

11th Biology Book Back Questions - New Book

11th Standard – BIO BOTANYNEW BOOK1.Living World**I. Choose the Correct Answer**

- Which one of the following statement about virus is correct
 - Possess their own metabolic system
 - They are facultative parasites
 - They contain DNA or RNA**
 - Enzymes are present
- Identify the incorrect statement about the Gram positive bacteria
 - Teichoic acid absent**
 - High percentage of peptidoglycan is found in cell wall
 - Cell wall is single layered
 - Lipopolysaccharide is present in cell wall
- Identify the Archaeobacterium
 - Acetobacter
 - Erwinia
 - Treponema
 - Methanobacterium**
- The correct statement regarding Blue green algae is
 - lack of motile structures**
 - presence of cellulose in cell wall
 - absence of mucilage around the thallus
 - Presence of floridean starch
- Identify the correctly matched pair
 - Actinomycete – a) Late blight
 - Mycoplasma – b) lumpy jaw
 - Bacteria – c) Crown gall**
 - Fungi – d) sandal spike

2. PLANT KINGDOM**I. Choose the correct answer**

- Which of the plant group has gametophyte as a dominant phase
 - Pteridophytes
 - Bryophytes**
 - Gymnosperm
 - Angiosperm
- Which of following represent gametophytic generation in pteridophytes
 - Prothallus**
 - Thallus
 - Cone
 - Rhizophore
- The haploid number of chromosome for an Angiosperm is 14 , the number of chromosome in its endosperm would be
 - 7
 - 14
 - 42**
 - 28
- Endosperm in Gymnosperm is formed
 - At the time of fertilization
 - Before fertilization**

- c. After fertilization.
- d. Along with the development of embryo

3. VEGETATIVE MORPHOLOGY

I. Choose the correct answer:

1. Roots are
 - a. Descending, negatively geotropic, positively phototropic
 - b. Descending, positively geotropic, negatively phototropic**
 - c. Ascending, positively geotropic, negatively phototropic
 - d. Ascending, negatively geotropic, positively phototropic
2. When the root is thick and fleshy, but does not take a definite shape, it said to be
 - a. Nodulose root
 - b. Tubercular root**
 - c. Moniliform root
 - d. Fasciculated root
3. Example for negatively geotropic roots
 - a. Ipomoea, Dahlia
 - b. Asparagus, Ruellia
 - c. Vitis, Portulaca
 - d. Avicennia, Rhizophora**
4. Curcuma amada, Curcuma domestica, Asparagus, Maranta are example of
 - a. Tuberos root
 - b. Beaded root
 - c. Moniliform root
 - d. Nodulose root**
5. Bryophyllum and Dioscorea are example for
 - a. Foliar bud, apical bud
 - b. Foliar bud, cauline bud**
 - c. Cauline bud, apical bud
 - d. Cauline bud, foliar bud

4. REPRODUCTIVE MORPHOLOGY

I. Choose the correct answer

1. Vexillary aestivation is characteristic of the family
 - a. Fabaceae**
 - b. Asteraceae
 - c. Solanaceae
 - d. Brassicaceae
2. Gynoecium with united carples is termed as
 - a. Apocarpous
 - b. Multicarpellary
 - c. Syncarpous**
 - d. None of the above
3. Aggregate fruit develops from
 - a. Multicarpellary, apocarpous ovary**
 - b. Multicarpellary, syncarpous ovary
 - c. Multicarpellary ovary
 - d. Whole inflorescence
4. In an inflorescence where flowers are borne laterally in an acropetal succession the position of the youngest floral bud shall be
 - a. Proximal
 - b. Distal**
 - c. Intercalary
 - d. Anywhere
5. A true fruit is the one where
 - a. Only ovary of the flower develops into fruit**
 - b. Ovary and calyx of the flower develops into fruit

- c. Ovary, calyx and thalamus of the flower develops into fruit
- d. All floral whorls of the flower develops into fruit

5. TAXONOMY AND SYSTEMATIC BOTANY

I. Choose the correct answer:

1. Specimen derived from non-original collection serves as the nomenclatural type, when original specimen is missing. It is known as
 - a. Holotype
 - b. **Neotype**
 - c. Isotype
 - d. Paratype
2. Phylogenetic classification is the most favoured classification because it reflects
 - a. Comparative Anatomy
 - b. Number of flowers produced
 - c. Comparative cytology
 - d. **Evolutionary relationships**
3. The taxonomy which involves the similarities and dissimilarities among the immune system of different taxa is termed as
 - a. Chemotaxonomy
 - b. Molecular systematic
 - c. **Serotaxonomy**
 - d. Numerical taxonomy
4. Which of the following is a flowering plant with nodules containing filamentous nitrogen fixing micro - organisms?
 - a. Crotalaria juncea
 - b. Cycas revoluta
 - c. Cicer arietinum
 - d. **Casuarina equisetifolia**
5. Flowers are zygomorphic in
 - a. Ceropogia
 - b. Thevetia
 - c. **Datura**
 - d. Solanum

6. CELL: THE UNIT OF LIFE

I. Choose the correct answer:

1. The two subunits of ribosomes remain united at critical ion level of
 - a. **Magnesium**
 - b. Calcium
 - c. Sodium
 - d. Ferrous
2. Sequences of which of the following is used to know the phylogeny
 - a. mRNA
 - b. **rRNA**
 - c. tRNA
 - d. Hn RNA
3. Many cells function properly and divide mitotically even though they do not have
 - a. Plasma membrane
 - b. cytoskeleton
 - c. mitochondria
 - d. **Plastids**
4. Keeping in view the fluid mosaic model for the structure of cell membrane, which one of the following statements is correct with respect to the movement of lipids and proteins from one lipid monolayer to the other
 - a. Neither lipid nor proteins can flip-flop
 - b. Both lipid and proteins can flip flop
 - c. **While lipids can rarely flip-flop proteins cannot**
 - d. While proteins can flip-flop lipids cannot

5. Match the columns and identify the correct option:

COLUMN-I	COLUMN-II
(a) Thylakoids	(i) Disc-shaped sacs in Golgi apparatus
(b) Cristae	(ii) Condensed structure of DNA
(c) Cisternae	(iii) Flat membranous sacs in stroma
(d) Chromatin	(iv) Infoldings in mitochondria

	(a)	(b)	(c)	(d)
(1)	(iii)	(iv)	(ii)	(i)
(2)	(iv)	(iii)	(i)	(ii)
(3)	(iii)	(iv)	(i)	(ii)
(4)	(iii)	(i)	(iv)	(ii)

