>Grade XII |       |                     |        |             |  |  |   |  |                |                 |              |          |       |       |        |
|--|-------|---------------------|--------|-------------|--|--|---|--|----------------|-----------------|--------------|----------|-------|-------|--------|
| S.No   | Month | No. of Working Days |        | No. of Days | Topic  | Sub Topic  | Resources   | Activity   | Mid April Test | Periodic Test 1 | Pre Mid Term | Mid Term | P.B-I | P.B-2 | Annual |
| 1  | APRIL | 23                  | Week 1 | 3           | C-1 Sexual Reproduction in plants                  | Flower structure, development of male and female gametophytes; pollination - types, agencies and examples; out breeding devices; pollen-pistil interaction; double fertilization.  | senses board, word documents<br>.ppts,text,Reference books,videos | Flowers adapted to pollination by different agencies (wind, insects, birds). Pollen germination on stigma through a permanent slide or scanning electron micrograph. | ✓              |                 |              | ✓        | ✓     | ✓     |        |
|  |       |                     | Week 2 | 5           | C-1. Sexual Reproduction in plants                 | Post fertilization events - development of endosperm and embryo, development of seed and formation of fruit; special modes- apomixis, parthenocarp, polyembryony; Significance of seed dispersal and fruit formation.  | senses board, word documents<br>.ppts,text,Reference books,videos | Prepare a temporary mount to observe pollen germination.   | ✓              |                 |              | ✓        | ✓     | ✓     |        |
|  |       |                     | Week 3 | 4           | MID APRIL TEST - X & XII<br>C-2.Human Reproduction | Male and female reproductive systems;Gametogenesis - spermatogenesis and oogenesis; menstrual cycle. Pregnancy,parturition and lactation   | senses board, word documents<br>.ppts,text,Reference books,videos | Worksheet  | ✓              |                 |              | ✓        | ✓     | ✓     |        |
|  |       |                     | Week 4 | 6           | C-3.Reproductive Health                            | Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); birth control - need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT | senses board, word documents<br>.ppts,text,Reference books,videos | T.S. of blastula through permanent slides (Mammalian).   |                | ✓               |              | ✓        | ✓     | ✓     |        |
|  |       |                     | Week 5 | 3           | C-4.Principles of inheritance and Variations       | Mendelian inheritance; deviations from Mendelism.Sex determination and linkage and crossing over. Mendelian disorders  |   |  |                | ✓               |              | ✓        | ✓     | ✓     |        |
|  |       |                     | Week 1 | 0           |  |  |   |  |                |                 |              |          |       |       |        |
|  |       |                     | Week 2 | 6           | C-5.Molecular Basis of inheritance                 | Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central Dogma; transcription, genetic code, translation.  |   |  |                |                 | ✓            | ✓        | ✓     | ✓     |        |
|  |       |                     | Week 3 | 6           | C-5.Molecular Basis of inheritance                 | Gene expression and regulation - lac operon; Genome, Human and rice genome projects; DNA fingerprinting.   |   |  |                |                 | ✓            | ✓        | ✓     | ✓     |        |

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|---|-------|----|--------|---|---|---|--|-----------|--|--|---|---|---|---|--|
| 3 | JUNE  | 19 | Week 4 | 6 | C-6.Evolution   | Origin of life; biological evolution and evidences for biological evolution (paleontology, comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples, types of natural selection; Gene flow and genetic drift; Hardy- Weinberg's principle; adaptive radiation; human evolution. |  |           |  |  | ✓ | ✓ | ✓ | ✓ |  |
|   |       |    | Week 5 | 1 |   |   |  |           |  |  |   |   |   |   |  |
| 4 | JULY  | 27 | Week 1 | 5 | PERIODIC TEST 1 BEGINS (II-XII)                         | Revision  | Textbok  | Worksheet |  |  |   |   |   |   |  |
|   |       |    | Week 2 | 6 | C-7. Human health and diseases                          | Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control;   |  |           |  |  | ✓ | ✓ | ✓ |   |  |
|   |       |    | Week 3 | 6 | C-7. Human health and diseases                          | Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse.  |  |           |  |  | ✓ | ✓ | ✓ |   |  |
|   |       |    | Week 4 | 6 |   |   |  |           |  |  |   |   |   |   |  |
|   |       |    | Week 5 | 4 |   |   |  |           |  |  |   |   |   |   |  |
| 5 | AUGUS | 23 | Week 1 | 2 | C-8.Microbes in Human Welfare                           | Microbes in food processing   |  |           |  |  | ✓ | ✓ | ✓ |   |  |
|   |       |    | Week 2 | 5 | C-8.Microbes in Human Welfare                           | Microbes in food processing, industrial production, sewage treatment, energy generation   |  |           |  |  | ✓ | ✓ | ✓ |   |  |
|   |       |    | Week 3 | 5 | C-8.Microbes in Human Welfare                           | microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use.  |  |           |  |  | ✓ | ✓ | ✓ |   |  |
|   |       |    | Week 4 | 6 | C-9.Biotechnology : Principles and Processes            | Principles and Processes of Biotechnology.Vectors and Host and PCR.   |  |           |  |  |   | ✓ | ✓ |   |  |
|   |       |    | Week 5 | 5 | C-10.Biotechnology : Biotechnology and its Applications | Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and patents.   |  |           |  |  |   | ✓ | ✓ |   |  |
| 6 | PTIME | 25 | Week 1 | 5 | Term 1  | Revision  | Sample Papers  |           |  |  |   |   |   |   |  |
|   |       |    | Week 2 | 6 | Term 1  | Revision  | Sample Papers  |           |  |  |   |   |   |   |  |
|   |       |    | Week 3 | 6 | Term 1  | Revision  | Sample Papers  |           |  |  |   |   |   |   |  |
|   |       |    | Week 4 | 6 | C-11.Organisms and Populations                          | Population attributes   | senses board, word documents ,ppts,text,Reference books,videos |           |  |  |   | ✓ | ✓ |   |  |



[illegible]