

**CHRISTIAN SOCIAL SERVICES COMMISSION (CSSC)**  
**NORTHERN ZONE JOINT EXAMINATIONS SYNDICATE (NZJES)**



**FORM SIX PRE-NATIONAL EXAMINATIONS 2023.**  
**034 /3 AGRICULTURAL SCIENCE PRACTICAL**

**MARKING SCHEME**

A. i). The specimen E2 (fresh engine oil) because it seems to be more soapy and slippery than the E1 (used engine oil) which has lost its property as it has contaminated. **(3 marks)**

ii) -metallic particles

-soil particles

- soot

- liquor or water

1 mark @ = **04 marks**

iii) -it reduces friction

- it helps to reduce engine temperature

- it cleans the engine parts

- it seals the piston ring

- it reduces the engine noises.

- It prevents wear and tear of the engine parts

Any four (04) points= **(04marks)**

**B.** i) the aim of adding barium sulphate is to flocculate the soil particles **(02 marks)**

ii) The soil settled in different layers after some time. Heavy and large particles were seen to settle at the bottom, followed by medium-sized particles, and the fine particles settled at the top. Organic matter floated on the water together with suspended clay particles. **(03 marks)**

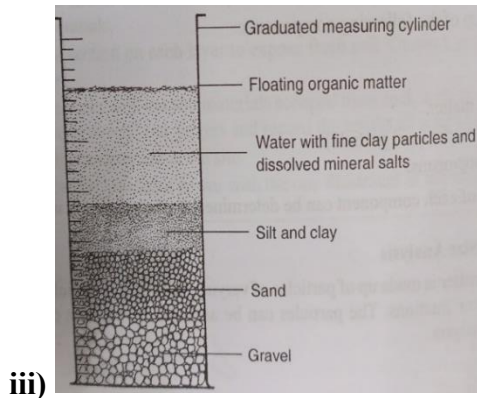


diagram with its labels= **04 marks**

## 2. ANSWERS

A.

i) L<sub>1</sub> is endoparasite (**01 mark**)

ii) – contain suckers for sucking blood.

- It contains spines which prevents them from being washed in bile duct.
- It is hermaphrodite hence high rate of reproduction.
- It can survive in low oxygen condition.

$\frac{1}{2}$  @ = **02 marks**

iii)-loss of blood (anaemia)

- Loss of weight (emaciation)
- Swollen and painful abdomen
- Destruction of liver tissues.
- Blockage of blood vessels.

Any four points  $\frac{1}{2}$  @ = **02 marks**

iv) -sheep

-cattle

1mark@= **02 marks**

v) -prevent animals from grazing on swampy areas/ water logged areas

- drainage of swampy area
- treating snail infested water bodies with copper sulphate solution.
- provide animals with ant-worm

$\frac{1}{2}$  @ = **02 marks**

- B. i) -restrain animal by tying with rope
- locate the spermatic cord and place the jaws of specimen L2 on the spermatic cord of testis
  - press the handles of the L2 to a locking position to crush the spermatic cord.
  - Release animal by untying animal
- ii) – make animal docile
- Control breeding in farm animals
  - Make animal to grow quickly.
  - Improve meat quality by making meat odorless and tender.
- $\frac{1}{2}$  @ = **02 marks**
- iii) – put the specimen on fire
- restrain the animal in a crush.
  - when the specimen L3 is red hot take it and press on the skin of the animal.
- 1½ mark**
- iv) This practice lowers the quality of skin or hides ( $\frac{1}{2}$  **mark**)
2. i)- specimen A damaged by grain weevils (*Sitophilus spp*)
- specimen C is damaged by bean bruchid (*Acanthoscelides obtectus*)
- 1mark @= (**4marks**)
- ii) -early harvesting of matured crop
- fumigating store before introducing new crops
  - use air tight container to store the crop
  - fumigate the stored produce.
  - Dusting insecticides on the stored crops.
- Any four (04) points 1mark @= **04 marks**
- iii) – witch weed
- *Striga spp*
- 1mark @= **02marks**
- iv) – crop rotation
- Trap cropping
  - Spraying highly selective herbicide
- 1mark @ = **03marks**
- v) - maize streak disease
- maize streak viruses ( $\frac{1}{2}$  @= **01 marks**)
- vi) -leaf hopper
- *Cicandulina mbila*
- ( $\frac{1}{2}$  **mark @= 01 marks**)