

TEST NO.4

pecial affinity for basic proteins.
together to form nucleoproteins,
resent in the chromosomes.

l data about the ratios of
es present in DNA
and (B) F. Sanger

rgaff (D) Rosalind
Franklin

ver. (C)

gaff provided data about the
es present in DNA. This data
and thymine are equal in ratio
cytosine.

rtion of RNA in the cell is.
resent (B) mRNA

(D) eRNA

ver. (D)

e major portion of RNA in the
o 80% of the total RNA. It is
h ribosomal protein and acts as
athesis of proteins.

f DNA is one half in.

cell (B) Sperm cell
(D) Kidney cells

ver. (B)

s fixed for a particular species
number of chromosomes. The
m cells (sperm and ova) is one
cells.

f dinucleotide is.

(B) NAD
(D) DNA

ver. (B)

oin to form dinucleotide.
e dinucleotide (NDA) is an
otide. It is an important
oxidation-reduction reaction.

1. In 1866 Ernst Hackle divided living organisms into.

- (A) Two Kingdoms (B) Three Kingdoms
(C) Six Kingdoms (D) Five Kingdoms

Explanatory Answer: (B)

Ernst Heackel introduced a third kingdom Protista to accommodate organisms such as Euglena and bacteria which possess both plant and animal-like characters.

2. Classification of living things is based on.

- (A) Homologies (B) Genetics
(C) Cytology (D) All these

Explanatory Answer: (D)

Biologists have classified all the living into groups showing similarities based upon homologies, comparative biochemistry, cytology and genetics.

3. An independent evolutionary unit is.

- (A) Species (B) Genus
(C) Class (D) Kingdom

Explanatory Answer: (A)

Each species possess its own distinct structural, ecological and behavioral characteristics, hence species are independent evolutionary units,

4. Five-Kingdom system proposed by Margulis and Schwartz is not based on.

- (A) Genetics (B) Cellular organization
(C) Nucleic acid (D) Mode of nutrition

Explanatory Answer: (C)

Lynn Margulis and Karlene Schwartz (1988) modified five kingdom classification of Whittaker by considering cellular organization, mode of nutrition, cytology, genetics and organelles of symbiotic origin (mitochondria and chloroplasts) as prokaryote (Moneta), Protocista (protest) planate, Animally and fungi.

5. The organisms are grouped into larger, more inclusive categories.

- (A) Species (B) Division
(C) Phylum (D) Taxa

Explanatory Answer: (D)

The basic unit of classification is species. One or more species compose a genus, and closely related genera are grouped into a family. Hence, the organisms are grouped into larger, more inclusive categories called taxa. Each category is more general than the one below it and has emergent properties.

6. The terms prokaryotic and eukaryotic were introduced by

- (A) E-Chatton (B) Margulis and Schwartz
(C) Robert Whittaker (D) Ernst Haeckel

Explanatory Answer: (A)

E-Chatton introduced terms prokaryotic and eukaryotic to describe bacteria and blue-green algae and animal and plant cells respectively.

7. Unit of classification in between class and family.

- (A) Genus (B) Species
(C) Order (D) Phylum

Explanatory Answer: (C)

Closely related families are grouped into an order and orders into classes.

8. A group of freely interbreeding organisms constitutes a.

- (A) Species (B) Genera
(C) Genus (D) Class

Explanatory Answer: (A)

A species is a group of natural population which can interbreed freely among themselves and produce fertile offspring but are reproductively isolated from all other such groups in nature.

9. The complete, mature and infectious particle is called.

- (A) Virus (B) Virion
(C) Prion (D) Capsid

Explanatory Answer: (B)

The complete, mature and infectious particle is called virion. The virion is composed of a central core of nucleic acid, either DNA or RNA, also called the genome, surrounded by a protein coat, the capsid.

10. Viral genome is composed of.

- (A) DNA only (B) RNA only
(C) DNA or RNA (D) DNA, RNA & protein

Explanatory Answer: (B)

Viral genome consists of a central core of DNA or RNA. DNA is usually found in animal viruses whereas plant viruses contain RNA.

11. Mature non-enveloped virus consists of.

- (A) Genome only (B) Prion only
(C) Genome and capsid (D) Nucleic acid + protein coat + membrane of the host cell

Explanatory Answer: (C)

Non-enveloped viruses are known as naked virions. These consist of genome and capsid.

