Questions and Answers form one biology

1. What is biology?

- Biology is the scientific study of living things attempts to understand the diversity of life on the earth.

2. Where Biology derived from?

- Biology is derived from two Greek word which is **BIO** means life and **LOGOS** means study.

3. What are two main parts of Biology?

- Zoology &Botany

4. What is Zoology?

- **Zoology:**is the study of animals.

5. What is Botany?

- **Botany :**Is the study of plants

6.What is Microbiology?

- Microbiology: is the study of microscopic size.

7. What is anatomy?

- **Anatomy:**is the studyof the internal structures of organism.

8. **What is Morphology?**

- **Morphology:** is the study of external structures of organisms.

9. What is the Physiology?

- Physiology: Physiology is defined as the study of functions of various .systems and different organs rather than with their shape and structure.

10. What is Biochemistry?

- **Biochemistry:** is the study of the chemical reactions occurring in organisms.

11.What is Embryology ?

- **Embryology:**is the study of the development of animals of animals from fertilizations to hatching or birth.

12. What is paleontology?

- **Paleontology:** is the study of plants and animals of the past as seen fossil record.

12. What is Ecology?

- **Ecology:** is the study of relationship of organisms to one other and to their general surrounding.

13. What is cytology?

- **Cytology:** is the study of the structure of cell.

14. What is molecular Biology?

- **MolecularBiology:** is the study of the chemicals from which cells are made.

15. What is Genetics?

- **Genetics:** is the study of the way in which the traits of an individual are transmitted from one generation to the next.

16. What is Taxonomy?

- **Taxonomy:**is the science of classifying organisms.

17. What is Evolutions?

- **Evolutions:** is the cumulative change in characteristics of pollutions of organisms in successive generations**.**

18. What is Pathology?

- **Pathology:**is the scientific study of diseases and abnormal structure and functions, symptoms and effect.

19. What are seven characteristics of living things?

- Movement
- Growth
- Need nutrition
- Respiration
- Excretion
- Sensitivity and response
- Reproduction
- Shortly the term (MRS GREN)

20. What is a cell?

- The cell is a smallest structure and functional unit an organisms.

21. What is a unicellular and multicellular?

- Unicellular: is a organisms have one cell.
- Multicellular: is a organisms have number of organisms.

22. State the cell theory?

- All living things are made of one or more cells.
- Cells are the basic units of structure and function in organism (the smallest unit that can perform life functions).
- All cells arise from pre-existing cells

23. What is a Spontaneous generation?

- The theory Spontaneous generation held that living creature could arise from nonliving matter like the fleas can arise from dust particles**.**

24.What is a magnification &resolution?

- This mean how much bigger an image appears compared with the original object
- Resolution: - ability to distinguish between two objects.

25. What are Hierarchy of Structural Organization?

- Chemical level
- Cellular
- Tissue
- Organ
- Organ system
- Organism

25. What is a Chemical level?

Chemical level

Atoms combine to make molecules

4 macromolecules in the body

- Carbohydrates
- Lipids
- Proteins
- Nucleic acids

26.What is cell ?

- The cell is a smallest structure and functional unit of an organisms .

27. What is a Tissue ?

Tissue :Collection of cells that work together to perform a specialized function

4 basic types of tissue in the human body:

- Epithelium
- Connective tissue
- Muscle tissue
- Nervous tissue

28.What is an Organ?

- **Organs** - different tissues working together to carry out a particular function.

29. **What is Organ system?**

- a group of organs that work together to do a job.

30. What is a organism?

- Biological Organisms: Living things that are capable of reacting to stimuli, reproduction, growth, and homeostasis.

31. Name some of the organs in your body?

- Stomach and kidney

32. List the Tissues that make up one of these Organs?

- Connective,Epithelial, Muscle and Nerve tissues.

33. What is the difference between an organ system and an organ?

- A tissue is made of cells of a single type, working together. An organ is composed of several different types of tissue working together to perform a function.

34.Why do you think cells are so specialized in complexanimals and plants?

- Because their cell to do certain task and develop

35. What is the Job the of the following system :-

A. Breathing system: Inhalation and exhalation
B. Circulatory system : transports substance to all parts of the body
C. Nervous system : carries messages around the body
D. Excretory system: gets rid of poisonous substance from the blood and controls water levels in the body
E. Digestive system : breaks down food into small molecules and absorbs them in to the blood

36. What is a classification?

- Classification is the process of placing and arranging organisms into groups according to their similarities and difference .

37.What is a Taxonomy ?

Is a branch of Biology which deals whit classification of living things .

38. State the three significance of classification?

- To identify living organisms and place them into their correct groups .

- To understand the evolutionary relationship between different organisms .
- It enables biologists to predict the characteristics of organisms.

39.Define the species?

- The species is the smallest classification group . Members of a species can interbreed together to produce fertile offspring.

40. What is a Respiration?

- Respiration is the process by which chemical energy in nutrients is converted into chemical energy which is usable by the cell.

41. List types of Respiration?

- There are three types of respiration which are internal respiration, external respiration and cellular respiration.

42. Write the chemical equation of aerobic respiration?

$C_6H_{12}O_6 + O_6 \longrightarrow CO_2 + H_2O + 2830KJ$

43. Why is classification Necessary?

- Because it can be facilitate to study and recognize easily.

44. What are types of cellular respiration?

- They are two types are aerobic need O_2 and anaerobic does not.

45. What is Externalrespiration?

- Is the exchange of gases between an animals or plants and the surrounding air

46. What is Internal respiration?

- Also called cellular respiration, is the process which involves exchange of gases in the cell where oxygen is used up and carbon dioxide is released along with water and energy.

47. Explain long term storage?

- Storage the body uses fat molecules, but these cannot broken down

48. Explain short term storage?

- ATP is short term energy store in the cells, which can release energy quickly when needed.

49. What is oxygen dept ?

- Anaerobic respiration occurs when there is no oxygen available and so produces an oxygen debt. This debt is equivalent to the total amount of oxygen required to oxidise the lactic acid formed from this process into carbon dioxide and water.

50. Demonstratesthe chemical equation in anaerobic respiration in animals?

- IS represent : $C_6H_{12}O_6 \longrightarrow C_3H_6O_3 + 150KG$

51. Explain the time occur anaerobic respiration in plants?

- Anaerobic respiration occur in plant during germinating seeds and roots living in water respire without oxygen.

52. Write the chemical Equation in anaerobic respiration in plants?

- Process $C_6H_{12}O_6 \longrightarrow C_2H_5OH + CO_2 + 210Kj.$

53. What is yeast?

- Yeast is a type of Fungus, that can respire an aerobically and an aerobically.

54. What is Fermentation?

Anaerobic respiration in yeast cells is called fermentation.

We use this reaction to make alcoholic drinks such as beer.

The alcohol in these drink is ethanol and that is produced by fermentation

CHAPTER TWO

Introduction to Green Plants

1. Tell two main portion of the flowering plant?

- There are two main part of the plant are shoot system and root system.

2. List four components of the flowering plant?

- They are Stem ,Leaves ,Root and flower

3. Tell two types of stem based on it's strength?

- Are woody stem and herbaceous stem.

4. What is a four main anatomy of root?

- The Root has four main regions are root cap , meristem tic , elongation and maturation.

5. What is bud ?

- Bud, Small lateral or terminal protuberance on the stem of a vascular plant that may develop into a flower, leaf, or shoot. Buds arise from meristem tissue.

6. What is a node?

- The region of the stem from which from which leaves and buds arise is called node.

7. List two function of stem?

- It supports and holds the leaves.
- It acts as a site for food storage.

8. List the types of roots ?

- There are two roots Tab root and Fibrous root.

9. Write two function of Root?

- Roots anchor the plant and Roots absorbs water and mineral from the soil.

10. How do plants take in water?

- Water enters plants through the roots. The tips of roots are covered in tiny hairs, water enters the roots by a process called Osmosis and then carry xylem other parts of the plants.

11.What are different between xylem and phloem?

- Xylem carry water while phloem carry

12.What is a osmosis ?

- Osmosis is the diffusion of water from a weak to a strong solution through a selectively permeable membrane .

