

FBISE PRACTICAL BASED ASSESMENT (PBA)
PHYSICS HSSC-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 HSSC-II

Part-I (60% of practical marks --- 9 Marks)

1. Determine resistance of wire by slide Wire Bridge.
2. Determine internal resistance of a cell using potentiometer.
3. Determine emf of a cell using potentiometer.
4. Determine the emf and internal resistance of a cell by plotting V against I graph.
5. Determine resistance of voltmeter by drawing graph between R and I/V.
6. Determine the relation between current and capacitance when different capacitors are used in AC circuit using different parallel combinations of capacitors.

Part-II (40% of practical marks ----- 6 Marks)

1. Determine time constant by charging and discharging a capacitor through a resistor.
2. Investigate the relationship between current passing through a tungsten filament lamp and the potential applied across it.
3. Draw characteristics of semiconductor diode and calculate forward and reverse current resistances.
4. Study of the variation of electric current with intensity of light using a photocell.
5. Analyze the variation of resistance of thermistor with temperature.



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**Model Questions Paper Physics HSSC-II
Practical Based Assessment (PBA) (2025)**

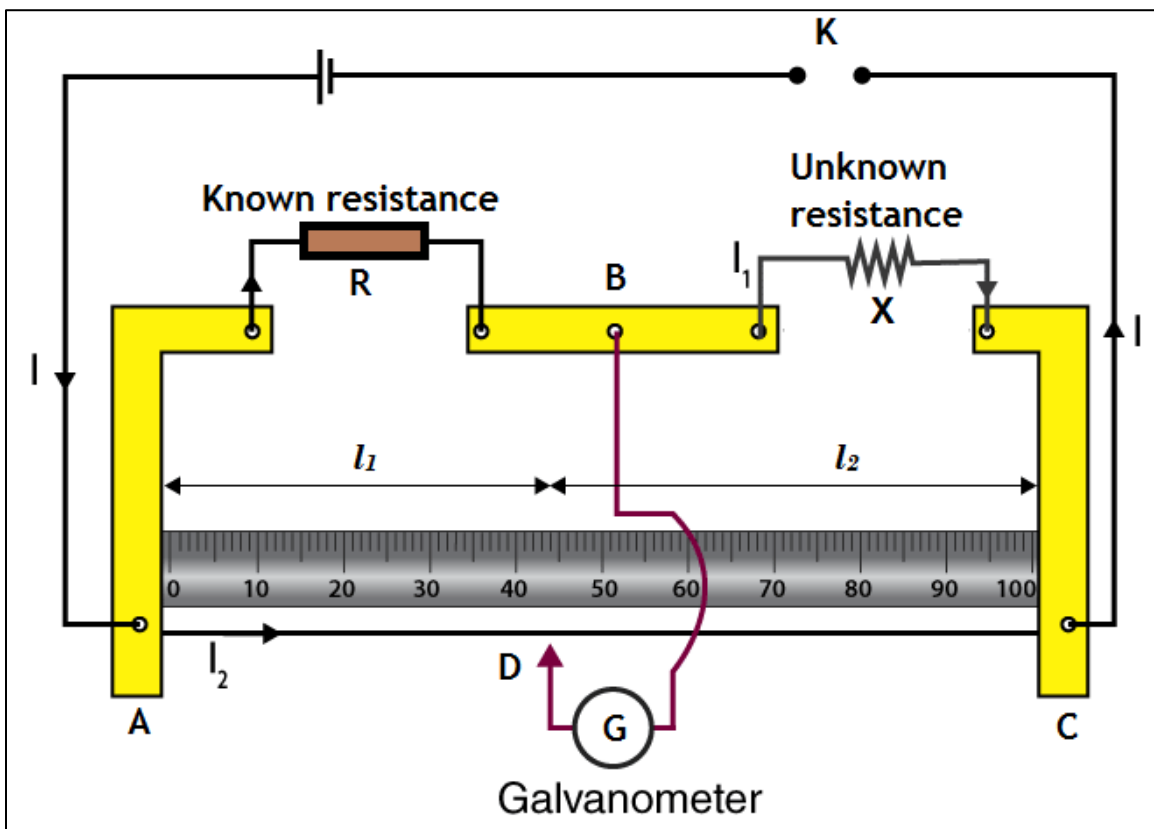
Total Marks: 15

Time: 01 hour

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

Section A

Q 1: A circuit diagram of the experimental setup is shown below. It is used to find the unknown resistance X in the laboratory.



(i) What is the name of this experimental setup? [01]

Ans:

(ii) What should be the deflection of galvanometer at the time of taking l_1 as balance point? [01]

Ans:

(iii) Complete the missing entries in the following table. [01+02+02]

No. of obs.	Resistance taken from resistance box R	Distance of balance point D from the end A l_1	Distance of balance point D from the end C $l_2=100-l_1$	Unknown Resistance X
Units	(_____)	(_____)	(_____)	(_____)
1	02	27.2		
2	04	21.5		
3	06	18.7		

(iv) Find the mean resistance X. [01]

Mean resistance X =

(v) On what principle does this circuit work? [01]

Ans:

Section B

Q 2: A student investigates the relationship between current passing through a tungsten filament lamp and the potential applied across it.

