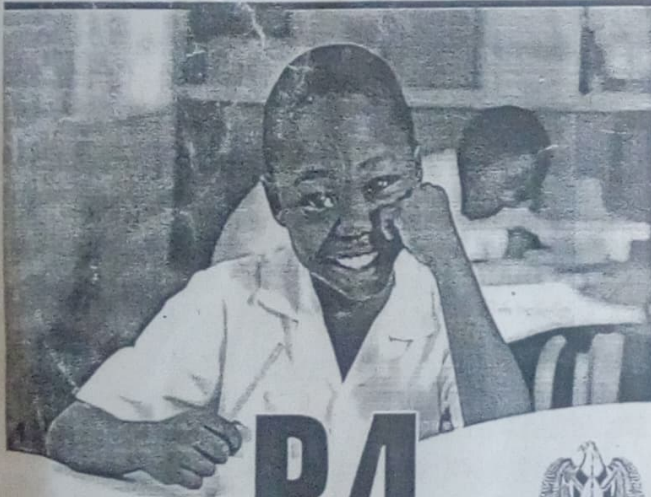


SUREKEY EXAMINATIONS BOARD
PRIMARY SEVEN MOCK OFFICIAL MARKING GUIDE
2023

INTEGRATED SCIENCE
OFFICIAL MARKING GUIDE

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SUREKEY EXAMINATIONS BOARD
OFFICIAL COMMENCEMENT OF
**LOWER PRIMARY
TRANSITIONAL
Examinations**

2023 October 16th – 19th

Let Quality speak for itself

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SUREKEY EXAMINATIONS BOARD
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LOWER
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Examinations

30,000/=
Online
Registration
Fee

2023 October 16th – 19th

The Surekey Lower Primary Certificate of Education (LPCE) Examination for the 2023 junior candidates will officially start on 16th October 2023.
THEME: "Preparing quality learners for Upper Primary"
Schools interested should register with Surekey Examinations Board before 5th June 2023. Online registration is also available at 20,000/= per junior candidate. For inquiries, contact 0700758668 / 0774088304 / 0755887056

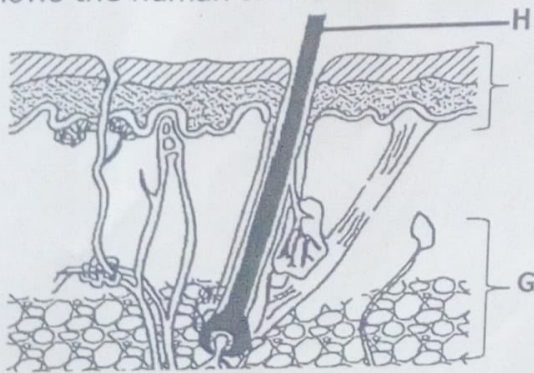
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1. Name the main food value that is not found in distilled water.
✓ **Mineral salts** (*Reject: Proteins, carbohydrates and vitamins*)
2. Which intestinal worm lives in the rectum of human beings?
✓ **Pinworms/threadworms.**
Note: *The above nouns are written as one word*
3. State any **one** way in which typhoid affects the digestive system.
✓ **Leas to inflammation of the intestines.**
✓ **Causes improper digestion of food.**
✓ **Causes diarrhea.**
✓ **Leads to abdominal pain.** (*Reject: Causes death*)
4. Give any **one** example of a bird with sharp curved talons.
✓ **Eagle, secretary bird, falcon/ owl/ kite/hawk/buzzard**
5. Which type of pit latrine provides manure to crop farmers?
✓ **Ecosan toilet**

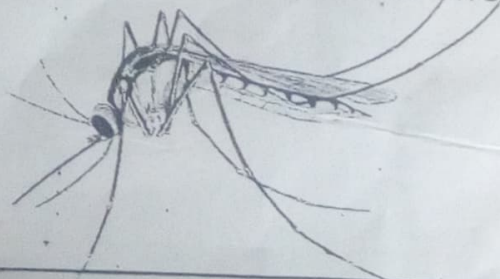
The diagram below shows the human skin. Use it to answer questions 6 and 7.