13. What is a Transpiration ?

- Is the process by which plants lose water vapor by evaporation in to the atmosphere .

14. What factors affect the rate of transpiration?

- Factors affect are Wind , Humidity, Temperature and Time of day.

15. What are Stomata and Guard cells?

- Stomata is a tiny hole passes water vabor and found lower side of leave while Guard cells are two sausage shaped surrounding each stomata and control the size of the hole .

16. What is a Transpiration Stream?

- The movement of water in the xylem from roots to leaves is called transpiration stream.

17. What is a Transpiration Pull?

- Transpiration produces a tension or 'pull' on the water in the xylem vessels by the leaves. Water molecules are cohesive so water is pulled up through the plant.

18.What is photosynthesis?

- Photosynthesis: the process in which light energy absorbed by chlorophyll transformed into chemical.

19. What is a chlorophyll?

- Chlorophyll is the chemical molecule that capture of light energy.

20. What is a chloroplast?

- The word chloroplast comes from the Greek words*khloros*, meaning "green", and *plastes*, meaning "formed". Is the site produce food of the cell.

21. What is an Enzyme?

- Enzymes are Biological catalysts made of protein. They alter the rate of chemical reaction without themselves being chemically changed at end of the reaction.

22. What is a diffusion?

- Is the net movement of particles (atoms , ions or molecules) from a region of higher to a region of lower concentration ,that is downs a concentration gradient.(solutes).

23. Where does the oxygen comes from?

- For many years, scientists wondered where oxygen came from .after that proved oxygen came water.

24. Which of the following is correct color of produced leaf contains starch after processing?

A. Blue black
B. Yellow
C. white
D. Red

24. Describe a variegated leaf?

- A variegated leaf is a leaf which has both green and non-green parts. As the green parts contain chlorophyll they photosynthesize, but the non-green parts do not contain chlorophyll, so they cannot absorb sunlight.

25. Suggest why foil is only put around part of a leaf in the experiment to show that light is needed for photosynthesis to take place?

- Because to make dark place to destarched leaf before beginning experiment.

26.Why is it important to leave the leaf attached to plant, in the experiment to show carbon dioxide is needed for photosynthesis?

- Because the part inside the bottle or cover did not get carbon dioxide during experiment while outside get fresh carbon dioxide

27. What is a Tropisms?

- the term tropism refers to a plant's biological ability to move by itself in response to various forms of external stimuli depend on direction stimuli.

28. What is an auxins?

Is the plant hormone hormone related growth movement of the plant

27.How may types of tropisms and what they are ?

- There five types each of them will be two either positive or negative response.

1. Phototropism
2. Chemotropism
3. Hydrotropism
4. Geotropisms
5. Thigmotropism

28. What is a flower?

- Flowers are the reproductive structures of plants .they contain the reproductive organs which produce the male and female sex cell or gametes.

29. What are male and female gametes contains?

- Male gametes contains pollen grains while ovules.

30. What are four rings of modified leaves?

Are:

1. Sepal:(calyx) is a outer layer of flower protect during bud
2. Petal:(coralla) this colored part attractive of flower contain nectar
3. Female Carpel:contain stigma, style, ovary and ovule
4. Male stamen:contain anther and filament

31. What is a pollination?

- Pollination is a stage in the sexual reproduction of flowers. It is the transfer of pollen grains from an anther to stigma.

32. What are two stages of reproduction of flowers?

Are:

1. Pollination
2. Fertilization

33. What is a fertilization?

- Fertilization, as in animals involves the joining of the nuclei of the male and female games

34. Compare the insects pollinated flowers and wind pollinated flowers?

Insects pollination flowers	**Wind pollination flower**
Brightly colored large petals	Dull colored small petals
Nectar produced in nectary	No nectar
Anther lie deep inside the flowers	Anthers often seen supported outside the flower
Plants carry bisexual flowers	Plants are often unisexual with more number of male

35. What is a fertilization in plants?

Fertilization in plants takes place when:

- A pollen grain lands on a stigma sends out a pollen tube which grows down the style
- The tube reaches the ovary and pushes into the ovule through the micro Pyle
- The tip of the pollen tube grows towards the egg at the center of the ovary

36. Write the consist of seed?

- Seed consist of tiny embryo plants and tough protective coat or testa

37. What is a germination?

- This process of the growth of a seed into a plant is called germination.

38. What are conditions required for the growth of a seed?

Are

- The presence of water or Moisture
- The Suitable temperature or Warmth
- The presence of oxygen

Once these conditions are satisfied, the seed begins to grow

39. What are dispersal of seeds?

- Is a process of spreading or scattering of seeds a way from the parent plant to avoid overcrowded

40. What are types of dispersal in seeds?

There are four types and they are

- Dispersal by explosion
- Dispersal by animals
- Dispersal by water
- Dispersal by wind

40. What is a overcrowded of seed?

- Most of the plants produce hundreds of seeds at a time. If they all fall close to the parent plant and germinate, the growth would be too dense and complete new plants and parents occurs is called overcrowded

Chapter 3

Introduction to Agriculture

1. What is a Agriculture?

- Agriculture is the science and art of cultivation of the soil, raising crops and rearing livestock. it is also called farming.

2.Tell three importance of Agriculture?

Agriculture contributes development in the following:

- Supp
- lies food for the nation
- Generate capital for farmers
- Generate taxes for development

3.Listmost commonly practiced in a branches of Agriculture?

- Agriculture Engineering
- Crop farming or arable farming
- Livestock farming
- Agriculture economic

4. Define the Agriculture Engineering?

- This branches concerns , with planning ,construction and utilization of farm structure

5.What are types of Arable farming or crop farming?

There are two types of Arable farming

- Field crop
- Horticulture

5. List the types of the livestock farming?

There are four types and they

1. Pastoralism farming
2. Fish farming farming
3. Beekeeping farming
4. Poultry farming

6. Define the Agriculture economic?

- **T**his branch is concerned with management , planning and handling agricultural product.

7. List four basic farming system?

There are four basic farming system

- Extensive
- Intensive
- Large scale
- Small scale

8. Describe the Extensive farming?

- This system of farming is characterized with the expansiveness of landmass involved in the production as opposed to the intensity of capital application

9.. Describe the Intensive farming?

- In this system of farming focuses in the heavy way or intensive application of capital on a small piece of land for enhanced agricultural production by ablying cash and more labourETC.

10. Describe the Large scale farming?

- This type of farming is carried out in farms with more than 2ohectores of

11.Describe the Small scale farming?

- This practiced on small piece of land usually not exceeding 2ohectores.

12. Describe the Agroforestry farming?

- Agroforestry farming is the land uses system or farming method in which trees or shrubs

13. List methods of farming system?

Are:-

1. Mixed method farming
2. Shifting method farming
3. Nomadic method farming
4. Organic method farming
5. Agroforestry method farming

14. What is organic farming?

- Organic farming is a farming method that capitalize on the use of organic based manure, directly derived either from plants source or animals manure from from animals.

Chapter 4: Land preparation for Crop Production

1. Define the land preparation?

- Land preparations are the initial activities that are carried out on land to make it suitable for crop production such as ploughing, digging and harrowing

2. List three importance of land?

- It kills weeds
- Let manure to get in soil
- Allows plant roots to penetrate

3. List all operations in land preparation?

- Clearing land before cultivation
- Primary cultivation
- Secondary cultivation
- Sub soiling
- Minimum tillage

4. Define the water drainage?

- Water drainage means getting rid of excess water from the field land for the purpose of making land suitable for crop production and other uses in agriculture

5. List three important of water drainage?

- Land preparation in readiness to plant crops is not possible under flooded
- Most crops cannot grow under excess water of die

- Excess water in the soil carries away mineral nutrients such as fertilizers

6. List methods of drainage?

- Surface drainage
- Subsurface drainage
- Pimping water
- Planting appropriate tree
- Constructing raised beds

7. List the types that the farmers to do?

- Tending crops
- looking after animals
- Constructing building
- Repairing material

8. What is a pyrethrum?

- Pyrethrum, any of certain plant species of the aster family (Asteraceae) whose aromatic flower heads, when powdered, constitute the active ingredient in the insecticide called pyrethrum. The plants were formerly considered a separate genus, Pyrethrum, and the taxonomy remains contentious between the genera Tanacetum and Chrysanthemum.

