CLASS XI BIOLOGY (MULTIPLE CHOICE QUESTIONS)

CHAPTER 1 THE LIVING WORLD

Q1. The Book SystemaNaturae is written by

(a) Aristotle (b) Linnaeus (c) Darwin (d) John Ray

Q2. Which of these is the Texon ?

(a) Insects (b) class insecta (c) Phylum Arthropoda (d) Genus Musca

Q3.Mark the odd one in the followings

(a) tigris (b) pardus (c) leo (d) Panthera

Q4.Which of the followings will have more characters in common?

(a) Class (b) order (c) family (d) genus

Q5.Binomial Nomenclature was first published in the book

(a) Species Plantarum (b)Genera Animalium (c) SystemaNaturae

(d)HistoriaPlantarum

Q6. The taxonomic category phylum is equivalent to which level in classification in plants?

(a) Species (b) class (c) kingdom (d) division

Q7. Who is known as father of Taxonomy?

(a) Hippocrates (b) Whittaker (c) John Ray (d) Linnaeus

Q8. The famous botanical garden of Kew is located in

(a) Germany (b) France (c) Japan (d) England

Q9.Largest herbarium in India is located at

(a) National Botanical Research Institute Lucknow

(b) Forest Research Institute Dehradun

(c) Indian Botanical Garden , Sibpur , Howrah

(d) Lloyd Botanical Garden Darjeeling

Q10.The correctly written scientific name of wheat is

(a) Triticumaestivum (b)triticumaestivum

(c) TritcumAestivum (d)triticumAestivum

Q11 Which of these is not considered as a species?

(a) lion (b) tiger (c) mules (d) dog

Q12.Genus Panthera and genus Felis are included in the family

(a) Canidae (b) Felidae (c) Hominidae (d) Muscidae

Q13. A genus represents

(a) a collection of plants or animals

(b) inter breeding plants or animals

(c) closely related species of plants or animals

(d) None of these

Q14.Who introduced the term –species?

(a)Bentham &Hooker (b) John Ray (c)Aristotle (d) Oswald Tippo

CHAPTER 2 BIOLOGICAL CASSIFICATION

Q1. Viruses that infect bacterial cells ,multiply and cause their lysis are called

(a) viroids (b) Bacteriophase (c) capsomeres (d) Prions

Q2.Cell wall of bacterium is made up of

(a) cellulose (b) lignin (c)hemicelluloses (d)peptidoglycan

Q3.Which of these fungi belong to the class Basidiomycetes?

(a)Morchella and Mushroom (b)Puff balls and Claviceps

(c)Rhizopus and Mucor (d) Mushroom and puffballs

Q4. Which of these statements is true about Fungi imperfecti?

(a) They include toadstools and puff balls.

(b) They prey on nematodes.

(c) They donot have mycelium.

(d)Sexual reproduction is not known in them.

Q5.The main component of fungus cell wall is

(a) cellulose (b)Pectin (c) cellulose (d) chitin

Q6.All unicellular eukaryotic organisms belong to the kingdom

(a) Protista (b) Monera (c) Fungi (d) Plantae

Q7.The archaebacteria which can live in strong salty places are called

(a)Halophiles (b)Heliophytes (c)Methanogens (d)Thermoacidophiles

Q8. Ringworm in human beings is caused by

(a)Viruses (b) Bacteria (c) Trichoderma (d) Nematodes

Q9.The beautiful diatoms and Desmids belong to which group?

(a)Euglenoids (b)Slime moulds (c) dinoflagellates (d)Chrysophytes

Q10.Cynobacteria are also referred as

(a)Protists (b)Golden algae (c) Mycoplasma (d) Blue green algae

Q11.Capsomeres are found in

(a) Viroids (b) Coat of viruses (c)Bacterial wall (d)Protist cell wall

Q12.Puccinia fungus which causes black rust of wheat belongs to class

(a)Phycomycetes (b) Ascomycetes (c) Basidiomycetes (d)None of These

Q13.The drug LSD is extracted from the fungus.

(a)Mushroom (b) Neurospora (c) Penicillium (d) Ergot fungus

Q14. Study of fungi is called

(a) cytology (b) Mycology (c) Psychology (d) Morphology

Q15.Kala-azar is caused by

(a)Trichomonas (b) Trichonympha (c) Leishmania (d) Giardia

Q16.How many of these belong to Monera? Nostoc,Lactobacillus, Yeast, Diatoms,Euglena and PPLO.

(a) Two (b) Three (c) Four (d) Five

Q17 The relationship between mycobiont and phycobiont partners in lichens is known as

(a) Competition (b) Symbiosis (c) parasitism (d)None of these

CHAPTER -3 PLANT KINGDOM

Q1.Mosses and ferns are found in moist and shady places because

(a) They require water for fertilisation.

(b) They do not need sunlight for photosynthesis.

(c) They depend on micro organisms for nutrition.

(d) All the above a, b and c.

Q2.Which of these is called as maiden hair fern ?

(a) Dryopteris (b)Pteris (c) Adiantium (d) Lycopodium

Q3. Incorrect statement about brown algae is

(a)Presence of chlorophyll a & b (b)Presence of pigment fucoxathin

(c)Presence of chlorophyll a & c (d)stored food mannitol&laminarin

Q4.Choose the incorrect pair.

(a) Chlorophyta - Spirogyra (b) Bryophyta – Riccia

(c) Pteridophyta -Selaginella (d) Gymnosperm –Lycopodium

Q5. Fusion of two gametes of dissimilar in size is termed as

(a) Isogamy (b) Anisogamy (c) Oogamy (d) Zoogamy

Q6.Phylogenetic classification is based on

(a) morphological features (b) floral characters

(c) evolutionary relationship (d) anatomical characters

Q7. Prothallus in life cycle of Pteridophytes represents

(a) gametophytic phase of fern (b) sporophytic phase of fern

(c) both a & b (d) none of these

Q8. Angiosperms have dominant land flora primarily because

(a) they produce large number of seeds.

(b) nature of self pollination (c) domestication by man

(d) have the adaptability in diverse habitats.

Q9. First vascular plants are

(a)Bryophytes (b) Gymnosperms (c)Pteridophytes (d)Angiosperms

Q10.Which of these listed genera belong to the same class of algae?

(a) Chara ,Fucus , Polysiphonia(b)Volvox, Spirogyra,Chlamydomonas

(c)Porphyra, Ectocarpus, Ulothrix (d)Sargassum,Laminaria, Gracilaria

Q11.Double fertilisation is found without any exception in

(a) angiosperms (b)gymnosperms (c)Bryophytes (d) pteridophytes

Q12.Which of these is matched incorrectly?

(a) gymnosperms –naked seeds (b)bryophytes- prothallus

(c)angiosperms- embryosac (d) both b &C

Q13. Agar-agar is obtained from the alga

(a) Gelidium (b) Laminaria (c) Chlorella (d) Sargassum

Q14. Diploid sporophytic phase is dominant, gametophytic phase is represented by one or few haploid cells, such life cycle is termed as

(a) Hapolntic (b) Diplontic (c) Haplo- diplontic (d)None of these

Q15.Sex organs antheridia and archegonia are found in

(a) moss plant (b) fern plant (c) both a & b (d) none of these

Q16.Red pigment Phycoerythrin and reserve food floridean starch is found in

(a) Green algae (b) Brown algae (c) Red algae (d) Bluegreen algae

Q17.The fertile leaves of fern bearing sori are called

(a) Tropophylls b) Sporophylls (c)Rhizome (d) None of these

Q18. Corolloid roots of Cycas have association with

(a) N2 fixingcynobacteria (b)Rhizobium (c) Fungus (d) both a & b

Q19. The fusion of one male gamete and egg cell is called

(a) Syngamy (b) Triple fusion (c)Double fertilization (d)both a & c

Q20. Embryosac in a flower is present in

(a) stigma (b) style (c) ovule (d) Fruit

CHAPTER -4 ANIMAL KINGDOM

Q1. True coelome is lined with

(a) Ectoderm and endoderm (b) Ectoderm and mesoderm

(c) Ectoderm on both sides (d) Mesoderm on both sides

Q2. Which of the following are the cold blooded animals?

