

SEMESTER – II**CPS 2b – Part II - PEDAGOGY OF BIOLOGICAL SCIENCE****Credits: 4****Internal: 40 marks****Hours/Week: Theory-4hrs & Practical- 4hrs****External: 60 marks****Total: 100 marks****Course Learning Outcomes:****At the end of the course, the student-teachers will be able to**

- appreciate the importance of co-scholastic activities in Biological Science;
- recognize the purpose of evaluation in Biological Science;
- plan adequately before teaching the subject;
- develop teacher professionalism and teacher commitment in the teaching of Biological Science;
- predict classroom climate and classroom management;
- determine the importance of organization and maintenance of the school plant;
- identify and analyze the diverse needs of learners in Biological Science;
- prepare teaching and learning materials in Biological Science;
- score the students through Continuous and Comprehensive Evaluation and analyze the results;
and
- compile question bank in Biological Science to aid student performance.

Unit I: Co- Scholastic Activities

Introduction-Formal and Informal methods of teaching and learning to strengthen Science Education – Exhibitions, Field Trips, Excursion, Science Fair-Celebrate Science Day, Earth Day and Environmental Day-organize Science Club, Eco club activities.

Unit II: Evaluation in Biological Science

Introduction-Concept of Evaluation- Formative, Summative Evaluation, Construction of achievement tests and its types- Diagnostic, Prognostic tests, Criterion and Norm referenced tests –Item Analysis- Principle of Test Construction - Blue Print - Question Bank- Tools of Evaluation, Written Examination, Online Examination- Grading system.

Unit III: Planning and Teaching

Introduction- Yearly planning in Biological Science, Importance of Unit Plan in Biological Science, Unit formulation in Biological Science, steps involved in Unit Planning, Merits and Demerits of unit plan. Major differences between Unit Plan and Lesson Plan, Importance of Lesson Planning- writing instructional objectives and planning for specific behavioural changes Herbatian Approach in writing Lesson Plan.

Unit IV: Teacher Professionalism and Teacher Commitment

Introduction- Committed teachers, passionate teachers: Dimension of passion associated with teacher commitment and engagement: Teacher commitment as passion- teacher – teacher commitment as a unit of time outside the contact hours with students- teacher commitment as focus on the individual needs of students. Teacher commitment as responsibility to impart knowledge, attitudes, values and beliefs- teacher commitment as maintaining ‘ Professional knowledge’- teacher commitment as engagement with school and community- importance of teacher commitment for quality enhancement – ways and means of enhancing teacher commitment for teaching Professionalism. Need and types of professional growth, role in fostering creativity, equipment maintenance, attending pre - service and in-service training by NCERT and allied agencies. Qualities and competencies of Science teachers - Academic Qualification, Professional training and special qualities required for Biology teachers

Unit V: Classroom Climate and Classroom Management

Introduction- Definition, importance of Classroom Climate, factors influencing classroom climate, Management of classroom climate. Classroom Management: Definition, Techniques, classroom management as time management

Unit VI: School Plant

Introduction- School Building, Design of the school, Maintenance of the School, Play Ground, Library, Laboratories, Classrooms, Role of Headmaster – Parent - Teacher Association in maintenance of School- Time Table- Co-curricular activities, Discipline, Records and Registers maintained in the School.

Suggested References:

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