

# Biology part-2

## complete Mcqs Notes

### with answers

---

www.preparationforetest.weebly.com

1. The medium of the food vacuole in the unicellular animals is first:

- a. Basic
- b. Neutral
- c. Acidic
- d. None of these

Correct Ans. (c)

2. Which of the following has no digestive cavity?

- a. Hydra
- b. Planaria
- c. Earth worm
- d. Amoeba

Correct Ans. (d)

3. Which of the following has one way passage of the food material in the digestive tract?

- a. Amoeba
- b. Hydra
- c. Planaria
- d. Earthworm

Correct Ans. (d)

4. The oesophagus has internal glands which secrete:

- a. Protolytic secrete:
- b. Hydrolytic enzyme
- c. Bile
- d.  $\text{CaCO}_3$

Correct Ans. (d)

5. The living cells of earth worm intestine secrete:

- a. Water
- b. Base
- c. Acids
- d. Enzymes

Correct Ans. (d)

6. The enzyme secreted by salivary glands is:

- a. Sucrase
- b. Cellulase
- c. Pepsin
- d. Amylase

Correct Ans. (d)

7. Which of the following does not take part in the pushing of food from the buccal cavity into the pharynx:

- a. Cheek muscles
- b. Floor of buccal cavity
- c. Nose muscles
- d. Tongue

Correct Ans. (c)

8. Normal direction of the waves of contraction of the muscle (Peristalsis) is from:

- a. Stomach to oesophagus
- b. Intestine to stomach
- c. Oesophagus to pharynx
- d. Oesophagus to stomach

Correct Ans. (d)

9. The inner lining of the stomach consists of:

- a. Salivary glands
- b. Pituitary glands
- c. Gastric glands
- d. All of these

Correct Ans. (c)

10. Which of the following is present in the gastric juice:

- a. Lipase
- b. Amylase

- c. HCl
- d. H<sub>2</sub>SO<sub>4</sub>

Correct Ans. (c)

11. Which of the following is not present in the pancreatic juice?

- a. Amylase
- b. Cellulase
- c. Lipase
- d. Trypsin

Correct Ans. (b)

12. Which of the following acts upon cellulose?

- a. Lipase
- b. Trypsin
- c. Pepsin
- d. None of these

Correct Ans. (d)

13. Which of the following is absorbed by the lacteals?

- a. Fats
- b. Glucose
- c. Amino acids
- d. Water

Correct Ans. (a)

14. Which of the following releases Trypsin?

- a. Gastric glands
- b. Adrenal glands
- c. Enterokinase
- d. Bile

Correct Ans. (c)

15. Dipeptidase acts on:

- a. Disaccharide
- b. ADP
- c. Diglyceride

- d. Peptide bonds

Correct Ans. (d)

16. Which of the following is not part of a villus?

- a. Red blood cells
- b. Blood capillaries
- c. Lacteals
- d. Epithelial cells

Correct Ans. (a)

17. Villi are found on the inner surface of:

- a. Pharynx
- b. Stomach
- c. Oesophagus
- d. Small intestine

Correct Ans. (d)

18. The lack of absorption of water & salt by the large intestine result in:

- a. Constipation
- b. Diarrhea
- c. Vomiting
- d. Dysentery

Correct Ans. (b)

19. Which of the following is the last part of the large intestine?

- a. Colon
- b. Caecum
- c. Rectum
- d. Ileum

Correct Ans. (c)

## CHAPTER 2

Choose the most appropriate answer:

1. In the 1<sup>st</sup> 13 segments of earthworm, the dorsal vessel acts the function of:

- a. Collection
- b. Distribution
- c. Both a & b
- d. None of these

Correct Ans. (b)

2. From the 14<sup>th</sup> segment backward, the dorsal vessel acts as:

- a. Collecting blood
- b. Distributing blood
- c. Both a & b
- d. None of these

Correct Ans. (a)

3. The dorsal vessel in earthworm sends the collected blood to:

- a. Ventral vessel
- b. Sub-neural vessel
- c. Hearts
- d. None of these

Correct Ans. (c)

4. Which of the following vessel runs below the intestine in earthworm?

- a. Dorsal vessel
- b. Ventral vessel
- c. Sub-neural vessel
- d. None of these

Correct Ans. (b)

5. The direction of flow of blood in the sub-neural vessel is:

- a. Lateral
- b. Vertical
- c. Forward
- d. Backward

Correct Ans. (d)

6. The colour of blood plasma is

- a. black
- b. green
- c. red
- d. yellow

Correct Ans. (d)

7. Which of the following is absent in grasshopper?

- a. Heart
- b. Blood
- c. Capillaries
- d. Transport system

Correct Ans. (c)

8. The blood enters the heart through the:

- a. Aorta
- b. Ventral vein
- c. Ostia
- d. All of these

Correct Ans. (c)

9. Which of the following is true of man?

- a. Open circulatory system
- b. One circulatory fluids
- c. Two circulatory fluids
- d. Three circulatory fluids

Correct Ans. (c)

10. Heart is enclosed by a tough membrane called:

- a. Diaphragm
- b. Pericardium
- c. Pericardium
- d. Epicardium

Correct Ans. (b)

11. Which of the following number of chambers compose heart of man?

- a. Two
- b. Four
- c. Seven
- d. Eight

Correct Ans. (b)

12. Atria are located:
- Above the ventricle
  - Below the ventricle
  - One left of the ventricle
  - Sandwiched by the ventricle

Correct Ans. (a)

13. The right side of the heart contains:
- Oxygenated blood
  - Deoxygenated
  - Mixed blood
  - All of these

Correct Ans. (b)

14. Which of the following received blood from the body?
- Ventricle
  - Atria
  - Both Ventricle and atria
  - None of these

Correct Ans. (b)

15. From the right ventricle blood is pushed towards the:
- Aorta
  - Left atrium
  - Lungs
  - Left ventricle

Correct Ans. (c)

16. By the contraction of the left ventricle the blood is pumped into the:
- Right atrium
  - Left atrium
  - Lungs
  - Aorta

Correct Ans. (d)

17. The tricuspid valve guarding the opening between the right atrium and right ventricle is made up of:

- Three flaps
- Two flaps
- Four flaps
- Five flaps

Correct Ans. (a)

18. The aerated blood returns from the lungs by means pulmonary veins into the:

- Right atrium
- Right ventricle
- Left atrium
- Left ventricle

Correct Ans. (c)

19. The whole heart cycle takes about:

- 0.2 seconds
- 0.4 seconds
- 0.6 seconds
- 0.8 seconds

Correct Ans. (d)

20. The heart muscles take rest for about:

- 0.1 -0.3 seconds
- 0.4 -0.5 seconds
- 0.6 -0.8 seconds
- 0.8 -1.00 seconds

Correct Ans. (a)

21. Arteries are formed of tissues arranged in:

- Single layer
- Two layers
- Three layers
- Four layers

Correct Ans. (c)

22. The thickness of blood capillaries is:

- One cell
- Two cells

- c. Three cells
  - d. Four cells
- Correct Ans. (a)

23. The average diameter of a blood capillary is about:

- a. 1um
- b. 3um
- c. 5um
- d. 7um

Correct Ans. (d)

24. Aorta arises from:

- a. left atrium
- b. left ventricle
- c. right atrium
- d. Right ventricle

Correct Ans. (b)

25. Which of the following supply blood to the heart itself?

- a. Pulmonary
- b. Iliac
- c. Cutaneous
- d. Coronary

Correct Ans. (d)

26. Superior vena cave carries blood to the:

- a. Left atrium
- b. Right ventricle
- c. Right atrium
- d. Right ventricle

Correct Ans. (b)

27. Which of the following carry blood from the kidneys?

- a. Hepatic vein
- b. Hepatic portal vein
- c. Renal vein
- d. All of these

Correct Ans. (c)

28. Which of the following has the lowest blood pressure?

- a. Arteries
- b. Arterioles
- c. Capillaries
- d. Veins

Correct Ans. (d)

29. Blood pressure from arteries towards veins:

- a. increase
- b. Decrease
- c. Remains unchanged
- d. None of these

Correct Ans. (b)

30. Normal range of diastolic blood pressure is:

- a. 70-85
- b. 85-95
- c. 90-100
- d. 100-110

Correct Ans. (a)