(a) Birds and snakes (b) Birds and mammals

(c) Bat and rat (d) Frog and snake

Q3. Open circulatory system is present in

(a) Man (b) Cow (c) Earthworm (d) Cockroach

Q4. Tissue level organisation is found in

(a) Porifera (b) Annelida (c) Coelenterata (d) None of these

Q5. Which of these reptiles have four chambered heart?

(a)Turtle (b) Cobra (c) Crocodiles (d) Calotes

Q6. A mammalian character without any exception is

(a) Vivipary (b) Presence of hairs on the body (c) Presence of tail

(d) Muscular diaphragm between thorax and abdomen

Q7. Which of these is true fish?

(a) Jelly fish (b) Flying fish (c) Silver fish (d) Star fish

Q8. Egg laying mammal is

(a) Armedilo (b)Duckbill platypus (c)Pangolin (d) All Of these

Q9.Haemocoel is found in

(a) Arthropoda (b)Annelida (c) Coelenterata (d) Porifera

Q10. Animals of which phylum are not found in fresh water?

(a)Mollusca (b) Annelida (c) Arthropoda (d) Echinodermata

Q11 .Flame cells are the excretory organs in

(a Planaria (b)Hydra (c) Cockroach (d) Earthworm

Q12 In which segments of earthworm clitellum is found?

(a) 16 th segment (b) 17 to 19 th segments

(c) 14 to 16 th segments (d) 5 and 6th segments

Q13. Which of these in birds indicate reptilian ancestry?

(a) presence of crop and gizzard (b) eggs with calcareous shell

(c) scales on their hind limbs (d) four chambered heart

Q14. Number of gills in Osteichthyes are

(a) 2 pairs (b) 6-15 pairs (c) 4 pairs (d) 5 pairs

Q15 Green gland is the excretory organ of

(a) Prawn (b) Butterfly (c) Snail (d) Earthworm

Q16. Animals of which phylum have water vascular system?

(a) Porifera (b) Echinodermata (c) Cnidaria (d) Ctenophora

Q17.Which of the following has the highest number of species?

(a) Insects (b) Birds (c) Molluscs (d) Snakes

Q18. Which of these statements is perfectly related to the phylum coelenterate?

(a) presence of cnidoblasts, diploblastic, have polyp and medusa

(b) bilateral symmetry, trploblastic,with organ level organisation

(c)bilateral symmetry, metamerically segmented ,have nephridia

(d) soft body, calcareous shell, muscular foot and radula present.

Q19.Which of these is known as Cuttlefish?

(a) Sepia (b) Octopus (c) Loligo (d) Asterias

Q20 Which is the second largest animal phylum ?

(a) Arthropoda (b) Mollusca (c)Annelida (d) Platyhelminthes.

A N S W E R S

chapter-I 1-b. 2-a. 3-d. 4-d 5-c. 6-d. 7-d. 8-d. 9-c. 10-a. 11-c. 12-b 13c.14b.

chapter-II 1-b. 2-d. 3-d. 4-d. 5-d. 6-a. 7-a. 8-c. 9-d. 10-d. 11-b. 12-c. 13-d. 14-b. 15-c. 16-b. 17-b.

chapter-III 1-a. 2-c. 3-a. 4-d. 5-b. 6-c. 7-a. 8-d. 9-c. 10-b. 11-a. 12-b. 13-a. 14-b. 15-c. 16-c. 17-b. 18-a. 19-a. 20-c.

chapter-IV 1-d. 2-d. 3-d. 4-c. 5-c. 6-d.7-b. 8-b. 9-a. 10-d. 11-a. 12-c. 13-c. 14-c. 15-a. 16-b. 17-a. 18-a. 19-a. 20-b.

UNIT – II

STRUCTURAL ORGANISARION IN PLANTS & ANIMAL

CHAPTER -5 MORPHOLOGY OF FLOWING PLANTS

1. **Phyllotaxy is connected with arrangement of**
   - **(i) Branches**
   - **(ii) Leaves**
   - **(iii) Veins**
   - **(iv) Flower buds.**
2. **Gamosepalous condition is**
   - **(i) Sepal free**
   - **(ii) Petal free**
   - **(iii) Sepal united**
   - **(iv) Petal united.**
3. **The sheath enclosing the plumule is**
   - **(i) Coleorhiza**
   - **(ii) Coleoptile**
   - **(iii) Scutellum**
   - **(iv) Aleurone.**
4. **Perianth are present in family**
   - **(i) Leguminosae**
   - **(ii) Solenaceae**
   - **(iii) Fabaceae**
   - **(iv) Liliaceae.**
5. **The edible part of mango is**
   - **(i) Epicarp**
   - **(ii) Mesocarp**
   - **(iii) Endocarp**
   - **(iv) Pericarp.**

6. **C A is the symbol of**
   - **(i) Polypetalous**
   - **(ii) Epiphyllous**
   - **(iii) Epipetalous**
   - **(iv) Gamopetalous.**
7. **In hypogynous flower, the ovary is**
   - **(i) Superior**
   - **(ii) Inferior**
   - **(iii) Both**
   - **(iv) None.**

8. **Reticulate venation is generally present in**
   - **(i) Monocots**
   - **(ii) Dicots**
   - **(iii) Gymnosperms**
   - **(iv) Pteridophytes**
9. **Rhizophora are adapted to survive in swampy area due to presence of**
   - **(i) Still root**
   - **(ii) Prop root**
   - **(iii) Pneumatophores**
   - **(iv) Adventitious roots**
10. **Flattened stem modification is present in**
   - **(i) Opuntia**
   - **(ii) Euphopia**
   - **(iii) Bougainvillea**
   - **(iv) Colocasia**
11. **In a leaf which part acts as channel of transport for water mineral & and food mineral**
   - **(i) Pulvinus**
   - **(ii) Lamina**
   - **(iii) Leaf blade**
   - **(iv) Veins**

12. **Potato is an underground stem it is distinguished from root because**
   - **(i) Stores food**
   - **(ii) Presence of nodes & internode**
   - **(iii) Lacks chlorophyll**
   - **(iv) Presence of xylem & phloem**
13. **Swollen placenta with many ovule is the feature of family**
   - **(i) Pea family**
   - **(ii) Potato family**
   - **(iii) Lily family**
   - **(iv) None**
14. **In Vaxillary aestivation the arrangement of petals is**
   - **(i) One largest standard, two lateral wings, and two smallest keel**
   - **(ii) One lateral wing, two large keel & two standard**
   - **(iii) One largest keel, One smallest standard two lateral wings**
   - **(iv) One standard one lateral wing & one smallest keel**
15. **False septum in ovary is present in**
   - **(i) Pea**
   - **(ii) China rose**
   - **(iii) Mustard**
   - **(iv) Tomato**

16.Radial symmetry is found in

(i) Actinomorphic

(ii) Zygomorphic

(iii) Asymmetric flower

(iv) Bracteates flower

17.In cymose florescence. Flower are borne in

(i) Acropetal succession

(ii) Basipetal order

(iii) Gamopetal

(iv) Potypetal

18.Mode of arrangement of sepals or petals in flower

(i) Aestivation

(ii) Placentation

(iii) Hypogynous

(iv) Perigynous

19.The leaflets are attached at tip of petiole in

(i) Pinnaltely compound

(ii) Palmately compound

(iii) Alternate

(iv) opposite

20.A medicinal plant Ashwagandha belongs to

(i) Fabaceae

(ii) Lilaceae

(iii) Leguminosae

(iv) Solanaceae

CHAPTER 6

ANATOMY OF FLOWERING PLANTS

1. **The condition when protoxylem lies towards pith is**

   (i) Exarch
   (ii) Endarch
   (iii) Periarch
   (iv) Polyarch.