Chapter: 5 Human Machine

1. State types of skeleton in living organisms?

- There are three types of skeleton are Endo skeleton, exoskeleton and hydro skeleton

2. What is a joint?

- Joint is a where meet two or more bones met

3. List five function of human skeletal system?

- Support
- Protection
- MuscleAttachment
- Mineral storage
- Blood formation

4. What is a ossification process?

- Is when the cartilage is replaced by hard deposits of Calcium phosphate bone

5. Where fat is a stored?

- Stored in a yellow bone marrow

6. Name the shape of the bones?

- Long , Short , Round , flat and irregular

7. What is a matrix?

- Components. The organic matrix makes up ~20% of the wet weight of bone and is comprised primarily of collagen.

8. What is a structure of a bone consist of?

- Bones consist of cells and matrix

9. WHY old people bones are easily break?

- Because the bones of old people have less living material and so they become brittle and break easily

10. What are components of human skeletal system?

- Human skeletal system composed of bones, Cartilage, tendon and Ligament

11. What are two main divisions in a human skeleton?

- Axial and appendicular skeleton system

12. How many bones consist of Axial skeleton system?

- 80bones

13. How many bones consist of appendicular skeleton system?

- 120bones

14. Tell the region of the bones in a vertebral column?

- Regions: cervical, thoracic, lumbar, sacrum, and coccyx

15. What is a shaft?

- Is a hollow inside the bone which makes them lighter and movement easier and shaft produces blood cells

16. What is a tendon?

- Thick stranded attaching muscle to bone

17. What is a Ligament?

- A flexible band attaching a bone to another bone

18. What is a cartilage?

- Flexible connective tissue with living cells arranges pairs/bundles

19. List the types of cartilage?

- There are three types of cartilage:

1. hyaline cartilage,
2. fibrocartilage,
3. elastic cartilage

20. What is a joint?

- Joints or articulations are sites where two or more bones meet

21. How classification of joints is a?

Joint are classified into two

- Structural and functional

22. List functional classification of joints?

- Synarthroses is immovable joints
- Amphiarthroses slightly movable joints
- Diarthroses freely movable joints

23.What is a fibrous tissue?

- fibrous tissue between the cells becomes hardened by a deposit of calcium salts such as calcium phosphate

24.What is Vertebral arch

- Vertebral arch: A circle of bone around the canal through which the spinal cord passes.

25.What is alaminae?

- Laminae — These are two small plates of bone that join in the back of the vertebra

26. How many bones consist of vertebral column?

- There are 33bones consist of vertebral column

27.What is a vertebral column?

- Backbone is a forms the central supporting structure of the skeleton

28. List types of skull?

Skull is divided into two type are

- 8 Cranial bones 2-parietal , 2-tenporal ,frontal, occipital , sphenoid and ethmoid
- 14 Facial bones unpaired bones mandible , vomer paired maxillae, lacrimals, nasals, zygomatrics, inferior nasal conchae and palatines

29. List the names of the upper limbs?

- Clavicle
- Scapula
- Humerus
- Ulna

- Radius
- 8carpals
- 5metacarbals
- 14phalanges

30. Name the Longest bones of upper limb?

- Humerus

31. Name the Longest bones of upper limb?

- Femur

32. List the names of the Lower limbs?

- Femur
- Patella
- Tibia
- Fibula
- 8Tarsal
- 5Metatarsal
- 14Phalanges

33. List types of joint movement?

- Are movable and immovable joint?

34. List 7types of synovial joints?

- Gliding joint
- Hinge joint

- Pivot joint
- Condyloid joint
- Saddle joint
- Ball and Socket joint
- Spine joint

35. What is a synovial joint?

- synovial joint is a type of joint which capable movement either flexion, extention, pronation,subination ,abduction, adduction

36. Write the characteristics of Ball and Socket Joint?

- A ball and socket joint allows movement in all directions
- A ball and socket joint allows rotation of a limb
- A ball and socket joints can be found at the shoulder of the hip

37. List three differences of between Hinge and ball and socket joint?

Ball and socket joint are:

- A ball and socket joint allows movement in all directions
- A ball and socket joint allows rotation of a limb
- A ball and socket joints can be found at the shoulder of the hip

Hinge joint are:

- Hinge joint are easily remembered by thinking about the hinge action on door opening and closing action.
- A hinge joint can only move in one direction the knee or the elbow joint

38.List three types of muscles tissue?

1. Smooth muscle
2. Cardiac muscle
3. Skeletal muscle

39. Compare Smooth, Cardiac and skeletal muscles?

Smooth muscles	Cardiac muscles	Skeletal muscles
Lacks striated	Striation	Striation
Uninucleated	Uninucleated	Multinucleated
Involuntary	Involuntary	Voluntary

40. What are Agonist (Biceps) Muscles?

- Agonist muscles are those that, during any movement, apply the force that allows the movement to occur.

41. What are Antagonist (triceps) Muscles?

- Antagonist muscles, on the other hand, are those that do not contract in any way during a movement. They are the muscles at rest while the movement is being performed

42.What is controls the muscles movement?

- The contraction muscles is controlled by nerve muscles

43. List three muscle movement?

- Blinking
- Chewing
- Breathing

44. List of uses or advantage of food?

I. For growth
II. As a source of energy
III. Food results cooperation of the body parts
IV. For replacement of worn and damaged tissue

45. What are types of balanced diet?

- Are Carbohydrates, proteins, Fats, Minerals, Vitamins, and Water

46. What is Balanced diet?

- A diet consisting of the proper quantities and proportion foods needed to maintain health or growth.

47.How many types of Carbohydrates?

- There are three types of Carbohydrates are Monosaccharide, Disaccharide and polysaccharide.

48. What is metabolism?

- Any chemical reaction carried up by organisms or total of anabolism and catabolic is called metabolisms.

49.What is a catabolic and anabolic metabolisms?

- Catabolic reactions that break down large, complex molecules to provide energy and smaller molecules.
- Anabolic reactions that use ATP energy to build larger molecules.

50. Write 4 function of lipids?

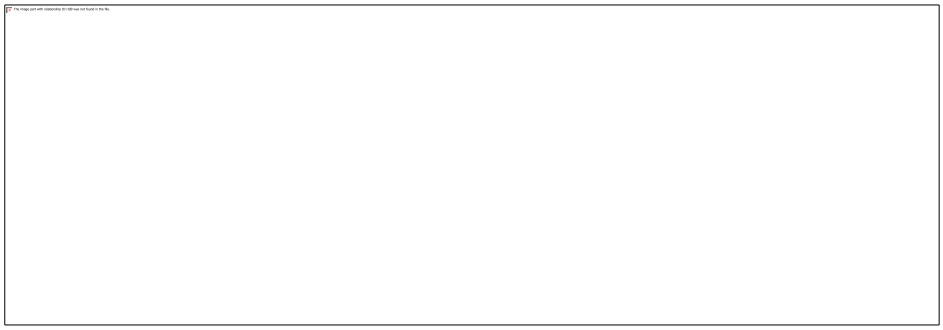
- Lipids are used in the cells of the body to form part of the cell membrane and other membrane system
- Insulation and regulate body temperature
- Fats can be stored in the body, so providing a means of long term storage of energy (stores energy)
- Cell messengers

50. List four types of Lipids?

4-types are

1. Triglycerides
2. Phospholipids
3. Steroids
4. Waxes

52. Tell two types of fatty acids in a structural formula and their names?



53. Name the linkage bond between Glycerol and 3fatty acids?

- Ester bond

54. What is fats?

- Fats are a class of lipids containing two kinds of monomers, fatty acids and glycerol. Glycerol is a three carbon biomolecule containing three hydroxyl groups, one bonded to each carbon atom. Dehydration synthesis creates an ester linkage between the carboxyl group of fatty acids and a hydroxyl group in glycerol.

55. What is proteins?

- Proteins are organic compounds with a high molecular weight consist of carbon, oxygen, hydrogen and nitrogen and may also contain sulfur

56. What is amino acid?

- Amino acids are the basic structure units of proteins that contain carboxyl group (COOH), an amino group (NH2) and a characteristic side chain (R).

