



**FEDERAL BOARD OF INTERMEDIATE AND
SECONDARY EDUCATION
H-8/4, ISLAMABAD**



**BIOLOGY SSC
(National Curriculum 2006)
PRACTICAL EXAMINATION 2024**

S #	List of Practicals
1.	Identification of major organs and organ systems in a dissected frog (Dissection by demonstrator / teacher)
2.	Observation of various stages of mitosis and meiosis by slides, model and charts
3.	Examination of the structure of kidney (sheep kidney / model)
4.	Study of bull eye
5.	Study of different types of bacteria with the help of prepared slides and of Amoeba, Paramecium, Volvox from prepared slides/ fresh culture/charts
6.	Observation of various stages of mitosis and meiosis by slides, model and charts
7.	Microscopic examination of a transverse section of the small intestine to show the villi
8.	Observation of binary fission of <i>Amoeba</i> using slides, photomicrographs or charts
9.	Observation of budding in yeast from prepared slides
10.	Determination of the effect of tonicity on plasmolysis and deplasmolysis in plant cells or in Red Blood Cell
11.	Experiment to show working of enzyme in vitro e.g., pepsin working on meat in test tube
12.	Experiment to test enzyme action by putting diastase in a starch solution in test tube at 37°C and after fifteen minutes performing iodine test for presence of starch
13.	Demonstration of the process of photosynthesis using an aquatic plant, like Hydrilla
14.	Investigation of the necessity of chlorophyll, light, carbon dioxide, using appropriate controls
15.	Experiment to demonstrate the process of respiration in germinating seeds by using lime water
16.	Investigation of the release of carbon dioxide and heat during Aerobic Respiration in germinating seeds
17.	Investigation of transpiration in potted plant under a bell jar
18.	Activity to compare the breathing rate at rest and after exercise
19.	Experiment to find out how much air a person can take into his lungs
20.	Demonstration through experiment of breathing out air into limewater that carbon dioxide is exhaled during respiration
21.	Demonstration of the presence of tar in cigarette smoke and also by charts showing pictures of lungs of smokers and nonsmokers
22.	Investigation of the nature of bone (by putting three pieces of rib bone of lamb in water, NaOH and dilute HCl)
23.	Recording the heights of class fellows to predict which kind of variation is it and presentation of the data of class fellows' heights in graphical form (either histogram or bar chart)
24.	Examination under the microscope an animal cell (e.g. from frog's blood) and a plant cell (e.g. from onion epidermis), using an appropriate temporary staining technique, such as iodine or methylene blue
25.	Food tests: Benedict's test for reducing sugar, iodine test for starch, spot test and emulsion test for fat, and Biuret test for protein in solution

26.	Examination of a bulb (onion), corm (Edocasia), rhizome (ginger) or stem tuber (potato) and its cultivation to get new plants
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Questions to be asked in place of Practical Notebook and Viva Voce. (Total Marks 06)
Write answers of any three of the following questions on your answer sheet.

Q.NO	Questions	Marks
1.	If a piece of bone is placed in HCl solution, what will happen to it after two hours? Give reason also.	(02)
2.	Enlist the conditions require for photosynthesis.	(02)
3.	The data for heights of students in a class was collected. Name the type of graph in which you can represent data. Which type of variation in population is shown in data?	(1+1)
4.	If a red blood cell is placed in hypertonic solution, what will happen to it and why?	(1+1)

Note: The above questions will be asked from students as replacement of the marks of Practical Notebook and Viva Voce. The rest of the conduct/format of practical examination will continue as per practice in vogue.