31. Which of the following has the high rate of blood flow?

- a. Veins
- b. Capillaries
- c. Aorta
- d. Arteries

Correct Ans. (c)

32. Which of the following has the reduced rate of blood flow?

- a. Aorta
- b. Arteries
- c. Capillaries
- d. Arterioles

Correct Ans. (c)

33. Which of the following brings about the transits of nutrients hormones etc between the blood and tissues:

- a. Aorta
- b. Capillaries
- c. Veins
- d. Arteries

Correct Ans. (b)

34. Which of the following has greater cross sectional area?

- a. Aorta
- b. Capillaries
- c. Veins
- d. Arteries

Correct Ans. (d)

35. Which of the following is not the characteristics of the blood?

- a. Circulates in the vessels
- b. Complex substance
- c. Composed of plasma and blood cells
- d. Gelatinous substance

Correct Ans. (d)

36. The percent by volume formed by the plasma of the blood about:

- a. 45
- b. 55
- c. 65
- d. 75

Correct Ans. (b)

37. The water percentage (by wt) of the plasma is almost:

- a. 50
- b. 60
- c. 80
- d. 90

Correct Ans. (d)

38. How many nucleoli are present in the red blood cells?

- a. One
- b. Two
- c. Three
- d. None

Correct Ans. (d)

39. Which of the following is the shape of human RBC?

- a. Biconcave
- b. Biconvex
- c. Spherical
- d. Rod-shaped

Correct Ans. (a)

40. In embryonic stages RBC are formed in:

- a. heart
- b. liver and spleen
- c. head
- d. kidney

Correct Ans. (b)

41. RBC present in one cubic millimeter of blood are almost:

- a. Two million
- b. Four million
- c. Five million
- d. Seven million

Correct Ans. (c)

42. WBC present in a cubic millimeter of blood are almost:

- a. 20,000
- b. 30,000
- c. 3,000
- d. 7,000 – 8,000

Correct Ans. (d)

43. Which of the following is the main function of the WBC?

- a. helps in blood clotting
- b. carry oxygen
- c. protection against microorganisms
- d. Transport iron

Correct Ans. (c)

44. Which of the following are the smallest in size?

- a. Erythrocytes
- b. Lymphocytes
- c. Neutrophils
- d. Platelets

Correct Ans. (d)

45. Which of the following is absent in the lymph?

- a. RBC
- b. WBC
- c. Protein
- d. All of them

Correct Ans. (a)

46. Which of the following is the function of lymph node?

- a. Carrying of O<sub>2</sub>
- b. Producing RBC
- c. Producing lymphocytes antibodies
- d. Producing platelets

Correct Ans. (c)

### CHAPTER 3

Choose the most appropriate answer

1. Which of the following is not present in Hydra?

- a. Gaseous exchange takes place through the whole surface
- b. Specialized organs for respiration present
- c. Oxygen diffuses from the water in the digestive cavity
- d. CO<sub>2</sub> diffuses through the general surface

Correct Ans. (b)

2. Which of the following has respiratory surface of large area?

- a. Hydra
- b. Planaria
- c. Grasshopper
- d. Man

Correct Ans. (d)

3. Which of the following has a respiratory pigment?

- a. Earthworm
- b. Amoeba
- c. Planaria
- d. Hydra

Correct Ans. (a)

4. Each nasal cavity is subdivided into air passage ways the number of which is:

- a. 3
- b. 4
- c. 5
- d. 6

Correct Ans. (a)

5. The cavity of larynx is called:

- a. Pharynx
- b. Trachea
- c. Glottis
- d. Nostril

Correct Ans. (c)

6. Vocal cords are located in the:

- a. Pharynx
- b. Glottis
- c. Trachea
- d. Nosal cavity

Correct Ans. (b)

7. Which of the following has no c-shaped cartilage ring?

- a. Bronchioles
- b. Trachea
- c. Bronchi
- d. None of these

Correct Ans. (a)

8. Which of the following acts as functional units of lungs?

- a. Bronchioles
- b. Air sac
- c. Bronchus
- d. Tracheae

Correct Ans. (b)

9. The membrane covering the lungs is called:

- a. Diaphragm
- b. Pericardium
- c. Epicardium
- d. Pleura

Correct Ans. (d)

10. Which of the following acts as pumps for moving air in and out of lungs?

- a. Lungs
- b. Heart
- c. Kidneys
- d. Chest wall and diaphragms

Correct Ans. (d)

11. With the increase in volume of the chest cavity its internal pressure:

- a. Decrease
- b. Increase
- c. Remain unchanged
- d. None of these

Correct Ans. (a)

12. Which of the following is not correct for inspiration?

- a. Elevation of chest wall
- b. Lowering of diaphragm
- c. Lowering of chest wall
- d. Moving of air inside

Correct Ans. (c)

13. Which of the following is the maximum amount of oxygen absorbed by 100 ml of human blood?

- a. 10 ml
- b. 15 ml
- c. 20 ml
- d. 30 ml

Correct Ans. (c)

14. Most of the CO<sub>2</sub> is carried from the tissues as:

- a. CO<sub>2</sub> gas
- b. Carbooric acid
- c. Carbonate ions
- d. Bicarbonate ions

Correct Ans. (d)

15. The amount of CO<sub>2</sub> present in 100 ml of blood in arteries is about:

- a. 45 ml
- b. 50 ml
- c. 54 ml
- d. 60 ml

Correct Ans. (b)

16. The amount of CO<sub>2</sub> taken by 100 ml of blood when it passes through the lungs is:

- a. 4 ml
- b. 8 ml
- c. 10 ml
- d. 14 ml

Correct Ans. (a)

17. The amount of Carbon dioxide given off by 100 ml of blood when it passes through the lungs is:

- a. 1 ml
- b. 2 ml
- c. 3 ml
- d. 4 ml

Correct Ans. (d)

#### CHAPTER 4

Choose the most appropriate answer:

1. Which of the following is the major and immediate nitrogenous product of proteins and amino acids?

- a. Urea
- b. Ammonia
- c. HNO<sub>3</sub>
- d. HNO<sub>2</sub>

Correct Ans. (b)

2. Which of the following are the most toxic waste substance?

- a. H<sub>2</sub>O
- b. CO<sub>2</sub>
- c. Ammonia
- d. Uric acid

Correct Ans. (c)

3. Which of the following needs more water for removal?

- a. Ammonia
- b. CO<sub>2</sub>
- c. Uric acid
- d. O<sub>2</sub>

Correct Ans. (a)

4. The chief nitrogenous waste products in grasshopper is:

- a. Ammonia
- b. Nitric acid
- c. Uric acid

d. HCl

Correct Ans. (c)

5. Which of the following emerges from the hilus in human kidney?

- a. Urinary bladder
- b. Ureter
- c. Urethra
- d. Nephridiopore

Correct Ans. (c)

6. Each nephron is

- a. Blind at one end
- b. Blind at both ends
- c. Open at both ends
- d. None of these

Correct Ans. (a)

7. A cluster of capillaries present in the Bowman, capsule is called:

- a. Cortex
- b. Medulla
- c. Glomerulus
- d. Nephron

Correct Ans. (c)

8. How many processes are involved in the functioning of kidney to form urine?

- a. None
- b. One
- c. Two
- d. Three

Correct Ans. (d)

9. Which of the following is the major excretory nitrogenous materials in man?

- a. Ammonia
- b. Amino acid
- c. Urea
- d. CO<sub>2</sub>

Correct Ans. (c)

10. Which of the following converts ammonia into urea?

- a. Kidney
- b. Stomach
- c. Lungs
- d. Liver

Correct Ans. (d)

11. The percentage of dissolved solids in urine is almost:

- a. 20
- b. 10
- c. 5
- d. 2

Correct Ans. (c)

12. Which of the following controls the reabsorption of glucose in the urinary tubule?

- a. Testosterone
- b. Thyroxine
- c. Insulin
- d. Parathormone

Correct Ans. (c)

13. The insufficiency of insulin results in incomplete metabolism of:

- a. Carbohydrate
- b. Fats
- c. Protein
- d. All of these

Correct Ans. (a)

14. Which of the following Disease results when carbohydrates metabolism is incomplete in the body?

- a. Goiter
- b. Colour blindness
- c. Diabetes mellitus
- d. Typhoid

Correct Ans. (c)

