

**FBISE PRACTICAL BASED ASSESMENT (PBA)**  
**PHYSICS SSC-I**

**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**

<b>Part-I (60% of practical marks --- 6 Marks)</b>	
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.
<b>Part-II (40% of practical marks ----- 4 Marks)</b>	
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:**

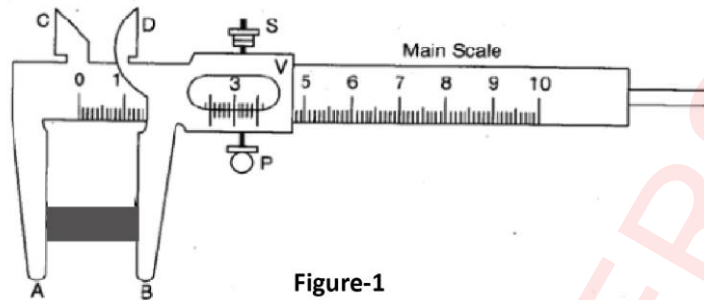
1. Carefully read all the questions and then answer them at the specified spaces.
2. Use black or blue ball point.
3. Marks are mentioned against all questions in the brackets [ ].
4. Students may use the last page for rough work (if required).
5. Answer the questions as per given instructions.

## MODEL PAPER SSC-I PHYSICS

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

### SECTION-A

Q # 1 Look at this vernier calipers and answer the questions given below:



- i. Which part of vernier calipers is used to measure internal diameter of a hollow cylinder? [0.5]

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- ii. Write down formula to find vernier constant of a vernier calipers. [01]

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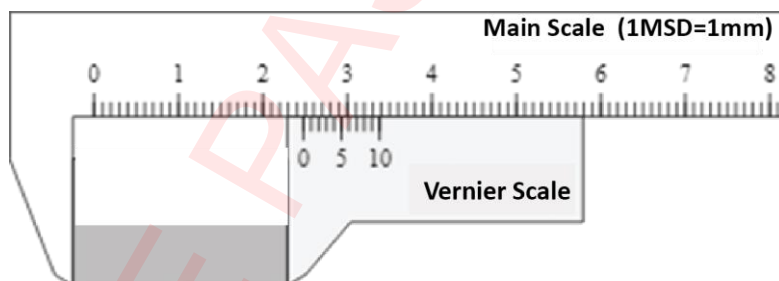
- iii. Calculate the vernier constant of the vernier calipers [ shown in figure 1]. [01]

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- iv. Look at the vernier calipers shown in figure-2 and answer the following questions:



- a. What is its main scale reading? [0.5]

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- b. What is coinciding division of vernier scale? [0.5]

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- c. Write down the formula for finding length of cylinder. [0.5]

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- d. Calculate length of the given cylinder [01]

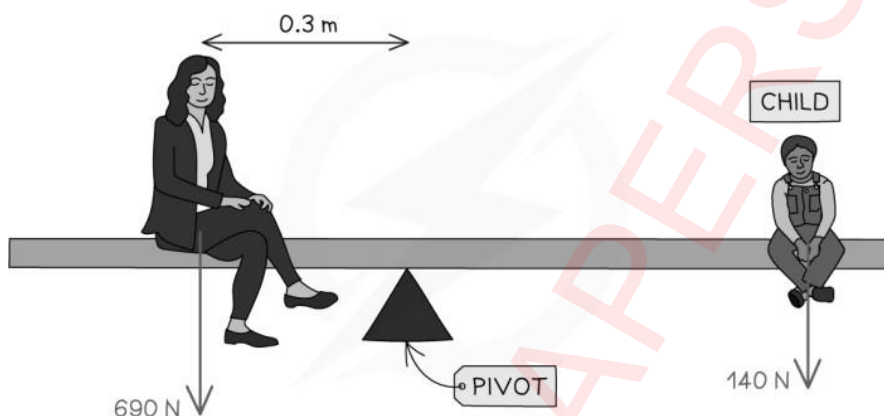
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## SECTION-B

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) ( $F_{\text{child}}$ ) = ..... N [0.5]

ii. Anticlockwise force (mother) ( $F_{\text{mother}}$ ) = ..... N [0.5]

iii. Write down the relevant equation and calculate the result.

a) Principle of moments [01]

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b) Calculate the clockwise moment due to the child [01]

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c) Calculate the anticlockwise moment due to the mother [01]

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ROUGH WORK

FBISE PAST PAPERS