12. The first infectious viral disease against which effective preventive measure was developed.

- (A) Polio (B) Small pox
(C) Herpes simplex (D) Mumps & Measles

Explanatory Answer: (B)

In 1736, Edward Jenner first vaccinated an eight-year-old boy with pus taken from a cowpox lesion on the hand of a milkmaid. After six weeks the same boy was inoculated with pus from a smallpox victim, but he did not develop the disease.

13. Unseen filterable agents of disease are.

- (A) Bacteria (B) Viruses
(C) Vectors (D) Ticks and mites

Explanatory Answer: (B)

Charles Chamberland found that viruses that cause rabies pass porcelain filters through which bacteria cannot. He called these agents filterable viruses (poisons). In those words virus was used to describe any toxic substance that caused disease.

14. The first virus to be isolated in crystal form by Stanley.

- (A) Bacteriophage (B) Cowpox virus
(C) Tobacco mosaic (D) Polio virus

Explanatory Answer: (C)

Ivanowski (1892) discovered that agent which causes tobacco mosaic disease was filterable. This filterable agent was first purified by Stanley (1935) and was successful in crystallizing the tobacco mosaic virus. Chemical analysis of these particles showed that they contained only nucleic acid and protein.

15. Which is not a characteristic of virus?

- (A) They are electron micrographs (B) They are obligate intracellular parasites

- microscopic infectious agents (C) They can synthesize proteins and nucleus acid
- intracellular parasites (D) They are resistant to antibiotics

Explanatory Answer: (C)

Viruses 100 times smaller than bacteria and can be seen under electron microscope only. They can reproduce by replication inside a plant or animal cell only therefore intracellular obligate parasites. They lack metabolic machinery for the synthesis of their own nucleic acid and protein. All viruses are resistant to broad range of available antibiotics such as penicillin, streptomycin and others.

16. Prion is a/an
- (A) Infectious part of virion (B) Infectious proteins only
- (C) A piece of RNA (D) A piece of DNA

Explanatory Answer: (B)

Prions are infectious proteins that contain information that code for their own replication. They are responsible for mad cow infection and mysterious brain infection in man.

17. The statement not true about lysogenic bacteria

- (A) They can be attached by any virus (B) They have prophage and are resistant to infection by the same virus
- (C) Virus not related to infections virus can attack (D) Cannot be attacked by related virus

Explanatory Answer: (C)

Lysogenic bacteria are resistant to infection by the same or related phages. The phage that causes lysogeny is called temperate or lysogenic phage.

18. About 60% of adults are immune to.
- (A) Herpes simplex (B) Influenza
- (C) Mumps (D) Measles

Explanatory Answer: (C)

An RNA virus belonging to group paramyxoviruses causes mumps. The disease is highly contagious but seldom fatal. About 60% of adults are immune to mumps.

19. The process of separation of prophage to

start lytic cycle is known as

- (A) Adsorption (B) Lysogeny
- (C) Induction (D) Penetration

Explanatory Answer: (B)

In some cases viral DNA, instead of taking over the control of host's machinery, becomes incorporated into the bacterial chromosome. Phage in this state is called prophage and this process is called lysogeny. The process in which virus gets detached from host DNA and lytic cycle starts is called Induction.

20. The lytic agents that destroy bacterial colonies.

- (A) Bacteria (B) Virus
- (C) Prions (D) Capsomeres

Explanatory Answer: (B)

Twort (1915) discovered bacteriophages. He observed that bacterial colonies sometimes undergo lysis (dissolved and disappeared) and that this lysis can be transferred from one colony to the other. He concluded that the lytic agent might be virus.

21. The second major form of hepatitis

- (A) Hepatitis A (B) Hepatitis B
- (C) Hepatitis C (D) Hepatitis D

Explanatory Answer: (B)

Hepatitis B is the second major form of hepatitis. It is caused by a DNA virus which is very common in Asia, China, Philippines, Africa and the Middle East.

22. Louis Pasteur is not famous for

- (A) Pasteurization (B) Development of vaccines
- (C) Germ theory of disease (D) disease7

Explanatory Answer: (C)

Germ theory of disease was formulated by Robert Koch. Pasteur confirmed the existence of microbes, developed vaccines for diseases such as anthrax, fowl cholera and rabies, and developed pasteurization process.