15. Which of the following is the waste product formed during metabolic process?

- a. Sucrose
- b. Heat
- c. Glucose
- d. Fatty acids

Correct Ans. (b)

16. Which of the following plays a part in temperature regulation?

- a. Skin
- b. Kidney
- c. Lungs
- d. Liver

Correct Ans. (a)

17. Which of the following phenomenon occurs if the body begins to lose more heat than it is generating?

- a. More blood supply to skin
- b. More sweating
- c. Reduction in metabolic activity
- d. Reduction of blood supply to the skin

Correct Ans. (d)

## CHAPTER 5

Choose the most appropriate answer:

1. Which of the following is not the character of multicellular animals?

- a. Tendency towards division of labour
- b. Better organization
- c. Less inter dependency of organs
- d. Integration and regulation of activity

Correct Ans. (c)

2. Which of the following does not come under the coordination in multicellular animals?

- a. Deregulation
- b. Organization
- c. Integration
- d. Control

Correct Ans. (a)

3. Which of the following consists of secretory tissues?

- a. Nervous system
- b. Endocrine system
- c. Circulatory system
- d. Excretory system

Correct Ans. (b)

4. How many steps are involved in a response?

- a. None
- b. One
- c. Two
- d. Three

Correct Ans. (d)

5. Which of the following are structures that respond when they are stimulated by nerve impulses?

- a. Neurons
- b. Receptors
- c. Effectors
- d. All of these

Correct Ans. (c)

6. Which of the following lacks central nervous system?

- a. Planaria
- b. Hydra
- c. Man
- d. Frog

Correct Ans. (b)

7. Each sense organ is specialized to receive

- a. Specific type of stimulus
- b. Different types of stimuli
- c. All types of stimuli
- d. None of these

Correct Ans. (a)

8. Which of the following light does not stimulate our eyes?

- a. Green
- b. Blue
- c. Violet
- d. Ultraviolet

Correct Ans. (d)

9. Which of the following carry impulses from the central nervous system?

- a. Sensory neurons
- b. Effectors
- c. Association neurons
- d. Motor neurons

Correct Ans. (d)

10. Which of the following lie exclusively in the spinal cord and brain?

- a. Sensory neurons
- b. Motor neurons
- c. Association neurons
- d. All of these

Correct Ans. (c)

11. The contact point between the axon endings of one neuron and the dendrites of another neuron is called:

- a. transmitter
- b. Acceptors
- c. Synapse
- d. Impulse

Correct Ans. (c)

12. The chemical liberated by the axon ending due to the arrival of an impulse are called:

- a. acceptors
- b. transmitters
- c. absorbers
- d. None of these

Correct Ans. (b)

13. Which of the following is incorrect?

- a. New neurons are formed by the division of old ones
- b. Neurons lack the ability of division

- c. Neuron can regenerate axons if cell body is not damaged
- d. None of these

Correct Ans. (a)

14. Which of the following is the normal rate in meter per second of an impulse?

- a. 10
- b. 50
- c. 100
- d. 200

Correct Ans. (c)

15. How many types of actions are usually performed by human body?

- a. Two
- b. Three
- c. Four
- d. Five

Correct Ans. (b)

16. Which of the following conditioned reflexes?

- a. Inborn
- b. Inherited
- c. Unlearned
- d. Acquired

Correct Ans. (d)

17. Which of the following is not the part of brain?

- a. Lateral brain
- b. Fore brain
- c. Midbrain
- d. Hindbrain

Correct Ans. (a)

18. Which of the following is not part of the forebrain?

- a. Cerebrum
- b. Thalamus
- c. Epithalamus

- d. Hypothalamus

Correct Ans. (c)

19. Which of the following is the largest part of human brain?

- a. Midbrain
- b. Hindbrain
- c. Thalamus
- d. Cerebrum

Correct Ans. (d)

20. Which of the following is the control centre of sight and hearing?

- a. Cerebrum
- b. Thalamus
- c. Hypothalamus
- d. Epithalamus

Correct Ans. (a)

21. Which of the following is not controlled by cerebrum?

- a. Smell
- b. Hearing
- c. Water balance
- d. Memory

Correct Ans. (c)

22. Which of the following is not controlled by the hypothalamus?

- a. Appetite
- b. Sleep
- c. Body temperature
- d. Smell

Correct Ans. (d)

23. Which of the following receives most of the impulses arriving from different sensory areas of the body?

- a. Midbrain
- b. Hindbrain
- c. Thalamus
- d. Hypothalamus

Correct Ans. (c)

24. Which of the following forms the second largest part of the brain?

- a. Cerebellum
- b. Cerebrum
- c. Pone
- d. Medulla oblongata

Correct Ans. (a)

25. Which of the following controls and coordinates the balance among organs and the muscles?

- a. Thalamus
- b. Hypothalamus
- c. Cerebellum
- d. Pons

Correct Ans. (c)

26. Which of the following is controlled by medulla oblongata?

- a. Muscular activities
- b. Heart beat
- c. Judgment
- d. Smell

Correct Ans. (b)

27. How many pairs of cerebral nerves arise from the brain?

- a. 12
- b. 15
- c. 20
- d. 31

Correct Ans. (a)

28. How many spiral nerves come out of the spiral cord?

- a. 25
- b. 31
- c. 35
- d. 40

Correct Ans. (b)

29. Which of the following types of nerves cerebral arise from the brain?

- a. Sensory
- b. Motor
- c. Mixed
- d. All of these

Correct Ans. (d)

30. Which of the following types of spiral nerves arise from the spiral cord?

- a. Sensory
- b. Mixed
- c. Motor
- d. None of these

Correct Ans. (b)

31. Which of the following is not controlled by the nervous system?

- a. Body equilibrium
- b. Rate of heart beat
- c. Rate of growth
- d. Rate of breathing

Correct Ans. (c)

32. Which of the following controlled by hormones?

- a. Rate of growth
- b. Rate of activity
- c. Sexual maturity
- d. All of these

Correct Ans. (d)

33. Which of the following generally not the function hormone?

- a. Initiate a process
- b. Stimulate
- c. Inhibit
- d. None of these

Correct Ans. (a)

34. Which of the following is true of hormones?

- a. All are proteins
- b. All are inorganic compounds
- c. All are Organics substances
- d. Transferred to the site of action by their own ducts

Correct Ans. (c)

35. Thyroid gland lies:

- a. Near liver
- b. In the middle portion of neck
- c. Top of kidney
- d. Below the heart

Correct Ans. (b)

36. What would happen to the sugar metabolism in the absence of insulin in the body?

- a. Stops
- b. Not affected
- c. Rate increases
- d. Slows down

Correct Ans. (a)

37. Which of the following is not regulated by iodothyroxines?

- a. balance of salts
- b. Maturation
- c. Sexual development
- d. Oxygen consumption

Correct Ans. (a)

38. Which of the following will occur as a result of insufficient secretion of the thyroid gland at infancy?

- a. Dwarf growth
- b. Incomplete mental development
- c. Retarded sexual development
- d. All of these

Correct Ans. (d)

39. Which of the following occurs as a result of myxedema in adults?

- a. Incomplete carbohydrate metabolism
  - b. Dwarf growth
  - c. Disturbance in salt metabolism
  - d. Thickness of skin and of hair brittleness
- Correct Ans. (d)

40. Which of the following results due to the deficiency of iodine?

- a. Exophthalmic goiter
- b. Goiter
- c. Mental lethargy
- d. Heart attack

Correct Ans. (b)

41. What happens to the blood glucose level as a result of insufficient insulin production?

- a. Increase
- b. Decrease
- c. Remains normal
- d. None of these

Correct Ans. (a)

42. Which of the following is secreted by adrenal glands?

- a. Cortisone
- b. Adrenaline
- c. Cortisone
- d. All of these

Correct Ans. (c)

43. Which of the following secreted by adrenal glands?

- a. Cortisone
- b. Adrenaline
- c. Cortisone
- d. All of these

Correct Ans. (d)

44. Which of the following functions effectively during emotions and emergencies?

- a. Adrenaline
- b. Noradrenalin
- c. Cortisone
- d. All of these

Correct Ans. (a)

45. Which of the following is male sex hormones?

- a. Testosterone
- b. Estrogen
- c. Cortisone
- d. Glycogen

Correct Ans. (a)

