WEST BENGAL COUNCIL OF HIGHER SECONDARY EDUCATION

SUBJECT : BIOLOGICAL SCIENCE (BIOS)

CLASS – XI **PRACTICAL** **FULL MARKS: 30**

EVALUATION SCHEME	MARKS
One major experiment Part A.(experiment no-1,3,7)	6
One minor experiment Part A.(experiment no-6,8,9,10,11)	5
Slide preparation Part A.(experiment no-2,4,5) (anyone)	3
Spotting. Part – B (three)	6 (2x3)
Practical record+Viva voce	5 (3+2)
Investigatory project viva voce	5 (3+2)
Total: SEM-I = 14 PRACTICAL CLASSES + SEM-II = 22 PRACTICAL CLASSES (24HRS.)	30

A. List of Experiments

1. Study and describe locally available common flowering plants from family Malvaceae, Solanaceae,Brassicaceae, Asteraceae,Leguminosae including dissection and display of floral whorls,Anther and Ovary to show number of chambers(Placentation).(Floral formula and floral diagrams.),Type of root.(Tap and adventitious.);Type of stem.(Herbaceous and woody); Leaf (Arrangement,shape,venation,simple and compound) 2. Preparation and study of TS of dicot and monocot roots and stems.(Primary.)
2. Study of osmosis by Potato Osmometer.
3. Study of plasmolysis in epidermal peels (e.g..Rheo/lily or fleshy scale leaves of onion bulb)
4. Study of distribution of stomata on the upper and lower surfaces of leaves.
5. Comparative study of the rates of transpiration in the upper and lower surfaces of leaves.
6. Test for the presence of sugar. starch, proteins and fats in suitable plant and animal materials.
7. Test for presence of urea in urine. 9. Test for presence of sugar in urine.

10. Test for presence of Albumin in urine. 11. Test for presence of Bile salts in urine.

B. Study and observe the following (Spotting)

1. Parts of a compound microscope.
2. Specimens./Slides./Models. Identify with reasons.—Bacteria, Spirogyra,Rhizopus,mushroom,yeast,liverwort, moss, fern,pine cone: male and female,one monocotyledonous plant, one dicotyledonous plant, one lichen.Different types of inflorescence.(Racemose and Cymose)
3. Virtual specimens/Slides/Models. Identifying features of Amoeba, Hydra, Liver Fluke, Ascaris, Leech, Earthworm,
   Prawn, Silkworm, Honeybee, Snail, Starfish, Shark, Rohu, Frog, Lizard, Pigeon and Rabbit. Human blood, and Toad blood
4. Mitosis in onion root tip cells and animal cells (Grasshopper) from permanent slides.
5. Human skeleton and different types of joints with the help of Virtual image/Models only.

[Note:*18 Hours reserved for Remedial classes, Tutorials and Home Assignments.]