2. **Periderm consists of**

   (i) Cork, primary cortex, endodermis
   (ii) Cork, cork cambium, secondary cortex
   (iii) Cork, cambium, secondary cortex,
   (iv) Cork cambium, secondary cortex, endodermis

3. **In Dicot stem the vascular tissue**

   (i) Conjoint, close, exarch
   (ii) Conjoint open endarch
   (iii) Radial close exarch
   (iv) Radial open endarch

4. **The living tissue in xylem is**

   (i) Tracheid
   (ii) Vessels
   (iii) Xylem Parenchyma
   (iv) Xylem Fibre

5. **Aerenchyma takes part in**

   (i) Providing flexibility
   (ii) Mechanical support
   (iii) Photosynthesis
   (iv) Buoyancy

6. **The youngest secondary xylem occurs**

   (i) Between pith & primary xylem
   (ii) Just inner to vascular cambium
   (iii) Just outer to vascular cambium
   (iv) Just inner to cork cambium

7. Cork is impermeable to due to deposition of

(i) Resins
(ii) Lignin
(iii) Tannins
(iv) Suberin

8. The guard cells in grasses are

(i) Bean shaped
(ii) Heart shaped
(iii) Dumbbell shaped
(iv) Round

9. Tissue/cells present in leaves of tea.

i) Sclerenchyma fibre
ii) Sclereids
iii) Parenchyma
iv) Collenchyma

10.Trichomes are-

i) Multicellular root hair
ii) Unicelllular root hair
iii) Multicellular shoot hair
iv) Unicellular shoot hair

11. Casparian strips are characteristics of

i) Endodermis
ii) Pericycle
iii) Epidermis
iv) Stele

12.In annual ring, the light coloured part is called

i) Sap wood
ii) Heart wood
iii) Early wood
iv) Late wood

13.Cell layers which constitute Bark

i) All tissue interior to vascular cambium
ii) All tissue exterior to vascular cambium
iii) All tissue interior to cork cambium
iv) All tissue exterior to cork cambium

14.The main bulk of plant ground tissue is divided into three zones

i) Cortex , Pericycle& Pith
ii) Xylem , Phloem & Cambium
iii) Epidermis, Cortex & Vascular tissue
iv) Xylem , Phloem & Pith

15. In monocots the bulliform cell are present at

i) Abaxial epidermis
ii) Adaxial epidermis
iii) Both
iv) None

16. Sieve tubes, companion cells and vessels are present in

i) Bryophyte
ii) Pteridophyta
iii) Gymnosperm
iv) Angiosperm

17. Conjoint, open vascular bundles are present in

i) Monocot stem
ii) Monocot root
iii) Dicot stem
iv) Dicot root

18. Epiblema is characteristics of

i) Root
ii) Stem
iii) Leaf
iv) All

19. Fascicular Vascular cambium, intra fascicular cambium, is examples of

i) Apical meristem
ii) Intercalary meristem
iii) Lateral meristem
iv) Primary meristem

20. Which is correct regarding hypodermis?

i) Dicot stem : collenchymatous, monocot stem: sclerenchymatous
ii) Dicot stem: sclerenchymatous, monocot stem: collenchymatous
iii) Dicot stem : Parenchymatous, monocot stem: collenchymatous
iv) Dicot stem: collenchymatous, monocot stem: parenchymatous

Chapter 7

STRUCTURAL ORGANIZATION IN ANIMALS

1. **Ligaments connect-**

   (i) Bone to muscle
   (ii) Muscle to muscle
   (iii) Bone to bone
   (iv) Muscle to skin

2. **Osteocytes are**

   (i) Cartilage cell
   (ii) Bone cell
   (iii) Muscle cell
   (iv) Epithelial cell

3. **Typhlosole in earthworm is for**

   (i) Digestion
   (ii) Ingestion
   (iii) Absorption
   (iv) Egestion

4. **Labium of cockroach is**

   (i) Upper tip
   (ii) Lower tip
   (iii) Tongue
   (iv) Teeth

5. **The cranial nerves present in frog is**

   (i) 12 pairs
   (ii) 14 pair
   (iii) 10 pairs
   (iv) 8 pairs

6. **Frog is**

   (i) Ureotelic
   (ii) Uricotelic
   (iii) Ammonotelic
   (iv) None

7. **In earthworm the female genital pore is present in**

   (i) **17 & 19th segment**
   (ii) **18th segment**
   (iii) **10th segment**
   (iv) **14th segment**

8. **Opening of rectum in frog is called**

   (i) **Cloaca**
   (ii) **Coccyx**
   (iii) **Anus**
   (iv) **Gonopore**

9. **RBC are produced in**

   i) **Osteocyte**
   ii) **Chondrocyte**
   iii) **Bone marrow**
   iv) **Lacunae**

10. **The first segment in earthworm is**

   i) **Prostomium**
   ii) **Peristomium**
   iii) **Metameres**
   iv) **Clitellum**

11. **In earthworm the spermathecal apertures are present in**

   i) **14-16 segment**
   ii) **4-8 segment**
   iii) **5-9 segment**
   iv) **17-19 segment**

12. **Sclerites in cockroach are**

   i) **Tergites dorsally &sternites ventrally**
   ii) **Tergites&sternites laterally**
   iii) **sternites dorsally &terqites ventrally**
   iv) **None of the above**

13. Anal styles are present in

i) Female cockroach
ii) Male cockroach
iii) Both
iv) None

14. Chitinous teeth in the cockroach are present in

i) Crop
ii) Mesentron
iii) Gizzard
iv) Ileum

15. The trachea in cockroach opens through

i) 10 pairs of gills
ii) 10 pairs of spiracles
iii) 8 pairs of gills
iv) 8 pairs of spiracles

16. Vocal sacs &copulatory pads are present in

i) Male frog
ii) Female frog
iii) Both
iv) None

17. Cutaneous respiration occurs in frog

i) Buccal cavity on land
ii) Lungs on land
iii) Skin in water
iv) Gills in water

18. Conversion of larva into adult is called

i) Polymorphism
ii) Dimorphism
iii) Metamorphosis
iv) Metamerism

19. Which is not present in earthworm?

i) Septalnephridia
ii) Pharyngeal nephridia
iii) Macro nephhridia
iv) Integumentary nephridia

20. One oothecae of cockroach contains

i) 10-12 eggs
ii) 12-14 eggs
iii) 14-16 eggs
iv) 16-18 eggs

Class XI

Unit-II Structural Organization In Plants And Animals

Chapter 5-Morphology in Flowering Plants

1-(ii) 2-(iii) 3-(ii) 4-(iv) 5-(ii) 6-(iii) 7-(i) 8-(ii) 9-(iii) 10-(i) 11-(iv) 12-(ii) 13-(ii) 14-(i) 15-(iii) 16-(i) 17-(ii) 18-(i) 19-(ii) 20-(iv).

Chapter 6- Anatomy Of Flowering Plants

1-(ii) 2-(ii) 3-(ii) 4-(iii) 5-(iv) 6-(ii) 7-(iv) 8-(iii) 9-(ii) 10-(iii) 11-(i) 12-(iii) 13-(ii) 14-(i) 15-(ii) 16-(iv) 17-(iii) 18-(ii) 19-(iii) 20-(i).

Chapter 7 – Structural OraganisationIn Animals

1-(iii) 2-(ii) 3-(iii) 4-(ii) 5-(iii) 6-(i) 7-(iv) 8-(i) 9-(iii) 10-(ii) 11-(iii) 12-(i) 13-(ii) 14-(iii) 15-(ii) 16-(iv) 17-(iii) 18-(i) 19-(iii) 20-(i).