46. Which of the following is produced by the ovaries?

- a. Iodothyroine
- b. Testosterone
- c. Estrogen
- d. Parathormone

Correct Ans. (c)

47. Which of the following is located at the base of the brain?

- a. Ovaries
- b. Liver
- c. Adrenal glands
- d. Pituitary gland

Correct Ans. (b)

48. Which of the following is secreted by the posterior pituitary lobe of pituitary gland?

- a. oxytocin
- b. lactogenic hormone
- c. thyroid stimulating hormone
- d. luteinizing hormone

Correct Ans. (a)

49. Which of the following is not regulated by the anterior lobe of the pituitary gland?

- a. Growth hormone
- b. Lactogenic hormone
- c. Antidiuretic hormone
- d. Latinizing hormone

Correct Ans. (c)

50. Which of the following results due to under secretion of antidiuretic hormone?

- a. Diabetes mellitus
- b. Diabetes insipidus
- c. Goiter
- d. Dwarf growth

Correct Ans. (b)

51. Which of the following stimulates the development of egg?

- a. Luteinizing hormone
- b. Testosterone
- c. Oxytocin
- d. Lactogenic hormone

Correct Ans. (a)

52. Which of the following will fail to appear as result of castration?

- a. Development of egg
- b. Mammary gland
- c. Moustache

d. All of these

Correct Ans. (c)

53. By the action of glucagon, the blood glucose level

- a. decreases
- b. increase
- c. remains the same
- d. none of these

Correct Ans. (b)

ICMS College System

## CHAPTER 6

Choose the most appropriate answer:

1. Which of the following is an advanced character?

- a. Asymmetrical body
- b. Bilateral symmetry
- c. Radial symmetry
- d. None of these

Correct Ans. (b)

2. Which of the following animals inhabit land environment?

- a. Asymmetrical
- b. Bilateral symmetry
- c. Radial symmetry
- d. None of these

Correct Ans. (a)

3. How many central smaller fibrils are present in a cilium?

- a. None
- b. 2
- c. 5
- d. 10

Correct Ans. (b)

4. Which of the following moves by means of tube feet?

- a. Planaria
- b. Starfish
- c. Hydra
- d. Earthworm

Correct Ans. (b)

5. Which of the following moves by means of foot?

- a. Earthworm
- b. Amoeba
- c. Snails
- d. Paramecium

Correct Ans. (c)

6. Which of the following is correct for arthropods?

- a. Skeleton internal to the muscle
- b. Skeleton absent
- c. Skeleton external to the muscle
- d. Skeletons both internal and external

Correct Ans. (c)

7. The bones are held together by a tissue called:

- a. Tendons
- b. Ligament
- c. Joints
- d. All of these

Correct Ans. (b)

8. Which of the following are voluntary muscles?

- a. Skeletal
- b. Cardiac
- c. Smooth
- d. All of these

Correct Ans. (a)

9. Which of the following are involuntary muscles?

- a. Cardiac
- b. Smooth
- c. Skeletal
- d. Both A & B

Correct Ans. (d)

10. Which of the following muscles contract relatively quickly?

- a. Cardiac
- b. Smooth
- c. Skeletal
- d. None of these

Correct Ans. (c)

11. Which of the following is the range of diameter of a skeletal muscle fibre?

- a. 10-100  $\mu\text{m}$
- b. 100-200  $\mu\text{m}$
- c. 300-400  $\mu\text{m}$
- d. 500-600  $\mu\text{m}$

Correct Ans. (a)

12. Which of the following are contractile subunits present in each muscle fibre?

- a. Myofilaments
- b. Myofibrils
- c. Myosin
- d. Actin

Correct Ans. (b)

13. The cell membrane enclosing the fibre is called:

- a. Plasmolema
- b. Endolema
- c. Sarcolemma
- d. Atolemma

Correct Ans. (c)

14. Myofilaments within the sarcoplasmic envelope run:

- a. Transversally
- b. Longitudinally
- c. Obliquely
- d. Radially

Correct Ans. (b)

15. The Myofilaments are made up of:

- a. Glycogen
- b. Steroids
- c. Cellulose
- d. Proteins

Correct Ans. (d)

16. Which of the following make up thick filament of the myofibril?

- a. actin
- b. Pectin
- c. Myosin
- d. Lysine

Correct Ans. (c)

17. The impulse received from the supply to the muscle release:

- a.  $\text{K}^{++}$
- b.  $\text{Na}^{+}$
- c.  $\text{Mg}^{+}$
- d.  $\text{Ca}^{++}$

Correct Ans. (d)

18. When a muscle fibre receives an impulse from the nerve it

- a. Contracts
- b. Expands
- c. Remains unaffected
- d. None of these

Correct Ans. (a)

19. The tricep brachii muscle possesses:

- a. One head
- b. Two heads
- c. Three heads
- d. Many heads

Correct Ans. (c)

20. How many bones take part in the formation of cranium in man?

- a. 8
- b. 10
- c. 15
- d. 20

Correct Ans. (a)

21. How many bones support the fact in man?

- a. 5

- b. 7
- c. 9
- d. 10

Correct Ans. (c)

22. Which of the following bone is not the part of cranium in man?

- a. occipital
- b. temporal
- c. ethmoid
- d. vomer

Correct Ans. (d)

23. Which of the following takes part in the formation of cranium?

- a. Frontal bone
- b. Occipital bone
- c. Sphenoid
- d. All of these

Correct Ans. (d)

24. The atlas vertebrae lie in the

- a. Back
- b. Thoracic region
- c. Neck
- d. Pelvic region

Correct Ans. (C)

25. Which of the following number of vertebrae are present in the thoracic region?

- a. 12
- b. 14
- c. 16
- d. 18

Correct Ans. (a)

26. Which of the following number of vertebrae are lying in the lower back region?

- a. 3
- b. 5
- c. 7
- d. 9

Correct Ans. (b)

27. Which of the following vertebrae are present in the lower back?

- a. Atlas
- b. Cervical
- c. Lumber
- d. Thoracic

Correct Ans. (c)

28. Which of the following vertebrae are lying in the neck region?

- a. lumber
- b. cervical
- c. thoracic
- d. none of these

Correct Ans. (b)

29. Which of the following number of vertebrae are present in the pelvic region?

- a. 3
- b. 5
- c. 7
- d. 9

Correct Ans. (d)

30. Which of the following number of rib pairs compose the chest cage?

- a. 12
- b. 15
- c. 18
- d. 20

Correct Ans. (a)

31. Which of the following attaches the arms to the trunk?

- a. Pelvic girdle
- b. Pectoral girdle
- c. Hip girdle
- d. None of these

Correct Ans. (b)

32. Which of the following connects the scapula to the sternum?

- a. Axis
- b. Atlas
- c. Coccyx
- d. Clavicle

Correct Ans. (d)

33. The joint formed by the humerus with the scapula is:

- a. Hinge joint
- b. Ball and socket joint
- c. Multistage joint
- d. None of these

Correct Ans. (b)

34. Which of the following joint is formed by the radius and ulna at their distal end with the wrist bones?

- a. Hinge
- b. Ball and socket
- c. Multistage
- d. All of these

Correct Ans. (c)

35. With how many wrist bones ulna and radius form a joint?

- a. 4
- b. 8
- c. 10
- d. 12

Correct Ans. (b)

36. Which of the following form knee joint with the femur?

- a. Ilium
- b. radius and ulna
- c. Tibia and Fibula
- d. All of these

Correct Ans. (c)

37. The ankle bones are called:

- a. Tarsal
- b. Carpels
- c. Metacarpels
- d. None of these

Correct Ans. (a)

38. The number of ankle bone is:

- a. 2
- b. 8
- c. 16
- d. 20

Correct Ans. (b)

39. Which of the following is the characteristic of endoskeleton?

- a. Primitive
- b. Inert
- c. Non-living
- d. None of these

Correct Ans. (d)

40. Which of the following is the character of exoskeleton?

- a. Rigid
- b. Heavy
- c. Non-living
- d. All of these

Correct Ans. (d)

41. Which of the following is not the characteristics of endoskeleton?

- a. Secreted by endodermal cells
- b. Poses no hindrance to the growth
- c. Present in advanced animals
- d. Can grow (living)

Correct Ans. (a)

