

FBISE PRACTICAL BASED ASSESMENT (PBA)

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. Ratio of Part-I practicals is 60% while ratio of Part-II practicals is 40% in the PBA paper.
- v. Draw diagram(s) if asked for.
- vi. In the new pattern of practicals i.e. 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.

LIST OF PHYSICS PRACTICALS SSC-I

	Part-I (60% of practical marks --- 6 Marks)
1.	To measure the area and volume of a solid cylinder by measuring diameter of a solid cylinder with Vernier calipers.
2.	To measure the thickness of a metal strip or a wire by using a screw gauge.
3.	To find the acceleration of a ball rolling down an angle iron by drawing a graph between $2s$ and t^2 .
4.	To find the value of “g” by free fall method.
5.	Investigate the relationship between force of limiting friction and normal reaction to find the co-efficient of sliding friction between a wooden block and horizontal surface.
	Part-II (40% of practical marks ----- 4 Marks)
1.	To verify the principle of moments by using a meter rod balanced on a wedge.
2.	To find the weight of an unknown object by using vector addition of forces.
3.	To study the relationship between load and extension (helical spring) by drawing a graph.
4.	To find the density of a body heavier than water by Archimedes principle.
5.	To find the specific heat by the method of mixture using polystyrene cups (used as container of negligible heat capacity).

**FEDERAL BOARD OF INTERMEDIATE
AND SECONDARY EDUCATION
ISLAMABAD**

**Subject: PHYSICS SSC-I
Paper: Practical Based Assessment (PBA)**

Total Marks: 10

Time: 45 minutes

Roll Number						
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

Name of Examination: _____

Centre Code: _____

Date: _____

Sig. of Dy. Supdt. _____

Instructions for students:

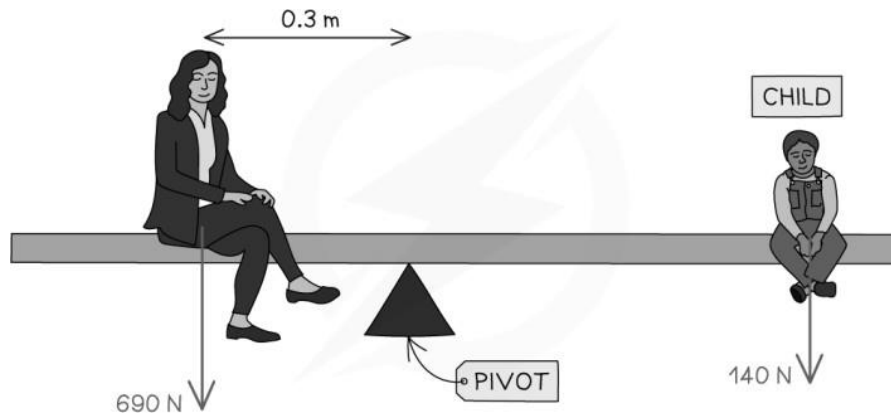
1. Carefully read all the questions and then answer them at the specified spaces.
2. Use black or blue ball point.
3. Marks are mentioned against all questions in the brackets [].
4. Students may use the last page for rough work (if required).
5. Answer the questions as per given instructions.

MODEL PAPER SSC-I PHYSICS

Note: Attempt all questions and answer the questions within the provided spaces.

SECTION-A

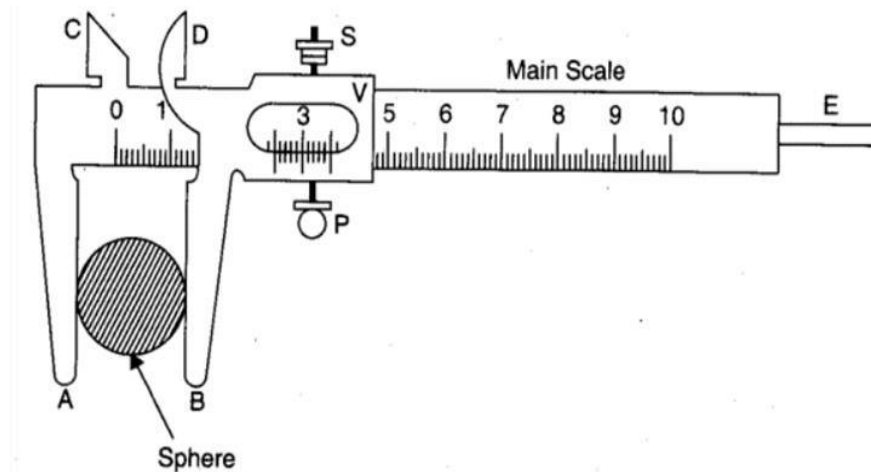
Q.1: A mother and child are at opposite ends of a playground see-saw. The mother weighs 690 N and the child weighs 140 N. The mother sits 0.3 m from the pivot.



- i. Clockwise force (child) (F_{child}) = N [0.5]
- ii. Anticlockwise force (mother) (F_{mother}) = N [0.5]
- iii. Distance of mother from the pivot (d_{mother}) = m [0.5]
- iv. Write down the relevant equation and calculate the result.
 - a) Principle of moment [01]
.....
.....
 - b) The clockwise moment is from the child [01]
.....
.....
 - c) The anticlockwise moment is from the mother [01]
.....
.....
 - d) Draw a diagram for representation of anti-clock and clock moment of force. [01]

RELEVANT MCQs

Note: Fill the relevant bubble for each part.



- i. Which is the smallest measurement that is possible by vernier caliper? [0.5]
- | | | | |
|------------------------|-----------------------|---------------------------|-----------------------|
| a) Least count | <input type="radio"/> | c) Actual reading | <input type="radio"/> |
| b) Main scale division | <input type="radio"/> | d) Vernier scale division | <input type="radio"/> |
- ii. Zero error is given by the formula_____. [0.5]
- | | |
|---|-----------------------|
| a) Actual reading = Main scale - Vernier scale - (Zero error) | <input type="radio"/> |
| b) Actual reading = Main scale + Vernier scale - (Zero error) | <input type="radio"/> |
| c) Actual reading = Main scale + Vernier scale + (Zero error) | <input type="radio"/> |
| d) Actual reading = Main scale * Vernier scale - (Zero error) | <input type="radio"/> |
- iii. The least count of Vernier caliper is_____containing 10 Vernier scale divisions? [0.5]
- | | | | |
|------------|-----------------------|-------------|-----------------------|
| a) 0.001mm | <input type="radio"/> | c) 0.01mm | <input type="radio"/> |
| b) 0.1mm | <input type="radio"/> | d) 0.0001mm | <input type="radio"/> |

SECTION-B

RELEVANT SHORT QUESTIONS

Q. 2 Write short answers of the following questions.

i. What is vernier caliper? **[0.5]**

ii. How the L.C. of a vernier is determined? **[0.5]**

iii. What is meant by zero error? **[0.5]**

iv. What is moment of force? **[0.5]**

v. What do you know about sign convention in moment of force? **[01]**

-----0%0%0%0%0%0%-----

ROUGH WORK