

SPECIAL MOCK 2025

SCI GUIDE

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COMING UP

PRE PLE SERIES(10) sets

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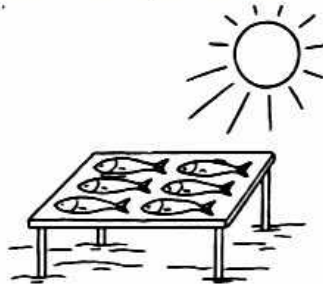
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SECTION A: 40 MARKS

Questions 1 to 40 carry one mark each.

1. Name any **one** natural magnet.
✓ **Earth//lodestone (Magnetite)**
Reject; U-shaped, bar magnet, cylindrical magnet, etc.
2. Identify any **one** way of caring for newly transplanted seedlings in the garden.
✓ **By watering them// spraying them// fencing the garden// manuring**
3. State **one** reason as to why protecting water sources contribute to the provision of quality clean water to the community.
✓ **It prevents contamination of water sources.**
4. Give any **one** possible effect of poor disposal of wastes in the environment.
✓ **Easy spread of diarrhoeal diseases// bad smell//Pollution (accept specifications of pollutions)**
5. State **one** way you can tell that a child is suffering from a deficiency of all food nutrients.
✓ **Pot belly//Feeling hungry all the time//Old man's face//Child is very thin//stunted growth**

The diagram below shows fish put under the sunshine to dry. Use it to answer the question 6 and 7.



6. Name the method of heat transfer which enables the above fish to dry.
✓ **Radiation.**
7. Apart from drying fish, state **one** other way in which heat transfer by the above method is applied in daily life.
✓ **Drying harvested crops// drying clothes and beddings// getting warmth from a fire place.**
8. Name the condition that speeds up the process of seed germination.
✓ **Warmth**
9. State **one** reason why soil is usually piled and heaped around stems of tuber crops.
✓ **To enable tubers swell and enlarge//To protect tubers from direct sunlight and tuber crop pests**
10. Give any **one** common way of identifying blood capillaries.
✓ **Have moist surfaces for easy diffusion of body materials**
✓ **Have very thin walls for easy diffusion of body materials**
11. Apart from antenatal care, give any **one** other requirement of an expectant woman.
✓ **Enough rest//Enough sleep//Balanced diet//Good nutrition**
12. Give any **one** way of conserving mineral nonrenewable resources.

✓ **Recycling//Reusing//Using them sparingly//Using other alternative sources of energy//Using renewable energy resources//Other alternative sources of energy**

13. Name any **one** way of identifying a leguminous crop suitable for agroforestry.

✓ **Storage of seeds in pods//Root nodules//Shallow rooted**

14. Identify the principle on which the volume of irregularly shaped objects is found.

✓ **On the principle of displacement method**

15. Name the group of birds that cleans the environment by feeding on rotten meats (carrion).

✓ **Scavenger birds**

The process below is of alcohol formation. Use it to answer questions **16** and **17**.



16. State any **one** importance of yeast during the process of alcohol formation above

✓ **Speeds up fermentation//Carries out fermentation//Producing zymase enzyme responsible for fermentation**

17. Name any **one** substance that is a source of sugars used in alcohol formation.

✓ **Pineapple juice// Yellow banana juice//Sugar cane juice**

18. State any **one** function of carbohydrates in the human body

✓ **Source of energy to the human body//Prevents malnutrition**

19. Give the meaning of the term wildlife.

✓ **Wildlife is a group of living undomesticated organisms of all kinds OR Wildlife refers to all living organisms that are not domesticated.**

NOTE; Undomesticated means not living with or near humans.