57. Tell the types of amino acids?

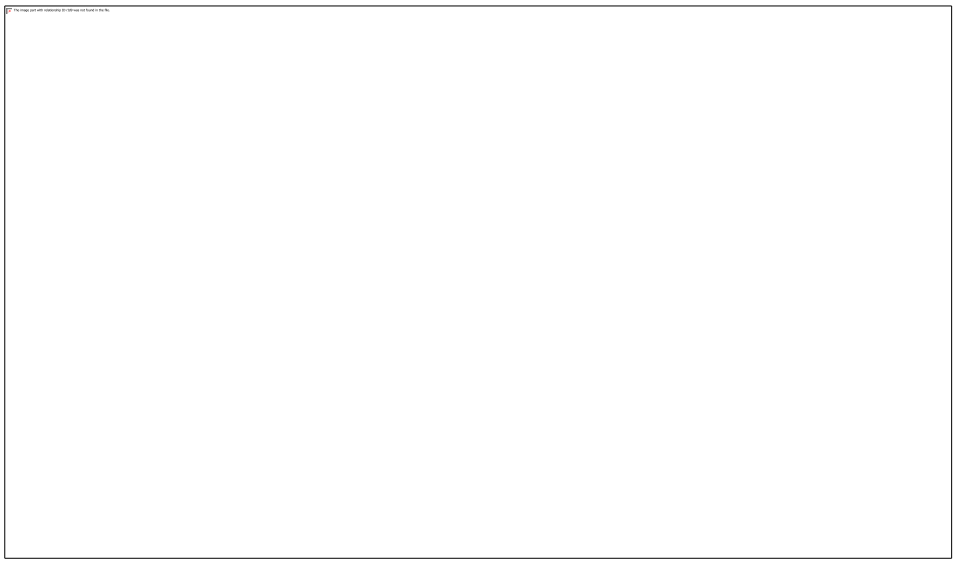
- There are two types of amino acids are essential amino acids
- And non-essential amino acids

60. Write four proteins structure hierchary?

Are

- Primary structure proteins
- Secondary structure of proteins
- Tertiary structure of proteins
- Quaternary structure of proteins

61. Write the general formula of any amino acid



62. What are biological molecules?

- The principal types of biological molecules or biomolecules are:

i. Carbohydrates
ii. lipids
iii. proteins
iv. nucleic acids

63. How many kcal in 2gram of fat?

1g → 9calories

2g x

2*9 = 18calories

63. What are types of vitamins?

There two main division of vitamins are

1. Water Soluble vitamins
2. Lipid(fat) soluble vitamins

64.Write two subcatory and f of Water Soluble vitamins?

1. Vitamin B
2. Vitamin C

65. Write the important function and disease cause difiency of Vitamin B and C?

- Vitamin B important function are make energy and synthesis RBC ,difeincy of Vitamin B12,6 cause their difeincy Anemia and also vitamin B 1,3 are cause mental confusion
- Vitamin c contribute to defense infection , produce collagen protein, tissue repair in skin bone and teeth and given strength it,s difeincy cause scurvy
- Scurvy signs are bleeding, spong gums ,prown spots and finally death

66. Write two subcatory of Fat Soluble vitamins?

1. Vitamin A

2. Vitamin D

67.What are Eight VitaminB Complex "

- **B1 - Thiamine**
- **B2 - Riboflavin**
- **B3 - Niacin**
- **B5 - Panthotenic acid**
- **B6 - Pyridoxine**
- **B7 – Biotin**
- **B9 - Folate (folic acid)**
- **B12 – (Cobalamin, cyanocobalamin)**

68.What is term xerophthalmia?

- The term xerophthalmia covers all the ocular manifestations of vitamin A deficiency. Xerophthalmia can progress to irreversible blindness if left untreated.

69. What are vitamins?

- Vitamins are organic chemicals compounds that are essential for health body, they are obtained from fresh fruits and vegetables, and some are synthesis in the body by the activity of micro organisms presesce gut i.e vitK

70. What are minerals?

In the context of nutrition, a minerals is chemical elements required as an essential nutrient by organisms to perform function necessary for life minerals originate in the

earth cannot be made by living organisms. Plants get minerals from soil. Element in human body are called trace element.

71. What are trace element that have specific biochemical function in the human body?

- Important minerals elements include calcium, phosphorus, Magnesium, Sodium, Potassium, Iron, Iodine, Chlorine and Fluorine

72. What are types of trace minerals?

- Major minerals(macro minerals)
- Minor minerals(microminerals)

73. Undigested part of the diet is called?

- Fibre or roughage

74.What importance of dietary fiber?

- Promote bowel health, protects against bad cholesterol and diabetes.

75. Define digestion?

- Digestion is the process by which large molecules and complex and insoluble organic food molecules are broken down to small soluble molecules
- Digestion is the chemical and mechanical breakdown of food drink into smaller, units for absorbtion

76.Define excretion?

- Is the process by which body gets ride the waste substances produced by it,s cells.

77. List the five stages of food processing?

ARE:

- Ingestion Digestion Absorption Assimilation Egestion or Excretion

78. Write two types of digestion?

Are

- Mechanical digestion
- Enzymatic digestion or (chemical)

79. What is Mechanical digestion?

- The physical break down of food into smaller units or
- Which achieved by the cutting and grinding action of teeth. This Breaks the food into small particles that can be swallowed

80.What is enzymatic (chemical) digestion?

- The breakdown of food by enzymes in the body
- Which is achieved by the digestive juices which come from the glands that are located in the alimentary canal

81. What are digestive system or GIT formed?

GIT tract is formed by two types of organs;

- Primary digestive organs (alimentary canal, or digestive tract or gastrointestinal tract)
- Accessory digestive organs (helping organs)

82. List alimentary canal (Primary digestive organs)?

Primary digestive organs are organs where actual digestion takes place.

- Mouth
- Pharynx
- Esophagus
- Stomach
- Small and
- Large intestine

83. List accessory digestive organs?

- Associate digestive organs;

Helping organs.

- Teeth
- Tongue
- Salivary glands
- Pancreas
- Liver and
- Gallbladder

84. Write function of Hydrochloric acid?

Secreted by parietal cells

- Activates pepsinogen
- Bacteriolytic action

85.List four function of Gastro Intestinal Tract(GIT)?

- Ingestion of food substances.
- Secretion of enzymes and other substances for digestion.
- Absorption of digestive products.
- Elimination of unwanted substances from the body.

86. What is mastication or chewing?

- Refers to the process by which the food placed in the mouth in cut and grounded into smaller pieces

87. List four muscles involved mastication?

- Are Temporalis, masseter, medial pterygoid and lateral pterygoid and buccinators mucles

88. List three different types of teeth?

- Incisors
- Canines
- Premolars and molars

89. What is Deglutition swallowing and it's phases?

- The passage of food from oral cavity into the stomach

It compares three phases

- Oral phase (voluntary)
- Pharyngeal phase (reflex or involuntary)
- Esophageal phase (reflex or involuntary)

90. What is peristalsis?

- When bolus (soft food) enters the esophagus the circular muscles behind it contract and the longitudinal muscles relax at same time the circular muscles in fronts the bolus relax and longitudinal muscles contract these actions push the bolus down the esophagus the stomach this alternate contraction and relaxation of the muscles produces a wave like movements called peristalsis

91. Write some common terminology related GIT?

ARE

- Mastication,deglutition, defecation, emulsification, peristalsis andchoking

92. Write the three types of salivary glands?

- Are parotid, Sublingual and Submandibular glands

93. Write structure of tongue?

- Are root ,body and tip

94. Write different parts of test detector in a human tongue?

- Are bitter, Sour, Salty and Sweat

95. Write different parts of small intestine?

- Are duodenum, jejunum and ileum

96. What is PH?

- PH is stand for Power of hydrogen, and is scale line start s 0 to 14.
- A measure of strength of the acid or base character of a substances

97. Write of four parts of stomach?

- Are cardi, fundus, body and sphincter

98. What is bile?

- Bile is a green, watery fluid made in the liver, stored in the gall bladder and delivered to the duodenum by duct the bile duct

99.Describe why food undergoes a process of digestion?