6. Name the layer marked **G** on the skin above.
✓ **Dermis** (*Reject: (Epidermis/ subcutaneous fat.)*)
7. Give the function of part marked **H** to the human skin.
✓ **Insulate the body against heat/ keeps the body warm**
(*Reject: provides warmth to the body*)
Note : provision of warmth is only done by a source of heat.
8. Why is it not advisable to use cold water when performing tepid sponging on a patient with high fever?
✓ **Cold water closes sweat pores which prevents heat loss from the body.**
✓ **Lowers the body temperature and causes shivering.**
9. Which type of hutch in rabbits is similar to the fold unit system of keeping poultry?
✓ **Morant hutch** (*Reject morrant hutch*)
10. Why does a butterfly lay its eggs beneath the leaves of the plant?
✓ **For protection against harsh weather/ against direct sunshine**
✓ **To protect eggs from being eaten by predators.**
(*Reject: For the larva stage to feed on*)

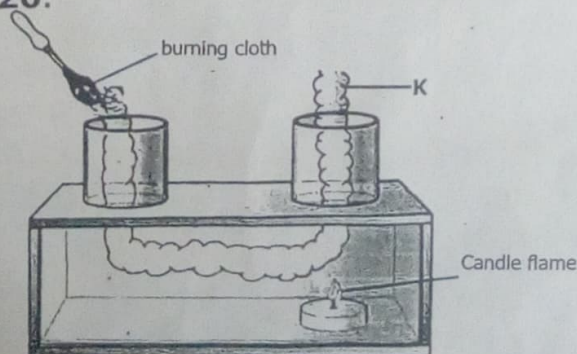
11. How does a dolphin benefit from echoes?
 ✓ **Dodges obstacles while swimming** ✓ **Locates its food/prey**
12. Write down any **one** activity done during land preparation.
 ✓ **Cutting big trees** ✓ **Harrowing**
 ✓ **Ploughing** ✓ **Slashing**
 ✓ **Digging** ✓ **Detrashing**
 ✓ **Controlled bush burning**
(Reject: Planting/pruning/gap filling/harvesting)
13. State any **one** feature of the lungs which makes them suitable for their function.
 ✓ **Has millions of air sacs for gaseous exchange.**
 ✓ **Have a network of blood capillaries for easy diffusion.**
 ✓ **Has moist walls for oxygen to dissolve easily.**
(Reject features without functions/roles)
14. Why are holes found on a queen excluder in a modern bee hive made of very small in size?
 ✓ **To prevent the queen bee from entering in the honey chamber.**
(Reject: To let in light/ to allow free air circulation)
15. State any **one** factor to consider when choosing a variety of tuber crops to grow.
 ✓ **Ability to give high yield.** ✓ **Drought resistance.**
 ✓ **Resistance from diseases.** ✓ **Presence of lateral buds.**
 ✓ **Fast growth.** ✓ **Resistance to pests.**
 ✓ **Good taste.**
Reject: labour/ capital/land/management
16. State any **one** characteristics of coniferous plants.
 ✓ **Conifers are nonflowering plants.** ✓ **Grow into tall and large trees.**
 ✓ **Store their seeds in cones.** ✓ **Produce soft wood.**
 ✓ **Reproduce by means of seeds.**
 ✓ **Have needle shaped leaves.**
 ✓ **Produce male and female cones on the same tree.**
(Reject : have chlorophyll/ make their own food)
Note: all plants have chlorophyll thus all are able to make food
17. Give any **one** way in which people can use nonrenewable resources sparingly.
 ✓ **By using them sparingly** ✓ **By using communal transport**
 ✓ **By walking short distance** ✓ **Using alloys**
 ✓ **Switching off car engines after parking**
 ✓ **Turning off gas cooker** ✓ **Controlled mining**
(Reject : Using them slowly/ carefully)

The diagram shows a type of mosquito. Use it to answer questions 18 and 19.