Unit III – (Structure and Function)

Chapter 8 – The unit of life

M.C.Q

Q1. Who saw and described a life cell ?

(a) Antonevokleevwenhock (b) Robert browne (c) G.N. Ramchandram (d) None of these

Q2. Who discovered the nucleus in the live cell ?

(a) Antone von leevwenhoek (b) Robert browne

(c) G.N. Ramchandram (d) None of these

Q3. Who proposed the cell theory ?

(a) Rudolf virchow in 1885 (b) Schleiden and Schwann in 1939

(c) Robert Browne in 1932 (d) G.N. Ramchandram in 1890

Q4. Who explaned Omnis cellula-e-cellula ?

(a) Rudolph Virchow (b) Schliden and Schwann

(c) Robert Brown (d) None of these

Q5. The smallest cell is?

(a) mycoplasma (b) W.B.C (c) Bacteria (d) Nerve cell

Q6. Largest single cell ?

(a) Ostrich's egg (b) Nerve cell (c) R.B.C (d) W.B.C

Q7. Prokaryotic cells are represented by ?

(a) Bacteria, Micoplasma, Blue green algae. (b) Algae, Bryophytes

(c) W.B.C, R.B.C (d) None of these

Q8. The cell wall determines in the cell-

(a) The shape of the cell and provide strong structural support

(b) It provide energy to the cell

(c) It helpful in the formation of food natural

(d) None of these

Q9. Gram positive bacteriasare ?

(a) Helpfull to us (b) Harmfull to us (c) Nuetral to us (d) None of these

Q10. Pili and fimbriae are surface structure of the bacteria role of these are ?

(a) The main role in motality in bacteria

(b) They help attack the Bacteria to walk in stream and host tissue which made a special protein

(c) The contribute in D.N.A replication and distribution to daughter cell

(d) None of these

Q11. Eukaryotic cells are ?

(a) The higher plants, protista and animal fungi.

(b) Bacteria, blue green algae, plasma, pplo

(c) Not defined nucleus

(d) None of these

Q12. The following are absent in animal cells ?

(a) Cell wall and plastids (b) Centriole

(c) mitochondria (d) None of these.

Q13. The following is not present in plant cells ?

(a) centriole (b) mitochondria (c) cell wall (d) plastids

Q14. Mitochondria are absent in ?

(a) Green algae (b) plant cell (c) Animal (d) Bacteria

Q15. In eukaryotic cells , the site of glycolate metabolism is

(a) Peroxysome (b) Lysosome (c) Ribosome (d) Polysome

Q16. Types of ribosome are describe as 80S, 70S , etc . in this 'S' refers to the

(a) sub – units of ribosome (b) solubility index of ribosome

(c) synthesis of protein in ribosome (d) sedimentation co- efficient of ribosome.

Q17 .indentify the secondry lysosome from the following ?

(a) residual bodies (b) pinocytic vesicle

(c) phagocytic vesicle(d) all of these

Q18. The primary wall in plant cell is ?

(a) semipermeable (b) selectivity permeable

(c) permeable (d) each of these

Q19. The fluid mosaic model for plasma membrane structure was proposed by ?

(a) singer and Nicolson in 1792 (b) schleiden and Schwann in 1972

(c) Robert brown in 1833 (d) singer and Nicolson in 1972.

Q20. In plants , oxygen is used up in

(a) dictyosomes. (b) Ribosomes. (c) mitochondria (d) cstionshloroplasts

Unit-3 CH-9 BIOMOLECULES

MCQ'S

Q1. Lock and key hypothesis of enzyme action was given by

A—koshland B—fischer C—Buchner d—kuhne

Q2. Genetic engineering employs—

A) Lipase B) Restriction endonuclease

C) Amylase D)None of these

Q3 vitamin B-12 is a complex of

a) TPP b)NAD c)pyridoxial phosphate d)FMN/FAD

Q4. Enzymes are polymers of

A)fatty acid B)Amino acid c)Nucleus and ribosomes d)chromosomes

Q5.Riboside is

a)Base + phosphate b)Ribose+phosphate

c)Ribose+base d)Ribose+phosphate+base

Q6.Lactose molecule is composed of

a)Glucose+fructose b)Glucose+glucose

c)Glucose+galactose d)Fructose +fructose

Q7. An element not of much importance to plant is

a)calcium b)Zinc c)copper d)sodium

Q8. Which of the following nucleic acid is most abundant in cells-

a)m-RNA b)s-RNA c)r-RNA d)t-RNA

Q9. The larger % weightage of the element is in the human body as well as in the earth crust

a)oxygen b)carbon c)Hydrogen d)None of these

Q10. In a protein amino acid are linked by

a)Glycosidic bond b)Peptide bond c)Primary bond d)None of these

Unit-3 CH-10 CELL CYCLE AND CELL DIVISION

Q1.All organisms start their life from the

A)single cell B)double cell C)Multicell D)None of these

Q2. The cell cycle in yeast completed

A)24 hrs B)90 min C)01 week D)none of these

Q3 Average duration of the cell cycle of a human cell is

A)90 min B)24 hrs C)365 days D)None of these

Q4 In which stage the chromosomes appear as their long thread

A) Liptotene

B) Pochytene

C) Prophase

D) zygotene

Q5. Chiasmata are first observed in

A) Zygotene

B) Laptotene

C) Dipotene

D) Pachytene

Q6 karyokenisis is

A) Division of nucleus

B) Division of cytoplasm

C) Division of cell inclusion

d) None of these

Q7. Who introduced the term meiosis

A) Former &moore 1905

B) Robert brown 1665

C) Flemming 1880

D) None of these

Q8 Anastral mitosis is found in

A) All living organisms

B) Higher plants

C) Higher animals

D) lower animals

Q9 stage of mitosis in which the chromosomes move toward into poles is

A) prophase

B) Metaphase

C) Anaphase

D) Telophase

Q10. The chiasmata in value exchange of non sisterchromatides

segment was first introduced by

A) Morgan

B) Altmann

C) Clung

D) Johnssen

Q11. In eukaryotic cells, the site of glycolate metabolism is

A) peroxysome

B) lysosome

C) Ribosome

D) Polysome

Q12. Meiosis bring about

A) Change over the generation

B) Change in ploidy

C) Genetic recombination

D) all of these

Q13.The check point in G1 phase can put the cell cycle in_____phase.

A) non-proliferative

B) Quiescence

C) Go

D) all of these

Q14.The chromosomes are seen in the dyad stage first during-

A) late prophase

B) zygotene

C) lepotene

D) interphase

**Q15.Metaphase plate or equatorial plate is composed of **

A) Microtubules

B) tubulin

C) Spindles fibres

D) Chromosomes

Q16.Astral Mitosis takes place in

A) higher animal cell

B) all cell having centriole in the nucleus

C) higher plant cell

D) both A and B

Q17.Identical gene Loci of homologous chromosomes carry

A) dominant genes

B) Recessive genes

C) alleles

D) none of these

Q18.Generation time of eukaryotic cell involves

A) interphase

B) karyokinesis

C) cytokinesis

D) All the above

Q19.During early prophase of mitosis,the chromosomes are in the_____stage

A) lyptotene

B) monad

C) dyad

D) sister chromatid

Q20.In the mitotic metaphase,the chromosomal fibres connect the centromere of each chromosomes with

A) The poles on both sides

B) only one pole on its side

C) centromere of the homologous chromosomes

D) sister chromatids.

