GRADE 10 OPENER TERM 2 2026 ASSESSMENT

SUBJECT: PHYSICS

Name: _____ ADM NO_____CLASS…….

TIME: 2 HOURS

		SCORE

INSTRUCTIONS

ANSWER ALL QUESTIONS IN THE SPACES PROVIDED AFTER EACH QUESTION.

1. State two branches of physics. (2marks)

2. State any three subjects that relate to physics and how they do relate? (3 marks)

3. State three careers that are physics dependent. (3 marks)

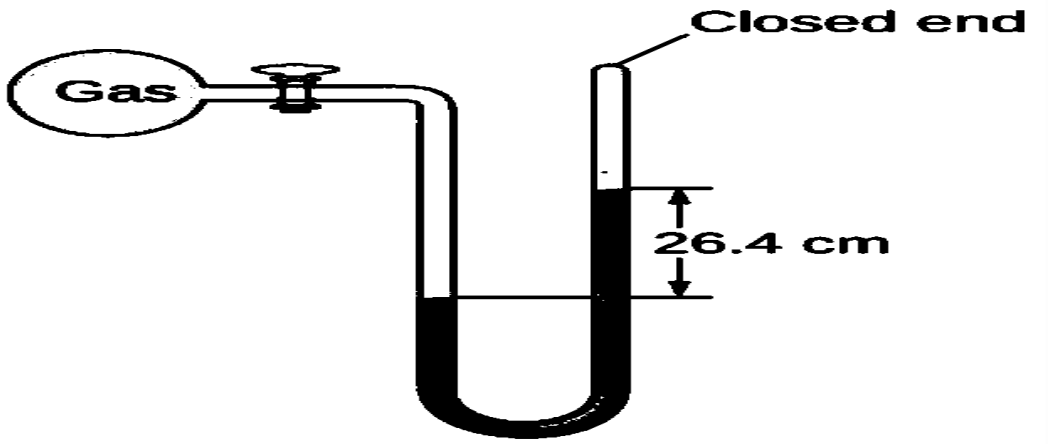
4. A balloon rising in the atmosphere may burst as it rises. Explain this phenomenon. (2 marks)

5. State two factors that affect pressure in fluids. (2 marks)

6. Atmospheric pressure is crucial in daily life. Explain an experiment you would carry out to demonstrate its existence. (5 marks)

7. When measuring pressure SI units are used state its SI units. (1 mark)

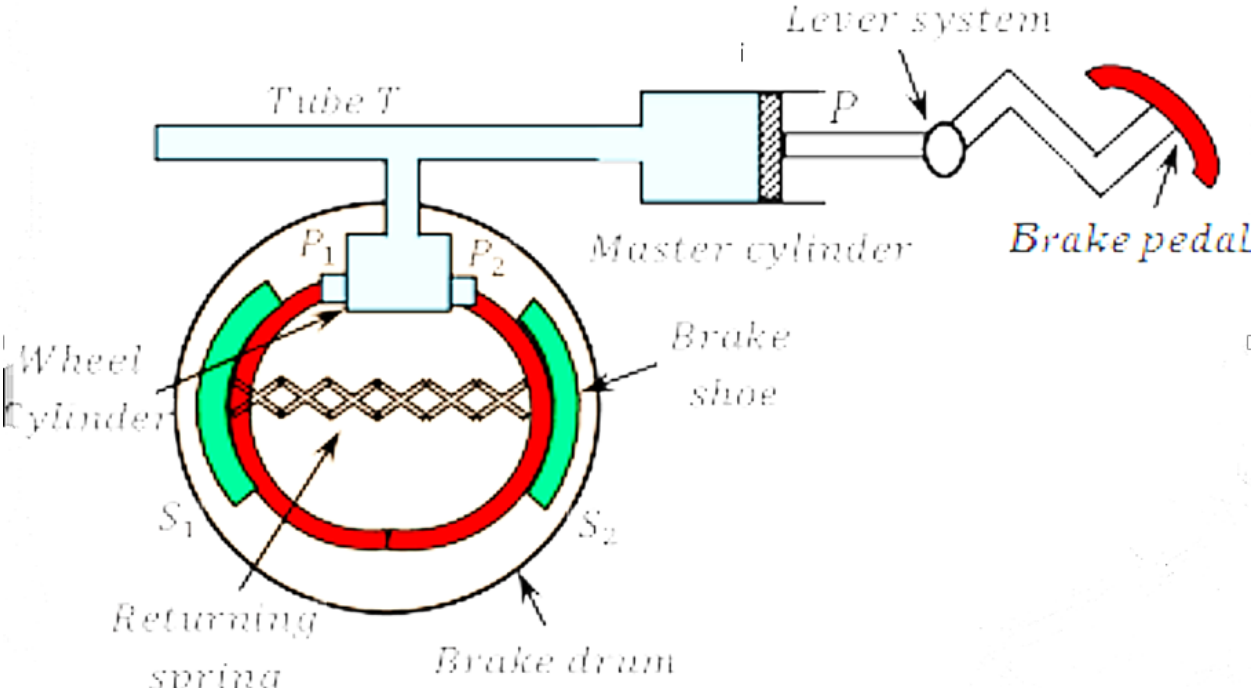
8. Determine the pressure of the gas below that raises the level of water as shown below.(3 marks)
(Density of water=1000kg/m3)



9. A fisherman dives 25m below the sea water. Given that the sea water is 1.03g/cm3, gravitational force (g) is 10N/Kg and atmospheric pressure is 103, 000n/m2. Determine the following:
i) The pressure exerted by the sea water on the man. (3 marks)

ii) Total pressure on him. (2 marks)

10. Below is a diagram of a hydraulic break system explain how the system works (4 marks)



11. A student was given a pipe to irrigate a land from a tank full of water with no tap and opened on the upper part raised 10m high from the ground. Explain as a physics student how you would irrigate the land. (3 marks)

12. Define the following term relating to material properties;
    a. Elastic deformation. (2 marks)

    b. Plastic deformation. (2 marks)

    c. Ductility (2 marks)

d. Malleability (2 marks)

e. Brittleness (2 marks)

13. State Hooke's law (1 mark)

14. A spring produces an extension of 12mm when a force of 0.6N is applied to it. Calculate the spring constant for the system that has two such springs arranged in:
    a) Series (3 marks)

    b) Parallel (3 marks)

15. A wire of length 2 m and cross sectional area of $0.0001m^2$ is stretched by a load of 1020 N. The wire is stretched by 0.1 cm. Calculate the following:
    a. Longitudinal or tensile stress (3 marks)

    b. Longitudinal or tensile strain (3 marks)

    c. Young's modulus of elasticity (3 marks)

16. Explain how a force pump works (5 marks)

17. What are the advantages of a force pump over a lift pump (4 marks)

18. As a physics student how can you use your knowledge to better your community (6 marks)