18. Which infectious disease is transmitted by the type of mosquito shown above?
 ✓ **Elephantiasis/filariasis** (Reject: Other diseases spread by other mosquitoes)
19. Give any **one** way of controlling the breeding of the type of mosquito above.
 ✓ **Draining stagnant/still.**
 ✓ **Pouring oil on still water/stagnant.**
 ✓ **Keeping fish in ponds.** ✓ **Allowing amphibians in ponds.**
 (Reject: Slashing tall grass/ sleeping under a treated/ using mosquito coils/ spraying mosquitoes)
20. State the property of light that enables people to see their images in plane mirrors.
 ✓ **Light can be reflected/Reflection of light**
21. State any **one** activity done by family members to promote health in the family.
 ✓ **Regular cleaning of toilets** ✓ **Collecting and burning rubbish**
 ✓ **Proper disposal of human wastes**
 ✓ **Draining still water** ✓ **Slashing tall grass**
 ✓ **Practising good food hygiene**
 ✓ **Boiling water for drinking**
22. State any **one** advantage of keeping Zebu cattle over Friesian cattle.
 ✓ **Zebu cattle need less care than Friesian cattle**
 ✓ **Zebu cattle can survive on poor pasture unlike Friesian cattle**
 ✓ **Zebu cattle are more resistant to diseases than Friesian cattle.**
 ✓ **Zebu cattle can withstand harsh weather conditions unlike Friesian cattle.** (Reject: comparison without noun and responses without comparison)
23. Mention any **one** form of energy that does not require a medium of transmission.
 ✓ **Light energy // heat energy.**
24. Why should the pit in which a banana sucker is planted be dug big enough?
 ✓ **For proper growth of the suckers.**
 ✓ **To prevent overcrowding of suckers.**
 ✓ **To create a large surface area to trap water for proper growth of suckers**
 ✓ **To ease expansion and penetration of roots.**

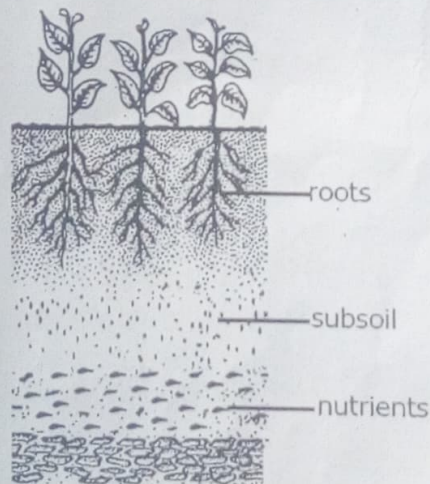
The diagram below shows a wooden box with a piece of cloth burning. Use it to answer questions **25** and **26**.



25. Name the substance marked **K**.
 ✓ **Smoke** (Reject air/gas)

26. Which method of heat transfer is demonstrated by the diagram above?
✓ **Convection**
27. In which way are short bones important to the circulatory system?
✓ **Help in the production of red blood cells.**
28. State any **one** chemical method of controlling bacterial diseases in people.
✓ **Taking antibiotics.** ✓ **Sanitizing hands.**
✓ **Washing hands with clean water and soap.**
✓ **Immunizing children.**
✓ **Sterilizing medical equipment.**
✓ **Using disinfectants and antiseptic.**
(Reject: proper sanitation/ boiling drinking water/ proper personal hygiene.)
29. State any **one** reason why mothers are encouraged to breastfeed their babies for at least two years.
✓ **To boost immunity of their babies.**
✓ **To protect their babies against malnutrition.**
30. Name the essential drug made from penicillium mould.
✓ **Penicillin**
31. Apart from Merino sheep, name any **one** other exotic breed of sheep that is useful to textile industries.
✓ **Romney marsh//Corriedale//Dorset//Cheviot**

The diagram below shows a condition in soil. Use it to answer question 32 and 33.

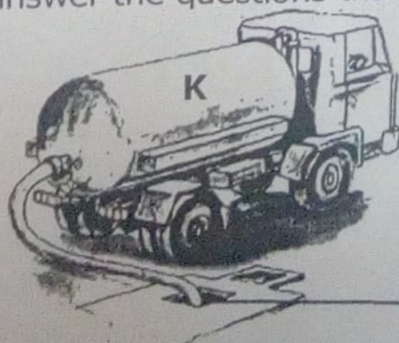


32. Identify the soil condition shown in the diagram above.
✓ **Leaching**
33. How does the condition shown in the diagram above affect soil?
✓ **Causes soil exhaustion/ Causes loss of soil fertility.**
34. Which communicable intestinal disease leads to dehydration?
✓ **Diarrhoea**(Accept severe diarrhoea)
(Reject: cholera/ typhoid /dysentery)