42. The bones forming endoskeleton in vertebrates are:

- a. living
- b. non-living
- c. secreted by endodermal cells
- d. do not grow

Correct Ans. (a)

43. Which of the following have plantigrade locomotion?

- a. Bears
- b. Fishes
- c. Goat
- d. Snake

Correct Ans. (a)

44. Which of the following have unguligrade type of locomotion?

- a. Goat
- b. Man
- c. Rabbits
- d. Bears

Correct Ans. (d)

45. Which of the following locomotion is present in horse?

- a. Plantigrade
- b. Digitigrades
- c. Unguligrade
- d. All of these

Correct Ans. (c)

46. Which of the following have bipedal locomotion?

- a. Horse
- b. Bear
- c. Rodents
- d. Man

Correct Ans. (a)

## CHAPTER 7

Choose the most appropriate answer:

1. Which of the following is not involved in asexual reproduction?

- a. Binary fission
- b. Multiple fissions
- c. Budding
- d. Gametes formation

Correct Ans. (d)

2. The gametes produced by female are called:

- a. Ova
- b. Sperms
- c. Spores
- d. Ovaries

Correct Ans. (a)

3. Sperms are produced in male inside:

- a. Ovaries
- b. Kidney
- c. Embryo
- d. Testes

Correct Ans. (d)

4. An individual possessing both male and female reproductive organs is called:

- a. imperfect
- b. hermaphrodite
- c. Unisexual
- d. Neuter

Correct Ans. (b)

5. Which of the following conditions need huge supply of yolk to the egg?

- a. viviparity
- b. Oviparity
- c. Both A & B
- d. None of these

Correct Ans. (b)

6. Which of the following animals are viviparous?

- a. Birds
- b. Deer
- c. Frog
- d. Snakes

Correct Ans. (b)

7. Which of the following lies to the extreme outside completely covering the embryo?

- a. Amnion
- b. Allantois
- c. Chorion
- d. None of these

Correct Ans. (c)

8. Which of the following acts as a reservoir for undigested food and nitrogenous waste products?

- a. Allantoic cavity
- b. Amniotic cavity
- c. Chorion cavity
- d. None of these

Correct Ans. (a)

9. Which of the following have no elaborate contact between the maternal and the foetal tissues?

- a. sharks
- b. cats
- c. dogs
- d. deers

Correct Ans. (a)

10. Which of the following mammals lay eggs?

- a. Eutherians
- b. Prototherians
- c. Metatherians
- d. None of these

Correct Ans.

(b)

11. Which of the following expel imperfectly develop embryo out of the body?

- a. Prototherians
- b. Eutherians
- c. Metatherians
- d. All of these

Correct Ans. (c)

12. Which of the following have developed placentas for the nourishment of embryos?

- a. eutherians
- b. Prototherians
- c. Metatherians
- d. None of these

Correct Ans. (a)

13. Which of the following are metatherians?

- a. birds
- b. fishes
- c. kangaroos
- d. frogs

Correct Ans. (c)

14. Consider the following:

Sharks  
Birds  
Kangaroos  
Monkeys  
Man  
Cat

Which of the following is eutherian?

- a. Man, shark, cat

- b. Cat, monkey, man
- c. Cat, monkey, birds
- d. Kangaroos, cat, shark

Correct Ans. (b)

15. The maturation of spermatozoa in man takes place in:

- a. Duct system
- b. Seminiferous tubules
- c. Vas deferens
- d. Epididymus

Correct Ans. (b)

16. The number of ova discharged at one time from the ovary in human is:

- a. none
- b. one
- c. two
- d. many

Correct Ans. (b)

17. The fertilized ovum or zygote enters into:

- a. Ovary
- b. Kidney
- c. Uterus
- d. Oviduct

Correct Ans. (c)

18. Which of the following is the approximate gestation period in humans?

- a. seven months
- b. nine months
- c. ten months
- d. twelve months

Correct Ans. (b)

19. Which of the following is involved in the control of menstrual cycle?

- a. Pituitary gland
- b. Pancreas
- c. Thyroid gland
- d. Placenta

Correct Ans. (a)

20. How many types of cells composed a human ovary?

- a. 10
- b. 7
- c. 4
- d. 2

Correct Ans. (d)

21. Which of the following is the function of follicle cells?

- a. reproduction
- b. growth
- c. support and nutrition
- d. none of these

Correct Ans. (c)

22. Which of the following occurs if fertilization fails to take place in human female?

- a. Corpus luteum starts regenerating
- b. Progesterone secretion increases
- c. Uterus remains intact
- d. Onset of menstruation

Correct Ans. (d)

23. Which of the following stimulates the development and secretion of milk in the mammary glands?

- a. Progesterone
- b. Luteotropic hormone
- c. Estrogen
- d. Luteinizing hormone

Correct Ans. (b)

24. Which of the following stimulates the release of the egg?

- a. Luteinizing hormone
- b. Follicle stimulating hormone
- c. Luteotropic hormone

d. Progesterone

Correct Ans. (a)

25. In which of the following abortion of embryo occurs if ovary is removed at any stage to pregnancy?

- a. Rabbits
- b. Horses
- c. Monkeys
- d. Humans

Correct Ans. (a)

ICMS College System

## CHAPTER 8

Choose the most appropriate answer

1. In which of the following the zygote divides very rapidly to become Multicellular?

- a. Gastrulation
- b. Cleavage
- c. Organogenesis
- d. All of these

Correct Ans. (b)

2. In which of the following the newly formed cells move from one place to other?

- a. Cleavage
- b. Organogenesis
- c. Gastrulation
- d. Growth

Correct Ans. (c)

3. Which of the following is not true of frog?

- a. Lays eggs
- b. Embryo is formed outside the body
- c. Eggs are laid on land
- d. Fertilization is external

Correct Ans. (c)

4. Four micromeres and four macromeres are formed in the developing zygote of frog after?

- a. First cleavage
- b. Second cleavage
- c. Third cleavage
- d. Fourth cleavage

Correct Ans. (c)

5. The two cells formed after first cleavage of the zygote of frog are called:

- a. micromeres
- b. macromeres
- c. centromeres
- d. blastomeres

Correct Ans. (d)

6. The embryo at the transitory period between cleavage and Gastrulation is called:

- a. blastocoele
- b. blastula
- c. blastomere
- d. blastopore

Correct Ans. (b)

7. The initiation of Gastrulation is the appearance at one side of a:

- a. bud
- b. cleft
- c. outgrowth
- d. opening

Correct Ans. (b)

8. Which of the following region of ectoderm gives rise to the neural plate?

- a. mid dorsal
- b. mid ventral
- c. anterior ventral
- d. anterior dorsal

Correct Ans. (a)

9. Which of the following is formed from the somatic mesoderm lying on the two lateral sides of the notochord?

- a. vertebral column
- b. muscles of the back
- c. dermis of the skin
- d. all of these

Correct Ans. (d)

10. Which of the following is formed by the ectoderm?

- a. urinary system
- b. respiratory system
- c. nervous system
- d. vertebral column

Correct Ans. (b)

11. The process by which the tail of tadpole is lost is called:

- a. Progressive
- b. Retrogressive
- c. Organizational
- d. None of these

Correct Ans. (b)

12. Which of the following is organizational change in frogs development?

- a. disappearance of gills
- b. development of limbs
- c. shortening of intestine
- d. none of these

Correct Ans. (c)

13. Which of the following tissues are regarded as organizers?

- a. notochordal
- b. somatic
- c. reproductive
- d. none of these

Correct Ans. (a)

14. Which of the following is a condition known for small skull?

- a. cleft plate
- b. colour blindness
- c. microcephaly
- d. microphylous

Correct Ans. (c)

15. Which of the following is a condition known for hare-lip?

- a. Microcephaly
- b. Cleft palate
- c. Microspory
- d. None of these

Correct Ans. (b)

16. Which of the following has a complete genetic information in its nucleus for formation of a complete individual?

- a. Thyroid gland
- b. Pituitary gland
- c. Liver
- d. Spleen

Correct Ans. (b)

17. Which of the following has a complete genetic information in its nucleus for formation of a complete individual?

- a. egg
- b. sperm
- c. zygote
- d. none of these

Correct Ans. (c)

18. Muscle cells acquire special kinds of proteins called:

- a. Actin
- b. Insulin
- c. Pectin
- d. Lignin

Correct Ans. (a)

19. The nucleus of Acetabularia lies:

- a. at the tip
- b. in the stalk
- c. in the cap
- d. in the base

Correct Ans. (d)

20. Which of the following happens when the two blastomeres of a sea urchin are separated?

- a. Not develops into larva
- b. Each one develops into a larva
- c. Only one develops into a larva
- d. None of these

Correct Ans. (b)

## CHAPTER 9

Choose the most appropriate answer:

1. In nature garden pea plant is

- a. Self fertilized
- b. Cross fertilized
- c. Both self and cross
- d. None of these

Correct Ans. (a)

2. Which of the following trait appears in the  $F_1$  generation when true breeding plants producing round seeds are crossed with true breeding wrinkled seeds?