23. Division in one plane, rods completely separate after division.

- (A) Bacillus (B) Coccobacillus
- (C) Cooobacillus (D) Streptobacillus

Explanatory Answer: (A)

Bacilli are rod-shaped bacteria. All bacilli divide in one plane producing a bacillus, Streptobacillus (a

chain) or diplobacillus (a pair). Bacillus is single cell of bacteria.

24. ➤ **Division in three planes, cocci arranged in a cube of.**

- (A) Streptococcus (B) staphylococcus
(C) Sarcina (D) Vibrios

Explanatory Answer: (C)

The cocci are spherical or oval bacteria having distinct arrangement based on their planes of division. When the division is in three planes, it will produce a cube of eight cocci called sarcina.

25. ➤ **Flagellum of bacteria arises from.**

- (A) Pilli (B) Cell membrane
(C) Cell wall (D) Basal body

Explanatory Answer: (D)

Flagella are extremely thin, hair-like cytoplasmic appendages that come out through cell wall and originate from basal body, a structure present just beneath the cell membrane

26. ➤ **Not true for flagella in bacteria.**

- (A) Aid in motility (B) Help detect chemical stimuli
(C) Help to attach to host surface (D) Used to classify

Explanatory Answer: (C)

The primary function of flagella is to help in motility. On the basis of presence or absence of flagella, pattern of attachment of flagella and the number of flagella present, bacteria are classified into different taxonomic groups. With the help of flagella, the bacteria can also detect and move in response to stimulus of chemicals (chemotaxis).

27. ➤ **Tubular shafts in bacteria that serve as a means of attachment of bacteria to various surfaces.**

- (A) Flagella (B) Fimbriae
(C) Pilli (D) Slime

Explanatory Answer: (C)

Pilli are tubular, hollow, filamentous appendages present in gram-negative bacteria. They are made up of special protein pillin and are primarily involved in conjugation. Some pilli function as a mean of attachment of bacteria to various surfaces.

28. ➤ **In which bacteria flagella are surrounding the whole bacterial cell.**

- (A) Atrichous (B) Amphitrichous
(C) Peritrichous (D) Lophotrichous

Explanatory Answer: (C)

Bacteria without flagella are called atrichous if a tuft of flagella is present at one pole of bacterium, it is known as lopotrichous. A condition when tuft of flagella is present at both poles of bacterial cell is called amphitrichous. In peritrichous condition, the flagella surround the whole cell.

29. ➤ **Chemotherapeutic chemical substances which are used in treatment of infectious diseases.**

- (A) Vaccines (B) Antibiotics
(C) Antiseptics (D) Disinfectants

Explanatory Answer: (B)

Antibiotics are chemotherapeutic chemical substances which are used in treatment of infectious diseases. These are synthesized and secreted by certain bacteria, actinomycetes and fungi.

30. ➤ **The structure present in between capsule and cell membrane of bacteria.**

- (A) Slime (B) Flagella
(C) Cell wall (D) Basal body

Explanatory Answer: (C)

Beneath the slime or capsule and external to cell membrane cell wall is present. It is a rigid structure that determines the shape of the bacterium and protects bacterial cell from osmotic lysis. Cell wall is only absent in Mycoplasmas.

31. ➤ **The accessory pigments in cyanobacteria.**

- (A) Carotenes (B) Phycobilins
(C) Bacteriochlorophyll (D) All these

Explanatory Answer: (B)

Cyanobacteria use phycobilins as accessory pigments. Photosynthetic pigments and electron transport chain components are located in thylakoid membrane linked with particles called phycobilisomes.

32. ➤ **In Chemotherapy.**

- (A) Cancerous parts are exposed to short wave radiation (B) Administering certain anti-cancerous chemicals to the patient
(C) Gene therapy (D) All of these

Explanatory Answer: (B)

In cancer radiotherapy and chemotherapy are used. In radiotherapy the cancerous part is exposed to short wave radiation from the radioactive material

repeatedly at regular intervals. Chemotherapy consists of administering certain anticancer chemicals to the patients at regular intervals. These chemicals may kill both cancerous as well as normal cells.

33. One of the following is a techniques used to preserve milk and milk products.

- (A) Gene therapy (B) Immunization
(C) Pasteurization (D) Preventive measures

Explanatory Answer: (C)

Pasteurization is a technique developed by Louis Pasteur to preserve milk and milk production from spoilage and without damaging its quality.