20. State the type of injury that affects the tendons in the human body.

✓ **Strain**

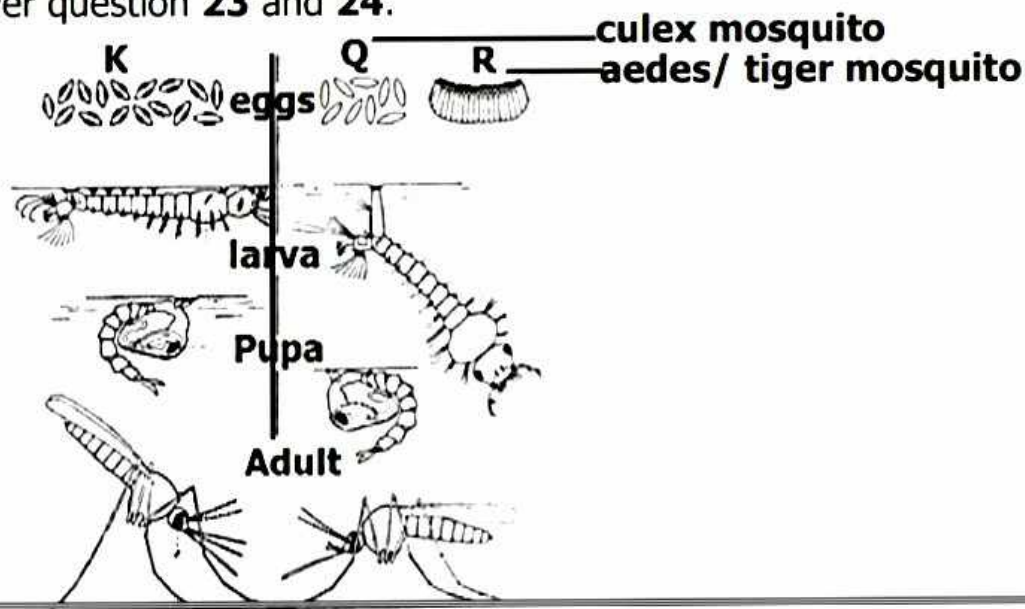
21. Give any **one** factor considered when choosing a site for nursery bed.

✓ **Soil fertility//Topography//Soil drainage//Nearness to the water source//Security of an area**

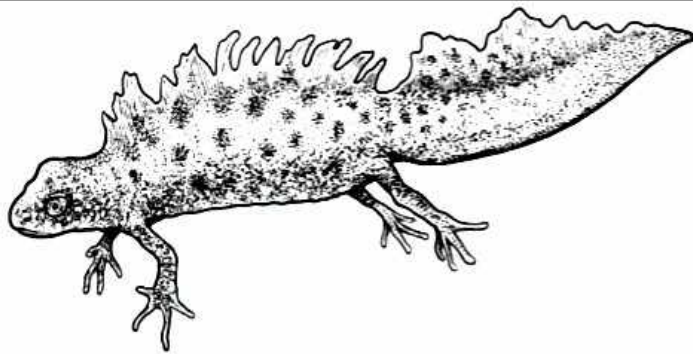
22. State any **one** way lower temperatures at night affect sound energy.

✓ **Lower temperatures make sound waves move nearer to the ground. This makes people hear sound at night clearer than during daytime.**

The diagram below shows lifecycle of different types of mosquitoes. Use it to answer question **23** and **24**.



23. Name the type of life cycle shown with letter **Q**.
 ✓ **Complete life cycle**
24. State any **one** reason you would classify the type of mosquito shown by letter **K** under complete life cycle
 ✓ **The larva stage of K is totally different from the adult stage in terms of structure and function.**
25. Write **ACP** in full.
AIDS Control Programme
26. Write any **one** living thing in the environment that makes pancakes to rot
 ✓ **Fungi//bacteria.**
27. State any **one** way in which trees benefit crops in agroforestry.
 ✓ **Tress provide shade to crops//protection to crops from strong wind/heavy rainfall//leguminous trees provide nutrients to crops**
28. Give a reason why wounds and cuts should be protected from bacteria invasion
 ✓ **Bacteria makes wounds septic/Causes more infections**
29. State any **one** way in which poisoning children by chemicals can be avoided at home.
 ✓ **Keeping chemicals away from food// Keeping chemicals away from reach of children // Keeping chemicals away from drinking water/ Keeping chemicals in their original containers for easy identification// Keeping chemicals away from cooking utensils to prevent food contamination// Wearing gloves, masks and eye glasses when handling chemicals// Label all chemicals stored in different bottles// Obey to instructions on chemicals**
30. Identify the name given to the eggs produced by lice as insects.
 ✓ **Nits**
31. Besides fermenting tobacco and wine, give any **one** other substance produced through fermentation by zymase enzyme in yeast
 ✓ **Yoghurt/Beer/Cheese/Bioethanol/Vinegar/Bread/Biogas/Soy sauce/Vaccines/Antibiotics (penicillin)**
32. Mention any **one** characteristic of local breed of goats kept for milk production.
 ✓ **They have large well developed udders// Have a triangular shape// Have well developed teats// Produce high quantities of milk.**
33. Identify any **one** way of preventing teeth discoloration as a disorder of teeth.
 ✓ **Brushing the teeth regularly// Rinsing the mouth every after meals// Avoiding smoking// Quitting smoking// Avoiding and quitting alcoholism// Regular dental flossing of teeth.**
- The diagram below shows a certain animal belonging to a certain group of vertebrates in the community. Use it to answer question **34** and **35**.



