NAME…….STREAM:…….

**THE PRIME MINISTER'S OFFICE**
**REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**
**TEMEKE MUNICIPAL COUNCIL**
**DOVYA SECONDARY SCHOOL**
**FORM ONE MIDTERM EXAMINATION**
**PHYSICS**

**2:30 HOURS** **AUGUST-2026**

1. For each of the items (i) - (x) choose the correct answer from among the given alternatives and write its letter beside the items number. For each of the items (i) – (x), choose the correct answer from among the given alternatives and write its letter in the box provided.

i. A student walks from home to school, a distance of 600 m, in 10 minutes. What is the student's average speed?
A. 0.6 m/s. B.60m/s. C. 1.0 m/s D. 6000 m/s

ii. Cyclist A travels at 5 m/s while Cyclist B travels at 8 m/s along the same straight road. Which statement is correct?
A. Cyclist A has greater speed. B. Cyclist B covers less distance every second. C. Cyclist B covers more distance every second. D. Both cyclists have the same velocity.

iii. A bus is travelling at 20 m/s. The driver applies the brakes and the bus comes to rest after 5 seconds. What happens to the velocity of the bus?
A. It increases uniformly. B. It decreases uniformly. C. It remains constant. D. It becomes negative immediately.

iv. (A runner moves 100 m east and then returns 100 m west to the starting point. Which statement is correct?
A. Distance = 0 m and displacement = 200m. Distance = 100 m and displacement = 100m. C. Distance = 200 m and displacement = 0m. D. Distance = 0 m and displacement = 0m

v. A heavy stone and a small stone are dropped simultaneously from the same height in a vacuum. Which statement is correct?
A. The heavy stone reaches the ground first. B. The small stone reaches the ground first. C. Their acceleration depends on their masses. D. Both reach the ground at the same time.

vi. Physics is a fundamental branch of science because the knowledge obtained in studying physics is strongly connected to other branches of science. Which among the following statements describes how physics is connected to other disciplines like chemistry and biology?
A. Physics studies the properties of matter and energy which are fundamental to all sciences
B. Physics focuses solely on celestial bodies and space exploration
C. Physics deals with the human mind and cognitive process
D. Physics have many applications in medical field

vii. (Which of the following best describes a variable?
A. A trend that show an experimental relationship
B. Something whose value can change over multiple measurements
C. A measure of how much a plot line changes along the y-axis
D. Something that remains constant over multiple measurements

viii. A cuboid with length 4cm , width 5cm and height 10 cm is made from wood. What is the actual volume of the cuboid? A. 200cm3. B. 120cm3. C. 240ml. D. 120cm3.

ix. Which of the following is true if the mass of an object is reduced
A. State of an object changes B. Amount of matter is reduced
C, Volume of an object is reduced D. Density of an object increases

x. Which instrument will you use to measure accurately the inside diameter of a bottle neck
A. Micrometer screw gauge B. Meter rule C. Vernier caliper D. Tape measure

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2. **Match the items in List A with the correct responses in List B by writing the letter of the correct answer.**

| LIST A | LIST B |
|---|---|
| i. Distance | A. Meter per second |
| ii. Velocity | B. 0 m/s and stops |
| iii. Displacement | C. Rate of change of velocity |
| iv. Acceleration | D. Path of an object |
| v. Maximum altitude | E. $10m/s^2$ |
| vi. Final velocity | F. Speed in meters |
| vii. Gravitational acceleration | G. Has magnitude only |
| | H. Momentarily stops |
| | I. Distance in specific direction |

| i. | ii. | iii. | iv. | v. |
|---|---|---|---|---|
| | | | | |

**Section B : answer all question in this section**

3. A. state principle conservation of energy

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_____

_____

B. state the transducer used to transform the following energy

i. Electric energy to light energy ……..
ii. solar energy to electric energy……..
iii. Mechanical energy to electric energy……..……
iv. Electric energy to mechanical energy…….……
v. Electric energy to sound energy……..…
vi. Electric energy to sound energy……..