- a. All wrinkled
- b. Half round and half wrinkled
- c. All round
- d. Round and wrinkled appeared in the ratio of 3:1 respectively

Correct Ans. (c)

3. Which of the following trait is obtained in  $F_1$  generation when true breeding plants producing purple flowers is crossed with true breeding plants producing white flowers?

- a. All purple flowers
- b. All white flowers
- c. Half purple and half white
- d. Purple and white in the ratio of 3:1 respectively

Correct Ans. (a)

4. Which of the following  $F_2$  tall will behave like  $F_1$  hybrid tall?

- a. all
- b.  $1/3$
- c.  $2/3$
- d. None

Correct Ans. (b)

5. Which of the following  $F_2$  tall will behave like  $F_1$  hybrid tall?

- a. none
- b. all
- c.  $2/3$
- d.  $1/3$

Correct Ans. (c)

6. The alternative form of a given gene is called:

- a. trait
- b. phenotype
- c. allele
- d. recessive

Correct Ans. (c)

7. During gamete formation the two different alleles of a trait

- a. separate
- b. stay together
- c. disappear
- d. none of these

Correct Ans. (a)

8. The gametes produced by a homozygous dwarf plant would of

- a. one type
- b. two type
- c. three type
- d. four type

Correct Ans. (a)

9. A child of homozygous blood group A is born of a father with homozygous blood group A. Which of the following will be the genotype of the child's mother?

- a.  $I^A I^B$
- b.  $I^B I^B$
- c.  $I^B i$
- d.  $ii$

Correct Ans. (a)

10. In the above cross what will be the percentage of plants in F<sub>2</sub> generation producing yellow round seeds?

- a. 20%
- b. 36%
- c. 46%
- d. 56%

Correct Ans. (d)

11. In the cross of question No. 45, what will be the percentage of plants in F<sub>2</sub> generation producing yellow wrinkled seeds?

- a. 18.75%
- b. 30.75%
- c. 40%
- d. 50%

Correct Ans. (a)

12. How many types of gametes are possible to be produced by a hybrid (heterozygous) pea plant producing yellow round seeds?

- a. 1
- b. 2
- c. 3
- d. 4

Correct Ans. (d)

13. Which of the following possible number of gene pairs control the skin colour in man?

- a. 2
- b. 4
- c. 6
- d. 8

Correct Ans. (d)

14. Which of the following controls the colour of eyes in human beings?

- a. brown pigment
- b. Red pigment
- c. Blue-pigment
- d. Green pigment

Correct Ans. (a)

15. Baldness in human beings is hereditary which is:

- a. Recessive in males
- b. Recessive in females
- c. dominant in males
- d. both b and c

Correct Ans. (d)

16. The inability of the body to utilize the sugars properly is due to:

- a. a dominant gene
- b. a recessive gene
- c. two dominant genes
- d. multiple genes

Correct Ans. (b)

17. The offspring of mating between two pure strains are called:

- a. hybrid
- b. mutants
- c. the P generation
- d. the F<sub>2</sub> generation

Correct Ans. (a)

18. How many possible phenotypes are there for the ABO blood group?

- a. 4
- b. 6
- c. 8
- d. 16

Correct Ans. (a)

19. A child with blood group genotype  $I^A I^B$  is born of a woman with genotype  $I^B I^B$ .

The father of the child could not be of the genotype.

- a.  $I^A I^A$
- b.  $I^B I^B$
- c.  $I^B I^B$
- d.  $I^A i$

Correct Ans. (b)

20. In the above question, if the couple has normal child, without phenylketonuria, what is the probability this child is carrier of the disease?

- a. 0.33
- b. 0.50
- c. 0.067
- d. 1.00

Correct Ans. (c)

21. When red-flowered snapdragons were crossed with white-flowered plants, their offspring have pink flowers. This type of genotypic expression is called:

- a. dominant-recessive
- b. co-dominance
- c. incomplete dominance
- d. all of these

Correct Ans. (c)

22. The genotypic expression seen in a person of blood group AB is called:

- a. dominant-recessive
- b. codominance
- c. incomplete dominance
- d. corecession

Correct Ans. (b)

## CHAPTER 10

Choose the most appropriate answer:

1. The Mendel factors which control the inheritance of characters are called:

- a. Chromosomes
- b. RNA
- c. Genes
- d. Centrosomes

Correct Ans. (c)

2. Gametes have:

- a. the same number of chromosomes as the body cells
- b. twice the number of chromosomes as the body cells
- c. half the number of chromosome, as the body cells
- d. one fourth the number of chromosomes as the body cells

Correct Ans. (c)

3. Which of the following number of chromosomes are present in the somatic cells of *Drosophila*?

- a. 4
- b. 8
- c. 16
- d. 20

Correct Ans. (b)

4. Which of the following determines sex of the offspring in human beings?

- a. Sperm
- b. Egg
- c. Somatic cell
- d. None of these

Correct Ans. (a)

5. Which of the following determines sex of the following in butterflies?

- a. sperm
- b. egg
- c. somatic cell
- d. all of these

Correct Ans. (b)

6. In which of the following, egg determines sex of the offspring?

- a. Drosophila
- b. Man
- c. Grass hopper
- d. Birds

Correct Ans. (d)

7. In the cross of male and female of F1 generation in Drosophila, what will be the ratio of red eyed males among all the offspring of F2 generation?

- a. 25%
- b. 33%
- c. 50%
- d. 75%

Correct Ans. (a)

8. Which of the following is sex-linked trait in man?

- a. Eye colour
- b. Skin colour
- c. Colour blindness
- d. Blood group

Correct Ans. (c)

9. Colour blindness is a condition in which the individuals have difficulty in distinguishing:

- a. Black from white
- b. White from green
- c. Yellow from red
- d. Red from green

Correct Ans. (d)

10. Gene for the trait of colour blindness in man is located on

- a. autosomes
- b. x chromosome
- c. y chromosome
- d. on both x and y chromosomes

Correct Ans. (b)

11. A woman receives her x chromosome from

- a. her mother only
- b. her father only
- c. both her mother and her father
- d. extra nuclear DNA in her mother's egg

Correct Ans. (c)

12. A man receives his x chromosome from

- a. his mother only
- b. his father only
- c. part from his father and part from his mother
- d. either his mother or his father

Correct Ans. (a)

13. Genes located on the same chromosome

- a. are assorted independently
- b. obey Mendel's law of independent assortment
- c. are not linked
- d. are linked

Correct Ans. (d)

14. Crossing over occurs when genetic information is exchanged between two

- a. chromatids of a chromosome
- b. long arms of a chromosome
- c. chromatids of two homologous chromosomes
- d. non homologous chromosomes

Correct Ans. (c)

15. The failure of homologous chromosomes to detach and segregate during meiosis is called:

- a. crossing over
- b. no disjunction
- c. synapsis
- d. linkage

Correct Ans. (b)

16. Which of the following defects is not caused by non disjunction?

- a. Down syndrome
- b. Turner syndrome
- c. Klinefelter's syndrome
- d. Acquired immuno deficiency syndrome

Correct Ans. (d)

17. Individual having Down's syndrome, contains chromo-some number

- a. 47
- b. 45
- c. 46
- d. 44

Correct Ans. (a)

18. Females with Turner's syndrome have chromosomes

- a. xx
- b. x
- c. xxx
- d. xxy

Correct Ans. (b)

19. In Klinefelters syndrome females posses

- a. xx
- b. xy
- c. xxy
- d. xxx

Correct Ans. (d)