7. CELL CYCLE

I. Choose the correct answer

- The correct sequence in cell cycle is
 - S-M-G1-G2
 - S-G1-G2-M
 - G1-S-G2-M**
 - M-G-G2-S
- If cell division is restricted in G1 phase of the cell cycle then the condition is known as
 - S Phase
 - G2 Phase
 - M Phase
 - G0 Phase**
- Anaphase promoting complex APC is a protein degradation machinery necessary for proper mitosis of animal cells. If APC is defective in human cell, which of the following is expected to occur
 - Chromosomes will be fragmented
 - Chromosomes will not condense
 - Chromosomes will not segregate**
 - Recombination of chromosomes will occur
- In S phase of the cell cycle
 - Amount of DNA doubles in each cell**
 - Amount of DNA remains same in each cell
 - Chromosome number is increased
 - Amount of DNA is reduced to half in each cell
- Centromere is required for
 - transcription
 - crossing over
 - Cytoplasmic cleavage
 - movement of chromosome towards pole**
- Synapsis occur between
 - mRNA and ribosomes
 - spindle fibres and centromeres
 - two homologous chromosomes**
 - a male and a female gamete
- In meiosis crossing over is initiated at
 - Diplotene
 - Pachytene**
 - Leptotene
 - Zygotene
- Colchicine prevents the mitosis of the cells at which of the following stage

- a. **Anaphase**
 - b. Metaphase
 - c. Prophase
 - d. interphase
9. The pairing of homologous chromosomes on meiosis is known as
- a. Bivalent
 - b. **Synapsis**
 - c. Disjunction
 - d. Synergids
10. Anastral mitosis is the characteristic feature of
- a. Lower animals
 - b. Higher animals
 - c. **Higher plants**
 - d. All living organisms.

8. BIOMOLECULES

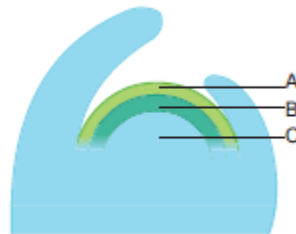
I. Choose the correct answer

1. The most basic amino acid is
 - a. **Arginine**
 - b. Histidine
 - c. Glycine
 - d. Glutamine
2. An example of feedback inhibition is
 - a. Cyanide action on cytochrome
 - b. Sulpha drug on folic acid synthesiser bacteria
 - c. **Allosteric inhibition of hexokinase by glucose-6-phosphate**
 - d. The inhibition of succinic dehydrogenase by malonate
3. Enzymes that catalyse interconversion of optical, geometrical or positional isomers are
 - a. Ligases
 - b. Lyases
 - c. **Hydrolases**
 - d. Isomerases
4. Proteins perform many physiological functions. For example some functions as enzymes. One of the following represents an additional function that some proteins discharge.
 - a. Antibiotics
 - b. Pigment conferring colour to skin
 - c. Pigments making colours of flowers
 - d. **Hormones**

9. TISSUE AND TISSUE SYSTEM

I. Choose the correct answer

1. Refer to the given figure and select the correct statement



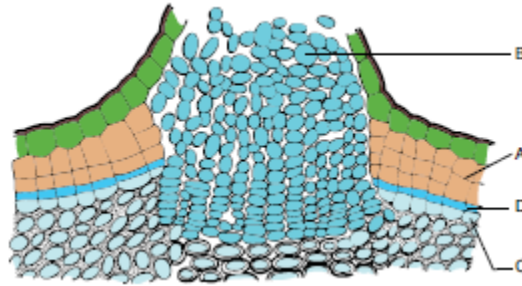
- i. A, B, and C are histogen of shoot ape
- ii. A Gives rise to medullary rays.
- iii. B Gives rise to cortex
- iv. C Gives rise to epidermis

- a. i and ii only
c. i and iii only
- b. **ii and iii only**
d. iii and iv only
2. Read the following sentences and identify the correctly matched sentences.
- i. In exarch condition, the protoxylem lies outside of metaxylem.
ii. In endarch condition, the protoxylem lie towards the centre.
iii. In centarch condition, metaxylem lies in the middle of the protoxylem.
iv. In mesarch condition, protoxylem lies in the middle of the metaxylem.
- a. i, ii and iii only
c. i, ii and iv only
- b. **ii, iii and iv only**
d. All of these
3. In Gymnosperms, the activity of sieve tubes are controlled by
- a. Nearby sieve tube members.
c. **Nucleus of companion cells.**
- b. Phloem parenchyma cells
d. Nucleus of albuminous cells.
4. When a leaf trace extends from a vascular bundle in a dicot stem, what would be the arrangement of vascular tissues in the veins of the leaf?
- a. Xylem would be on top and the phloem on the bottom
b. Phloem would be on top and the xylem on the bottom
c. **Xylem would encircle the phloem**
d. Phloem would encircle the xylem
5. Grafting is successful in dicots but not in monocots because the dicots have
- a. Vascular bundles arranged in a ring
b. **Cambium for secondary growth**
c. Vessels with elements arranged end to end
d. Cork cambium

10. SECONDARY GROWTH

I. Choose the Correct Answer

1. Consider the following statements In spring season vascular cambium
- i. is less active
ii. produces a large number of xylary elements
iii. forms vessels with wide cavities of these,
- a. (i) is correct but (ii) and (iii) are not correct
b. **(i) is not correct but (ii) and (iii) are correct**
c. (i) and (ii) are correct but (iii) is not correct
d. (i) and (ii) are not correct but (iii) is correct.
2. Usually, the monocotyledons do not increase their girth, because
- a. They possess actively dividing cambium
b. **They do not possess actively dividing cambium**
c. Ceases activity of cambium
d. All are correct
3. In the diagram of lenticel identify the parts marked as A,B,C,D



- a. **A. phellem, B. Complementary tissue, C. Phellogen, D. Phellogen.**
 b. A. Complementary tissue, B. Phellem, C. Phellogen, D. Phellogen.
 c. A. Phellogen, B. Phellem, C. Phellogen, D. complementary tissue
 d. A. Phellogen, B. Phellem, C. Complementary tissue, D. Phellogen
4. The common bottle cork is a product of
 a. Dermatogen
 b. Phellogen
 c. Xylem
 d. **Vascular cambium**
5. What is the fate of primary xylem in a dicot root showing extensive secondary growth?
 a. It is retained in the center of the axis
 b. **It gets crushed**
 c. May or may not get crushed
 d. It gets surrounded by primary phloem

11. TRANSPORT IN PLANTS

I. Choose the correct answer

1. In a fully turgid cell
 a. DPD = 10 atm; OP = 5 atm; TP = 10 atm
 b. **DPD = 0 atm; OP = 10 atm; TP = 10 atm**
 c. DPD = 0 atm; OP = 5 atm; TP = 10 atm
 d. DPD = 20 atm; OP = 20 atm; TP = 10 atm
2. Which among the following is correct?
 i. apoplast is fastest and operate in nonliving part
 ii. Transmembrane route includes vacuole
 iii. symplast interconnect the nearby cell through plasmadesmata
 iv. symplast and transmembrane route are in living part of the cell
 a. i and ii
 b. ii and iii
 c. iii and iv
 d. **i, ii, iii, iv**
3. What type of transpiration is possible in the xerophyte Opuntia?
 a. **Stomatal**
 b. Lenticular
 c. Cuticular
 d. All the above
4. Stomata of a plant open due to
 a. **Influx of K⁺**
 b. Efflux of K⁺
 c. Influx of Cl⁻
 d. Influx of OH⁻
5. Munch hypothesis is based on
 a. Translocation of food due to TP gradient and imbibition force
 b. **Translocation of food due to TP**
 c. Translocation of food due to imbibition force

d. None of the above

12. MINERAL NUTRITION

I. Choose the correct answer:

1. Identify correct match.

- | | |
|---------------------------------|----------|
| 1. Die back disease of citrus - | (i) Mo |
| 2. Whip tail disease - | (ii) Zn |
| 3. Brown heart of turnip - | (iii) Cu |
| 4. Little leaf - | (iv) B |

a. 1 (iii) 2 (ii) 3 (iv) 4 (i)

b. **1 (iii) 2 (i) 3 (iv) 4 (ii)**

c. 1 (i) 2 (iii) 3 (ii) 4 (iv)

d. 1 (iii) 2 (iv) 3 (ii) 4 (i)

