NAME………………………………………………………... ADM NO……………………….

Candidates Signature……………………………… Date…………………………….

**PRIMARY TEACHER EDUCATION**

**SEMESTER: THREE 2017 Time: 1 HOUR**

 

**VISION EMPOWERMENT TRAINING INSTITUTE**

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**Unit: SCIENCE**

**INSTRUCTIONS TO CANDIDATES**

*Write your name and admission number in the space provided above.*

*Sign and write the date of examination in the spaces provided*

*This paper consists of* ***THREE*** *questions.*

*Answer* ***ALL*** *the**questions*

**For Examiners Use Only**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Question** | **1** | **2** | **3** | **Totals** |
| **Maximum Score** | **10** | **10** | **10** | **30** |
| **Candidate’s Score** |  |  |  |  |

Candidate should check the question papers to ascertain all the pages and questions are printed as indicated and none is missing.

**QUESTION ONE**

1. Define the following terms (5 Marks)
2. Simple machine
3. Mechanical Advantage
4. Velocity Ratio
5. Efficiency
6. Power
7. State four actions that Force can perform (4 Marks)
8. What is the SI unit of work? (1 Mark)

**QUESTION TWO**

1. Calculate the work done by a girl by pushing a box weighing 6kg for 2m. (2 Marks)
2. A girl lifted a parcel weighing 30kg through a distance of 10m. How much work in kilo Joules did the girl do? (3 Marks)
3. Josephine lifted a 3kg box through a distance of 3m. She then held it at that height for 2 minutes. Calculate the total work she did. (3 marks)
4. Calculate the work done by a ceiling by holding a bulb weighing 50g for 2 days. (2 Marks)

**QUESTION THREE**

1. Study the diagram below and answer the questions that follow:

50 kg

50 cm

100 N

10 cm

1. Calculate the Mechanical Advantage of the simple machine shown above (3 marks)
2. Calculate the Velocity Ratio of the simple machine shown above. (3 marks)
3. Calculate the efficiency of the machine shown above (3 marks)
4. The efficiency of an actual machine is usually less than 100%. Explain (1 mark)