34. Name the class of vertebrates to which the above animal belongs.
 ✓ **Amphibians**
35. Apart from living in water and on land, give any **one** other common characteristic of the animals in the class of vertebrates you have mentioned in **34** above.
 ✓ **They have webbed feet// Have external ears// Lay eggs covered with jelly// Cold blooded animals// Undergo external fertilization (except caecilians)**
36. State **one** reason why breast milk is always said to be ready for a baby to feed on at any time without warming or cooling.
 ✓ **It is always produced at its right temperature.**
37. Mention the term referring to the introduction of harmful substances in food, making it unsafe for eating
 ✓ **Food contamination**
38. Give any **one** characteristic of a good pigsty that prevents mother pigs from crushing their piglets as they lie down in the process of suckling.
 ✓ **Should have a farrowing pen/crate with guard rails.**
39. Mention the farm practice in sheep responsible for making mating easy.
 ✓ **Docking**
40. State any **one** method used in encouraging bees to enter an empty hive.
 ✓ **Using swarm catching nets//Using swarm catcher box//Using baits/smearing sugary substances inside the hives**

SECTION B: 60 MARKS

41. (a) Give the meaning of the term velocity ratio.
 ✓ **This is the ratio of effort distance to load distance.**
 (b) State the reason why Velocity ratio has no units.
 ✓ **It's a ratio of distance of forces**
 (c) Give **one** reason why you would choose a screw with twelve threads instead of one with ten threads when fastening wood.
 ✓ **A screw nail of 12 threads allows use of less effort than a screw nail of 10 threads.**
 (d) Besides screw nails, give one other example of screws used to fasten materials
 ✓ **Screw nuts//screw bolts//screw car jack**
 ✓ **bottle cover//spiral staircases**
42. (a) Give any **one** example of an arachnid in the environment.

✓ **Spiders//mites//ticks//scorpions**

(b) State any **two** common ways of identifying of arachnids as arthropods.

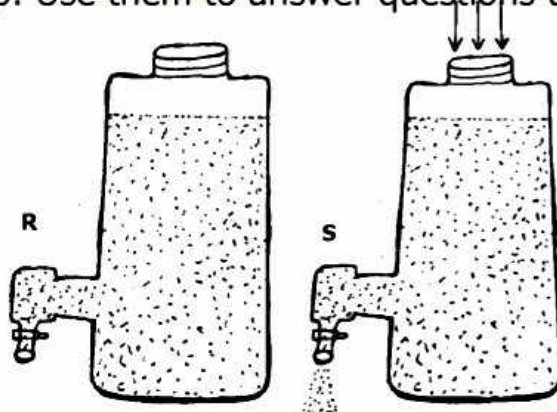
✓ **They have segmented bodies //They have exoskeleton**

✓ **They have jointed legs**

(c) Give any **one** way arachnids are different from crustaceans.

✓ **Arachnids breathe through lung books while crustaceans through gills.**

The diagrams below show two water tanks **R** with closed top and **S** with unclosed top. Use them to answer questions that follow correctly.