(i) Write down the apparatus needed for this investigation. [01]

Ans:

(ii) The student record reading of voltmeter and ammeter are given in table.

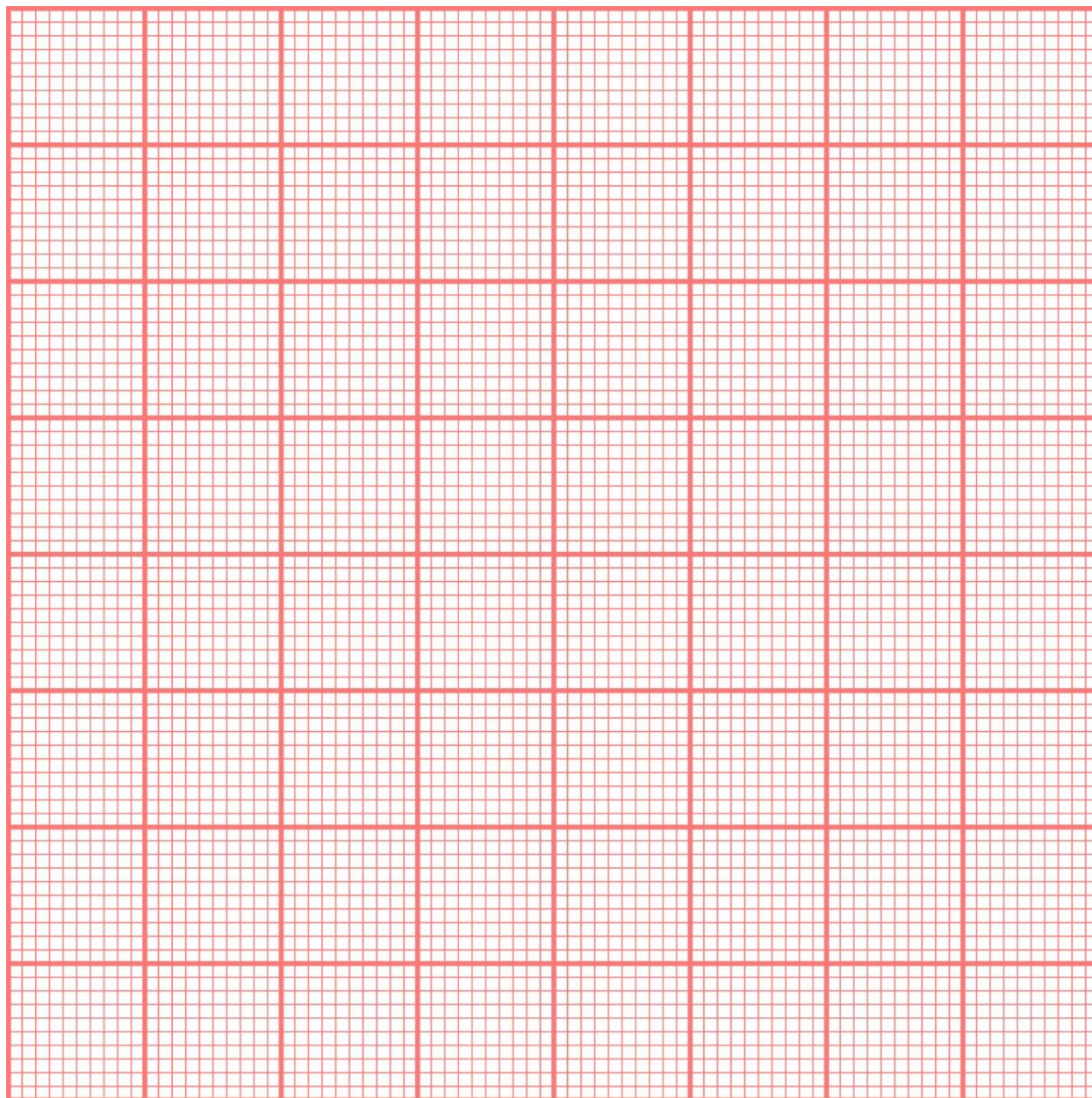
No of obs.	Ammeter reading I (ampere)	Voltmeter reading V (volt)
1	0	0
2	0.23	03
3	0.42	06
4	0.53	09
5	0.65	12
6	0.71	15

Tell which physical quantity is dependent variable and which one is independent variable. [01]

Ans: Dependent variable: _____ Independent variable: _____

(iii) Plot the graph between current (I) and potential (V).

[03]



(iv) Discuss the behaviour of tungsten that can be deduced from the graph.

[01]

Ans:
