AGA KHAN UNIVERSITY EXAMINATION BOARD

SECONDARY SCHOOL CERTIFICATE

CLASS IX

ALTERNATE TO PRACTICAL (ATP)

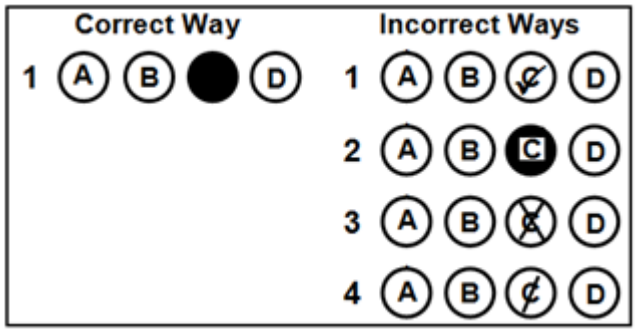
MODEL EXAMINATION PAPER 2021

Physics Paper III

Time: 20 minutes Marks: 10

INSTRUCTIONS

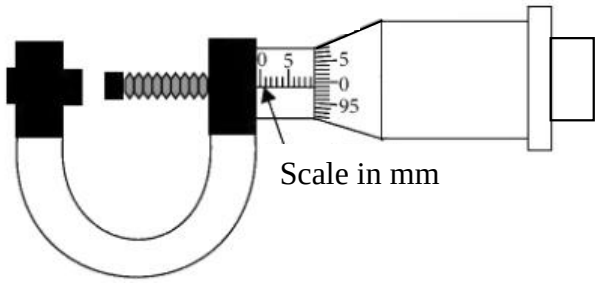
1. Read each question carefully.
2. Answer the questions on the separate answer sheet provided. DO NOT write your answers on the question paper.
3. There are 100 answer numbers on the answer sheet. Use answer numbers 1 to 10 only.
4. In each question, there are four choices A, B, C, D. Choose ONE. On the answer grid, black out the circle for your choice with a pencil as shown below.



Candidate's Signature

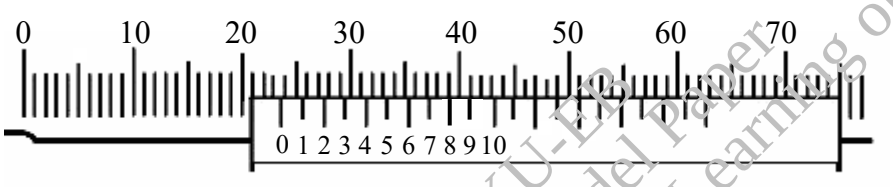
5. If you want to change your answer, ERASE the first answer completely with a rubber, before blacking out a new circle.
6. DO NOT write anything in the answer grid. The computer only records what is in the circles.
7. You may use a simple calculator if you wish.

1. The least count of the screw gauge shown in the given diagram is



A. 0.1 mm
B. 0.01 mm
C. 0.001 mm
D. 0.0001 mm

2. The Vernier scale reading in the given diagram is



A. 8
B. 10
C. 23
D. 24

3. If a ball is thrown vertically upward, then the acceleration due to gravity 'g' and the velocity of the ball at its highest point will be

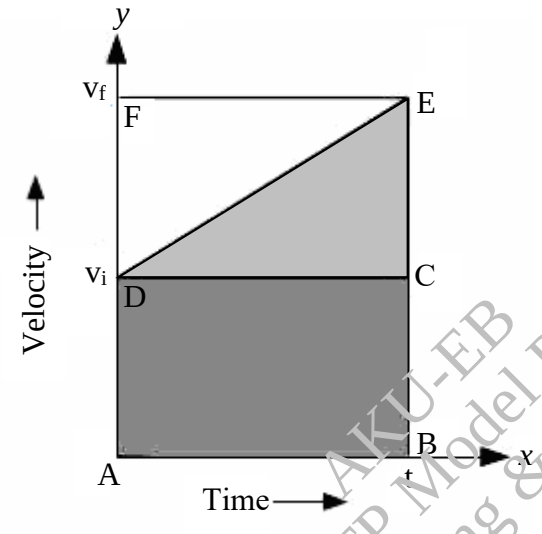
	Acceleration due to Gravity	**Velocity of the Ball**
A	zero	zero
B	g	zero
C	½ g	remain constant
D	- g	remain constant

4. Suppose that at a particular point in planet 'X', the mass of an object is measured as 0.7 kg and its weight is measured as 10.0 N.

   The value of acceleration due to gravity 'g' at that point will be

   A. 7.0 m/s^2
   B. 9.8 m/s^2
   C. 10.0 m/s^2
   D. 14.2 m/s^2

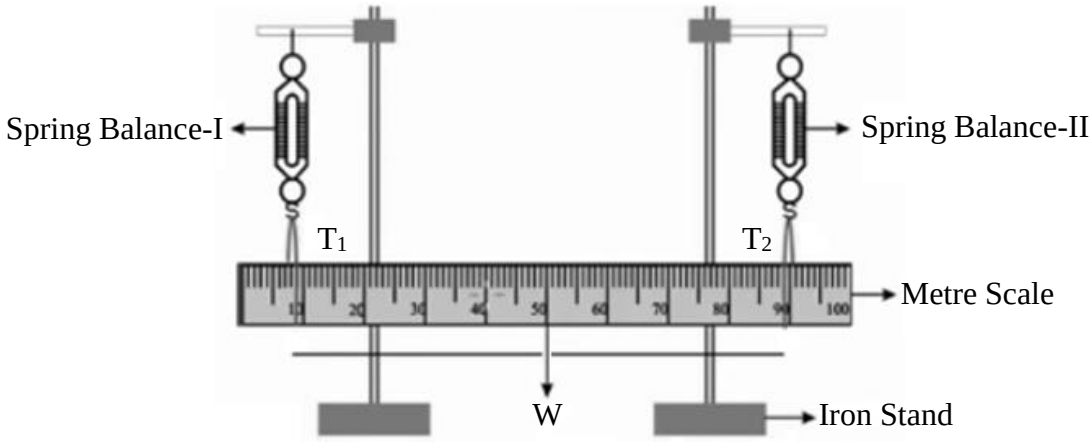
5. The given picture shows the velocity-time graph for the motion of a body.



   Which of the following options represents the total displacement covered by the body?

   A. Triangle DCE
   B. Rectangle ABCD
   C. Triangle DCE + Triangle DEF
   D. Rectangle ABCD + Triangle DCE

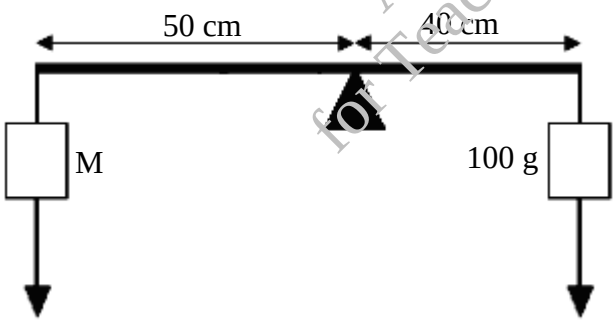
6. The given diagram shows that a metre rule is balanced on spring balances I and II, which are supported by iron stands and have tensions T_1 and T_2 respectively.



If spring balance-I is shifted on the 30 cm mark while spring balance-II maintains its position on the metre scale, then which of the following options is CORRECT for the tensions T_1 and T_2?

	T_1	T_2
A	increase	remain constant
B	decrease	increase
C	increase	decrease
D	remain constant	increase

7. A metallic rod is pivoted in an equilibrium position as shown in the given figure.



The value of mass M is

A. 80 g
B. 100 g
C. 150 g
D. 220 g

8. If the weight of an object is measured 10 N and 8 N in the air and in water respectively, then the density of the object is

   (**Note**: Take the density of water as 1000 kg/m^3.)

   A. 1000 kg/m^3
   B. 1250 kg/m^3
   C. 2500 kg/m^3
   D. 5000 kg/m^3

9. In summers, the temperature of the sand rises more quickly as compared to the seawater at the beach. This is due to

   A. evaporation.
   B. specific heat.
   C. state of matter.
   D. atmospheric pressure.

10. The given options show four different substances of equal masses with their values of specific heat capacity.

    If the same amount of heat is given to all, then which substances will show the maximum rise in temperature.

	Substance of Equal Mass	Specific Heat Capacity (J/kg.K)
A	Brick	900
B	Carbon	121
C	Alcohol	2500
D	Aluminium	903

END OF PAPER

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