20. Which of the following is the symptom of Down's syndrome?

- a. physical and mental abnormality
- b. sexual immaturity
- c. criminal tendency
- d. colour blindness

Correct Ans. (a)

21. In which of the following females have 45 chromosome number?

- a. Down's syndrome
- b. Turners syndrome
- c. Klinefelter's Syndrome
- d. Immuno deficiency syndrome

Correct Ans. (b)

## CHAPTER 11

Choose the most appropriate answer:

1. Which of the following is present in the chemical composition of DNA

- a. Sulphur
- b. Phosphours
- c. Lodine
- d. Potassium

Correct Ans. (b)

2. Which of the following is absent in the virus proteins?

- a. sulphur
- b. phosphours
- c. nitrogen
- d. carbon

Correct Ans. (b)

3. DNA is formed of units called:

- a. nucleotides
- b. glucose
- c. amino acids
- d. fatty acids

Correct Ans. (a)

4. Which of the following is not the chemical component of a nucleotide of DNA?

- a. Deoxyribose sugar
- b. Phosphate group
- c. Nitrogenous base
- d. Amino acid

Correct Ans. (d)

5. The different types nitrogenous based which from different nucleotides are:

- a. 4
- b. 5
- c. 6
- d. 7

Correct Ans. (b)

6. Which of the following nitrogenous bases is absent in the nucleotides of DNA?

- a. Thymine
- b. Adenine
- c. Uracil
- d. Cytosine

Correct Ans. (c)

7. Which of the following different types of nucleotides form DNA molecule?

- a. 2
- b. 3
- c. 4
- d. 5

Correct Ans. (c)

8. According to Waston and Crick model of DNA, each molecule is made up of

- a. one strand
- b. two strands which run parallel
- c. two strands which twist around each other
- d. three stands

Correct Ans. (c)

9. The two strands of DNA molecule are held together by weak:

- a. hydrogen bonds
- b. Carbon bonds
- c. Ionic bonds
- d. Oxygen bonds

Correct Ans. (a)

10. Which of the following proved conclusively that DNA is the genetic material?

- a. Waston and Crick
- b. Griffith
- c. Hershey and Chase
- d. Laderburg and Tatum

Correct Ans. (c)

11. The 5-Carbon sugar in RNA molecule is:

- a. Deoxyribose
- b. Ribose
- c. Glucose
- d. Fructose

Correct Ans. (b)

12. In the RNA molecule nitrogenous base Uracil is substituted for:

- a. cytosine
- b. adenine
- c. guanine
- d. thymine

Correct Ans. (d)

13. Genetic information in a DNA molecule is coded in:

- a. sequence of nucleotides
- b. base pairings
- c. proportion of each base present
- d. the turning pattern of the helix

Correct Ans. (a)

14. The two strands of double helix model of DNA are held together by hydrogen bonds between.

- a. Sugar and phosphate groups
- b. Sugar and nitrogenous bases
- c. Phosphate groups and nitrogenous bases
- d. Nitrogenous bases

Correct Ans. (d)

15. The number of cytosine bases in a DNA molecule.

- a. is equal to the number of uracil bases
- b. is equal to the number of guanine bases
- c. is equal to the number of adenine bases
- d. cannot be predicted

Correct Ans. (b)

16. In a double helix-model of DNA, the distance between two base pairs is:

- a. 0.034 nm
- b. 0.34 nm
- c. 3.4 nm
- d. 34 nm

Correct Ans. (b)

17. Which of the following bring a particular amino acid to a particular specified place?

- a. tRNA
- b. mRNA
- c. rRNA
- d. DNA

Correct Ans. (a)

18. The code for specifying amino acid consists of

- a. one base
- b. two base
- c. three bases
- d. four bases

Correct Ans. (c)

19. Which of the following is genetic code for methionine?

- a. UGG
- b. UCG
- c. GUA
- d. AUG

Correct Ans. (d)

20. Beadle and Tatum in their experiments on genetics in 1941, used the

- a. bacteriophage
- b. bacteria
- c. Neurospora
- d. Rhizopus

Correct Ans. (c)

21. Which of the following is true of Neurospora?

- a. It is an autotroph
- b. Is a parasite
- c. Can grow in minimal medium
- d. Black bread mold

Correct Ans. (c)

22. Which of the following is present in place of glutamic acid in sickle cell trait?

- a. bases
- b. sugars
- c. phosphate
- d. groups
- e. fatty acids

Correct Ans. (c)

23. Instructions for the order of amino acids in a polypeptide chain are coded along a DNA strand into the sequence of:

- a. bases
- b. sugars
- c. phosphate groups
- d. fatty acids

Correct Ans. (a)

24. The enzyme which is used to break open the plasmid ring is called:

- a. recombinant enzyme
- b. restriction enzyme
- c. reductase enzyme
- d. carboxylase enzyme

Correct Ans. (b)

25. Of the 64 codons, how many code for amino acids?

- a. 20
- b. 22
- c. 40
- d. 61

Correct Ans. (d)

26. About how much of the DNA in a eukaryotic cell is expressed at any one time?

- a. 1 percent
- b. 20 percent
- c. 50 percent
- d. 80 percent

Correct Ans. (a)

27. The function of mRNA is to

- a. provide specific binding sites for a series of specific tRNA molecules.
- b. Hold a group of ribosomes together
- c. Transfer the genetic code to rRNA
- d. Transfer the genetic code to DNA

Correct Ans. (a)

28. The function of tRNA is to

- a. form a site for protein synthesis
- b. transcribe the genetic code
- c. transport specific amino acids to specific sites on the mRNA
- d. synthesize amino acids

Correct Ans. (c)

29. Which of the following unwound double helix of DNA during replication?

- a. DNA ligase
- b. Primase
- c. DNA polymerase
- d. Helicase

Correct Ans. (d)

## CHAPTER 12

Choose the most appropriate answer:

1. Which of the following is the age of the earth according to the scientific belief?

- a. one million years
- b. 5 million years
- c. 6 billion years
- d. 15 billion years

Correct Ans. (c)

2. Variations in the living organisms are:

- a. absent
- b. of two kinds
- c. of three kinds
- d. of four kinds

Correct Ans. (b)

3. Which of the following is true of a population?

- a. all individuals are exactly alike
- b. 50% individuals are exactly alike
- c. 10% of individuals are exactly alike
- d. no two individuals are exactly alike

Correct Ans. (d)

4. Paramecium divides

- a. three times a day
- b. ten times a day
- c. after three days
- d. after ten days

Correct Ans. (a)

5. During one breeding season a cod fish lays

- a. one egg
- b. hundred eggs
- c. thousand eggs
- d. million of eggs

Correct Ans. (d)

6. Elephants begin to breed at age of

- a. six months
- b. six years
- c. thirty years
- d. fifty years

Correct Ans. (c)

7. Elephants are considered to one of the

- a. slowest breeders among vertebrates
- b. fastest breeders among vertebrates
- c. slowest breeders among invertebrate
- d. Fastest breeders among invertebrate

Correct Ans. (a)

8. Organisms fully adapted to their environment

- a. will gradually perish
- b. can not survive
- c. have low survival chances
- d. have high survival chances

Correct Ans. (d)

9. Organs that serve no apparent purpose are called

- a. abortive
- b. vestigial
- c. reproductive
- d. degenerative

Correct Ans. (b)

10. Which of the following is the vestigial organ in human body?

- a. nose
- b. radius
- c. ear muscle
- d. humerus

Correct Ans. (c)

11. Different sorts of remains of organisms that live in the past era are called:

- a. microorganisms
- b. fossils
- c. birds
- d. horses

Correct Ans. (b)

12. Which of the following has greatest diversity of living things?

- a. palearctic
- b. nearctic
- c. Australian
- d. Ethiopian

Correct Ans. (d)

13. Which of these show an unusual fauna and flora?

- a. Ethiopian
- b. Palearctic
- c. Neotropical
- d. Nearctic

Correct Ans. (c)

14. In which of the following the spread of fauna and flora has often been greatly limited by the harshness of the climate?