- Because by which large molecules and complex and insoluble organic food molecules are broken down to smalls soluble molecules. Large molecules are usually not soluble in water, while the smaller ones are. The small molecules can pass through the epithelium of the alimentary canal , through the walls of the blood vessels and into the blood. Some food can be absorbed with out digestion

100. What is Egestion(defecation)?

- The removal of undigested matter from the body.

101. What us Emulsification?

- The breakdown of large fat molecules into small ones

102. What is Excretion?

- The process by which metabolic waste products and toxic materials are removed from a body of an organisms E.G. sweat CO_2 and stool

103. What are Excretory Organs?

- There Are four organs are Liver, Kidney, Skin and Lungs

104. Function of liver?

- Fundamental functions of the liver- store energy in the form glycogen, to regulate blood glucose concentration by glycogenesis.
- Glucose is transformed from glycogen, when
- blood glucose level falls by gluconegenesis.
- Another crucial function of liver is the production of bile w/c contains bile salts.
- Liver produces thrombopoietin that promotes production of thrombocytes.
- Hemolytic function- old RBCs after lifespan of 120 days are destroyed.
-

105. Function of Skin?

- Protection function
- Storage function
- Regulation of body temperature

106. What are Lungs?

- Lungs are sac like organs located in the chest Cavity

107. Function of Lungs

- Lungs helps us to breathe, it's a main organ respiratory system
- Defense of dust and microbes
- Maintenance of water balance

108. Function of Kidney?

- Filtration, Reabsorption an Excretion
- Hemopoietic function:
- Filter out waste substance
- Regulate the amount of water and salt in the body
- Reabsorb substances such as sugar, that are needed by the body

109. What are components renal system (excretory)

Renal system include;

- Pair of kidneys
- Pair of ureters
- Urinary bladder

- Urethra

110. What is nephron?

- Nephron is the structural and functional unit of the kidney

111. What is breathing?

- Breathing is process by which oxygen in air is taking into the body (inhale) and taking out Carbon dioxide and water from the body(exhale)

112. What are two main task in a respiratory system?

- Exchanging air between the body and the outside environment known as *external respiration*
- Bringing oxygen to the cells and removing carbon dioxide from them referred to as *internal respiration*

113. What is diaphragm?

- Is the muscle separating the chest cavity from the abdomen

114. What are two main parts of respiratory system?

There are two main parts are

1.Upper respiratory system

- Nose or mouth Nasal cavity
- Pharynx
- Larynx

2. Lower respiratory system

- Trachea
- Bronchi
- Bronchioles
- Lung
- Alveoli(air sac)

115Describe the process of breathing in and breathing out?



116. Explain how breathing in (Inhale) occur?

- The muscles between the ribs contract lifting the rib cage up and out expanding the chest. At the same time muscles contract to flatten the diagram .this makes the space inside the ribcage bigger and reduces the air pressure in the lungs. Air moves into the lungs from outside because there the air pressure is higher

117. Explain how breathing outside (exhale) occur?

The rib and diaphragm muscles relax. This lowers chest and raises the diaphragm. The space in the rib cage gets smaller so the air pressure increase. This forces air out of the lung

118. What is saturated Air

- Saturated air that contains the maximum amount of water vapour that is possible at the given temperature and pressure, i.e. air in which the relative humidity is 100%

119. What is gaseous exchange or ventilation?

- Gaseous exchange refers to the exchange of oxygen and carbon dioxide which takes place between the air and the blood vessels in the lungs**.**

120. Write the Equations showing the transport and release of oxygen by Haemoglobin?

Two equations are

- $Hb + O_2 \longrightarrow HbO_2$
- $HbO_2 \longrightarrow H_2Hb + O_2$

121.Write Difference between ATP and Glucose?

Glucose	**ATP**
Requires many enzymes	Requires one enzyme
Large	Small
Production in a process Photosynthesis	Production in a process tissue respiration

122. What is oxidation?

- Adding oxygen to the compound and loses in a Electron

123. Write types of respiration and their differences?

- There are two types of respiration are aerobic respiration and an aerobic respiration
- Aerobic takes O_2While an aerobic lack of oxygen

124. List the four types of respiration?

- Glycolysis
- Acetyl CoA formation
- Krebs cycle
- Electron transports Chain

125. How many types of Human circulatory system?

- There are two types of systems are Cardiovascular system and lymphatic system

126. List Human 11 systems?

There are 11 systems in Human body?

Are

1. Integumentary system
2. Skeletal system
3. Muscular system
4. Nervous system
5. Endocrine system
6. Circulatory has subdivided has

- Cardiovascular system
- Lymphatic system

7. Respiratory system
8. Digestive system

9. Urinary system
10. Reproductive system
11. Immune system

127. List subdivided in a cardiovascular system?

- The human cardiovascular system has three essential components which are blood, heart and bloodvessels

128. List three function of circulatory system?

- Transport of oxygen from the lungs to the tissue
- Transport of Carbon dioxide from tissues to the lungs
- Transport of digested food from the intestine to the tissues

129. What is blood?

- Blood is essential to life. Blood circulates through our body and delivers essential substances like oxygen and nutrients to the body's cells. It also transports metabolic waste products away from those same cells. There is no substitute for blood. It cannot be made or manufactured. Generous blood donors are the only source of blood for patients in need of a blood transfusion

130. Write two types of blood?

- Blood consist of plasma55% and cells45%

131. Write types of cells and their names in a medical?

- Study of formed elements of blood.
  - Erythrocytes (red blood cells)(RBC)

- Leukocytes (White blood cells)(WBC)
- Thrombocytes.(platelets)(PLT)

132.Write plasma proteins?

- albumin
- globulins
- fibrinogen

133. Write the types of LeukocytesWBC?

Leuk*ocytes* are usually divided into:

- Granulocytes, which have specific granules, and
- Agranulocytes, which lack specific granules

134. List types of WBC?

- Granulocytes/ Polymorphonuclear leukocytes are divided into:
  - Neutrophils
  - Eosinophils
  - Basophils
- Agranulocytes/mononuclear leukocytes are divided into:
  - Lymphocytes and
  - Monocytes.

135. Write the three characteristics of ERYHOCYTES?

- Tiny, biconcave disk like cells (flattened disk with depressed center)

- The center appears brighter in colour
- Red blood cells lives for about 4months (120days)

136. What is the main function of erythrocyte?

- The primary function of RBC is Oxygen carry

137. What is phagocytosis?

- The process of engulfing and ingesting foreign particles, such as bacteria by phagocytes such as the white blood cells

138. List of stages of phagocytosis?

- Adherence – binding of organism to the surface of phagocytic cell.
- Engulfment:- is the ingestion of m/os and formation of phagosomes.
- Digestion – after the foreign particle or m/os is ingested, cytoplasm lysosome fuse with phagosome The enzymes of *lysosome* then contribute to microbial killing and lysis**.**

139. List Four Characteristics of thrombocyte?

- Platelets are tiny pieces of cells broken off larger cells in the bone marrow
- They are round oval and irregular shaped, colorless bodies that are present in blood
- Their life span is 7 to 8 days
- They destroyed in spleen and liver

140. What is the major function of thrombocyte?

- The primary function is preventing blood loss from hemorrhage by forming a platelet plug.

141. List types of circuit?

- There are two types of blood circulation which are
- Pulmonary circulation and systematic circulation

142. Write three types of blood vessels

There are 3 main kinds of blood vessels –arteries veins and capillaries

- Arteries carry blood away from the heart.
- Veins carry blood towards the heart
- Capillaries connect the arteries and veins

143.Write some functions of blood?

There are many function of blood but we can summarize these four written in the below

- Transport
- Protection
- Communication
- Temperature regulation

144. What is diffusion?

- Movement of solutes from an area of higher concentration to an area of lower concentration in a solution.