ANSWERS

CH-UNIT OFLIFE 1-a,2-b,3-c,4-a,5-a,6-a,7-a,8-a,9-a,10-b,11-a,12-a,13-a,14-d,15-a,16-d,17-b,18-c,19-d20-c

BIOMOLECULE

1-b,2-b,3-d,4-b,5-c,6-c,7-d

CELL CYCLE AND CELLDIVISION 1-a,2-b,3-a,4-a,5-a,6-a7-a,8-b,9-c,10-a,11-b,12-d,13-d,14-a,15-a,16-d,17-c,18-d,19-b,20-d

UNIT-4

Chapter 12 –Transport in plants

Q.1.A plant cell attains turgidity due to

(a)Electrolysis (b)Exosmosis (c)Endosmosis (d)Hydrolysis

Q.2.Water reaches the top of plant due to

(a)Root pressure (b)Capillarity (c)Transpiration (d)diffusion

Q.3.In which of the following plants there is no transpiration

(a)Aquatic,submerged plants (b)Plants live in deserts

(c)Aquatic plants with floating leaves (d)plants in hilly region

Q.4.Water lost in a liquid state in some plants through hydathodes.thesehydathodes

(a)Remain closed at night (b)remains closed during day

(c)Remains always open (d)none of these

Q.5.If flowers are cut and dipped in dilute Nacl solution then

(a) transpiration is low (b)Endosmosis occurs (c)No bacterial growth takes place

(d)adsorption of solute inside flower cells takes place

Q.6.Which of the following chemical serves as an antitranspirants in plant

(a)Cobalt chloride (b)Dimethyl mercury (c)potassium iodide

(d)phenyl mercuric acetate

Q.7.Instrument used for measuring rate of transpiration is

(a)photometer (b)potometer (c)porometer (d)lactometer

Q.8.A cell when kept in sugersolution,getsdehydrated.then the solution is

(a)hypotonic (b)hypertonic (c)isotonic (d)none of these

Q.9.The lower surface of leaf will have more number of stomata in a

(a)dorsiventral (b)isobilatral (c)both a and b (d)none of these

Q.10.When a plant undergoes senescence, the nutrients may be

(a)exported (b)withdrawn (c)translocated (d)none of these

Q.11.The rate of the transpiration will be very less in a situation where

(a)ground water is sufficiently available (b)wind is blowing

(c)environment is veryhot and dry (d)relative humidity is very high

Q.12.The path way of the movement of water through cell wall only is called

(a)symplast pathway (b)plasmodesmata pathway (c)apoplast pathway

(d)vacuolar pathway

Q.13.The rate of transpiration of a plant would gradually increase if

(a)The relative humidity increases (b)the relative humidity decreases

(c)the rate of humidity remains unchanged (d)the water potential gradient remain unchanged

Q.14.The form of sugar transported through phloem is

(a)glucose (b)fructose (c)sucrose (d)ribose

Q.15.Hydathode helps in

(a)transpiration (b)guttation (c)photosynthesis (d)respiration

Q.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	c	a	a	c	b	d	b	b	a	b	d	c	b	c	B

Chapter 13 –Mineral nutrition

Q.1.The most abundant element present in the plants is

(a)Nitrogen (b)manganese (c)iron (d)carbon

Q.2.Middle lamella mainly contains

(a)Ca (b)Mg (c)Na (d)K

Q.3.Name the elements which occur in nucleic acid molecule

(a)C,H,O,N,S (b)C,O,N,S (c)C,O,P,S (d)C,H,O,N,P

Q.4.Which of following mineral nutrient plays an important role in biological nitrogen fixation

(a)zinc (b)Iron (c)Molybdenum (d)Magnesium

Q.5.A plant require magnesium for

(a)protein synthesis (b)Chlorophyll synthesis (c)cell wall development (d)holding cell together

Q.6.During nitrification,which bacteria converts ammonia to nitrate

(a)nitrobacter (b)pseudomonas (c)nitrosomonas (d)mycobacterium

Q.7.Inorganic nutrients are presents in the soil in the form of

(a)molecules (b)atoms (c)compounds (d)electrically charged ions

Q.8.Nitrogen fixing microbe associated with azolla in rice field is

(a)spirulina (b)anabaena (c)frankia (d)tolypothrix

Q.9.Which of the following element in plants not remobilized

(a)phosphorus (b)calcium (c)potassium (d)sulphur

Q.10.Passive adsorption of minerals salt is not dependent of

(a)osmosis (b)diffusion (c)donnan equilibrium (d)ion exchange

Q.11.The appearance of yellow edges to leaves is due to deficiency of this mineral element

(a)calcium (b)magnesium (c)potassium (d)sulphur

Q.12.Which is essential for root hair growth

(a)Zn (b)Ca (c)Mo (d)S

Q.13.Petiole crack is due to deficiency of element

(a)boron (b)nitrogen (c)zinc (d)none of these

Q.14. A plant require magnesium for

(a)protein synthesis (b)chlorophyll synthesis (c)cell wall development

(d)holding cells together

Q.15.Zn,Mo,Fe,Cu are

(a)trace elements (b)non- essential elements (c)macronutrients (d)none of these

Q.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	d	a	d	c	b	c	d	B	b	a	c	b	d	b	a

Chapter 14 photosynthesis in higher plants

Q.1.Which pigment acts directly to convert light energy into chemical energy

(a)chlorophyll a (b)chlorophyll b (c)xanthophylls (d)carotenoid

Q.2.Which light range is most effective in photosynthesis

(a)blue (b)green (c)red (d)violet

Q.3.Chemosynthetic bacteria gets energy from

(a)sun (b)infra red rays (c)organic substance (d)inorganic chemicals

Q.4.Energy require for ATP synthesis in PSII comes from

(a)proton gradient (b)electron gradient (c)reduction of glucose (d)oxidation of glucose

Q.5.PEP is primary co_2 accaptor in

(a)c_4 plants (b)c_3 plants (c)c_2 plants (d)both a and b

Q.6.The enzyme not found in c_3 plant is

(a)RuBPcarboxylase(b)PEP carboxylase (c)NADP reductase (d)ATP synthetase

Q.7 Which metal ion is a constituent of chlorophyll

(a)iron (b)copper (c)magnesium (d)zinc

Q.8.When CO_2 is added to PEP,the stable product synthesized is

(a)pyruvate (b)glyceraldehydes-3-phosphate

(c)phosphoglycerate (d)oxaloacetate

Q.9.Calvin cycle leads to reduction of

(a)CO_2 (b)O_2 (c)RUBP (d)RUMP

Q.10.In photosystem-I the first electron accepter is

(a)an iron sulphur protein (b)ferredoxin (c)cytochrome (d)plastocyanin

Q.11.NH_3 released from

(a)photorespiration (b)dark respiration (c)CAM (d)all of these

Q.12.Acid concentration in CAM plants is more at

(a)night (b)day time (c)down (d)dusk

Q.13.Which one of the following is essential for photolysis of water

(a)manganese (b)zinc (c)copper (d)boron

Q.14.A process that makes important difference between C_3 and C_4 plants is

(a)transpiration (b)glycolysis (c)photosynthesis (d)photorespiration

Q.15.Kranz anatomy is one of the characteristics of the leaves of

(a)Sugarcane (b)Pea (c)Potato (d)Mustard

Q.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	a	c	d	a	a	b	c	d	a	c	a	a	a	d	a

CHAPTER- 15

RESPIRATION IN PLANTS

Q.1.Electron transport system is located in mitochondrial

(a)outer membrane (b)inter membrane space (c)inner membrane (d)matrix

Q.2.The ultimate electron accepter of respiration in aerobic organisms is

(a)cytochrome (b)oxygen (c)hydrogen (d)glucose

Q.3.Phosphorylation of glucose during glycolysis is catalysed by

(a)phosphoglucomutase (b)phosphoglucoisomerase

(c)hexokinase (d)phosphorylase

Q.4.Which of the following exhibits the highest rate of respiration

(a)growing shoot apex (b)germinating seed (c)root tip (d)leaf bud

Q.5.The end product of oxidative phosphorylation is

(a)NADH (b)oxygen (c)ADP (d)ATP+H_2O

Q.6.Intermediate stage between aerobic and anaerobic cycle is

(a)glyoxylate cycle (b)glycolysis (c)krebs cycle (d)none of these

Q.7.Pyrubic acid, the key product of glycolysis can have many metabolic fates. under aerobic condition it forms