34. Bacteria increase in number asexually by.

- (A) Mitosis (B) Binary fission
(C) Conjugation (D) Lag phase

Explanatory Answer: (B)

Bacteria increase in number by an asexual means of reproduction called binary fission. In binary fission parent cell enlarges, its chromosome duplicates and plasma membrane pinches inward at the centre of the cell. The cell wall grows inward to separate daughter cells.

35. Which of the following is not an economic importance of bacteria?

- (A) Production of antibiotics (B) Spoilage of food and vegetables
(C) Able to decompose organic matter (D) Use in biotechnology

Explanatory Answer: (C)

Decomposition of organic matter by bacteria is important ecologically. Bacteria play significant role in completion of cycles: nitrogen, phosphorus, sulphur and carbon.

36. Gram positive or negative bacteria grouping is on the basis of their.

- (A) Capsule (B) Cyst
(C) Cell wall (D) Cell membrane

Explanatory Answer: (C)

Gram Christian developed the technique of Gram stain. Bacteria could be divided into two groups: gram-positive bacteria and gram-negative bacteria. The two groups differ on the basis of cell wall character. Gram-positive bacteria stain purple with primary dye (crystal violet) due to formation of CV-I

complex, while gram-negative bacteria stain pink with secondary dye (safranin).

37. During which phase of reproduction death rate become equal to newly formed bacteria.

- (A) Lag (B) Log
(C) Stationary (D)

Explanatory Answer: (C)

Four distinct phases are recognized in bacterial growth curve. The phase of no growth is called lag phase. Bacteria prepare themselves for division. The phase of rapid growth is log phase during which bacteria divide at exponential rate. The phase when death rate becomes equal to newly formed-bacteria is known as stationary phase. When death rate of bacteria is more than reproduction rate, the phase is called decline-phase.

38. Lipid absent in the membrane of bacteria.

- (A) Wax (B) Sterals
(C) Phospholipids (D) Acylglycerol

Explanatory Answer: (B)

Bacterial membrane differs from eukaryotic membrane in lacking steroids such as cholesterol.

39. Chemical substances used on living tissues that inhibit growth of microorganisms are called

- (A) Antiseptics (B) Antibiotics
(C) Antibiotics (D) Chemotherapeutic agents

Explanatory Answer: (A)

Chemical substances used on living tissues that inhibit the growth of microorganisms are called antiseptics

40. Destruction of all life forms is.

- (A) Immunization (B) Vaccination
(C) Sterilization (D) Chemotherpeutism

Explanatory Answer: (C)

Sterilization is destruction of all life forms. In sterilization process steam, dry heat, gas, filtration and radiation are used to control bacteria / microorganism.

TEST NO.5

1. Multi cellular animals are included in
(A) Parazoa (B) Protozoa
(C) Metazoa (D) All these

Explanatory Answer: (C)

In traditional two-kingdom system, the multicellular animals were referred to as Metazoa to distinguish them from one-called Protozoa. Parazoa is a sub-kingdom to which simplest animals belong.

2. The symmetry is sponge is
(A) Radial (B) Bilateral
(C) Acoelomate (D) Absent

Explanatory Answer: (D)

Sponges (Parazoa) lack tissue organization into organs systems, have indeterminate shape and are asymmetrical.

3. All the animals include in grade bilateria are

- (A) Triploblastic (B) Diploblastic
(C) Acoelomates, pseudocoelomates, coelomates (D) Both a and c

Explanatory Answer: (B)

The animals included in grade bilateria have bilateral symmetry and are triploblastic. They may be acoelomates, pseudocoelomates or coelomates. The animals belonging to phyla Platyhelminthes to Chordata are included in this group.

4. Not a characteristic of triploblastic animal
(A) Ectoderm, endoderm and mesoderm present (B) Cells show greater degree of specialization
(C) Central nervous system is absent (D) May be coelomates, acoelomates pseudocoelomates

Explanatory Answer: (C)

Triploblastic animals are included in grade Bilateria. They body of these animals is made of three layers ectoderm, endoderm and mesoderm. In most animals cells of these layers develop into structure. The integumentary and nervous systems develop from ectoderm. Mesoderm gives rise to muscular skeletal and reproductive systems. Endoderm forms the lining of digestive tract and forms other glands of digestive

system such as liver. The cells of these animals show greater degree of specialization.