145. What is the difference between Arteries, Veins and Capillary according structure?

These three blood vessels are different the structure and functional

Arteries	**Veins**	**Cappillary**
Tunica intima: This contain endothelial cells	**Tunica intima:**	**Singe cells**

and basement membrane		
Tunica media: this contain smooth muscle	**Tunica media**	
Tunica Externa: (adventia) this contain nerve ends	**Tunica Externa:**	

146. Write human heart chambers?

- The human heart has four chambers which are the right atrium(auricles) and the left atrium(two atria)
- And right ventricle and left ventricle (two ventricles)

147.. What is the difference between Arteries, Veins and Capillary according structure and functional?

These three blood vessels are different the structure and functional

	Arteries	**Capillaries**	**Veins**
Function	Carry blood away from the heart ta high blood pressure	Supply all cells with their requirement. Take away waste products	Return blood to the heart at low pressure
Structure	Thick, strong	Very thin, only one cells thick	Thin

	Contain muscles, elastic fibers and fibrous tissue		Mainly fibrous tissue Contain far less muscles and elastic tissue than arteries
Lumen	Narrow Varies with heart beat (increase as a pulse of blood passes through)	Very narrow Just wide enough for a red blood cells to pass through	Wide
Valves	Negative means no valves	Negative means no valves	Positive Prevent backflow
How structure fits function	Strength and elasticity needed to with stand the burstingandmaintain pressure wave Helps to maintain High blood pressure, preventing blood flowing backwards	No need for strong walls, as most of the bloodpressure has been lost Thin walls and narrow lumen bring blood into close contact with body tissue. White blood cells can between cells of the walls	No need for strong walls, as most of The bloodpressure has been lost Wide lumen offers less resistance to blood flow

148. List types of Heart valves?

- There are two pair of valves in a heart which are:
- Atrioventricular valves which contain tricuspid and mitral or bicuspid valves
- Tricuspid valve which is between right atrium and right ventricle
- Mitral or bicuspid valve which is between left atrium and left ventricle
- Semilunar Valves which contain pulmonary and Aortic valves
- Pulmonary valve which is between right ventricles and pulmonary artery
- Aortic valve which is between left ventricle and aorta

149. Name the divide heart right and left parts?

- Is divided into right and left sides by the *septum*

150. What is the function of the heart?

- The major function of the heart pumps blood body via circulatory system

151. Write the layers of the heart

Inside the pericardium, the heart has three layers

- Epicardium (outermost layer)
- Myocardium (middle layer of muscular tissue)
- Endocardium (inner layer)

152. What is puberty?

- Puberty is the age at or period during which the body or girls matures and becomes capable of reproducing

153. What is reproduction?

Reproduction is the process by which organisms give rise to new individual of the same kind

154. What is difference between menstrual cycle and ovulation cycle?

- Menstrual is the monthly blood los
- depend on four main hormones and through two phases which length time each 14days
- focucle stimulating hormone(FSH)
- Luteinizing hormone (LH)
- Estrogen
- Progesterone

Two phases are

- Folucular phases
- Luteul phase

Ovulation is the releasing unfertilized eggs

155. List types of reproduction and explain each?

There are two types of reproduction which are:

Asexual reproduction: it is a form of reproduction involving one parent.

Sexual reproduction: it is a formof reproduction which involves two parents

156. What is fertilization?

- Is the union of the egg and sperm to produce zygote

157. List organs of female and male reproductive organs?

Female consist of

- Two ovaries
- Oviduct or fallopian tube

- Uterus or womb
- Vagina or birth canal

Male reproductive organs consist of

- Two testes
- Sperm duct
- Sperm sex glands
- Penis

158. What is cervix?

- The cervix is a ring of muscle closing the lower end of the uterus where it joints the vagina

159. What is Testosterone?

- Testosterone is the main male hormone

160. What is Epididymis

- Epididymis is located at the top of each testes which are a group of ducts that store sperm

161. What is the seminal vesicles

- The seminal vesicles (also known as the vesicular or seminal glands) are a pair of glands found in the male pelvis, which function to produce many of the constituent ingredients of semen. They ultimately provide around 70% of the total volume of semen.

162. Write pass way of sperm?



Chapter 6

The living things and their environments

1. What is environment?

- **E**nvironment is a scientific word comes from Frenchenviron which means encircle. In simple words we can say that everything which surrounds us is called environments or we say Environment can be defined as all surrounds conditions that have direct impact on all human beings and animals

2.List types of environments?

There are sixes types of environments according functionality surrounds which are

1) School Environments
2) Home Environments
3) Business Environments

4) Industrial Environments
5) Agriculture Environments
6) Grazing Environments

3. List components of Environments?

- There are two components of environments which Biotic (living things) and abiotic (nonliving's things)

4. What is the biosphere?

- Biosphere is that part of earth where life can exist or we say biosphere is the combination atmosphere, hydrosphere and lithosphere

5. Write the types of atmosphere?

- There are five in layers in atmosphere which Troposphere, stratosphere, mesosphere, thermosphere and Exosphere

6. What is Habitat?

- Habitat is a particular place where an organism normally lives and grows and Habitat is classified into two which are territorial (land) and Aquatic (water)

7.What is population?

- Population is a group of individuals in a particular area that belongs to same species

8. What is community?

- Community is the all the population of living organisms (biotic) in one area

9. What is Ecosystem?

- It is composed of living and non-living components whose interaction results in a stable system

10. Where does our food come from?

- All our food comes from plants and animals

11. Describe how the environments you live is. Give example of the living things and non-living things?

- You know our environments is surrounding us and provides such things air to breathe, water to drink, and a suitable temperature in which to live. These are the physical (abiotic) or nonliving parts of the environment. You're live also affected by other living things (biotic). These could be the people in your class, your family, your pets and even the bacteria in the air

12.What is food chain?

- A food chain is a chart showing the flow of energy (food) from one organism to the next beginning with a producers

13. What is food web?

- Food web is anetwork of interconnected food chains showing the energy flow through part of ecosystem
- Food web is a natural interconnection of different food chains

14. Write two main parts of food chain in ecosystem?

- There are two main division in a food chain in ecosystem which are producers (Green plants) and Consumers (animals)

15. Write subdivision in a Consumers?

- The word consumers means animals eat ready food so consumers either
- Primary consumers (herbivores),
- Secondary consumers (carnivores)
- Tertiary consumers
- Animals eat both meat and plants are called omnivores
- Decomposers bacteria and fungi are called detrivores

16. What is Producer?

- Any living things that makes its own food is called producer

17. What is Consumer?

- Animals on the other hand cannot make their own food .they must get their food by eating plants or by eating other animals, so called are called consumers

18. What is herbivores?

- Animals that eat plants are called herbivores

19. What iscarnivores?

- Animals that eat other animals are called carnivores

20. What is Omnivores?

- Animals that eat both meat and plants are called omnivores

21. What is detrivores?

- This is the Decomposers, Decomposers either bacteria or fungi which break down died living things either plant or animals

22. Explain why all living things depend on sunlight for food?

- Because All plants use sunlight to make food (sugars) in a process called photosynthesis then this food major comes from plants
- The sun is the source of all energy, heat and light. The amount of sunlight in an area determines what living thing can survive there.

23. Construct A) a long and B) a short food chain ending you?

A)Grass → Locust → Lizard → Snake → Eagle

Locust → Thrush → sparrow hawk

B) Grass → Goat → Human

24. **What is difference between predator and prey?**

- Characteristics of what a predator is - something that hunts its prey. In the wild, predators are those animals that hunt down, kill, and eat other animals. The food a predator hunts is called its prey
- Prey is the animals that eat or kill the predator or prey is the food of predator

25. What is the difference between Scavengers and Decomposers?

- Scavengers is animals that feed on dead animals or plant remains. For example vultures and hyenas so Scavengers are large animals
- Decomposers don't eat animals and plants. They digest them by releasing enzymes on to the remains to break them down into smaller substance

26. What is Ecology

- Ecology is the branch of biology that studies how organisms interact with their environment and other organisms. Every organism experiences complex relationships with other organisms of its species, and organisms of different species. These complex interactions lead to different selective pressures on organisms. The pressures together lead to natural selection, which causes populations of species to evolve. Ecology is the study of these forces, what produces them, and the complex relationships between organisms and each Wother, and organisms and their non-living environment

Or

- Ecology is the study of how living things interact with each other and their environment. This includes living things (biotic factors) and non-living things (abiotic factors).