35. Give any **one** example of nitrogenous wastes removed from the body.
 ✓ **Urea/ ammonia/ uric acid/creatinine**
 (Reject: Excess water/ nitric acid/carbon dioxide/ sweat.)
36. How do nursery children benefit from a seesaw at school?
 ✓ **Used as playing materials.** ✓ **For swinging.**
 ✓ **For physical education lessons.**
37. Give any **one** reason why an onion is grouped under monocotyledonous plants.
 ✓ **Has parallel leaf venation.** ✓ **Has fibrous root system.**
 ✓ **Undergoes hypogeal germination.**
 ✓ **Bears seeds with one cotyledon.**
38. Apart from polio, mention any **one** other immunisable disease whose vaccine is administered through oral method.
 ✓ **Rota virus diarrhoea// cholera// typhoid**
39. Which part of a cassava plant is affected by the white flies?
 ✓ **Leaf/ leaves** (Reject: root/ root tuber)
40. How does tar affect the human teeth?
 ✓ **Stains teeth.** ✓ **Discolourises teeth.**
 ✓ **Cause bad breath in the mouth(halitosis)**
 ✓ **Causes inflammation of the gum/plaque.**

SECTION B: 60 MARKS

41. a) Name the body organ in the human body that controls the level of;
 i) Salt **kidneys** (Reject skin)
 ii) Sugar **liver** (Reject pancreas)
- b) Give any **two** health habits that maintain the efficiency of the body organs named in a) above.
 ✓ **Having regular physical exercises.** ✓ **Avoid smoking.**
 ✓ **Feeding on a balanced diet.**
 ✓ **Going for immunization.**
 ✓ **Drinking enough boiled water.**
42. The diagram below shows a vehicle commonly found in the community. Study and use it to answer the questions that follow.



Septic tank

- a) Name the part marked **K** on the vehicle shown in the diagram above.
✓ **Cesspool emptier** (Reject: truck/ vehicle/tank)
- b) Which element of Primary Health Care (P.H.C) is promoted by the vehicle above? **Water and sanitation/ sanitation** (Reject: water alone)
- c) How does the vehicle help to promote the element of Primary Health Care (P.H.C) above?
✓ **Helps in proper disposal of sewage.**
✓ **Helps in transporting sewage safely to the treatment plants.**
✓ **Helps in emptying septic tanks.**
✓ **Helps in emptying latrines safely when full.**
- d) Mention any **one** place where the above vehicle is commonly found.
✓ **Water treatment plant**
✓ **Sewage plant** (Reject: urban areas/ school/ towns/ latrines)
43. A girl in primary five wanted to find the volume of an irish potato tuber.
- a) State the method that the girl would use.
✓ **displacement method**
- b) Give a reason for your answer in (a) above.
✓ **An irish potato displaces the amount of water equals to its volume.**
(Reject: has no proper shape)
- c) Write down any **two** other objects whose volume can be found in the same as that of an irish potato.
✓ **Keys //stone//sweet potato// mango// cassava.**
44. a) Write down **two** signs and symptoms of sleeping sickness.
✓ **Persistent fever.** ✓ **Dullness.**
✓ **Body weakness.** ✓ **Loss of body weight.**
✓ **Loss of appetite for food.** ✓ **A person may fail to walk.**
- b) Give any **two** ways of controlling the outbreak of sleeping sickness in area. -**Spray insecticides to kill adult tsetse flies.**
✓ **Use tsetse fly traps to trap adult tsetse flies.**
✓ **Clear bushes around the homes.**
✓ **Keep away from forests where tsetse flies live.**
45. In the table below, part **A** shows practices carried out in farm animals and part **B** has the importance or the practices.

