**MIDWAY BOYS HIGH SCHOOL**

**TERM II OPENER EXAMS 2018**

**FORM ONE PHYSICS**

* *Answer* ***all*** *questions in the spaces provided.*
* *All formulae, working and SI units* ***must*** *be clearly shown.*
1. Explain briefly what Nuclear Physics deals with. (2mks)

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1. Suggest ***two*** reasons why it is not suitable to determine the volume of charcoal by displacement method. (2mks)

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1. One litre of fresh water of density 1.0×103 kgm-3 is mixed with two litres of brine of density 1.2×103 kgm-3. Calculate the density of the mixture in SI units. (4mks)

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1. The density of concentrated nitric(V) acid is 1.12gcm-3. What volume of the acid would have a mass of 2.8×10-2 kg?(give your answer in cm3 (3mks)

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1. Give examples of basic physical quantities and derived physical quantities. (3mks)

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| **Basic physical quantities** | **Derived physical quantities** |
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1. The mass of an empty density bottle is 23.5g. When filled with water its mass is 73.5g while when filled with turpentine the mass becomes 64g. Calculate the density of turpentine given that density of water is 1000kgm-3. (4mks)

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1. The length of a free spring is 11.5cm. When the spring is loaded its length becomes 13.1cm. Calculate the extension due to the load. (2mks)

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1. Fill in the blank spaces using ***mass*** or ***weight***.
2. ……………………… is constant everywhere. (1mk)
3. ……………………… is measured using a spring balance. (1mk)
4. The measure of gravitational pull on an object is……………………….. (1mk)
5. The SI unit of …………………………. is kilogram (1mk)
6. ……………………….. is the quantity of matter in an object. (1mk)
7. The ………………………….. of a body equals the force exerted by that body.(1mk)
8. ……………………………… is a scalar quantity. (1mk)
9. It varies from place to place, it is …………………………. (1mk)
10. Water wets glass while mercury does not. Explain. (2mks)

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