27. What is Ecological pyramid Number?

- A pyramid of numbers is a diagrammatic representation of numbers of different organisms at each trophic level.
- Usually producers more than Consumers

28. What is Ecological pyramid biomass?

- Biomass is a word used to describe the mass of living material in an ecosystem

29. What is trophic level in biomass?

- Remember that trophic levels tell us an organism position food chain

30. In the course of the month a cow consumes 300KGof grass of biomass and gains 15KG of the body mass. Calculate the efficiency of biomass transfer

- Efficiency $\frac{Gain\ in\ biomass}{Toral\ Biomass\ intake}$
- Efficiency = $\frac{15KG}{300KG}$ = 0.05
- In percentage Efficiency = $\frac{15KG}{300KG}$ *100
- 0.05*100 = 5%biomass transfer energy

31. What is the difference between Heterotrophs and autotrophs or self feeders or primary producers?

- **autotrophs**An organism that is able to form nutritional organic substances from simple inorganic substances such as carbon dioxide.
- **Heterotrophs** cannot produce organic compounds from inorganic sources and therefore rely on consuming other organisms in the food chain

	Autotroph	Heterotroph
Produce own food	Yes	No
Food chain level	Primary	Secondary and tertiary
Types	Photoautotroph,&Chemoautotroph	Photoheterotroph,&Chemoheterotroph
Exmaples	plants, algae, and some bacteria	Herbivores, omnivores, and

		carnivores

32. What would happen to the organisms if there is no sun in this world

- Without the Sun's rays, all photosynthesis on Earth would stop. All plants would die and, eventually, all animals that rely on plants for food — including humans — would die

33. What is the interdependence?

- All of the different species in a community depend on each other are called interdependence

34. Where competition takes place?

- Competition takes place between same species and different species always when required supply shorter occur

35. List two types of Community interaction?

- There are two types of community interaction are competition and symbiosis

36. List two types of competition?

- There are two types of competition which are intraspecific and interspecific

37. What is intraspecific competition?

- Intraspecific completion occurs between members of the same species

38. What is interspecific competition?

- The competition occurs between different species

39. List three types of symbiosis?

- There are three types of symbiosis which are mutualism, Commensalism and parasitism

40. Why do animals complete for?

- Because Food and water are vital to animals for survival. When these resources get shorter, competition sets in

41. What is Environment pollution?

- Environment pollution is the introduction of life injuring substances to the surrounding through human activities

42. What is pollution?

- Pollution is the contamination of the environment with poisonous or harmful substance

Or

- Pollution any things added to the environment that harmful to the environment that harmful to the living things

Or

- Pollution the addition of substances to the environment that damage it , making it unfit for life

43. List three types of pollution?

- There are three types of pollution which are Air pollution, water pollution and Soil (land) Pollution

44. What is the Air pollution?

- It occurs when gases, smokes dust or odor get into the air and makes it **dirty**

45. What are factors caused in air pollution?

- There are many factors which are cause Air pollution such as volcano eruption, Dust storms and Wild fires

46. What are effect of Air pollution?

- The effect of Air pollution such as diseases such as respiratory disorder, global warming and Acid rain, the Acid rain kills soil and water living organisms and cause corrodes railways, bridges and buildings and destroys plants
- Low production of vitamin D
- Lung cancer
- Heart attack
- Headache
- Eye irritation

47. What are steps to be Control Air pollution?

- We should use public transport more
- For short distance use a bicycle or by go walking
- Switch off the appliance, when not in use
- Plant trees as much as possible

48. What are factors caused water pollution?

- Water pollution has many types which classified into two natural factors and Human factor caused pollution

These are Human factor caused pollution:

- Pollution caused by crude oil which spill into the water
- Pollution caused sewages
- Pollution caused by dumbing wastes into the water sources
- Pollution caused by nuclear factories

These are Natural factor caused pollution

- Volcanoes
- Aquatic animals waste
- Silt from floods

49. What are effect of water pollution?

- Death of aquatic animals
- Disruption of food chain
- Diseases such as in many deaths from infectious diseases such as Cholera, dysentery and typhoid all water borne diseases

50. How to prevent and control water pollution?

- Always look for the correct waste bin for throwing waste
- Save water, close the tab when not in used
- Do not throw waste chemicals, oils and medicine in the sink drain
- Do not overuse pesticides and fertilizers
- Try planting more and more trees

51. What is Soil (land) Pollution?

- Soil (land) Pollution is when there are changes in soil by adding pollutants
- Soil pollution can have dangerous effects on all living organism

52. List the causes of soil pollution?

- Garbage throwing
- Thrash from factories
- Overuse of pesticide &fertilizers

53. What are effect of soil pollution?

- Deformities
- Cancer
- Skin problems

54. List some steps reduced soil pollution?

- Recycles and reuse
- Produce less trash

- Dispose trash properly

55. Classify the following animals as either Carnivores or Herbivores:

- Cow, Rabbit, Dog, Shark, Sheep, Deer, Lion, Seal, Grass Snake and Horse
- **Carnivores**Dog, Shark, Lion, Grass Snake
- **Herbivores**Cow, Rabbit, Deer and Horse

Chapter: 7

1. What is the Health in W.H.O?

- Health may be defined as a state of complete bodily, mental and social wellbeing
- "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease **(this definition of W.H.O)**
- State of harmony with nature and the environment
- Absence of disease (medical definition)
- Complete state of well-being
- Functional adequacy

2. What is the Disease (or illness)?

- Disease or illness is a disorder or malfunctioning of the mind or body

3. What is the Basic Concepts between these terms Disease, Illness and Sickness?

- Disease: are specific kinds of biological reactions to some kind of injury or change affecting the internal environment of the body. Or Disorders or functional of structure
- Illness: is a phenomenon in which individuals perceive themselves as not feeling well and therefore may tend to modify their normal behavior.
- Sickness: the social organization and performance of illness/disease, i.e. the "sick-role"
- Disease, Illness and Sickness
- Disease, illness and sickness are loosely interchangeable terms but are better as wholly synonymous.
- Disease. It is physiological or psychological dysfunction.
- Illness is the subjective state of a person who feels aware ()of not being well and Sickness is a state of social dysfunction; I
  .e. a role that an individual assumes when ill.

4. What are Germs?

- Germs are tiny living things that cause diseases

5. List common of micro-organisms caused disease?

- Are Bacteria, Virus, Fungi (mycology), protozoa (parasitology is divided into protozoology and Helminthes)

6. What is infectious diseases?

- Diseases that spread from one person to another person are called Infectious or communicable diseases

7. Identify the different types of microbes that cause disease?

Bacteria

- **Bacteria**is the monera kingdom,which are prokaryotes organisms

- Bacteria are unicellur prokarytes organisms and only visible under powerful microscope
- Bacteria is either harmful or pathogenic and harmless or beneficial
- Bacteria their singular is bacterium
- Bacteria reproduce by binary fission
- Only bacteria and algae are microbiological prokaryotes

Viruses

- Viruses are minute micro-organisms, much smaller than a bacteria and can only replicate within a cell of living plant.
- Viruses can reproduce only by using the cellular (Replication)ˇmachinery of the *host,*
- Living when inside living cell, nonliving outside
- They are so small that need electron microscopy to be seen
- They are a cellular (not cellular)
- Viruses cannot be culture (grown)
- Core made of only one type of nucleic acid (either DNA, or RNA)

Fungi

- Fungi (singular: fungus) are Eukaryotes
- They may be unicellular (yeast)- are oval in shape larger than bacteria
  - OR
- multicellular (mold)- form visible masses called mycelia compose of long filaments (hyphae)cottony growths on bread&fruit).