5. All of the following are the members of eumetazoa except.
(A) Cnidaria (B) platyhelminthes
(C) Porifera (D) Nematoda

Explanatory Answer: (C)

The sub-kingdom Eumetazoa includes animals other than phylum Porifera. About 29 animal phyla belong to eumetazoa.

6. All of the following are the characteristic of deuterostomes except.
(A) Cleavage is radial (B) Anus is formed from blastopore
(C) Coelom is derived from mesoderm (D) Mesoderm is derived from the archenteron

Explanatory Answer: (C)

In series Deuterostomia the cleavage is radial and indeterminate; mouth is formed at some distance anterior to blastopore and blastopore forms the anus; coelom develops as an out pouching of archenterons. It includes Echinodermata, Hemichordate and Chordata.

7. The body cavity present between the body wall and the alimentary canal and lined by mesoderm.
(A) Spongocoel (B) Pseudocoelom
(C) Coelom (D) Enteron

Explanatory Answer: (C)

The cavity present between the body wall and the alimentary canal and is lined by mesoderm is called coelom. The mesoderm splits into outer perietal layer which underlines the body wall and (the visceral layer which covers the alimentary canal. It is filled with fluid called coelomic fluid. Annelids to chordates are coelomates.

8. Character not related to proterostomes.
(A) Spiral cleavage (B) Anus is formed from blastopore
(C) Coelom is formed by splitting of mesoderm (D) Mesoderm is derived from dorsal lip cells.

Explanatory Answer: (B)

In members of series Proterostomia the cleavage is spiral and determinate; mouth arises from the anterior

margin of blastopore. coelom is formed by splitting of mesoderm (true coelom); mesoderm is derived from cells on lip of blastopore. It includes phyla such as Nematoda, Annelida, Molluscs and Arthropods.

9. The body cavity that develops from blastocoels.

- (A) Spongocoel (B) Pseudocoelom
(C) Coelom (D) Gastrovascular cavity

Explanatory Answer: (B)

The body cavity that develops from blastocoel of the embryo and bounded externally by the muscles and internally by cuticle of the intestine is called pseudocoelom.

10. Phylum, the members of which are pseudocoelomates and bilateria.

- (A) Platyhelminthes (B) Nematoda
(C) Annelida (D) Mollusca

Explanatory Answer: (B)

Bilateria is group of animals with bilateral symmetry. In these animals the right side is approximately the same as the left side and there is a distinct anterior end. The animal can be divided into two equal halves by an imaginary line. All the above mentioned phyla belong to bilateria. The animals that have a false coelom (continuation of blastocoel) are called pseudocoelomates. The members of Nematoda, also called Aschelminthes, are pseudocoelomates.

11. All member of following phyla have clearly defined dorsal and ventral surface except.

- (A) Nematoda (B) Echinodermate
(C) Cnidaria (D) Mollusca

Explanatory Answer: (C)

In bilaterally symmetrical animals there is a clearly defined dorsal and ventral surface. Cnidarians are radially symmetrical in which the parts of the body are arranged around a central axis in such a way that any plane passing through the central axis divides the animal in halves that are almost mirror image of each other.

12. Fertilization in Porifera takes place

- (A) In water (B) In spongocoel
(C) IN mesenchyma (D) In gemmules

Explanatory Answer: (C)

Sperms are released in water and are carried to the egg by amoeboid cells. Fertilization occurs in

mesenchyme and zygote formed develops into embryo. Gemmules are asexual reproductive internal buds.

13. Enteron of which cnidarians is divided into mesenteries.

- (A) Maftepore (B) Actinia
(C) Jellyfish (D) Hydra

Explanatory Answer: (B)

There is only cavity in coelenterates called gastrovascular cavity or enteron. It opens to outside by only one opening, the mouth. In Actinia the body consists of polyp only and enteron is divided by large partitions called mesenteries.

14. Coelenterate that exist only in polyp form in

- (A) Hydra (B) Obelia
(C) Aurelia (D) Physalia

Explanatory Answer: (A)

Hydra exist in polyp form. Coelenterates (cnidarians) exist in two basic forms: the polyps and medusae. Polyps are cylindrical animals which in most cases are nutritive in function, therefore also called gastropods. The medusae are free swimming, umbrella-like forma that contain gonads, therefore involved in sexual reproduction.