2. If a plant is provided with all mineral nutrients but, Mn concentration is increased, what will be the deficiency?

- a. **Mn prevent the uptake of Fe, Mg but not Ca**
 b. Mn increase the uptake of Fe, Mg and Ca
 c. Only increase the uptake of Ca
 d. Prevent the uptake Fe, Mg, and Ca

3. The element which is not remobilized?

- | | |
|-------------------|--------------|
| a. Phosphorous | b. Potassium |
| c. Calcium | d. Nitrogen |

4. Match the correct combination.

- | | |
|--------------|---------------|
| A Molybdenum | 1 Chlorophyll |
| B Zinc | 2 Methionine |
| C Magnesium | 3 Auxin |
| D Sulphur | 4 Nitrogenase |

a. A-1 B-3 C-4 D-2

b. A-2 B-1 C-3 D-4

c. **A-4 B-3 C-1 D-2**

d. A-4 B-2 C-1 D-3

5. Identify the correct statement

- i. Sulphur is essential for amino acids Cystine and Methionine
 ii. Low level of N, K, S and Mo affect the cell division
 iii. Non-leguminous plant Alnus which contain bacterium Frankia
 iv. Denitrification carried out by nitrosomonas and nitrobacter.

a. I, II are correct

b. **I, II, III are correct**

c. I only correct

d. all are correct

13. Photosynthesis

I. Choose the correct answer:

1. Assertion (A): Increase in Proton gradient inside lumen responsible for ATP synthesis

Reason (R): Oxygen evolving complex of PS I located on thylakoid membrane facing Stroma, releases H^+ ions

a. Both Assertion and Reason are True.

b. **Assertion is True and Reason is False.**

- c. Reason is True and Assertion is False.
d. Both Assertion and Reason are False
2. Which chlorophyll molecule does not have a phytol tail?
a. Chl- a
b. Chl-b
c. **Chl- c**
d. Chl -d
3. The correct sequence of flow of electrons in the light reaction is
a. **PS II, plastoquinone, cytochrome, PS I, ferredoxin.**
b. PS I, plastoquinone, cytochrome, PS II ferredoxin.
c. PS II, ferredoxin, plastoquinone, cytochrome, PS I.
d. PS I, plastoquinone, cytochrome, PS II, ferredoxin.
4. For every CO₂ molecule entering the C₃ cycle, the number of ATP & NADPH required
a. 2ATP + 2NADPH
b. 2ATP + 3NADPH
c. **3ATP + 2NADPH**
d. 3ATP + 3NADPH
5. Identify true statement regarding light reaction of photosynthesis?
a. Splitting of water molecule is associated with PS I.
b. PS I and PS II involved in the formation of NADPH + H⁺.
c. The reaction center of PS I is Chlorophyll a with absorption peak at 680 nm.
d. **The reaction center of PS II is Chlorophyll a with absorption peak at 700 nm.**

14.RESPIRATION

I. Choose the correct answer:

1. The number of ATP molecules formed by complete oxidation of one molecule of pyruvic acid is
a. 12
b. 13
c. 14
d. **15**
2. During oxidation of two molecules of cytosolic NADH + H⁺, number of ATP molecules produced in plants are
a. **3**
b. 4
c. 6
d. 8
3. The compound which links glycolysis and Krebs cycle is
a. succinic acid
b. pyruvic acid
c. **acetyl CoA**
d. citric acid
4. Assertion (A): Oxidative phosphorylation takes place during the electron transport chain in mitochondria.
Reason (R): Succinyl CoA is phosphorylated into succinic acid by substrate phosphorylation.
a. A and R is correct. R is correct explanation of A
b. **A and R is correct but R is not the correct explanation of A**
c. A is correct but R is wrong
d. A and R is wrong.
5. Which of the following reaction is not involved in Krebs cycle.
a. Shifting of phosphate from 3C to 2C
b. **Splitting of Fructose 1,6 bisphosphate of into two molecules 3C compounds.**
c. Dephosphorylation from the substrates
d. All of these

15.PLANT GROWTH AND DEVELOPMENT**I. Choose the correct answer:**

- Select the wrong statement from the following:
 - Formative phase of the cells retain the capability of cell division.
 - In elongation phase development of central vacuole takes place.
 - In maturation phase thickening and differentiation takes place.
 - In maturation phase, the cells grow further.**
- If the diameter of the pulley is 6 inches, length of pointer is 10 inches and distance travelled by pointer is 5 inches. Calculate the actual growth in length of plant.
 - 3 inches**
 - 6 inches
 - 12 inches
 - 30 inches
- In unisexual plants, sex can be changed by the application of
 - Ethanol
 - Cytokinins**
 - ABA
 - Auxin
- Select the correctly matched one

A) Human urine	i) Auxin –B
B) Corn gram oil	ii) GA3
C) Fungus	iii) Abscisic acid II
D) Herring fish	iv) Kinitin sperm
E) Unripe maize	v) Auxin A grains
F) Young cotton	vi) Zeatinbolls

 - A-iii, B-iv, C-v, D-vi, E-i, F-ii,
 - A-v, B-i, C-ii, D-iv, E-vi, F-iii,**
 - A-iii, B-v, C-vi, D-i, E-ii, F-iv,
 - A-ii, B-iii, C-v, D-vi, E-iv, F-i
- Seed dormancy allows the plants to
 - overcome unfavourable climatic conditions
 - develop healthy seeds
 - reduce viability
 - prevent deterioration of seeds.**

11th Standard – BIO ZOOLOGY**NEW BOOK****1.THE LIVING WORLD****I. Choose the Correct Answer**

- A living organism is differentiated from non-living structure based on
 - Reproduction
 - Growth
 - Metabolism
 - Movement**
- A group of organisms having similar traits of a rank is
 - Species
 - Taxon**
 - Genus
 - Family