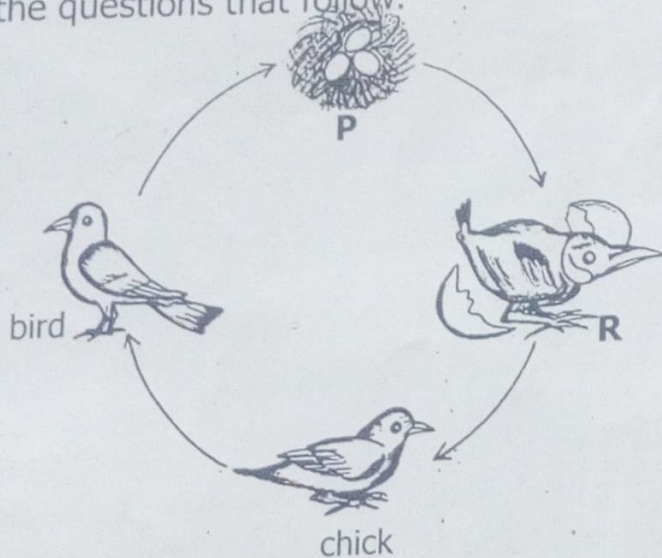
Part A: practices	Part B: importance
Steaming up	Reduces injuries to other animals.
Castration	Increases chances of ovulation.
Flushing up	Controls inbreeding.
Dehorning	Promotes proper foetal growth.

Use the importance in part B of the table to match the practices below.

- a) Steaming up – **promotes proper foetal growth.**
- b) Castration - **controls inbreeding.**
- c) Flushing up – **increases chances of ovulation.**
- d) Dehorning - **reduces injuries to other animals.**

46. a) Write down any **two** examples of venomous snakes.
 ✓ **Cobra/gabon vipers/black mamba/ puff adder** (Reject: puff udder).
- b) Give any **one** way in which snakes are useful to a crop farmer.
 ✓ **Eat some pests in the garden.** ✓ **Aerate the soil.**
 ✓ **Their wastes form humus which improves on crop yields.**
- c) In which way are snakes different from other reptiles in body structure?
 ✓ **Snakes are limbless while other reptiles have limbs.**
 ✓ **Snakes have no legs while other reptiles have legs.**

47. The diagram below shows the life cycle of a bird. Study and use it to answer the questions that follow.



- a) Name the process that takes place at part **P** before stage **R** hatches.
 ✓ **Incubation.** (Reject: Fertilisation/ laying eggs/reproduction)
- b) Identify the type of change shown in the diagram above.
 ✓ **Biological change**
- c) How does the bird benefit from the biological change shown in the diagram above?
 ✓ **A bird multiplies/ increases in number/ reproduces.**
- d) State any **one** condition necessary for process marked **R** to take place.
 ✓ **Optimum temperature.** ✓ **Presence of moisture.**
 ✓ **Presence of fertilized eggs.**
 ✓ **Presence of oxygen.**

48. a) Name the basic method of soil formation.
✓ **Weathering of rocks/ weathering of rock particles**
(Reject: Decomposition)
- b) State any **two** factors that lead to the method of soil formation named in a) above.
✓ **Change in temperature**
✓ **Movement of ice**
✓ **Action of air**
✓ **Quarrying**
✓ **Strong wind**
✓ **Animal movement**
✓ **Action of landslides**
- c) Which composition of soil is formed as a result of the method of soil formation named in a) above?
✓ **rock particles** (*reject minerals*)
49. a) Apart from using sacks, state any **two** other ways in which farmers store their crops after harvesting.
✓ **Using a granary.**
✓ **Using a silo.**
✓ **Using food store rooms.**
✓ **Using buckets and pots.**
- b) How can farmers prevent sacks containing stored crops from absorbing moisture on the ground?
✓ **By putting sacks on dry pieces of timber above the ground.**
- c) Give any **one** reason why crop farmers store their crops after harvesting.
✓ **To get planting materials for next season.**
✓ **To have what to sell when market prices are good.**
✓ **To keep food for eating in dry season.**
50. The diagram below shows a structure installed on top of buildings. Study and use it to answer the questions that follow.