15. The intermediate host in Taenia solium

- (A) Humans (B) Cattle
(C) Pig (D) Both b or c

Explanatory Answer: (D)

Taenia solium (tapeworm) is an endoparasite of humans, cattle and pigs that completes its life cycle on two hosts. The intermediate host is pig or cattle.

16. Blastocoel is a cavity which gives rise to.

- (A) Coelom (B) Pseudocoelom
(C) Acoelom (D) All of these

Explanatory Answer: (B)

Nematodes (roundworms) are triploblastic, bilaterally symmetrical pseudocoelomates. Pseudocoelom is the body cavity derived from hollow space, the blastocoel present in blastula, and not from mesoderm. It consists of a number of cells filled with a protein-rich fluid which develop high hydrostatic pressure.

17. Locomotion in nematodes is by

- (A) Setae (B) Cheatae
(C) Contraction of circular muscles (D) Undulating movements

Explanatory Answer: (D)

Locomotion in nematodes is by undulating waves of contraction and relaxation of muscles. These muscles are arranged in four bands, two dorso-lateral and two ventro-lateral. The circular muscles are absent, therefore the bending is ventro-lateral only.

18. The skeleton in earthworm
- | | | |
|-----------------|------------------|----|
| (A) Exoskeleton | (B) Endoskeleton | is |
| (C) Hydrostatic | (D) Skeleton | |
| skeleton | | |

Explanatory Answer: (C)

Typical skeleton, exoskeleton or endoskeleton. is absent in earthworm (annelid), however coelomic fluid present in the coelom act as hydrostatic skeleton and provides rigid surface to muscles for locomotion.

19. The first group of invertebrates to develop closed circulatory system.
- | | |
|--------------|-------------------|
| (A) Annelida | (B) Arthropoda |
| (C) Mollusca | (D) Echinodermate |

Explanatory Answer: (A)

Annelida are the first group of invertebrates that have developed a closed circulatory system consisting of vessels, pumping organs: hearts, and a circulatory fluid; the blood. It transports gases and nutrients common characteristics such body, appendages and cuticle.

20. Trochophore larva is present in which class of phylum annelida.
- | | |
|----------------|------------------|
| (A) Polychaeta | (B) Oligochaeta |
| (C) Hirudinea | (D) Both a and c |

Explanatory Answer: (A)

In Nereid, a member of class Polychaeta, the fertilization is external and a free swimming trochophore larva is produced during the life cycle.

21. One of the following is not common between annelids and arthropods.
- | | |
|--------------------|-----------------------|
| (A) Segmented body | (B) Appendages |
| (C) Cuticle | (D) Trochophore larva |

Explanatory Answer: (A)

Arthropods are believed to have common origin with annelids because both have some common characteristics such as segmented body, appendages and cuticle.

22. The Structure containing claws in class Arachnida of Arthropoda.

- | | |
|----------------|----------------|
| (A) Chelicerae | (B) Pedipalps |
| (C) Abdomen | (D) Book lungs |

Explanatory Answer: (A)

Body in members of Arachnida has the anterior segments that are fused to form a combined cephalothorax, with a pair of appendages called chelicerae with claws, two pairs as Pedipalps and four pairs of legs there are no antennae and true jaw.

23. The Structure containing claws in class Arachnida of Arthropoda.
- | | |
|----------------|----------------|
| (A) Chelicerae | (B) Pedipalps |
| (C) Abdomen | (D) Book lungs |

Explanatory Answer: (A)

Body in members Arachnida has the anterior segments that are fused to form a combined cephalothorax, with a pair of appendages called chelicerae with claws, two pairs as Pedipalps and four pairs of legs there are no antennae and true jaw.

24. Very large number of segments each with a pair of legs are found in which class of phylum Arthropoda.
- | | |
|---------------|---------------|
| (A) Crustacea | (B) Insecta |
| (C) Arachnida | (D) Myriapoda |

Explanatory Answer: (D)

In Myriapoda is divided into large are found in which class of phylum Arthropoda number of segments, each having a pair of legs. A pair of antennae and a pair of eyes is centipedes and millipedes.