(a)lactic acid (b)CO_2 +H_2O (c)Acetyl CoA+CO_2 (d)ethanol+CO_2

Q.8.Mitochondria are semiautonomous as they posses

(a)DNA (b)DNA+RNA (c)DNA+RNA ribosomes (d)protein

Q.9.Which of the enzyme not used in krebs cycle

(a)aconitase (b)decarboxylase (c)aldolase (d)fumarase

Q.10.the process after glycolysis in aerobic respiration is known as

(a)fermentation (b)respiration (c)krebs cycle (d)decomposition

Q.11.Dough kept overnight in warm weather becomes soft and spongy because of

(a)fermentation (b)cohesion (c)osmosis (d)absorption of CO_2 from atmosphere

Q.12.Identify from the following the compound that links glycolysis and krebs cycle

(a)oxaloacetic acid (b)pyruvic acid (c)lactic acid (d)acetyl coenzyme A

Q.13.Chemosmotic theory of ATP synthesis in the chloroplast and mitochondria is based on

(a)membrane potential (b)accumulation of Na ions (c)accumulation of K ions (d)proton gradient

Q.14.The net gain of ATP during glycolysis is

(a)six (b)eight (c)two (d)four

Q.15.The energy releasing metabolic process in which substrate is oxidized without an external electron acceptor is called

(a)photorespiration (b)glycolysis (c)fermentation (d)aerobic respiration

Q.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	b	b	c	B	a	b	c	c	c	c	a	d	c	C	c

CHAPTETER 16-PLANT GROWTH AND DEVLOPMENT

Q.1.Ethylene is used for

(a)retarding ripening of tomatoes (b) ripening of fruits

(c)slowing down ripening of apples (d)Parthenogenesis

Q.2.Coconut milk contains

(a)ABA (b)auxin (c)cytokinin (d)gibberellins

Q.3.the affect of apical dominance can be overcome by which of the following hormone

(a)IAA (b)ethylene (c)gibberellins (d)cytokinin

Q.4.The photoperiod in plants is perceived at

(a)meristem (b)flower (c)floral buds (d)leaves

Q.5.ABA acts antagonistic to

(a)ethylene (b)cytokinin (c)gibberlic (d)IAA

Q.6.To increase suger production in sugercanes,they are sprayed with

(a)IAA (b)cytokinin (c)gibberllin (d)ethylene

Q.7.Monocarpic plants are those which

(a)bear flower with one ovary (b)flower once and die (c)bear only one flower

(d)all of the above

Q.8.Growth can be measured in various way.which of these can be used as parameter to measure growth

(a)increase in cell number (b)increase in cell size (c)increase in length and weight

(d)all the above

Q.9.Senescence is inhibited by

(a)ethylene (b)gibberellic acid (c)absciscic acid (d)cytokinin

Q.10.Function of ABA is

(a)apical dominance (b)growth inhibition (c)cell division (d)seed germination

Q.11.Vernalization stimulates flowering in

(a)zamikand (b)turmeric (c)carrot (d)ginger

Q.12.Vernalization is done at

(a)Low temperature (b)low light intensity (c)high temperature (d)high light intensity

Q.13.Photoperiodism was first characterised in

(a)cotton (b)tobacco (c)potato (d)tomato

Q.14.Coconut milk factor is

(a)an auxin (b)a gibberlline (c)abscisic acid (d)cytokinin

Q.15.Auxin is synthesized in which part of the plant

(a)apical (b)nodal (c)intenodal (d)Axillary

Q.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	b	c	d	d	c	C	a	d	d	b	c	a	b	d	a

UNIT V

Chapter 16: Digestion and Absorption

1. **pH of digestive juices within human small intestine is between 7.5 and 8.5. This environment is slightly:**
   (a)Basic (b) Basic (c) Neutral (d) None of these.

2. **What is the substrate of the salivary amylase?**
   (a)Glucose (b) Maltose (c) Starch (d) Protein

3. **Dental formula for man is :**
   (a)2312/2312 (b) 2123/2123 (c) 2132/2132 (d) 2213/2213

4. **Muscular contraction in stomach are known as :**
   (a)Digestion (b) Peristalsis (c) Absorption (d) Circulation

5. **The Intestine of Human body is about 29 feet long, because:**
   (a)It provides more area for food storage
   (b) Bacteria contained in food may gradually be killed.
   (c) More length increases food digestion and absorption
   (d) None of these.

6. **Crypts of Lieberkuhn secrete:**
   (a)Gastric juice
   (b) Sacculusrotundus
   (c) Succusentericus
   (d) Bile Juice

7. **Caecum is meant for the Digestion of :**
   (a)Protein (b) Cellulose (c) Lipid (d) Starch

8. **Which is a common passage in swallowing food and breathing:**
   (a)Larynx (b) Pharynx (c) Glottis (d) Gullet

9. **Vermiform Appendix is a part of:**
   (a) **Alimentary canal**
   (b) **Nervous system**
   (c) **Vascular system**
   (d) **Reproductive system**

10. **Liver secretes:**
   (a) **No digestive enzymes**
   (b) **Many digestive enzymes**
   (c) **Hormones**
   (d) **Entericus**
11. **The largest gland in human body is:**
   (a) **Pancreas**
   (b) **Liver**
   (c) **Pituitary**
   (d) **Thyroid**
12. **Brunner's gland are found in**
   (a) **Submucosa of stomach**
   (b) **Wall of rectum**
   (c) **Submucosa of deudenum**
   (d) **Mucosa of ileum**
13. **Oxyntic cells are located in :**
   (a) **Islets of Langerhans**
   (b) **Gastric epithelium and secrete pepsin**
   (c) **Kidneys and secrete rennin**
   (d) **Gastric epithelium and secrete HCl**
14. **Jaundice may be caused by retarded function of :**
   (a) **Lungs**
   (b) **Kidneys**
   (c) **Heart**
   (d) **Liver**
15. **Peyer's patches produce:**
   (a) **Enterokinase**
   (b) **Amylase**
   (c) **Trypsin**
   (d) **Lymphocytes**

1. **Aerobic respiratory pathway is appropriately termed :**
   (a)Catabolic (b) Parabolic (c) Amphibolic (d) Anabolic

2. **Which of the following respiratory organs are present in spiders and scorpion?**
   (a)Book lungs (b) Gills (c) Gill books (d) Lungs

3. **Residual volume is:**
   (a)Lesser than Tidal volume
   (b) Greater than Inspiratory volume
   (c)Greater than Vital Capacity.
   (d) Greater than Tidal volume.

4. **Respiratory system is derived from :**
   (a)Endoderm (b) Mesoderm (c) Ectoderm (d) None of these.

5. **Coverings of the Lungs is called:**
   (a)Perichondrium (b) Pleural membrane (c) Pericardium (d) peritoneum

6. **Thyroid cartilage is found in**
   (a)Nose (b) Pharynx (c) Larynx (d) Ear pinna

7. **Which of these contain vocal cords:**
   (a)Larynx (b) Pharynx (c) Bronchial tube (d) Glottis
8. **Even when there is no air in it Human trachea does not collapse due to the presence of:**
   (a)Bony rings (b) Turgid pressure (c) Chitinous rings (d) cartilaginous rings
9. **Lung alveoli of mammals have a thin walled composed of :**
   (a)Simple cuboidal epithelium
   (b) Simple Squamous epithelium
   (c)Stratified cuboid epithelium
   (d) Stratified squamous epithelium.