43. (a) State what the arrows above on water tank **S** represent.

✓ **Air pressure**

(b) Name the property of air represented in the diagram above.

✓ **Air exerts pressure**

(c) Give **one** reason why water tank **R** does not produce out water.

✓ **Tank R is closed and pressure is not exerted on it.**

(d) State any **one** way you can make water tank **R** to produce water out of its tap.

✓ **By opening the lid of tank R for air to exert pressure.**

44. (a) Give the meaning of the term biogas digester.

✓ **Biogas digester is a structure or system that breaks down slurry into biogas (methane) through anaerobic digestion.**

(b) Briefly describe the process of making a biogas digester.

(03 marks)

✓ **Dig/construct a pit and seal it tightly.**

✓ **Install an inlet pipe and an outlet pipe**

✓ **Place a gas collection cover to trap biogas.**

Note:

✓ **The pit holds the slurry.**

✓ **It is sealed to prevent oxygen entry**

✓ **The inlet pipe for feeding slurry**

✓ **The outlet pipe for removing digested slurry.**

45. (a) State **one** reason why wading birds have long flexible necks.

✓ **To reach food below water surface**

(b) Identify any **two** characteristics of wading birds that suit them to their mode of feeding.

- ✓ **They have long thin beaks for catching prey from water**
- ✓ **They have long flexible necks to reach food below water surface**
- ✓ **They have thin long legs and half webbed feet to walk in water without sinking.**

(c) Give the way in which wading birds makes good use of their long thin legs with half webbed feet widely spread.

- ✓ **Wading birds use them to walk in water without sinking**

46. Give the meaning of the following terms as used in crop growing.

(i) Perennial crops

- ✓ **Perennial crops are crops whose lifecycle is more than a year// Crops which take more than one year to mature// Crops that complete their lifecycle in a year.**

(ii) Annual crops

- ✓ **Annual crops are crops whose lifecycle is less than a year// Crops which grow and mature within a year.**

(b) State any **one** way in which the following practices affect crops in the gardens.

(i) Planting clean seeds

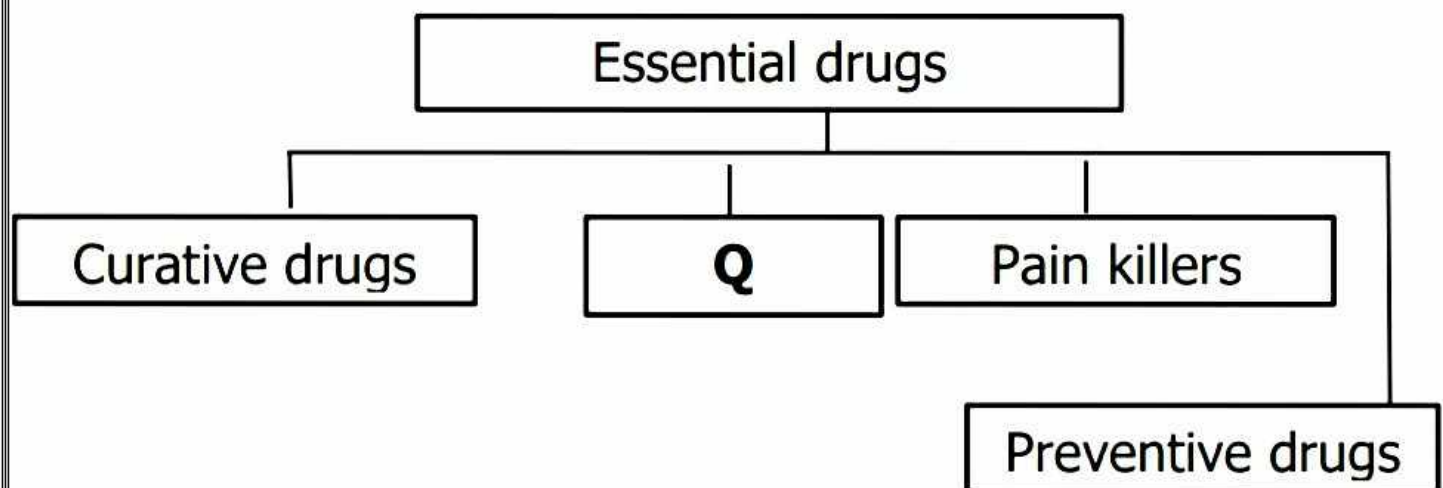
- ✓ **Reduces chances of gap filling// promotes seed viability// Controls crop pests and diseases**