4. In an experiment to study the behaviour of the weight of an object a student finds that the weight of the object is 4.9 N in air and its weight when completely submerged in water is reduced to 3.1 N. Calculate the

A. upthrust.

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……
……
……
……

B. Density

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……
……
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5. Why do we study physics? State three reasons.

i.……
ii.……
iii.……

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(b) Explain the role of physics in the following fields.

(i) Transport

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(ii) Medicine

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6. What is the density of liquid in the figure below?

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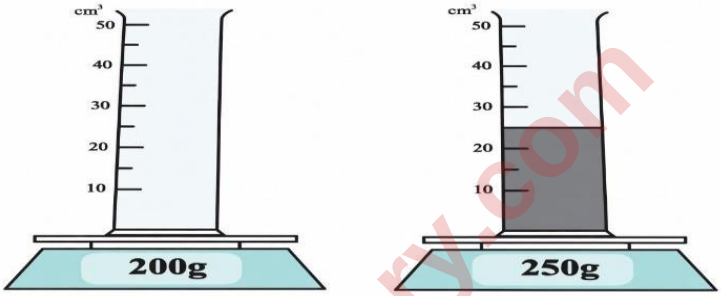
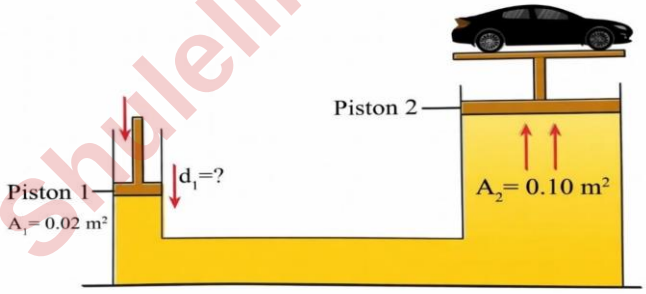


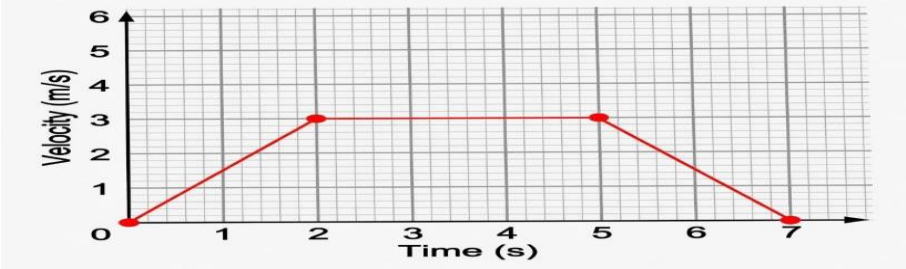

7. A hydraulic press has pistons with areas of 0.02 m² and 0.1 m² as shown in Figure below. A car weighing 5 000 N sits on a platform mounted on the larger piston.




(ii) How much force must be applied to piston 1 to lift the car?

(iii) How far must piston 1 be pushed downward to raise the car 0.3 m?

8. The figure below shows the velocity-time graph for a train travelling on a different part of the track. Determine the total distance travelled by the train on this part of the track and its acceleration

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9. A. Define the term error

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B. Mention three source of error.

i. ……

ii.……

iii.……

**SECTION C**

10. (a) What is measurement?

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(b) Tabulate four difference between mass and weight

| S/N | **MASS** | **WEIGHT** |
|---|---|---|
| (i) | | |
| (ii) | | |
| (iii) | | |
| (iv) | | |

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(C) State the use of each of the following laboratory apparatus.

i. Stop watch……..

ii. Measuring cylinder ……..

iii. Ruler ……

iv. Beam balance……

v. Voltmeter……

vi. Micrometer screw gauge……