10. Diaphragm is a characteristics of:

(a) Mammals (b) Reptiles (c) Birds (d) All vertebrates

11. Lungs have a large number of narrow tubes called:

(a) Alveoli
(b) Bronchi
(c) Bronchioles
(d) Tracheoles

12. Which one is false:

(a) Blood from right side of the heart is carried to lungs by pulmonary artery
(b) Scurvy is due to Vitamin C deficiency
(c) Pancreas is both exocrine and endocrine gland
(d) Pleura is double covering of kidney

13. The alveolar epithelium in the lung is:

(a) Non ciliated squamous
(b) Non ciliated columnar
(c) Ciliated columnar
(d) Ciliated squamous

14. The structure which does not contribute to the breathing movements in mammals are:

(a) Larynx
(b) Ribs
(c) Diaphragm
(d) Intercostal muscles

15. The left and right bronchi are :

(a) Subdivisions of the trachea
(b) Lobes of lungs
(c) Fine branches of the tracheoles
(d) All the above

1. **Histamine and Heparin are secreted by :**
   (a) Monocytes (b) Neutrophils (c) Eosinophils (d) Basophils
2. **Renal portal system is absent in :**
   (a) Rat (b) Rabbit (c) Man (d) All of these
3. **Which of the following matches correctly:**
   (a) Factor II Thromboplasm
   (b) Factor III Prothrombin
   (c) Factor VIII Antihaemophilic globulin
   (d) Factor XII Haemophilic
4. **Thread like tendons of papillary muscles inserted upon flaps of tricuspid and bicuspid valves are:**
   (a) Chordae tendinae
   (b) Yellow elastin fibres
   (c) Reticulate fibres
   (d) Collagen fibres
5. **Which of these have closed blood vascular system:**
   (a) Cockroach
   (b) Fish
   (c) Scorpion
   (d) Molluscs
6. **Heart is four chambered in:**
   (a) Lizard
   (b) Fish
   (c) Frog
   (d) Crocodile
7. **Chordae tendinae are found in :**
   (a) Ventricles of Heart
   (b) Atria of Heart
   (c) Joints
   (d) Ventricles of brain

8. **Mitral valve in mammals guards the opening between:**
   (a) Right atrium and right ventricle
   (b) Left atrium and left ventricle
   (c) Right atrium and left ventricle
   (d) Left atrium and left ventricle
9. **Which vessels carry blood from lungs to the Heart;**
   (a) Pulmonary vein
   (b) Cardiac arteries
   (c) Cardiac veins
   (d) Pulmonary arteries
10. **Tricupsid valve is present between :**
   (a) Right atrium and ventricle
   (b) The two atria
   (c) The two ventricles
   (d) Left atria and ventricles
11. **Ventricle is thick walled as compared to auricle because:**
   (a) It is present on the posterior side
   (b) It is to pump blood
   (c) It is to receive blood from the auricles
   (d) None of the above.
12. **Heart is covered by:**
   (a) Peritoneum
   (b) Pleural membrane
   (c) Pericardium
   (d) Visceral membrane
13. **First heart transplant was performed by:**
   (a) James Watson
   (b) William Harvey
   (c) HarGovind Khorana
   (d) Christian Bernard
14. **Pacemaker influences:**
   (a) Contraction of pelvis
   (b) Heartbeat rate
   (c) Flow of blood in Heart
   (d) Contraction of heart muscles
15. **Pulse beat is measured by:**
   (a) Capillaries
   (b) Arteries
   (c) Veins
   (d) Nerves

1. **Excretion means:**
   (a) **Removal of the substances which have never been the part of body.**
   (b) **Formation of useful substances in the body.**
   (c) **Removal of the substances not required in the body.**
   (d) **All of these**
2. **Osmoregulation is the control over the:**
   (a) **Removal of Notrogen from the body.**
   (b) **pH of the blood.**
   (c) **Osmotic properties of cell membrane**
   (d) **Concentrations of salts and water in the body.**
3. **In annelids, excretory organs are :**
   (a) **Nephridia**
   (b) **Malpighian tubules**
   (c) **Green glands**
   (d) **Kidney**
4. **Henle's loop is found in:**
   (a) **Lungs**
   (b) **Heart**
   (c) **Liver**
   (d) **Kidneys**
5. **Bowman's capsule is a part of :**
   (a) **Nephron**
   (b) **Liver cell**
   (c) **Neuron**
   (d) **Smooth muscles**
6. **Malpighian body is constituted by:**
   (a) **Glomerulus body**
   (b) **Glomerulus and Bowman's capsule**
   (c) **Glomerulus and efferent vessel**
   (d) **Glomerulus and afferent vessel.**
7. **The animal that excretes amino acids without deamination is:**
   (a) **Housefly**
   (b) **Frog**
   (c) **Unio**
   (d) **Spider**

8. **Uric acid is the chief excretory product in:**
   (a) **Amphibians**
   (b) **Mammals**
   (c) **Insects**
   (d) **Earthworm**
9. **The Glomerular filtrate contain contains:**
   (a) **Urea and Uric acid.**
   (b) **Urea, Uric acid and Ammonia**
   (c) **Urea, Uric acid, Ammonia and water**
   (d) **Urea, Uric acid,Glucose and water**
10. **Vitamin excreted by urine in higher vertebrate:**
   (a) **A**
   (b) **C**
   (c) **D**
   (d) **K**
11. **Bowman's glands are found in:**
   (a) **Juxtramedullary nephrons**
   (b) **Olfactory epithelium**
   (c) **External auditory canal**
   (d) **Cortical nephrons only**
12. **Loop of Henle is found in :**
   (a) **Lung**
   (b) **Liver**
   (c) **Neuron**
   (d) **Nephron**
13. **Deamination occurs in:**
   (a) **Kidney**
   (b) **Liver**
   (c) **Nephron**
   (d) **Both (a) and (b)**
14. **Bidder's Canal is found in:**
   (a) **Testes of Frog.**
   (b) **Kidney of Frog**
   (c) **Kidney of Rabbit**
   (d) **Both (a) and (c)**

15. Excretory product of Spider is:

(a) Uric acid

(b) Ammonia

(c) Guanine

(d) None of these

16. ADH acts on:

(a) Collecting tubule of Kidney.

(b) Loop of Henle

(c) Collecting ducts of testes.

(d) None of the above.

1. **Muscle which are immune to fatigue are:**
   (a) Unstriped muscles
   (b) Cardiac muscles
   (c) Jaw muscles
   (d) Skeleton muscles
2. **Accumulation of which of the following causes fatigue?**
   (a) Acetic acid
   (b) Carboxylic acid
   (c) Hydrochloric acid
   (d) Lactic acid
3. **Elbow joint is an example of :**
   (a) Pivot joint
   (b) Hinge joint
   (c) Sliding joint
   (d) Ball and socket joint
4. **The kind of tissue that forms the supportive connective tissue in our pinna (External ears is also found in:**
   (a) Vertebrae
   (b) Nails
   (c) Ear ossicles
   (d) Tip of the Nose
5. **Lower jaw of man is made of :**
   (a) 1 Bone
   (b) 2 Bone
   (c) No bones, only muscles
   (d) 3 Bones
6. **Scapula is an example of :**
   (a) Long Bone
   (b) Short Bone
   (c) Flat bone
   (d) Irregular bone

7. **Biceps muscle is found in:**
   - **(a) Radius**
   - **(b) Ulna**
   - **(c) Humerus**
   - **(d) Scapula**

8. **Myoglobin is found in:**
   - **(a) All muscle fibre**
   - **(b) Red muscle fibre**
   - **(c) White muscle fibre**
   - **(d) Red and White both**

9. **The functional unit of a contractile system in striated muscle is:**
   - **(a) Myofibril**
   - **(b) Cross bridges**
   - **(c) Sacromere**
   - **(d) Z-band**