(ii) Early planting of crops

- ✓ **Helps plants to outcompete weeds// Controls crop pests**

47. Give any **one** example of commonly abused drugs (drugs of abuse).

- ✓ **Khat, Mira, Jet fuel, Petrol, Alcohol, Tobacco, Marijuana,**



(b) Identify the group of essential drugs labeled with letter Q.

- ✓ **Contraceptives**

(c) Give any **one** example of each of the following groups of essential drugs.

(i) Curative drugs

Fansidar//coartem//Quinine//Chloroquine//Aloe vera//Neem leaf juice

(ii) Preventive drugs **all vaccines such as MMR/DPT/BCG/TT/ PDT - Hep B - Hib vaccine**

48. Give the meaning of the term fainting.

✓ **Brief loss of consciousness in humans.**

(b) Give any **two** conditions that may lead to fainting of humans.

✓ **Extreme hunger//extreme happiness//shocking news//**

(c) Mention the kind of first aid you can give to a fainted person.

✓ **Put the fainted person in an open space to help him get fresh air.**

✓ **Raise the legs above the head level to allow easy oxygen flow to the brain**

49. You are provided with the following materials; banana peelings, water, a perforated container. Briefly describe the steps taken in making local salt solution.

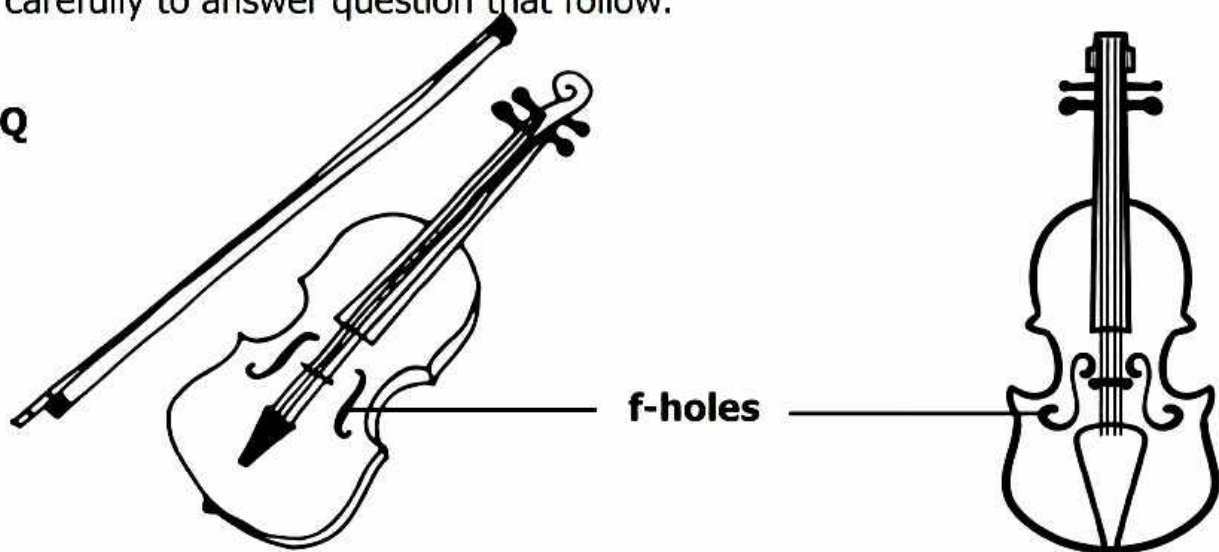
(04 marks)

✓ **Burn dry banana peelings to ash//Put ash in a perforated container /Taste and use it while cooking.**

✓ **Add water, allowing the salt solution to seep through//Collect the salt solution in another container**

Below is a diagram showing musical instruments (violins). Study them carefully to answer question that follow.

