***ST MARY'S NEWHOPE NABWERU***

***MIDTERM ASSESSMENT EXAM***

***(PHYSICS )***

**Senior three**

**Time: 1hr and 30 mins**

**Instructions;**

* **Answer all items in section A and one in section B**
* **Additional items will not be marked**
* **Use good and neat handwriting**

**SECTION A**

**ITEM ONE**

Thomas **shaves his beard** every after two weeks, his wife has always been demanding him to buy for her a mirror that she uses when **applying make up on her face ,** however Thomas is unware of which type of mirror he should buy which can be used by both him and his wife . In a cosmetics shop where he has gone they have only two types of mirrors ie concave and convex mirrors , and the available shop attendants are unaware of which mirror to be given to Thomas since there also new at the shop

**TASK**

Assuming you had been sent to buy something at this shop and you found Thomas and the shop attendants in confusion,

Advise them on which type of mirror Thomas should buy and why (**12 scores)**

**ITEM TWO**

A group of football funs in Uganda watching world cup finals live that took place in Brazil where surprised that by that time they were watching the match at around 9:00 pm at night in Uganda it was it was still day time in Brazil. During the same period the, snowfalls were many in Brazil yet in Uganda they had spent **almost a full month without raifall.** This puzzled most of them

**TASK**

Explain to your father who is among those watching football match why

a) it was day in Brazil and at the same time night in Uganda

b) there was snow in Brazil yet in Uganda there was no rainfall **( 12 scores)**

**SECTION B**

**ITEM THREE**

John, a prominent trader in Masaka town,after collecting some money he decided to build a flat hotel with four floor . He started building this hotel, however upon finishing the second floor, he ran out of capital while still on the second floor, he decided to stop and first finish the the first two floors.

**He put a water supply tank above the two floors** to supply both hot and warm water, he was surprised when the plumber **put the water heater at the bottom of the tank .** After collectingsome money, he then decided to add and finish the remaining two floors**,however the tenants in the added two floors (third and fourth floor) have complained that their floors dont receive water from the tank** . The business is now stranded and confused of what to do

TASK

a) Explain to the John the business man why the plumber put the water heater at the bottom of the tank

b) Advise John the business man why the water is not reaching the last two floors (third and fourth floor) anf how he can solve this problem **(12 scores)**

**ITEM FOUR**

During rainfall especially in rush hours many people take risky decisions which at times cost their lives ,these may include

Some decide to walk in the rain so that they can reach at work in time

Others decide to **take shelter under tall trees** and wait until the rain stops

Others move with umbrellas slowly until they reach home

At another school which had tall buildings but protected by lightning conductors ,one of the students who had gone for short **but touched the copper strip of a lightning conductor,** the physics teacher was furious at him

Task

a) Explain to your young siblings why

i) its dangerous to **walk in rain fall or take shelter under tall trees** when it is raining

ii) the teacher in the other school was furious when he found a student touching a copper strip when it was raining

iii) the handles of umbrella are made of plastic material **(12 scores )**

**END**