- Large multicellular like mushroom look somewhat like plant but they are not photosynthesis
- Cell wall compose of chitin

Protozoa

- Single –celled organisms that process that process membrane –bound organelles and nuclei that cause different human disease like malaria, dysentery and sleeping sickness
- Protozoa are unicellular Eukaryotic microbes
- Move by flagella, cilia, pseudopods
- Have variety of shapes,
- Lives free or as parasite
- They absorb or ingest organic compounds from their environment
- They reproduce by sexually or asexually

8. What genital Herpes?

- Genital herpes is an STD caused by two types of viruses. The viruses are called herpes simplex virus type 1 (HSV-1) and herpes simplex virus type 2 (HSV-2)
- These two types are envelope double stranded membrane DNA viruses and they are herbesviridae family. HSV1 can cause mouth and tongue while HSV2 can cause genital herpes sometimes both viruses can cause mouth, tongue and genital herbes.
-
- Can move through population silently

- Symptoms skin, mucus membrane, lesions Oral and Genital area
- Most contagious when virus filled lesions are present can spread by asymptomatic shedding Herbes virus can be in saliva and genital secretion
- Primary infection can cause ulcers and pustules
- In women labia mojara and labia minora, mouth pubis, vagina mucosa and cervix
- In men shaft of penis

9. Why smoking bad for health?

- Because the tobacco contain two poisons substance which are tar and nicotine
- Smoking tobacco kills thousands of people in the world in each year .Tobacco smoke contains many chemicals which are harmful to the to the body
- Smoking tobacco is a habit that is not only dangerous to the health of the people who smoke. But also the rest of family

10. What are difference between Tar and Nicotine?

- Tar is a sticky substance which blocks up the lungs.
- Nicotine is an addictive drug which is absorbed into the blood stream and seems to affect the heart, blood vessels and nervous system .it raises
- Blood pressure which may lead to coronary heart diseases
- Nicotine goes into the smoker's blood and is spread all over the body. Nicotine prevents the heart from working well and a heart attack cloud ensue

11. Which organs are damaged by smoking tobacco?

- Lung
- Heart
- Nervous system
- Blood vessel
- Red blood cell in specially Hemoglobin

12. Describe the effect of smoking on health?

- Smoking kills thousands of people in the world in each year. Tobacco smoke contains many chemicals which are harmful to the body.
- Nicotine is an addictive drug which is absorbed into the blood stream and seems to affect, the heart blood vessels and nervous system. It raises blood pressure which may lead to the difficult and painful breathing associated with bronchitis and emphysema. Both conditions leads to a reduction of the surface area available for exchange and so the sufferers get very short of breath.
- Carbon monoxide from cigarettes smoke into the blood and combines with hemoglobin in the red blood cell. Oxygen transport around the body is seriously affected. When tobacco smoke cools it forms tar which sticks to the lining of the lungs and collects in the alveoli, it is the chemicals in this tar which irritates the lungs and may cause lung cancer
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Commented [WU1]:

12. Explain the terms emphysema and bronchitis?

- Both conditions lead to a reduction of the surface area available for gas exchange and so the sufferers get very short of breathe
- Emphysemais a Pus in the pleural cavity
- They are COPD chronic bronchitis (blue bloaters) and Emphysema (pink buffer) most patient have both cigarette smoking
- Why blue chronic bronchitis? Because of the presence of cyanosis of the skin and mucous membrane hypoxemia occur early in the disease. The damage is in the bronchioles, therefore increased (radius) and therefore CO_2 retention and therefore cyanosis----> blue. Since there is CO_2retention -----> bloater

- Why Emphysema pink? Because of their color and way they breathe through pursed lips on expiration, hypoxemia occurs late in diseased the damage is not in the bronchioles, therefore no increased resistance (radius) and therefore no CO_2retention and therefore no cyanosis pink

13. List diseases caused by smoking?

- Lung cancer
- Bronchitis
- Emphysema
- Heart attack

14. What are two main division of lungs disease?

They are obstructive and restrictive

- Obstructive cannot get the air out
- Restrictive cannot get the air out

15. List obstructive diseases?

They are

- Asthma
- Emphysema
- Chronic Bronchitis
- Bronchiectasis

16. Describe the effect of smoking on health?

- Smoking kills thousands of people in the world in each year. Tobacco smoke contains many chemicals which are harmful to the body.
- Nicotine is an addictive drug which is absorbed into the blood stream seems to affect the heart, blood vessels and nervous system. It raises blood pressure

which may lead to coronary heart diseases(CHDS).Nicotine also affects the cilia lining the air ways in the lungs. This can lead to the difficult and painful breathing associated with bronchitis and emphysema. Both conditions lead to a reduction of the surface area available for gas exchange and so the sufferers get very short of breath. Carbon monoxide from cigarette smoke gets into the blood and combines with hemoglobin in the red blood cells. Oxygen transports around the body is seriously affected. When tobacco smoke cools it forms tar which sticks to the lining of the lungs and collects in the alveoli. It is the chemical in this tar which irritates the lungs and may cause lung cancer

- Cigarette smoke contain poisons gases which carbon monoxide and nitrogen oxide
- Smoking causes death 1 of every 5 deaths in the U.S is linked to smoking
- Smoking increases your risk for: includes Heart disease, heart attack and stroke, Lung cancer in men, Lung cancer in women death from COPD,
- Smoking and cardiovascular diseases, when Nicotine through your blood stream it,s stimulate adrenal glands releases epinephrine, epinephrine hormone raises blood pressure , so Nicotine raise blood pressure
- Nicotine and Carbon monoxide can damage inner wall of artery and cause process plaque
- Smoking causes coronary artery diseases causes atherosclerotic coronary artery
- Smoking increases risks of blood clots
- Smoking increases risks of peripheral vascular diseases
- Smoking can causes an abdominal aortic aneurysm
- Smoking and lung diseases
- Smoking and cancer Examples of carcinogens in cigarette (are substances caused Cancer) E.G yanide, formaldehyde, Benzene, Ammonia than lastly harmful substances damage DNA in your help cells then create or new help cells produces damaged DNA
- The most common Cancer caused smoking in the is a Lungs caner, the harmful substances can cause cancer in the other parts of your body

- Other area other cancer caused smoking are mouth, blood and bone marrow Larynx, throat, esophagus , stomach, pancreases, kidney, bladder, uterus, and cervix smoking causes cancer all organs we list in the early
- Other health concerns of smoking
- Risk of smoking while pregnant, low birth weight, miscarriage, preterm delivery, still birth, infants death, SIDS
- Effects of smoking on breath feeding in baby, restlessness, rapid heart bea, vomiting, interrupted sleep, diarrhea,
- Others health effects of smoking ,Low bone density women, increased risk for hip fracture in women ,Gum diseases, Immune system dysfunction, sexual impotence in men

17. What is Alcoholism?

- Alcohol is forbidden in our religion, Islam, Alcohol is a drug that is very much abused. It has become a major social problem in many countries. Alcohol is really depressant drug. It reduces brain activity and thereby affects thinking, Alcohol abuse also causes severe liver damage (livercirrohosis).
- Abusers (Alcoholic) may develop stomach ulcer. It destroys brain cells and may even result in memory loss. Children born to Alcoholic mothers normally have below average intelligence. They may also have facial deformities, poor eyesight and heart defect.
- Dangers of alcohol
- In our country, it is illegal to drink alcohol
- Alcohol leads to poor performance in school work and can cause people to fail in their duties
- Alcohol is one of the main causes of road accidents in some countries
- Parents who drink tend to neglect their children and may do harm by beating them
- Alcohol leads to poverty and self-neglect
- Alcohol is bad for your health. It's destroys the liver and the nervous system
- Alcohol also create social problems and economic problems

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18. What is personal health hygiene?

- Personal health is a part of hygiene, which tells us how an individual preserves and maintain the health of his own mind and body
- it's is taking care of yourself every day, from your hair to your feet, by following the rules of proper washing and grooming, healthful nutrition, and getting enough physical activity and rest. Sunlight and fresh air have double beneficial action . They stimulate one's mind and produce important effects on skin, thus improving the metabolism of the body.
- Rest and sleep are needed for maintaining health. During sleep mind is set at rest. Repair and growth of the tissues take place during sleep because during working hours our tissues and nerves are constantly subjected to wear and tear
- Exercise is the basis for the healthy body for majority of people. It is important for maintaining health and vigor and to promote growth. Ability to think and perceive is enhanced by means of exercise. Without exercise, the whole body becomes sluggish
- Respect, caring and valuing people
- Support people we care about
- Spending time with family
- Avoiding harmful behavior