Q



50. Give the way in which the musical instruments above produce sound

✓ **By vibrations of the strings when bowed**

(b) State any **one** way in which the following parts are important in the production of sound using the violin above.

(i) Tuning pegs

✓ **For changing the tension of the strings**

- ✓ **For tightening or loosening the strings// For tightening the strings to increase the pitch of sound// For loosening the strings to lower the pitch of sound//**

(ii) Part marked **Q**.

- ✓ **For bowing the strings to cause vibrations.**

(c) Give **one** way of storing the sound produced by the violin above.

- ✓ **By using mechanical/Magnetic/Electromagnetic**

51. (a) State the purpose of painting the inside of a lens camera black.

- ✓ **To prevent internal reflection**

(b) Give any **one** reason why a lens camera is said to be an optical instrument.

- ✓ **A lens camera uses light to function//create images**

(c) State the use of the following parts on the lens camera.

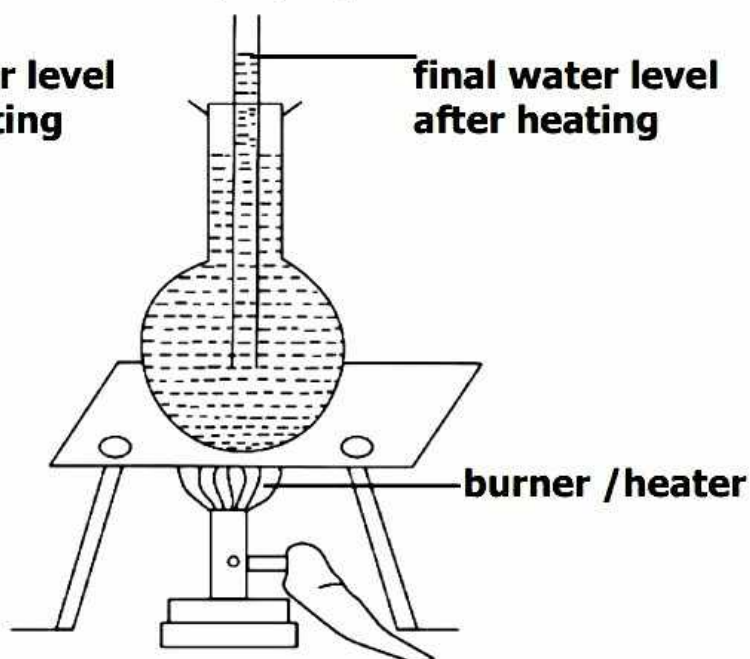
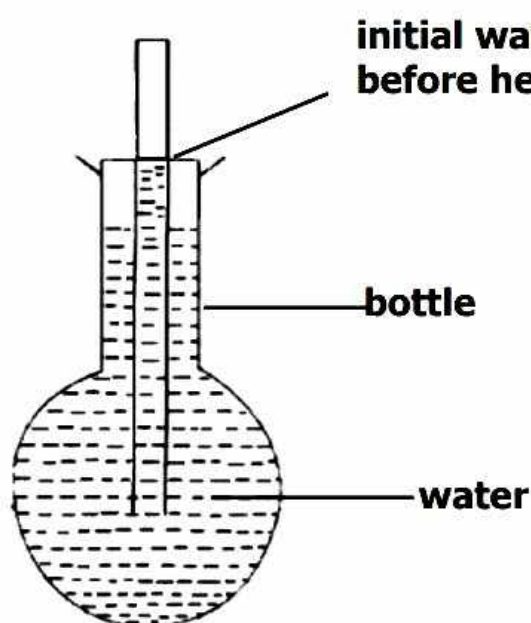
(i) Diaphragm

- ✓ **Controls the amount of light entering the lens camera (it does so by regulating the size of the aperture) it works like the iris of the human eye.**

(ii) Focusing ring

- ✓ **Carries out accommodation (adjusts the distance between the lens and the film) it works like Ciliary muscle of the human eye.**

The diagram shows experiment about a certain property of matter. Use it to answer question 52.