10. **Substance that accumulates in a fatigued mascle is:**
   - **(a) Pyruvic acid**
   - **(b) Carbon di oxide**
   - **(c) ADP**
   - **(d) Lactic acid**

11. **Ribs are attached to:**
   - **(a) Scapula**
   - **(b) Sternum**
   - **(c) Clavicle**
   - **(d) Illium**

12. **ATPase of the muscle is located in:**
   - **(a) Actinin**
   - **(b) Troponin**
   - **(c) Myosin**
   - **(d) Actin**

13. **Intervertebral disc is found in the Vertebral column of:**
   - **(a) Birds**
   - **(b) Reptiles**
   - **(c) Mammals**
   - **(d) Amphibians**

14. Knee joint and elbow joints are examples are examples of:

(a) Saddle joint

(b) Ball and Socket joint

(c) Pivot joint

(d) Hinge joint

15. Which of the following is not a disorder of bone:

(a) Arthritis

(b) Osteoporosis

(c) Rickets

(d) Artherosclerosis

Chapter 21 : Neural control and coordination

1. **Which of the following actions is controlled by Sympathetic neural system?**
   (a) Breathing
   (b) Increased heart rate during stress
   (c) Increased breathing
   (d) Digestion
2. **During resting stage the axonal membrane is more permeable to which ion?**
   (a) Potassium
   (b) Calcium
   (c) Sodium
   (d) Magnesium
3. **What is the name of the node between two myelin sheaths:**
   (a) Nissl granules
   (b) Schwan cells
   (c) Nodes of Rsnvier
   (d) None of these
4. **Which of the following is not controlled by medulla oblongata :**
   (a) Cardiovascular reflexes
   (b) Breathing
   (c) Gastric reflexes
   (d) Reflex action
5. **Which of the following is a neurotransmitter :**
   (a) Morphine
   (b) Epinephrine
   (c) Dopamine
   (d) Norepinephrine.
6. **The neurotransmitter at synapse is :**
   (a) ATP
   (b) Cholin esterase
   (c) Acetyl choline
   (d) None

7. **Mammalian brain differs from an Amphibian Brain in possessing :**
   - **(a) Cerebellum**
   - **(b) Corpus callosum**
   - **(c) Olfactory lobe**
   - **(d) Hypothalamus**
8. **The Cerebellum is important in controlling:**
   - **(a) Stereognosis**
   - **(b) Muscle strength**
   - **(c) Stretch reflex**
   - **(d) Muscular coordination**

9. **Which is true about conduction of nerve impulse at first phase?**
   - **(a) Na+ moves in K+ moves out.**
   - **(b) Na+ moves out K+ moves in.**
   - **(c) Both move in**
   - **(d) Both move out**
10. **The nature of action potential on the outer surface of plasma membrane :**
   - **(a) –ve**
   - **(b) +ve**
   - **(c) Neural**
   - **(d) None of these.**
11. **Which of the following is not a structure of the Hind brain?**
   - **(a) Medulla Oblongata.**
   - **(b) Thalamus**
   - **(c) Cerebellum**
   - **(d) Pons**
12. **Which of the following structure is in Diencephalon?**
   - **(a) Cerebral cortex**
   - **(b) Olfactory bulb**
   - **(c) Hypothalamus**
   - **(d) Basal ganglia**

13. Anterior Choroid plexus is found in the roof of:

(a) Cerebrum

(b) Diencephalon

(c) Iter

(d) Cerebellum

14. Parkinsonism is related with:

(a) Brain

(b) Spinal cord

(c) Cranial nerves

(d) Spinal nerves.

15. The Nerves supplied to Diaphragm is :

(a) Vagus

(b) Phrenic

(c) Trigeminal

(d) Glossopharyngeal

Chapter 22 : Chemical coordination and Integration

1. **Insulin is produced by which type of cells in the pancreas?**
   - **(a) Alpha cells**
   - **(b) Beta cells**
   - **(c) Gamma cells**
   - **(d) Delta cells**
2. **Which of the following is not a result of action of Cortisol?**
   - **(a) RBC production**
   - **(b) Lipolysis**
   - **(c) WBC production**
   - **(d) Maintenance of blood pressure.**
3. **Which hormone is responsible for the development of Corpus luteum in the uterus?**
   - **(a) FSH**
   - **(b) GH**
   - **(c) LH**
   - **(d) MSH**
4. **The immune system becomes weak in older persons. Which of the following is a cause for this?**
   - **(a) Increased secretion of Thymus.**
   - **(b) Decreased secretion of Thymus.**
   - **(c) Increased secretion of Thyroid gland.**
   - **(d) Decreased secretion of Thyroid gland.**
5. **What is the full form of ACTH?**
   - **(a) Adenocortricotrophic hormone**
   - **(b) Adrenocorticotrophic hormone**
   - **(c) Adenocorticoid hormone.**
   - **(d) Adrenocorticoid hormone**
6. **Which of the following hormones is secreted by hypothalamus?**
   - **(a) Releasing hormone.**
   - **(b) Inhibitory hormones**
   - **(c) Both (a) and (b).**
   - **(d) Neither (a) nor (b).**

7. **Deficiency of iodine causes which of the following conditions?**
   - **(a) Hyperthyroidism.**
   - **(b) Hypothyroidism.**
   - **(c) Goitre.**
   - **(d) Both (b) and (c).**
8. **Secretion of pancreas and gall bladder is influenced by which hormone?**
   - **(a) Gastrin.**
   - **(b) Secretin.**
   - **(c) Cholecystokinin.**
   - **(d) Gastric inhibitory peptide.**

9. **What is erythropoiesis?**
   - **(a) Production of antibodies.**
   - **(b) Production of antigens.**
   - **(c) Production of clotting factors.**
   - **(d) Production of RBC's.**
10. **What is the function of Atrial Natriuretic factor (ANF)?**
   - **(a) Decreased blood pressure.**
   - **(b) Increased blood pressure.**
   - **(c) Decreased heart rate.**
   - **(d) Increased heart rate.**
11. **Ovulation is stimulated by:**
   - **(a) LH**
   - **(b) FSH**
   - **(c) Estrogen**
   - **(d) Progesterone**
12. **Glucagon produced by alpha- cells of Islets of Langerhans:**
   - **(a) Covert Glucose to Glycogen**
   - **(b) Covert glycogen to glucose**
   - **(c) Decrease concentration of glucose in blood**
   - **(d) None of these.**

13. Cholestokinin and Secretin are secreted by:

(a) Stomach

(b) Liver

(c) Duodenum

(d) Ileum

14. Somatostanin (GIH) is secreted by:

(a) Pituitary

(b) Thyroid

(c) Pineal

(d) Hypothalamus

15. Insulin is:

(a) Vitamin

(b) Proteinaceous hormone.

(c) Amine hormone

(d) Steroid

Answer key: Class XI

Chapter 16	Chapter 17	Chapter18	Chapter19	Chapter 20	Chapter 21	Chapter 22
1a	1c	1d	1c	1b	1b	1b
2 c	2a	2d	2d	2d	2a	2c
3b	3d	3c	3a	3b	3c	3c
4b	4a	4a	4d	4d	4d	4b
5c	5b	5d	5a	5a	5a	5b
6c	6c	6d	6b	6c	6c	6c
7b	7a	7a	7c	7c	7b	7d
8b	8d	8b	8c	8b	8d	8c
9a	9b	9a	9d	9c	9a	9d
10a	10a	10a	10b	10d	10a	10a
11b	11c	11b	11b	11b	11b	11a
12c	12d	12c	12d	12b	12c	12b
13d	13a	13d	13b	13c	13b	13c
14d	14a	14b	14b	14d	14a	14d
15d	15a	15b	15c	15d	15b	15b
			16a			