25. The character not related with Arthropods.
- | | |
|---------------------|------------------------|
| (A) Solid uric acid | (B) Malpighian tubules |
| (C) Haemocoel | (D) Unsegmented body |

Explanatory Answer: (D)

True coelom is absent in arthropods, instead a reduced coelom called haemocoel has developed. It communicates with blood vascular system. A well-developed excretory system comprising of Malpighian tubules is present in arthropods. The

26. A rasping tongue-like structure in the mouth cavity of many mollusks.
- | | |
|------------|----------------|
| (A) Radula | (B) Mantle |
| (C) Valve | (D) Epithelium |

Explanatory Answer: (A)

In many mollusks the mouth cavity contains a rasping tongue-like radula, which is provided with many horny teeth.

27. ➤ The shell in Mollusca is secreted by
(A) Visceral mass (B) Mantle
(C) Radula (D) Foot

Explanatory Answer: (B)

The mollusk body is covered by a glandular epithelial envelope called mantle which secretes calcareous shell.

28. ➤ Not found in class Gastropoda of Mollusca
(A) Two piece shell (B) Mantle cavity is converted into lungs
(C) Includes garden snail (D) All these snail

Explanatory Answer: (A)

Gastropoda contain asymmetrical mollusks in which the body is covered with usually coiled one piece shell. Both aquatic and terrestrial species such as garden snail, slug, etc are included in the class. The aquatic species have lungs while in land species the mantle is converted into lungs.

29. ➤ Echinoderms deserve a place
(A) Below annelid worms (B) Top of list of invertebrate phyla
(C) Below arthropods and above mollusks (D) Above hemichordata

Explanatory Answer: (A)

The echinoderms are comparatively simple in structure, organization and physiology and deserve a place slightly below the annelids worms. However, these are placed at the top of the list of invertebrate phyla because there are a number of striking resemblances between echinoderms and chordates.

30. ➤ The largest living vertebrate among the followings.
(A) Shark (B) Skate
(C) Rays (D) Hagfishes

Explanatory Answer: (A)

Sharks are the largest living vertebrates Some of these reach 30-50 feet in length The only exception is whale, a mammal.

31. ➤ Diploblastic animal belong to.
(A) Group Radiata (B) Group Bilateria
(C) Series (D) Series

Proterostomia

Deuterostomia

Explanatory Answer: (A)

Diploblastic animals belong to group Radiata. The body of these animals consists of two layers of cells ectoderm and endoderm. There is a jelly-like mesenchyme or mesogloes, which in most cases in non-cellular.

32. ➤ The pore through which water leaves the body of sponge.
(A) Ostia (B) Osculum
(C) Both a and b (D) None of these

Explanatory Answer: (B)

There are many pores in the body of sponges. The pores through which water enters the body are called ostia, and pore through which the water leaves the body is known osculum.

33. ➤ One of the following is not present in between outer and inner layer of body cells of sponges.
(A) Flagellated collar cells (B) Amoeboid cells
(C) Specules (D) Spongin fibres

Explanatory Answer: (A)

In most sponges body wall in formed of an outer layer pinacoderm formed of cells called pinacocyte, and an inner layer choanoderm composed of cell known as choanocytes Between these two layers gelatinous mesenchyme is present which may contain amoeboid cells and spicules or spongin fibres.

34. ➤ Which of the following constitute 20% of the food of spongers?
(A) Small animals (B) Phytoplankton
(C) Zooplankton (D) All of these

Explanatory Answer: (D)

The food or sponges includes small animals, zooplankton and phytoplankton (20%) and detrital organic particles (80%).

35. ➤ Specules and sponging fibres in porifera act as.
(A) Sex cells (B) Skeleton
(C) Gemmules (D) Buds

Explanatory Answer: (B)

The skeleton in sponges is in the form of needle-like structures called spicules or spongin fibres (bath sponge), which may be calcareous or siliceous. The skeleton is present among pinacocytes and provides support. Spicules are also present around the osculum and ostia.

TEST NO.6

1. The structure in the mouth that prevent food from entering the windpipe in the.

- (A) Epiglottis (B) Soft palate
(C) Tongue (D) Pharynx

Explanatory Answer: (A)

Epiglottis is the flap of cartilage that closes the opening of the windpipe called glottis, at the time of swallowing.

2. The pH of saliva is.

- (A) 8 (B) 6
(C) Zero (D) 2

Explanatory Answer: (B)

Fresh saliva is alkaline with pH about 8 however it quickly loses carbon dioxide and its pH becomes 6.

3. Hunger contractions are.

- (A) Peristaltic contractions (B) Peristaltic relaxations
(C) Antiperistaltic movements (D) All these

Explanatory Answer: (A)

Hunger conations are peristaltic contraction, which are increased by low blood glucose levels and are sufficiently strong to create an uncomfortable sensation often called hunger pang.