3. Every unit of classification regardless of its rank is
 - a. **Taxon**
 - b. Variety
 - c. Species
 - d. Strain
4. Which of the following is not present in same rank?
 - a. **Primata**
 - b. Orthoptera
 - c. Diptera
 - d. Insecta
5. What taxonomic aid gives comprehensive information about a taxon?
 - a. **Taxonomic Key**
 - b. Herbarium
 - c. Flora
 - d. Monograph
6. Who coined the term biodiversity?
 - a. **Walter Rosen**
 - b. AG Tansley
 - c. Aristotle
 - d. AP de Candole
7. Cladogram considers the following characters
 - a. Physiological and Biochemical
 - b. **Evolutionary and Phylogenetic**
 - c. Taxonomic and systematic
 - d. None of the above
8. Molecular taxonomic tool consists of
 - a. **DNA and RNA**
 - b. Mitochondria and Endoplasmic reticulum
 - c. Cell wall and Membrane proteins
 - d. All the above

2.KINGDOM ANIMALIA

I. Choose the correct answer

1. The symmetry exhibited in cnidarians is
 - a. **Radial**
 - b. Bilateral
 - c. Pentamerous radial
 - d. Asymmetrical
2. Sea anemone belongs to phylum
 - a. Protozoa
 - b. Porifera
 - c. **Coelenterata**
 - d. Echinodermata
3. The excretory cells that are found in platyhelminthes are
 - a. Protonephridia
 - b. **Flame cells**
 - c. Solenocytes
 - d. All of these
4. In which of the following organisms, self fertilization is seen.
 - a. Fish
 - b. Round worm
 - c. **Earthworm**
 - d. Liver fluke
5. Nephridia of Earthworms are performing the same functions as
 - a. Gills of prawn
 - b. **Flame cells of Planaria**
 - c. Trachea of insects
 - d. Nematoblasts of Hydra
6. Which of the following animals has a true coelom ?
 - a. Ascaris
 - b. **Pheretima**
 - c. Sycon
 - d. Taenia solium
7. Metameric segmentation is the main feature of
 - a. **Annelida**
 - b. Echinodermata
 - c. Arthropoda
 - d. Coelenterata

8. In Pheretima locomotion occurs with help of
 a. circular muscles
 b. longitudinal muscles and setae
 c. **circular, longitudinal muscles and setae**
 d. parapodia
9. Which of the following have the highest number of species in nature?
 a. **Insects**
 b. Birds
 c. Angiosperms
 d. Fungi
10. Which of the following is a crustacean?
 a. **Prawn**
 b. Snail
 c. Sea anemone
 d. Hydra
11. The respiratory pigment in cockroach is
 a. Haemoglobin
 b. **Haemocyanin**
 c. Oxyhaemoglobin
 d. Haemoerythrin
12. Exoskeleton of which phylum consists of chitinous cuticle?
 a. Annelida
 b. porifera
 c. **Arthropoda**
 d. Echinodermata
13. Lateral line sense organs occur in
 a. Salamander
 b. Frog
 c. Water snake
 d. **Fish**
14. The limbless amphibian is
 a. Ichthyophis
 b. Hyla
 c. **Rana**
 d. Salamander
15. Four chambered heart is present in
 a. Lizard
 b. Snake
 c. Scorpion
 d. **Crocodile**
16. Which of the following is not correctly paired?
 a. Humans – Ureotelic
 b. Birds – Uricotelic
 c. Lizards – Uricotelic
 d. **Whale – Ammonotelic**
17. Which of the following is an egg laying mammal?
 a. Delphinus
 b. Macropus
 c. **Ornithorhynchus**
 d. Equus
18. Pneumatic bones are seen in
 a. Mammalia
 b. **Aves**
 c. Reptilia
 d. Sponges
19. Match the following columns and select the correct option.
- | | |
|------------------|-------------------|
| Column – I | Column – II |
| (p) Pila | (i) Devil fish |
| (q) Dentalium | (ii) Chiton |
| (r) Chaetopleura | (iii) Apple snail |
| (s) Octopus | (iv) Tusk shell |
- a. p – (ii), q – (i), r – (iii), s – (iv)
 b. **p – (iii), q – (iv), r – (ii), s – (i)**
 c. p – (ii), q – (iv), r – (i), s – (iii)
 d. p – (i), q – (ii), r – (iii), s – (iv)
20. In which of the following phyla, the adult shows radial symmetry but the larva shows bilateral

symmetry?

- | | |
|---------------|-------------------------|
| a. Mollusca | b. Echinodermata |
| c. Arthropoda | d. Annelida |

21. Which of the following is correctly matched?

- | | |
|---|---------------------------|
| a. Physalia – Portugese man of war | b. Pennatula – Sea fan |
| c. Adamsia – Sea pen | d. Gorgonia – Sea anemone |

3.TISSUE LEVEL OF ORGANISATION

I. Choose the correct answer:

- The main function of the cuboidal epithelium is

a. Protection	b. Secretion
c. Absorption	d. Both (b) and (c)
- The ciliated epithelium lines the

a. Skin	b. Digestive tract
c. Gall bladder	d. Trachea
- What type of fibres are found in connective tissue matrix?

a. Collagen	b. Areolar
c. Cartilage	d. Tubular
- Prevention of substances from leaking across the tissue is provided by

a. Tight junction	b. Adhering junction
c. Gap junction	d. Elastic junction
- Non-shivering thermogenesis in neonates produces heat through

a. White fat	b. Brown fat
c. Yellow fat	d. Colourless fat

4.ORGAN AND ORGAN SYSTEMS IN ANIMALS

I. Choose the correct answer

- The clitellum is a distinct part in the body of earthworm *Lampito mauritii*, it is found in?

a. Segments 13 – 14	b. Segments 14 – 17
c. Segments 12 – 13	d. Segments 14 - 16
- Sexually, earthworms are

a. Sexes are separate	b. Hermaphroditic but not self -fertilizing
c. Hermaphroditic and self – fertilizing	d. Parthenogenic
- To sustain themselves, earthworms must guide their way through the soil using their powerful muscles. They gather nutrients by ingesting organic matter and soil, absorbing what they need into their bodies.

True or False: The two ends of the earthworm can equally ingest soil.

- | | |
|---------|-----------------|
| a. True | b. False |
|---------|-----------------|

4. The head region of Cockroach ____ pairs of ____ and ____ shaped eyes occur.

- | |
|--|
| a. One pair, sessile compound and kidney shaped |
| b. Two pairs, stalked compound and round shaped |

