PRACTICE SET-2

1. Aquaculture does not include
a. Pisces **b.** Prawns
c. Silkworm **d.** Shell fishery

2. Haematology is the study of:
a. Bone **b.** Blood
c. Neuron **d.** Cartilage

3. Organic evolution would have not been taken place:
a. If individuals in a population did not show genetic variations
b. If individuals did not inherit characters acquired during their life to their off-springs
c. If somatic variations did not inherit
d. If somatic variations were not transferred to genetic variations

4. The process of evolution:
a. Is a continuous process
b. Is a discontinuous process
c. Was continuous in beginning but discontinuous now
d. Was discontinuous in beginning but continuous now

5. There are several ways of looking at living thing, one which is at the molecular level and analytical level with regard to life could vary nearly come to:
a. Result of Newtonian laws
b. Matter energy interaction
c. Matter velocity relationship
d. Physical expression of moment of mass

6. Infective nature of tobacco mosaic disease was discovered by:
a. Mayer
b. Ivanovsky
c. Bawden
d. Green

7. Infective portion of a virus is nucleic acid, this was discovered by
a. de-Herelle
b. Hershey and Chase
c. Stanley
d. Ivanovsky

8. Alary muscle is associated with:
a. Heart and circulation
b. Malpighian tubule and excretion
c. Trachea and respiration
d. None of these

9. Organ of mastication in cockroach is:
a. Labrum
b. Labium
c. Mandibles
d. Maxilla

10. Commonest mode of asexual reproduction in bacteria is:
a. Binary fission
b. Budding
c. Sexual conjugation
d. Sporulation

11. In nitrification, nitrosomonas bacteria converts:
a. Nitrate to Nitrite
b. Ammonia to Nitrite
c. Chloroplasts
d. Nitrate to N_2

12. In Bougainvillea large coloured structures are-
a. Bracts
b. Stamens
c. Petals
d. Sepals

13. Zigzag development of inflorescence axis is an example of:
a. Umbel
b. Helicoid cyme
c. Scorpioid cyme
d. Verticillaster

14. Young fleshy inflorescence is edible in:
a. Cauliflower
b. Bombax
c. Aconitum
d. Trapa

15. Sclerenchymatous hypodermis is found in:
a. Monocot roots **b.** Monocot stems
c. Dicot stems **d.** Gymnosperm stems

16. Polyarch vascular bundles are usually found in
a. Monocot roots **b.** Dicot roots
c. Monocot stems **d.** Dicot stems

17. Bilirubin is a by-product of no use, so it is eliminated partly with the stools as such, Accumulated bilirubin causes a dangerous toxicity referred to as:
a. Cri-du-chat syndrome
b. Crigler-Najjar syndrome
c. Down's syndrome
d. Cretuzfeldt-Jakob syndrome

18. A variety of cells are present in the areolar tissue. In the list of cells which are not found in the said connective tissue are:
a. Myeloblasts
b. Fibroblasts
c. Neutrophils
d. Macrophages

19. Who proposed the fluid-mosaic model of membrane structure?
a. Davson and Denielli
b. Robertson
c. Seifriz
d. Singer and Nicolson

20. Which cell organelle is essential for photorespiration?
a. Endoplasmic reticulum
b. Dictyosome
c. Peroxisome
d. Glyoxysome

21. In the meiotic division four daughter cells are produced by two successive divisions in which
a. First division is equational and second is reductional
b. First division is reductional and second is equational
c. Both divisions are equational
d. Both divisions are reductional

22. Anastral mitosis is characteristic of
a. Higher plants **b.** Higher animals
c. All living organism **d.** Lower animals

23. Proteins can be synthesized over/in:
a. Rough ER **b.** Ribosomes
c. Cytoplasm **d.** All of these

24. All types of proteins synthesised over ribosomes have:
a. L-amino acids
b. D-amino acids
c. Both D- and L-amino acids
d. Only optically active amino acids

25. In osmosis, there is movement of:
a. solute only
b. solvent only
c. Both **a.** and **b.**
d. neither solute nor solvent

26. Phloem conducts food by:
a. perforated sieve plates
b. bast fibres
c. xylem parenchyma
d. xylem fibres

27. Exchange of substances between a cell and its environment is due to:
a. osmosis **b.** active transport
c. diffusion **d.** All of these

28. Calcium works as catalyst for
a. ATPase **b.** Phospholipids
c. Succinic dehydrogenase **d.** All of these

29. Phosphorus is present in
a. Vitamin A **b.** Vitamin C
c. Lecithin **d.** Glycin

30. Kranz anatomy is found in
a. C_2 plants **b.** C_3 plants
c. C_4 plants **d.** Succulent plants

31. According to van Helmont food is synthesised by
a. Air **b.** Soil
c. H_2O **d.** H_2O and air

32. Why do fruit juices turn bitter if kept in an open place for some time?
a. Juices have something inside them which makes it bitter
b. It is due to fermentation brought about by yeast cells
c. It is due to the activity of fungi present in the atmosphere
d. All of the above

33. Lowest rate of respiration will be in
a. Collenchyma
b. Leaf
c. Dry seeds
d. Germinated seeds

34. Slow respiring plants or plant tissues are
a. Promeristems
b. Cambium
c. Leaf primordia and young plant
d. Adult plants and matured tissues

35. Antibiotic has been extracted from
a. Chlorella
b. Spirogyra
c. Oscillatoria
d. Ulothrix

36. Which of the following plants does not have archegonium?
a. Funaria
b. Spirogyra
c. Cycas
d. Pteris

37. The essential mineral for synthesis of proteins in body is:
a. Sodium **b.** Iron
c. Potassium **d.** Sulphur

38. Which one is the matching pair characterised by pigmented skin of hands, legs and irritability?
a. Iodine – Goitre **b.** Nicotinamide – Pellagra
c. Thiamine – Beriberi **d.** Protein – Kwashiorkor