52. (a) Identify the state of matter that is being experimented above.

- ✓ **Liquid// Liquid state**

(b) State what the experiment above proves about the state of matter you have mentioned in 52(a) above.

- ✓ **Liquids expand when heated**

(c) Write **one** reason why the liquid level in the bottle rose after heating.

- ✓ **Due to expansion//Due to increase in volume**

(d) Besides the property shown in the diagram, give any **one** other property of the state of matter used in the experiment above.

✓ **Liquids take the shape of the container**

✓ **Liquids find their own level// Liquids have weak cohesion**

53. Give any **two** examples of pouched mammals in the environment.

✓ **Kangaroo//Wombat//Wallaby//Opossums (Using KWWOP)**

(b) Give any **two** characteristics of pouched mammals.

✓ **They have a pouch for carrying their joeys.**

✓ **They have a long powerful tail for balancing during movement**

✓ **They produce immature joeys which grow with in a pouch.**

54. (a) Give the meaning of the term teenager.

✓ **A teenager is a person between the age of 12 and 20 years OR a person having years of 13 to 19.**

(b) Write any **two** factors that may cause teenage pregnancies among adolescents.

✓ **Rape// Defilement// Peer influence Forced marriage// Early marriages// Too much desire for money**

(c) Write any **one** piece of advice you can give to a teenager to cease them from using drugs.

✓ **Teaching them dangers of using drugs**

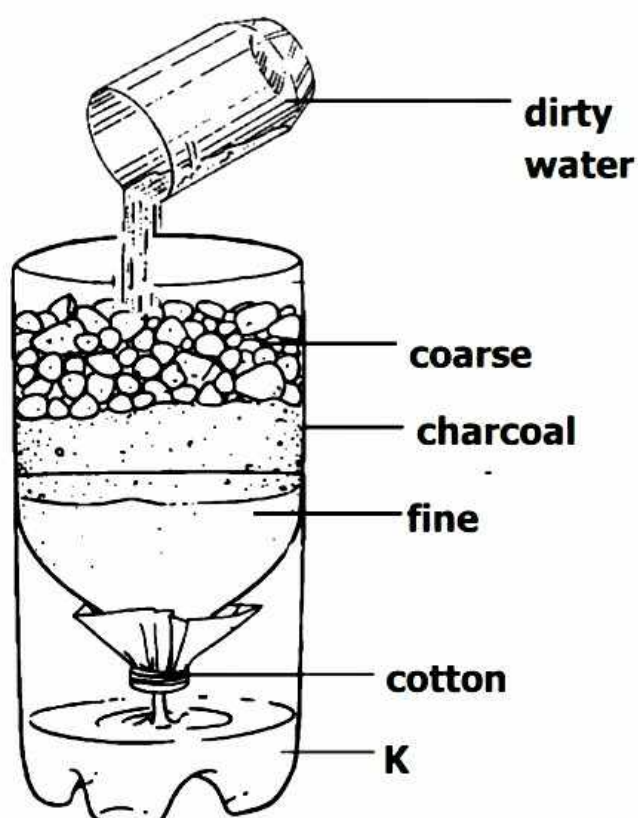
✓ **Advising them to avoid peer influence of people who use drugs**

✓ **To go for football/netball/volleyball// during free time**

✓ **Joining church choirs in free time**

✓ **Seeking guidance from elders on their personal problems than using drugs to solve them.**

The diagram below shows filtration method of obtaining clean water. Use it to answer question **55**.



(a) Name the substance labeled with letter K.

✓ **Filtrate**

(b) State any **one** use of the following substances as shown in the above method.

(i) Coarse sand and coarse stones

✓ **Both remove/filter/separate larger impurities from water**

(ii) Fine sand and cotton wool

✓ **Both remove/filter/separate tiny impurities from water**

(iii) Charcoal paste

✓ **Remove bad smell and tiny impurities.**

END