- c. Many pairs, sessile simple and kidney shaped
 d. Many pairs, stalked compound and kidney shaped
5. The location and numbers of malpighian tubules in Periplaneta.
 a. **At the junction of midgut and hindgut, about 150.**
 b. At the junction of foregut and midgut, about 150.
 c. Surrounding gizzard, eight.
 d. At the junction of colon and rectum, eight.
6. The type of vision in Cockroach is
 a. Three dimensional
 b. Two dimensional
 c. **Mosaic**
 d. Cockroach do not have vision
7. How many abdominal segments are present in male and female Cockroaches?
 a. **10, 10**
 b. 9, 10
 c. 8, 10
 d. 9, 9
8. Which of the following have an open circulatory system?
 a. Frog
 b. Earthworm
 c. Pigeon
 d. **Cockroach**
9. Buccopharyngeal respiration in frog
 a. **is increased when nostrils are closed**
 b. Stops when there is pulmonary respiration
 c. is increased when it is catching fly
 d. stops when mouth is opened.
10. Kidney of frog is
 a. Archinephros
 b. Pronephros
 c. **Mesonephros**
 d. Metanephros
11. Presence of gills in the tadpole of frog indicates that
 a. fishes were amphibious in the past
 b. fishes evolved from frog-like ancestors
 c. frogs will have gills in future
 d. **frogs evolved from gilled ancestor**
12. Choose the wrong statement among the following:
 a. In earthworm, a single male genital pore is present.
 b. Setae help in locomotion of earthworms.
 c. **Muscular layer in the body wall of earthworm is made up of only circular muscles.**
 d. Typhlosole is part of the intestine of earthworm.
13. Which of the following are the senseorgans of Cockroach?
 a. Antennae, compound eyes, maxillary palps, anal cerci
 b. **Antennae, compound eye, maxillary palps**
 c. Antennae, ommatidia, maxillary palps, sternum
 d. Antennae, eyes, maxillary palps, and tarsus of walking legs

5. DIGESTION AND ABSORPTION

I. Choose the correct answer:

- Choose the incorrect sentence from the following:
 - Bile juice emulsifies the fat.
 - Chyme is a digestive acidic food in stomach.
 - Pancreatic juice converts lipid into fatty acid and glycerol.
 - Enterokinase stimulates the secretion of pancreatic juice.**
- What is chyme....?
 - The process of conversion of fat into small droplets.
 - The process of conversion of micelles substances of glycerol into fatty droplet.
 - The process of preparation of incompletely digested acidic food through gastric juice.**
 - The process of preparation of completely digested liquid food in midgut.
- Which of the following hormones stimulate the production of pancreatic juice and bicarbonate?
 - Angiotensin and epinephrine
 - Gastrin and insulin
 - Cholecystokinin and secretin**
 - Insulin and glucagon
- The sphincter of Oddi guards
 - Hepatopancreatic duct**
 - Common bile duct
 - Pancreatic duct
 - Cystic duct
- In small intestine, active absorption occurs in case of
 - Glucose
 - Amino acids
 - Na⁺**
 - All the above
- Which one is incorrectly matched?
 - Pepsin – stomach
 - Renin – liver**
 - Trypsin – intestine
 - Ptyalin – mouth
- Absorption of glycerol, fatty acids and monoglycerides takes place by
 - Lymph vessels within villi**
 - Walls of stomach
 - Colon
 - Capillaries within villi
- First step in digestion of fat is
 - Emulsification**
 - Enzyme action
 - Absorption by lacteals
 - Storage in adipose tissue
- Enterokinase takes part in the conversion of
 - Pepsinogen into pepsin
 - Trypsinogen into trypsin**
 - Protein into polypeptide
 - Caseinogen into casein
- Which of the following combinations are not matched?

Column I	Column II
a. Bilirubin and biliverdin	(i) intestinal juice
b. Hydrolysis of starch	(ii) Amylases
c. Digestion of fat	(iii) Lipases
d. Salivary gland	(iv) Parotid
- Match column I with column II and choose the correct option

Column – I	Column – II
(P) Small intestine	(i) Largest factory
(Q) Pancreas	(ii) Absorption of glucose

- (R) Liver (iii) Carrying electrolytic solution
 (S) Colon (iv) Digestion and absorption
 a. (P-iv) (Q -iii) (R- i) (S – ii) b. (P-iii) (Q -ii) (R- i) (S – iv)
 c. (P-iv) (Q -iii) (R- i) (S – ii) d. (P-ii) (Q -iv) (R- iii) (S – i)

12. Match column I with column II and choose the correct option

- | Column – I | Column – II |
|---------------------|----------------|
| (P) Small intestine | (i) 23 cm |
| (Q) Large intestine | (ii) 4 meter |
| (R) Oesophagus | (iii) 12.5 cm |
| (S) Pharynx | (iv) 1.5 meter |
- a. (P-iv) (Q -ii) (R- i) (S – iii) b. (P-ii) (Q -iv) (R- i) (S – iii)
 c. (P-i) (Q -iii) (R- ii) (S – iv) d. (P-iii) (Q -i) (R- ii) (S – iv)

13. Match column I with column II and choose the correct option

- | Column – I | Column – II |
|-------------|---------------|
| (P) Lipase | (i) Starch |
| (Q) Pepsin | (ii) Cassein |
| (R) Renin | (iii) Protein |
| (S) Ptyalin | (iv) Lipid |
- a. (P-iv) (Q -ii) (R- i) (S – iii) b. (P-iii) (Q -iv) (R- ii) (S – i)
 c. (P-iv) (Q -iii) (R- ii) (S – i) d. (P-iii) (Q -ii) (R- iv) (S – i)

14. Which of the following is not the function of liver?

- a. **Production of insulin** b. Detoxification
 c. Storage of glycogen d. Production of bile

15. Assertion : (A) Large intestine also shows the presence of villi like small intestine.

Reason: (B) Absorption of water takes place in large intestine.

- a. Both A and B are true and B is the correct explanation of A
 b. Both A and B are true but B is not the correct explanation of A
 c. A is true but B is false
 d. **A is false but B is true**

16. Which of the following is not true regarding intestinal villi?

- a. They possess microvilli.
 b. They increase the surface area.
 c. They are supplied with capillaries and the lacteal vessels.
 d. **They only participate in digestion of fats.**

6. RESPIRATION

I. Choose the correct answer:

1. Breathing is controlled by
 a. cerebrum b. **medulla oblongata**
 c. cerebellum d. pons
2. Intercostal muscles are found between the
 a. vertebral column b. sternum

- c. **ribs**
 - d. glottis
3. The respiratory structures of insects are
- a. **tracheal tubes**
 - b. gills
 - c. green glands
 - d. lungs
4. Asthma is caused due to
- a. bleeding in pleural cavity.
 - b. infection of nose
 - c. damage of diaphragm.
 - d. **infection of lungs**
5. The Oxygen Dissociation Curve is
- a. **sigmoid**
 - b. straight line
 - c. curved
 - d. rectangular hyperbola
6. The Tidal Volume of a normal person is
- a. 800 mL
 - b. 1200 mL
 - c. **500 mL**
 - d. 1100 – 1200 mL
7. During inspiration, the diaphragm
- a. expands.
 - b. unchanged
 - c. relaxes to become domed–shaped.
 - d. **contracts and flattens**
8. CO₂ is transported through blood to lungs as
- a. **carbonic acid**
 - b. oxyhaemoglobin
 - c. carbamino haemoglobin
 - d. carboxy haemoglobin
9. When 1500 mL air is in the lungs, it is called
- a. vital capacity
 - b. tidal volume
 - c. **residual volume**
 - d. inspiratory reserve volume
10. Vital capacity is
- a. TV + IRV
 - b. TV + ERV
 - c. RV + ERV
 - d. **TV + IRV + ERV**
11. After a long deep breath, we do not respire for some seconds due to
- a. more CO₂ in the blood
 - b. **more O₂ in the blood**
 - c. less CO₂ in the blood
 - d. less O₂ in the blood
12. Which of the following substances in tobacco smoke damage the gas exchange system?
- a. carbon monoxide and carcinogens
 - b. carbon monoxide and nicotine
 - c. carcinogens and tar
 - d. **nicotine and tar**
13. Column I represents diseases and column II represents their symptoms. Choose the correctly paired option
- | Column I | Column II |
|---------------|--|
| (P) Asthma | (i) Recurring of bronchitis |
| (Q) Emphysema | (ii) Accumulation of W.B.C.S in alveolus |
| (R) Pneumonia | (iii) Allergy |
- a. **P = iii, Q = ii, R = i**
 - b. P = iii, Q = i, R = ii
 - c. P = ii, Q = iii, R = i
 - d. P = ii, Q = i, R = iii
14. Which of the following best describes the process of gas exchange in the lungs?
- a. Air moves in and out of the alveolus during breathing.
 - b. Carbon dioxide diffuses from deoxygenated blood in capillaries into the alveolar air.