39. Which one is best source of vitamin A?
a. Apples **b.** Carrots
c. Honey **d.** Peanut

40. In photosynthesis, $NADPH_2$ is formed, but in respiration it is formed during:
a. HMP **b.** ETS
c. Krebs cycle **d.** None of these

41. The exchange of gases in the alveoli of the lungs takes place by:
a. Osmosis **b.** Simple diffusion
c. Passive transport **d.** Active transport

42. Heartbeat of an average human lasts:
a. 1 minute **b.** 0.8 second
c. 0.2 second **d.** 0.5 second

43. Pulse beat is measured from
a. Vein **b.** Artery
c. Capillary **d.** Nerve

44. _____ is the pace maker of heart.
a. AV node **b.** SA node
c. Purkinje's fibre **d.** AV septum

45. The nephrostomes in the kidneys are functional in:
a. Rabbit **b.** Adult frog
c. Mouse **d.** Cockroach

46. The main function of Henle's loop is:
a. Passage of urine **b.** Filtration of blood
c. Formation of urine **d.** Conservation of water

47. What is sprain?
a. More pulling of tendon
b. Less pulling of tendon
c. More pulling of ligament
d. Less pulling of ligament

48. Muscles are red because of the presence of
a. Myoglobin and mitochondria
b. Haemoglobin and golgi bodies
c. Globulin and mitochondria
d. Protein and lysosome

49. Which set of hormones are not antagonistic?
a. Parathormone and thyrocalcitonin
b. Glucagon and insulin
c. Growth hormone and somatostatin
d. Adrenaline and noradrenaline

50. Deficiency of ADH causes:
a. Acromegaly **b.** Dwarfism
c. Diabetes insipidus **d.** Diabetes mellitus

Answers and Solutions

1. **(c)** Silkworm, *Aquaculture* is the farming of aquatic organisms in both coastal and inland areas involving interventions in the rearing process to enhance production.

2. **(b)** Haematology is the study of blood.

3. **(a)** If individuals in a population did not show genetic variations.

4. **(a)** The process of evolution is a continuous process.

5. **(b)** Matter energy interaction.

6. **(a)** Infective nature of tobacco mosaic disease was discovered by Mayer.

7. **(b)** Infective portion of a virus is nucleic acid, this was discovered by Hershey and Chase.

8. **(a)** Alary muscle is associated with heart and circulation.

9. **(c)** Organ of mastication in cockroach is mandibles.

10. **(a)** Binary fission is the commonest mode of asexual reproduction in bacteria.

11. **(b)** In nitrification, *Nitrosomonas* bacteria converts ammonia to nitrite.

12. **(a)** In *Bougainvillea* large coloured structures are bracts.

13. **(c)** Scorpioid cyme

14. **(a)** Young fleshy inflorescence is edible in cauliflower.

15. **(b)** Sclerenchymatous hypodermis is found in monocot stems.

16. **(a)** Polyarch vascular bundles are usually found in monocot roots.

17. **(b)** In Crigler-Najjar syndrome, jaundice is apparent at birth or in infancy. Severe unconjugated hyperbilirubinemia can lead to a condition called kernicterus, which is a form of brain damage caused by the accumulation of unconjugated bilirubin in the brain and nerve tissues.

18. **(c)** Neutrophils

19. **(d)** Singer and Nicholson proposed the Fluid-mosaic model of membrane structure.

20. **(c)** Peroxisome cell organelle is essential for photorespiration.

21. **(b)** First division is reductional and second is equational.

22. **(a)** Anastral mitosis is characteristic of higher plants.

23. **(d)** Rough ER, Ribosomes and Cytoplasm.

24. **(a)** All types of proteins synthesised over ribosomes have L-amino acids.

25. **(b)** In osmosis, the movement of solvent occur.

26. **(a)** Phloem conducts food by perforated sieve plates.

27. **(d)** Osmosis, active transport and diffusion.

28. **(d)** ATPase, phospholipids and **s**uccinic dehydrogenase. It regulates the activity of *calcium ATPase*, and in hypothyroidism there is an increase in the ratio of inorganic phosphate to *ATP* in resting muscle and a decrease in phosphocreatine in *working* muscle.

29. **(c)** Phosphorus is present in Lecithin.

30. **(c)** Kranz anatomy is found in C_4 plants.

31. **(c)** H_2O

32. **(b)** It is due to fermentation brought about by yeast cells.

33. **(c)** Lowest rate of respiration will be in dry seeds.

34. **(d)** Slow respiring plants or plant tissues are adult plants and matured tissues.

35. **(a)** *Chlorella* is a type of algae that grows in fresh water. The whole plant is used to make nutritional supplements and medicine.

36. **(b)** *Spirogyra* a filamentous green alga of a genus that includes blanket weed.

37. **(d)** Sulphur is the essential mineral for synthesis of proteins in body.

38. **(b)** Nicotinamide – Pellagra

39. **(b)** Carrots is best source of vitamin A.

40. **(c)** The *Krebs Cycle* is an aerobic process consisting of eight definite steps. In order to enter the *Krebs Cycle* pyruvate must first be converted into Acetyl-CoA by pyruvate dehydrogenase complex found in the mitochondria.

41. **(b)** The exchange of gases in the alveoli of the lungs takes place by simple diffusion.

42. **(b)** 0.8 second.

43. **(b)** Pulse beat is measured from artery.

44. **(b)** SA node

45. **(b)** The nephrostomes in the kidney's are functional in adult frog.

46. **(d)** Conservation of water is the main function of Henle's loop.

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