4. Vomiting is due to,

- (A) Peristaltic contractions (B) Peristaltic relaxations
(C) Anitperistalsis movements (D) All these

Explanatory Answer: (C)

Antiperistalsis refers to reversal of peristaltic movements.

5. The stomach wall layer called mucosa.

- (A) Outer layer (B) Middle layer
(C) Inner layer (D) All these

Explanatory Answer: (C)

Stomach wall is composed of three principal layers outer layer of connective tissue middle layer of connective tissue with many glands called Mucosa.

6. Type of mucosa cells that secrete prpsinogen.

- (A) Zymogens (B) Oxyntic
(C) Mucous (D) Gastric

Explanatory Answer: (A)

The mucosa of the stomach possesses numerous tubular gastric glands composed of three kinds of cells, which secrete hydrochloric acid. And zymogene cells, which secrete pepsinogen

7. The Structure in the mouth that prevent food from entering the nasal cavities.

- (A) Epiglottis (B) Soft palate
(C) Tongue (D) Pharynx

Explanatory Answer: (B)

The backward movement of tongue pushes the soft palate up and closes the nasal openings at the back.

8. Jaundice is caused by.

- (A) Accumulation of bile pigments in blood. (B) Precipitation of cholesterol in gall bladder
(C) laceration or liver rupture (D) Heart malfunctioning

Explanatory Answer: (A)

If bile pigments are prevented from leaving digestive tract, they may accumulate in blood causing a condition known as jaundice.

9. Galls stones result from.

- (A) Accumulation of cholesterol in gall bladder (B) Liver does convert ammonia into urea
(C) Enlargement of live (D) Breakdown of hemoglobin in liver

Explanatory Answer: (A)

Cholesterol, secreted by the liver, may precipitate in the gall bladder to produce gall stones, which may block the release of bile.

10. The total area of absorpction becomes incredibly large due to the.

- (A) Enfolding (B) Vilil
(C) Microvilli (D) All of these

Explanatory Answer: (D)

The internal surface of ileum has many folds, which exhibit velvety appearance due to the presence of numerous finger-like outgrowths called villa. Each villas is richly supplied with bloods capillaries and a lymph versed called lacteal coned with epithelial cells. These cells have countless, closely packed cylindrical processes called microfilm. The total

surface area of absorption become incredibly large due to enfolding, villi and microfilm.

11. ➤ **Diarrhea occurs because.**

- (A) Infection (B) Emotional disturbance
(C) Drug action (D) All these

Explanatory Answer: (D)

If absorption of salts and water does not take place in large intestine due to some infection, drug action or emotional disturbance diarrhea occurs. If this condition is unchecked, dehydration develops that may prove to be fatal. The other extreme condition is constipation, which is caused by excessive absorption of water.

12. ➤ **Imperfect digestion is called.**

- (A) Dyspepsia (B) Food poisoning
(C) Botulism (D) Bulimia nervosa

Explanatory Answer: (A)

Incomplete or imperfection digestion is called dyspepsia. This is not disease in itself but symptomatic of other disorders or diseases. This is characterized by abdominal discomfort. Flatulence, heartburn, nausea and vomiting. Dyspepsia may occur due to excessive acidity in stomach or faulty function of stomach and intestine.

13. ➤ **The loss of appetite due to the fear of becoming fatty**

- (A) Bulimia nervosa (B) Dyspepsia
(C) Obesity (D) Anorexia nervosa

Explanatory Answer: (A)

Anorexia nervosa is an illness, which largely affects girls, between the ages of 12 to 21 years. The illness is characterized by the loss of appetite due to the fear of becoming obese. The affected girl overestimates the size of her body and insists to be overweight. These girls; are often immature psychologically and are unable to cope with the challenge of puberty and their emerging sexuality.

14. ➤ **Smoking, Spicy food, alcoholic beverage, coffee, tea and stress lead to.**

- (A) Piles (B) Hemorrhoid
(C) Botulism (D) Ulcer

Explanatory Answer: (D)

A sore in stomach or duodenum wall caused because of eating of walls by digestive enzymes is called ulcer. Occasionally ulcer is so severe that contents of the tract spill into the abdominal cavity, leading to severe infections which may prove to be fatal, if not cured immediately.