c. **Oxygen and carbon dioxide diffuse down their concentration gradients between blood and alveolar air.**

d. Oxygen diffuses from alveolar air into deoxygenated blood.

15. Make the correct pairs.

Column-I

(P) IC

(Q) EC

(R) VC

(S) FRC

(a) P – i , Q – ii , R – iii , S – iv

(c) P – ii , Q – iii , R – i , S – iv

Column-II

i. maximum volume of air breathes in after forced.

ii. Volume of air present after expiration in lungs.

iii. Volume of air inhaled after expiration.

iv. Volume of air exhaled after inspiration.

(b) P – ii , Q – iii , R – iv , S – i

(d) **P – iii , Q – iv , R – i , S – ii**

16. Make the correct pairs.

Column-I

(P) Tidal volume

(Q) Residual volume

(R) Expiratory reserve volume

(S) Inspiratory reserve volume

(a) **P – ii , Q – iv , R – i , S – iii**

(c) P – ii , Q – iv , R – iii , S – I

Column-II

i. 1000 to 1100 ml

ii. 500 ml

iii. 2500 to 3000 ml

iv. 1100 to 1200 ml

(b) P – iii , Q – ii , R – iv , S – i

(d) P – iii , Q – iv , R – i , S – ii

7. BODY FLUIDS AND CIRCULATION

I. Choose the correct answer

- What is the function of lymph?
 - Transport of O₂ into brain
 - Transport of CO₂ into lungs
 - Bring interstitial fluid in blood**
 - Bring RBC and WBC in lymph node
- Which one of the following plasma proteins is involved in the coagulation of blood?
 - Globulin
 - Fibrinogen**
 - Albumin
 - Serum amylase
- Which of the following WBCs are found in more numbers?
 - Eosinophil
 - Neutrophil**
 - Basophil
 - Monocyte
- Which of the following is not involved in blood clotting?
 - Fibrin
 - Calcium
 - Platelets
 - Bilirubin**
- Lymph is colourless because
 - WBC are absent
 - WBC are present
 - Haemoglobin is absent
 - RBC are absent**
- Blood group is due to the presence or absence of surface
 - Antigens on the surface of WBC
 - Antibodies on the surface of RBC
 - Antigens of the surface of RBC**
 - Antibodies on the surface of WBC

7. A person having both antigen A and antigen B on the surface of RBCs belongs to blood group
 a. A b. B c. **AB** d. O
8. Erythroblastosis foetalis is due to the destruction of
 a. **Foetal RBCs** b. Foetus suffers from atherosclerosis
 c. Foetal WBCs d. Foetus suffers from mianmata
9. Dub sound of heart is caused by
 a. Closure of atrio-ventricular valves b. Opening of semi-lunar valves
 c. **Closure of semi-lunar values** d. Opening of atrio-ventricular valves.
10. Why is the velocity of blood flow the lowest in the capillaries?
 a. The systemic capillaries are supplied by the left ventricle, which has a lower cardiac output than the right ventricle.
 b. Capillaries are far from the heart, and blood flow slows as distance from the heart increases.
 c. **The total surface area of the capillaries is larger than the total surface area of the arterioles.**
 d. The capillary walls are not thin enough to allow oxygen to exchange with the cells.
 e. The diastolic blood pressure is too low to deliver blood to the capillaries at a high flow rate.
11. An unconscious patient is rushed into the emergency room and needs a fast blood transfusion. Because there is no time to check her medical history or determine her blood type, which type of blood should you as her doctor, give her?
 a. A⁻ b. AB c. **O⁺** d. O⁻
12. Which of these functions could or could not be carried out by a red blood cell? Briefly justify your answer
 a. Protein synthesis b. Cell division
 c. Lipid synthesis d. **Active transport**
13. At the venous end of the capillary bed, the osmotic pressure is
 a. **Greater than the hydrostatic pressure**
 b. Result in net outflow of fluids
 c. Results in net absorption of fluids
 d. No change occurs.
14. A patient's chart reveals that he has a cardiac output of 7500 mL per minute and a stroke volume of 50 mL. What is his pulse rate (in beats / min)
 a. 50 b. 100 c. **150** d. 400
15. At any given time there is more blood in the venous system than that of the arterial system. Which of the following features of the veins allows this?
 a. relative lack of smooth muscles b. presence of valves
 c. proximity of the veins to lymphatic's d. **thin endothelial lining**

8.EXCRETION

I. Choose the correct answer

1. Concentration of urine depends upon which part of the nephron
 a. Bowman's capsule b. **length of Henle's loop**
 c. P.C.T. d. net work of capillaries arising from glomerulus
2. If Henle's loop were absent from mammalian nephron, which one of the following is to be expected?

- a. There will be no urine formation
 - b. There will be hardly any change in the quality and quantity of urine formed
 - c. The urine will be more concentrated
 - d. **The urine will be more dilute**
3. A person who is on a long hunger strike and is surviving only on water, will have
- a. Less amino acids in his urine
 - b. Macula densa cells
 - c. **Less urea in his urine**
 - d. More sodium in his urine
4. What will happen if the stretch receptors of the urinary bladder wall are totally removed?
- a. **Micturition will continue**
 - b. Urine will be continue to collect normally in the bladder
 - c. there will be micturition
 - d. urine will not collection the bladder
5. The end product of Ornithine cycle is
- a. carbon dioxide
 - b. uric acid
 - c. **urea**
 - d. ammonia
6. Identify the wrong match
- a. Bowman's capsule – Glomerular filtration
 - b. **DCT - Absorption of glucose**
 - c. Henle's loop - Concentration of urine
 - d. PCT - Absorption of Na^+ and K^+ ions
7. Podocytes are the cells present on the
- a. Outer wall of Bowman's capsule
 - b. **Inner wall of Bowman's capsule**
 - c. neck of nephron
 - d. Wall glomerular capillaries
8. Glomerular filtrate contains
- a. **Blood without blood cells and protein**
 - b. Plasma without sugar
 - c. Blood with proteins but without cells
 - d. Blood without urea
9. Kidney stones are produced due to deposition of uric acid and
- a. silicates
 - b. minerals
 - c. calcium carbonate
 - d. **calcium Oxalate**
10. Animal requiring minimum amount of water to produce urine are
- a. ureotelic
 - b. ammonotelic
 - c. **uricotelic**
 - d. chemotelic
11. Aldosterone acts at the distal convoluted tubule and collecting duct resulting in the absorption of water through
- a. **Aquaporins**
 - b. spectrins
 - c. GLUT
 - d. Chloride channels
12. The hormone which helps in the reabsorption of water in kidney tubules is
- a. cholecystokinin
 - b. angiotensin II

- c. **antidiuretic hormone**
- d. pancreozymin
- 13. Malpighian tubules remove excretory products from
 - a. mouth
 - b. oesophagus
 - c. **haemolymph**
 - d. alimentary canal.

