

# 1<sup>st</sup> YEAR PUC PRACTICAL EXAMINATION

## SUBJECT: BIOLOGY (36)

### QUESTION PAPER

TIME: 2 HOURS

MAXIMUM MARKS: 30

1. Prepare a temporary slide of transverse section of the given plant material "A" and identify the same by giving two reasons

OR

Conduct an experiment to demonstrate plasmolysis from the given material "A" and draw a labeled diagram of the same.

OR

Prepare a temporary slide of the epidermal peel of the given leaf material "A" to show the stomatal apparatus and draw a labeled diagram.

5 marks

2. Identify (with scientific name) and assign the given plant "B" to the respective family with a minimum of six reasons.

OR

Identify and classify the given plant "B" with its scientific name. Derive its floral formula and floral diagram.

5 marks

3. Conduct a suitable biochemical test to detect the presence of ..... in the given sample "C".

3 marks

4. Identify the experimental setup "D" and discuss the physiological principle involved in it.

3 marks

5. Identify the given slide/specimen "E" giving two reasons.

2 marks

6. Identify the given slide/specimen "F" giving two reasons.

2 marks

7. Viva voce

4 marks

8. Practical records

6 marks

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**SUBJECT: BIOLOGY (36)**  
**SCHEME OF EVALUATION**

TIME: 2 HOURS

MAXIMUM MARKS: 30

Q.NO	SUBJECT	SCHEME OF EVALUATION	NOTE TO EXAMINERS
	T.S of the given plant material	Preparation of the slide--3 marks	<b>*Any one of the experiments to be performed by student on the basis of selection by lottery system (A student shall select one from four experiments).</b>
		Identification –1 mark Differentiating/justifying root/ stem of dicot/monocot with 2 reasons - 1 mark	
	Plasmolysis experiment	Preparation of the slide-1 mark	
		Labeled diagram-2 marks	
	Stomatal Apparatus	Preparation of the slide--3 marks	
Labeled diagram-2marks			
2	Plant Taxonomy	Identification with scientific name- 1 mark	
		Mentioning the name of the family-1 mark	
		Any six reasons-3 marks	
	Plant Taxonomy	Identification with scientific name-1 mark Mentioning the name of the family-1 mark Floral formula-1 mark Floral diagram-2 marks	
3	Biochemical Test	Procedure-1mark Observation-1mark Inference/Result-1mark	
4	Comment on experimental setup(Plant physiology)	Aim of the experiment-1 mark Physiological principle involved-2marks	Any one of the following to be given for question no.4 Potato osmometer showing osmosis/difference in rate of transpiration/paper chromatography/To study the rate of transpiration in flower buds or germinating seeds/To study the rate of anaerobic respiration/
5	Specimen Identification	Identification-1 mark	One of the following is to be given for question no.5

	and commenting	Any two reasons-1 mark	Bacteria/Oscillatoria/Spirogyra/Rhizopus/Yeast/Lichen/Marchantia/Funaria/Dryopteris/ Pinus plant/ Pea plant/Maize plant/Modification of root/Modification of stem/Inflorescence/Plant tissues.
6	Specimen Identification and commenting	Identification-1 mark	One of the following is to be given for question no.6
		Any two reasons-1 mark	Permanent slide of <i>Amoeba/Hydra/Fasciola/Ascaris/Pheretima/Hirudinaria/Palaemon/Bombyxmori/Apisindica/Pilaglobosa/Asterias/Scoliodon/Labeorohita/Ranatigrina/Calotes/Columba livea/Oryctolaguslagomorpha.</i>  Permanent/temporary slides of Epithelial tissue/blood smear/Striated muscle fibre/Smooth muscle fibre/Cardiac muscle fibre <b>Or</b> Parts of human skeleton such as Human skull/Vertebral column/Rib cage and sternum/Pectoral girdle/Pelvic girdle/Bones of the hand/bones of the leg/Gliding joints/Pivot joints/Hinge joints/Saddle joints/Ball and socket joints
7	Viva Voce	4 marks	Viva to be conducted by the internal examiner. Any four questions to be asked by the internal examiner. Questions to be asked pertaining to the experiments given in that practical examination only. Viva should be conducted in the last half an hour of practical exam or after the immediate completion of practical examination of the student, <b>which ever is earlier.</b>
8	Practical record	6 marks	See the table below*

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Sl.No	% of experiments performed, recorded and evaluated	Maximum marks to be awarded
1	≥ 91%	6
2	≥81% to 90%	5
3	≥71% to 80%	4
4	Between 41% and 70%	3
5	40% & below 40%	0

**NOTE : A minimum of TWENTY SIX (26) experiments (practical classes) have to be conducted in an academic year**