- a) Name the form of electricity that the structure above protects the building against.
✓ **Lightning** (Reject: Static electricity)
- b) How does the structure protect the building against the danger of the form of electricity named in (a) above?
✓ **Provides route for charges to pass into the ground.**
✓ **Traps charges and directs them to the ground.**

- c) State the function of the copper cable on the structure above.
✓ **Provides route for charges to pass into the ground.**
- d) Give any **one** danger of building a house without installing the structure above on it.
✓ **A house can easily be struck by lightning.**
✓ **A house can easily be damaged by lightning.**

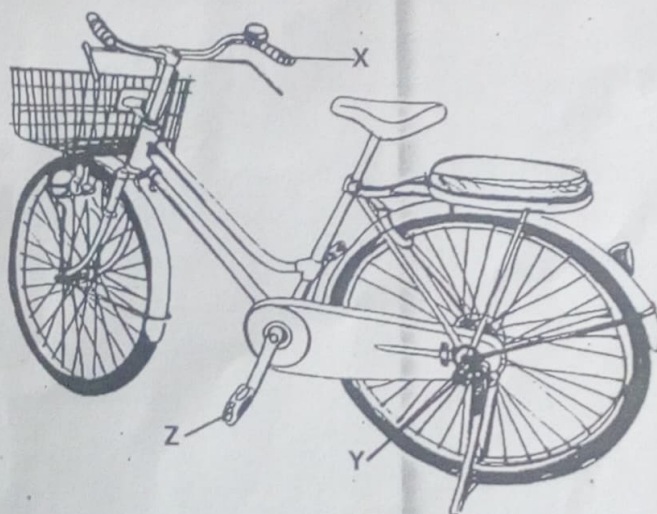
51. a) How are the following parts important in the human heart?
- ✓ **Septum- Prevents oxygenated blood from mixing with deoxygenated blood** (Reject: Separates the left side from the right side)
 - ✓ **Aorta-Transports oxygenated blood from the heart to all body parts.** (Reject: Holds other arteries /It is the main artery.)
- b) Give any **one** way in which the heart is adapted to its function.
- ✓ **Has thick cardiac muscles for easy pumping of blood at higher pressure.**
 - ✓ **Has septum which prevents oxygenated blood from mixing with deoxygenated blood.**
 - ✓ **Has valves that prevent the backflow of blood.**
- c) State any **one** importance of having regular physical exercises to the circulatory system.
- ✓ **Helps to strengthen cardiac muscles.**
 - ✓ **Helps to improve on blood circulation.**

52. a) At what stage do maize plants develop prop roots?
- ✓ **Flowering stage/ fruiting stage**
- b) How are prop roots important to the maize plants during the stage above? **Prop roots provide extra support to the plant.**
- c) Give any **two** reasons why prop roots are able to carry out the importance stated in b) above.
- ✓ **They are many to overcome the weight of the plant.**
 - ✓ **They emerge from different parts of the plant to overcome the weight of the plant.**
- ✓ **They are well distributed around the stem to increase the plant stability.**

53. a) How does sugar behave when put in liquid tea?
- ✓ **Dissolves** (Reject: disappears in tea)
- b) Give a reason for your answer in (a) above.
- ✓ **Sugar is soluble in water** (Reject: sugar is a solute)
- c) Mention any **two** other substances in which sugar behaves as stated in (a) above.
- ✓ **Milk//porridge// juice** (Reject: salt/ glucose)

54. a) Which health condition in human beings results from reduced supply of oxygenated blood to the brain?
 ✓ **Fainting** (Reject: dizziness)
- b) Write down any **two** factors that can lead to the health condition above in human beings.
- ✓ **Prolonged hunger**
 - ✓ **Dehydration**
 - ✓ **Prolonged standing in sunshine**
 - ✓ **Receiving shocking news**
 - ✓ **Vigorous physical exercises**
 - ✓ **Alcoholism**
 - ✓ **Severe pain**
- c) How can a casualty with the health condition above be helped to allow the flow of oxygenated blood to the brain?
 ✓ **By raising the legs slightly above the head.**

55. The diagram below is of a bicycle showing some parts under simple machines. Study and use it to answer the questions that follow.



- a) Name the structures on the bicycle handles marked **X**.
 ✓ **Grip** (Reject: handle)
- b) State the importance of the structure named in a) above on the bicycle handles.
 ✓ **Increases friction so as the rider's hands do not slip/slide off.**
- c) How does part marked **Z** simplify work when riding a bicycle?
 ✓ **Helps the rider to apply force easily while pedaling.**
 ✓ *(Reject Reduces the effort needed to turn/ride the bicycle)*
- d) State any **one** way of reducing friction in part marked **Y**.
 ✓ **By oiling.**
 ✓ **By greasing.**
 ✓ **Using ball bearing.**
 ✓ **Lubricating.**

END