9. LOCOMOTION AND MOVEMENT

I. Choose the correct answer

1. Muscles are derived from
 - a. ectoderm
 - b. **mesoderm**
 - c. endoderm
 - d. neuro ectoderm
2. Muscles are formed by
 - a. **myocytes**
 - b. leucocytes
 - c. osteocytes
 - d. lymphocytes
3. The muscles attached to the bones are called
 - a. **skeletal muscle**
 - b. cardiac muscle
 - c. involuntary muscle
 - d. smooth muscles
4. Skeletal muscles are attached to the bones by
 - a. **tendon**
 - b. ligament
 - c. pectin
 - d. fibrin
5. The bundle of muscle fibres is called
 - a. Myofibrils
 - b. **fascicle**
 - c. sarcomere
 - d. sarcoplasm
6. The pigment present in the muscle fibre to store oxygen is
 - a. **myoglobin**
 - b. troponin
 - c. myosin
 - d. actin
7. The functional unit of a muscle fibre is
 - a. **sarcomere**
 - b. sarcoplasm
 - c. myosin
 - d. actin
8. The protein present in the thick filament is
 - a. **myosin**
 - b. actin
 - c. pectin
 - d. leucin
9. The protein present in the thin filament is
 - a. myosin
 - b. **actin**
 - c. pectin
 - d. leucin
10. The region between two successive Z-discs is called a
 - a. **sarcomere**
 - b. microtubule
 - c. myoglobin
 - d. actin
11. Each skeletal muscle is covered by
 - a. **epimysium**
 - b. perimysium
 - c. endomysium
 - d. hypomysium
12. Knee joint is an example of
 - a. saddle joint
 - b. **hinge joint**

- c. pivot joint
d. gliding joint
13. Name of the joint present between the atlas and axis is
a. synovial joint
b. **pivot joint**
c. saddle joint
d. hinge joint
14. ATPase enzyme needed for muscle contraction is located in
a. actinin
b. troponin
c. **myosin**
d. actin
15. Synovial fluid is found in
a. Ventricles of the brain
b. Spinal cord
c. immovable joint
d. **freely movable joints.**
16. Inflammation of joints due to accumulation of uric acid crystals is called as
a. **Gout**
b. myasthenia gravis
c. osteoporosis
d. osteomalacia
17. Acetabulum is located in
a. collar bone
b. **hip bone**
c. shoulder bone
d. thigh bone
18. Appendicular skeleton is
a. **girdles and their limbs**
b. vertebrae
c. skull and vertebral column
d. ribs and sternum
19. The type of movement exhibits by the macrophages are
a. flagellar
b. ciliary
c. muscular
d. **amoeboid**
20. The pointed portion of the elbow is
a. acromion process
b. glenoid cavity
c. **olecranon process**
d. symphysis

10. NEURAL CONTROL AND COORDINATION

I. Choose the Correct Answer

1. Which structure in the ear converts pressure waves to action potentials?
a. Tympanic membrane
b. **Organ of Corti**
c. Oval window
d. Semicircular canal
2. Which of the following pairings is correct?
a. **Sensory nerve – afferent**
b. Motor nerve - afferent
c. Sensory nerve – ventral
d. Motor nerve – dorsal
3. During synaptic transmission of nerve impulse, neurotransmitter (P) is released from synaptic vesicles by the action of ions (Q). Choose the correct P and Q.
a. **P = Acetylcholine, Q = Ca^{++}**
b. P = Acetylcholine, Q = Na^+
c. P = GABA, Q = Na^+
d. P = Cholinesterase, Q = Ca^{++}
4. Examine the diagram of the two cell types A and B given below and select the correct option.



- a. Cell-A is the rod cell found evenly all over retina
 b. Cell-A is the cone cell more concentrated in the fovea centralis
 c. **Cell-B is concerned with colour vision in bright light**
 d. Cell-A is sensitive to bright light intensities
5. Assertion: The imbalance in concentration of Na^+ , K^+ and proteins generates action potential.
 Reason: To maintain the unequal distribution of Na^+ and K^+ , the neurons use electrical energy.
- a. Both Assertion and Reason are true and Reason is the correct explanation of the Assertion.
 b. Both Assertion and Reason are true but the Reason is not the correct explanation of Assertion.
 c. Assertion is true, but Reason is false.
 d. **Both Assertion and Reason are false.**
6. Which part of the human brain is concerned with the regulation of body temperature?
 a. Cerebellum
 b. Cerebrum
 c. Medulla oblongata
 d. **Hypothalamus**
7. The respiratory centre is present in the
 a. **Medulla oblongata**
 b. Hypothalamus
 c. Cerebellum
 d. Thalamus
8. Match the following human spinal nerves in column I with their respective number in column II and choose the correct option
- | column I | column II |
|--------------------|--------------|
| P. Cervical nerves | i. 5 pairs |
| Q. Thoracic nerve | ii. 1 pair |
| R. Lumbar nerve | iii. 12 pair |
| S. Coccygeal nerve | iv. 8 pair |
- a. (P-iv), (Q-iii), (R-i), (S-ii)
 b. (P-iii), (Q-i), (R-ii), (S-iv)
 c. (P-iv), (Q-i), (R-ii), (S-iii)
 d. (P-ii), (Q-iv), (R-i), (S-iii)
9. Which of the following cranial nerve controls the movement of eye ball ?
 a. trochlear nerve
 b. **optic nerve**
 c. Olfactory nerve
 d. vagus nerve.
10. The abundant intracellular cation is
 a. H^+ b. **K^+** c. Na^+ d. Ca^{++}
11. Which of the following statements is wrong regarding conduction of nerve impulse?
 a. In a resting neuron, the axonal membrane is more permeable to K^+ ions and nearly impermeable to Na^+ ions.
 b. Fluid outside the axon has a high concentration of Na^+ ions and low concentration of K^+ , in a resting neuron.
 c. Ionic gradients are maintained by Na^+ K^+ pumps across the resting membrane, which transport 3 Na^+ ions outwards for 2 K^+ into the cell.

