FBISE PRACTICAL BASED ASSESMENT (PBA)
PHYSICS SSC-II
(Curriculum 2006)

Guidelines/instructions for teachers/paper setters:

i. There will be two Sections in PBA paper. In Section-A, there will be one question having parts in it. Similarly, in Section-B there will be one question having parts in it.

ii. In Section-A, Question No. 1 will be based only on one experiment taken from Part-I of the list of practicals.

iii. In Section-B, Question No. 2 will be based on multiple experiments taken from Part-II of the list of practicals.

iv. Weightage of Part-I practicals is 60% while weightage of Part-II practicals is 40% in the PBA paper.

v. Draw diagram(s) if asked for.

vi. In Practical Based Assessment (PBA), there will be no marks for practical note books and viva voce. However, students may record procedures, observations, apparatus and calculation etc., on any type of plain papers/work sheets / practical folder for their future memory of all aspects of practical performance in order to attempt the PBA Examination amicably.

vii. It may be noted that performance of all the prescribed practicals is mandatory in the laboratories during the whole academic year and only those students will be able to attempt the PBA who will have performed the practicals in the laboratories as per requirement of each practical.

viii. MCQs will not be asked in PBA paper.

ix. The 0.5 mark question will not be asked in any section of PBA paper.

LIST OF PHYSICS PRACTICALS SSC-II

Part-I (60% of practical marks --- 6 Marks)

1. To study the effect of the length of simple pendulum on time and hence find "g" by calculation.
2. To study resistors in series circuit.
3. To study resistors in parallel circuit.
4. To find the resistance of galvanometer by half deflection method.
5. Verify Ohm's law (using wire as conductor).

Part-II (40% of practical marks ----- 4 Marks)

1. To verify the laws of refraction by using a glass slab.
2. To find the refractive index of water by using concave mirror.
3. To determine the critical angle of glass using prism.
4. To trace the path of a ray of light through glass prism and measure the angle of deviation.
5. To verify the truth table of OR, AND, NOT, NOR and NAND gates.

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

Model Questions Paper Physics SSC-II
Practical Based Assessment (PBA) (2025)
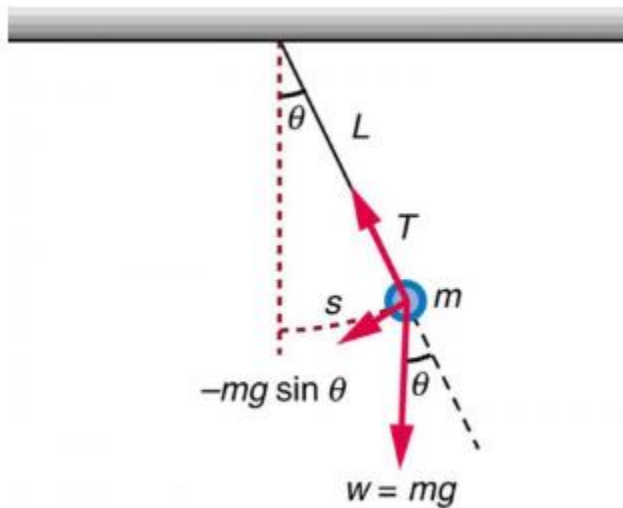
Total Marks: 10   **Time: 45 minutes**

Note: Attempt all questions and answer the questions within the provided spaces, along with each Question

SECTION-A

Q. NO. 1

A student investigates the time period of a simple pendulum for calculation of value of 'g' (gravitational acceleration). Figure shows the apparatus.

i.   Student measured the time of 10 vibrations of different lengths of thread and

recorded the observations in the following table. Complete the table.   (4 marks)

Radius of metallic bob = r = 2.26 cm

| Serial #	Length of thread l (cm)	Length of Simple Pendulum $L = l + r$ (cm)	Time for 10 vibrations		Mean Time t (s)	Time Period $T = t/10$ (s)	$g = \dfrac{4\pi^2}{T^2}L$ (cms^{-2})
			t_1 (s)	t_2 (s)			
1	80 cm		18.23	18.22			
2	90 cm		19.17	19.15			
3	100 cm		20.01	20.11			

ii.   Calculate the mean value of 'g'?   (1 mark)

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iii.   Find the percentage error in the calculated value of 'g' (from the table)   (1 mark)

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Q.NO. 2

i.   A student traces the path of a ray of light through a glass prism as shown in the diagram, but leaves it incomplete and unlabeled. Complete and label the diagram. Also label on it the angles $\angle i, \angle e, \angle r$ and $\angle D$.   (1+1=2 marks)
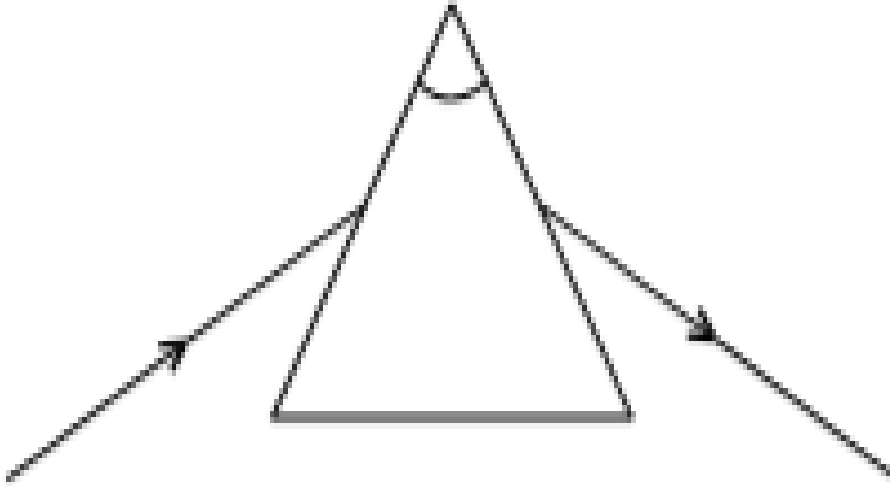
ii.   Measure the values of these angles?   (1+1=2 marks)

            a.   Angle of incidence = $\angle i$ = -------------------------

            b.   Angle of emergence = $\angle e$ = ----------------------

            c.   Angle of refraction = $\angle r$ = ------------------------

            d.   Angle of deviation = $\angle D$ = ------------------------