- d. **A neuron is polarized only when the outer surface of the axonal membrane possess a negative acharge and its inner surface ispositively charged.**
12. All of the following are associated with the myeline sheath except
- Faster conduction of nerve impulses
 - Nodes of Ranvier forming gaps along the axon**
 - Increased energy output for nerve impulse conduction
 - Saltatory conduction of action potential
13. Several statements are given here in reference to cone cells which of the following option indicates all correctstatements for cone cells ? Statements
- Cone cells are less sensitive in bright light than Rod cells
 - They are responsible for colour vision
 - Erythropsin is a photo pigment which is sensitive to red colour light
 - They are present in fovea of retina
- (iii), (ii) and (i)
 - (ii) , (iii) and (iv)**
 - (i), (iii) and (iv)
 - (i), (ii) and (iv)
14. Which of the following statement concerning the somatic division of the peripheral neural system is incorrect?
- Its pathways innervate skeletal muscles
 - Its pathways are usually voluntary
 - Some of its pathways are referred to as reflex arcs
 - Its pathways always involve four neurons**
15. When the potential across the axon membrane is more negative than the normal resting potential, the neuron is said to be in a state of
- Depolarization
 - Hyperpolarization**
 - Repolarization
 - Hypopolarization

11.CHEMICAL COORDINATION AND INTEGRATION

I. Choose the correct answer

- The maintenance of constant internal environment is referred as
 - Regulation
 - homeostasis**
 - co-ordination
 - hormonal control
- Which of the following are exclusive endocrine glands?
 - Thymus and testis
 - adrenal and ovary
 - parathyroid and adrenal**
 - pancreas and parathyroid
- Which of the following hormone is not secreted under the influence of pituitary gland?
 - thyroxine
 - insulin**
 - oestrogen
 - glucocorticoids
- Spermatogenesis in mammalian testes is controlled by
 - Luteinising hormone
 - Follicle stimulating hormone**
 - FSH and prolactin
 - GH and prolactin
- Serum calcium level is regulated by
 - Thyroxine
 - FSH

- c. Pancreas
d. **Thyroid and parathyroid**
6. Iodised salt is essential to prevent
a. rickets
b. scurvy
c. **goitre**
d. acromegaly
7. Which of the following gland is related with immunity?
a. Pineal gland
b. adrenal gland
c. **thymus**
d. parathyroid gland
8. Which of the following statement about sex hormones is correct?
a. **Testosterone is produced by Leydig cells under the influence of luteinizing hormone**
b. Progesterone is secreted by corpus luteum and softens pelvic ligaments during child birth
c. Oestrogen is secreted by both sertoli cells and corpus luteum
d. Progesterone produced by corpus luteum is biologically different from the one produced by placenta.
9. Hypersecretion of GH in children leads to
a. Cretinism
b. **Gigantism**
c. Graves disease
d. Tetany
10. A pregnant female delivers a baby who suffers from stunted growth, mental retardation, low intelligence quotient and abnormal skin. This is the result of
a. Low secretion of growth hormone
b. Cancer of the thyroid gland
c. Over secretion of pars distalis
d. **Deficiency of iodine in diet.**
11. The structure which connects the hypothalamus with anterior lobe of pituitary gland is the
a. Dendrites of neuro hypophysis
b. Axons of neurohypophysis
c. Bands of white fibers from cerebellar region
d. **Hypophysial portal system**
13. Which one of the following statement is correct
a. Calcitonin and thymosin are thyroid hormones
b. Pepsin and prolactin are secreted in stomach
c. Secretin and rhodopsin are polypeptide hormones
d. **Cortisol and aldosterone are steroid hormones**
14. which of the given option shows all wrong statements for thyroid gland: Statements
(i) It inhibits process of RBC Formation
(ii) It helps in maintenance of water and electrolytes
(iii) Its more secretion can reduce blood pressure
(iv) It stimulates osteoblast
(a) **(i) and (ii)**
(b) (iii) and (iv)
(c) (i) and (iv)
(d) (i) and (iii)

12. TRENDS IN ECONOMIC ZOOLOGY

I. Choose the correct answer:

1. Which one of the following is not related to vermiculture?
 - a. Maintains soil fertility
 - b. Breakdown of inorganic matter
 - c. Gives porosity, aeration and moistureholding capacity
 - d. Degradation of non biodegradable solid waste
 - a. a and b is correct
 - b. **c and d is correct**
 - c. b and d is not correct
 - d. a and c is not correct

2. Which one of the following is not an endemic species of earthworm?
 - a. Perionyx
 - b. **Lampito**
 - c. Eudrillus
 - d. Octochaetona

3. Match the following

1. Bombyx mori -	a) Champa -	I) Muga
2. Antheraea assamensis -	b) Mulberry -	II) Eri
3. Antheraea mylitta -	c) Arjun -	III) Tassar
4. Attacus ricini -	d) Castor -	IV) Mulberry

 - A) 1 – b – IV
 - B) 2 – a – I
 - C) 3 - c - III
 - D) 4 - d - II

4. Silk is obtained from_____
 - a. Laccifer lacca
 - b. Nosema bombycis
 - c. **Attacus ricini**
 - d. Attacus mylitta

5. Assertion: Nuptial flight is a unique flight taken by the queen bee followed by several drones.
Reason: The queen bee produces a chemical substance called pheromone. The drones in that area are attracted to the pheromone and then mating takes place.
 - a. Assertion and reason is correct but not related
 - b. Assertion and reason is incorrect but related
 - c. **Assertion and reason is correct but related**
 - d. Assertion and reason is incorrect but not related

6. Rearing of honey bee is called
 - a. Sericulture
 - b. Lac culture.
 - c. Vermiculture
 - d. **Apiculture**

7. Which of the statements regarding Lac insect is FALSE?
 - a. A microscopic, resinous crawling scale insect
 - b. Inserts its proboscis into plant tissue to suck juices and
 - c. Secretes lac from the hind end of body.
 - d. **The male lac insect is responsible for large scale production of lac.**

8. Aquaponics is a technique which is
 - a. A combination of aquaculture and fish culture
 - b. **A combination of aquaculture and hydroponics**
 - c. A combination of vermiculture and hydroponics
 - d. A combination of aquaculture and prawn culture.

9. Prawn belongs to the class
 - a. **crustacea**
 - b. Annelida

- c. Coelenterata
10. Pearl oyster belongs to the Class
a. Gastropoda
c. Scaphapoda
- d. Echinodermata
b. Cephalopoda
d. **Pelecypoda**
11. Inland fisheries are
a. deep sea fishing
b. capturing fishes from sea coast
c. **Raising and capturing fishes in fresh water**
d. oil extraction from fish
12. Induced breeding technique is used in
a. Marine fishery
c. Culture fishery
- b. Capture fishery
d. **Inland fishery**
13. Isinglass is used in
a. Preparation
c. Distillation of wines
- b. **Clearing of wines**
d. Preservation of wines
15. Assertion: The best quality of pearl is known as lingha pearl and obtained from marine oysters.
Reason: Nacre is secreted continuously by the epithelial layer of the mantle and deposited around the foreign particle
- a. Assertion is true, Reason is false
b. Assertion and Reason are false
c. Assertion is false But Reason is true
d. **Assertion and Reason are true**