- a. Oriental
- b. Nearctic
- c. Ethiopian
- d. Australian

Correct Ans. (b)

15. It was observed in England that before industrial expansion the colour of the wings and bodies of the prevalent variety of moth was

- a. light
- b. red
- c. green
- d. dark

Correct Ans. (a)

16. In heavy industrial areas the colours of moth was changed to

- a. yellow
- b. green
- c. brown
- d. coal black

Correct Ans. (d)

17. The absence of lichens from tree trunks in an area is an indication of

- a. absence of pollution
- b. presence of pollution
- c. absence of industries
- d. clear and pleasant air

Correct Ans. (b)

18. The gradual process of change that occurs in populations of organisms over along period of time, leading to the formation of new species is called:

- a. organic evolution
- b. inorganic evolution
- c. genetic drift
- d. none of these

Correct Ans. (a)

## CHAPTER 13

Choose the most appropriate answer:

1. Within a community living organisms:
- interact with members of their own species
  - Do not interact with members of their own species
  - Do not interact with members of other species
  - All of these

Correct Ans. (a)

2. It is a group of populations of different organisms living in the same area and sharing the same resources:
- community
  - Environment
  - Biome
  - Ecosystem

Correct Ans. (a)

3. It is a specific locality with particular set of environment conditions where organisms
- Biome
  - Habitat
  - Atmosphere
  - Lithosphere

Correct Ans. (b)

4. Within the same habitat each organism has definite functional position different from other organisms. This is called:
- Ecological Ecosystem
  - Ecological pyramid
  - Ecological Niche
  - None of these

Correct Ans. (c)

5. Which of the following is recycled in a balanced ecosystem?

- Carbon, Nitrogen, energy
- Hydrogen, energy, oxygen
- Nitrogen, carbon, hydrogen
- Energy, nitrogen, oxygen

Correct Ans. (c)

6. Consider the following ecosystems:
- pond
  - lake
  - river
  - dam
  - aquarium

Which of the following groups make natural ecosystem?

- I, II and IV
- II, III and IV
- I, III and V
- I, II and III

Correct Ans. (d)

7. It is the ultimate source of energy for all natural ecosystem:

- food
- producers
- sunlight
- water

Correct Ans. (c)

8. Most life in the biosphere functions within the temperature range of:

- 0----- 50° C
- 6----- 50° C
- 10----- 50° C
- 5----- 50° C

Correct Ans. (a)

9. Cactus and Euphorbia have developed thick cuticle to overcome the problem of:

- very low temperature
- excess of water
- deficiency of loss of water
- deficiency of minerals

Correct Ans. (c)

10. Flag form or one sided trees develop under the influence of:

- a. water deficiency
- b. very low temperature
- c. strong winds in one direction
- d. intense sunlight

Correct Ans. (c)

11. Consider the following

- I. CO<sub>2</sub>
- II. O<sub>2</sub>
- III. H<sub>2</sub>O
- IV. N<sub>2</sub>

Which one of the following is used as raw material by the green plants during photosynthesis?

- a. I & II
- b. I & III
- c. II & III
- d. III & IV

Correct Ans. (b)

12. It brings sudden changes in the ecosystem:

- a. Temperature
- b. Soil
- c. Fire
- d. Topography

Correct Ans. (c)

13. The top soil is generally dark brown in colour due to the presence of:

- a. water
- b. nitrogen
- c. phosphorus
- d. humus

Correct Ans. (d)

14. Which one of the following abiotic factors has no direct influence on the organisms?

- a. Topography
- b. Temperature

- c. Gravity
  - d. Radiations
- Correct Ans. (a)

15. Atmospheric pressure and temperature are two phenomena

- a. both increase with increasing altitude
- b. both decrease with increasing altitude
- c. do not change with changing altitude
- d. pressure increases while temperature decreases with increasing altitude

Correct Ans. (b)

16. Following are some consumers:

- a. Rabbits
- b. Dog
- c. Man
- d. Insects

Correct Ans. (d)

17. Which of the following zones is beyond the reach of light penetration?

- a. Profundal
- b. Limnetic
- c. Littoral
- d. All of these

Correct Ans. (a)

18. Freshwater habitats are divided into two categories, standing water and running water, oxygen concentration

- a. Remains the same in both of these regions
- b. High in standing and low in running water
- c. Low in standing and high in running water
- d. None of these

Correct Ans. (c)

19. To overcome the problems of thinness of atmosphere and pull of gravity, land plants have developed:

- a. Thick corky bark in plants
- b. Water storage tissues
- c. Deeply penetrated root system
- d. Supporting and strengthening tissues

Correct Ans. (d)

20. In tropical rain forests annual rain falls:

- a. Exceeds 2000 mm
- b. Between 1000-2000 mm
- c. Below 1000 mm
- d. Exceeds 4000 mm

Correct Ans. (a)

21. Consider the following characters:

- I. Decomposition of litter is quick
- II. Growing season shrinks to 3 to 4 months
- III. Forest is highly stratified
- IV. Great diversity of trees

Which one of the following is the characteristics of Tropical Rain forest?

- a. I, II & III
- b. I, III & IV
- c. II, III & IV
- d. I, II & IV

Correct Ans. (b)

22. Abundant evenly distributed rain fall and moderate temperature are the characteristics of:

- a. Coniferous forests
- b. Desert ecosystem
- c. Temperate deciduous forests
- d. Tundra ecosystem

Correct Ans. (c)

23. In Pakistan *taxus baccata*, and *berberis lysium* are the prominent trees found in:

- a. Tundra ecosystem
- b. Tropical rain forest
- c. Coniferous alpine forest
- d. Temperate deciduous forests

Correct Ans. (d)

24. It is characterized by long sever winters and a constant cover a winter snow:

- a. Coniferous alpine forests
- b. Temperate deciduous forest
- c. Tropical rain forest
- d. Grasslands

Correct Ans. (a)

25. They are characterized by periodic and often sever droughts:

- a. Deserts
- b. Grasslands
- c. Tundra
- d. Coniferous forests

Correct Ans. (a)

26. Unreliable and unevenly distributed less than 250 mm annual rain fall are characteristics of:

- a. Tropics
- b. Grasslands
- c. Deserts
- d. Savana

Correct Ans. (c)

27. Surface feeders are desert plants which:

- a. grow on the surface
- b. Spread over the surface
- c. Have deep root system
- d. Have shallow root system

Correct Ans. (d)

28. Cacti and Euphorbias naturally occur in:

- a. Deserts
- b. Grasslands
- c. Savanna
- d. Temperate deciduous forests

Correct Ans. (a)

29. Trees can not grow above timber line because of:

- a. Abundant water
- b. Harsh environmental conditions
- c. Deficiency of organic matter
- d. Absence of sunlight

Correct Ans. (b)

30. Permafrost is characteristic of:

- a. Coniferous Alpine forest
- b. Coniferous boreal forests
- c. Tundra ecosystem
- d. Deserts

Correct Ans. (c)

31. The tundra of high altitude is called:

- a. Arctic tundra
- b. Antarctic tundra
- c. Boreal Tundra
- d. Alpine tundra

Correct Ans. (d)

32. Most of the plants ceases to grow at a temperature below:

- a. 6 °C
- b. 10 °C
- c. 15 °C
- d. 20 °C

Correct Ans. (a)

33. A population is a group of

- a. species in a community
- b. communities in an ecosystem
- c. individuals in a species
- d. individuals in family

Correct Ans. (c)

34. An ecological community is an assemblage of:

- a. family units
- b. food webs
- c. interacting populations
- d. closely related species

Correct Ans. (c)

35. Competition for light is more intense among the plants of

- a. tropical rain forests
- b. temperate deciduous forests
- c. coniferous alpine forests
- d. coniferous boreal forests

Correct Ans. (a)

36. Most animals are tree dwellers in a

- a. temperate deciduous forests
- b. tropical rainforests
- c. tropical deciduous forests
- d. coniferous forest

Correct Ans. (b)

37. Epiphytes are most abundant in a

- a. tropical rain forests
- b. temperate deciduous forests
- c. thorn woodland
- d. scrubland

Correct Ans. (a)

38. Nights are cool in the desert because:
- they dry air does not radiate much heat to the earth's surface
  - the elevation is always high
  - so much heat is absorbed by the earth's surface during the day
  - the air pressure is low

Correct Ans. (a)

39. Aquatic ecosystems cover approximately how much of the earth's surface?
- 20%
  - 40%
  - 75%
  - 90%

Correct Ans. (c)

40. Which of the following is ecological zone of shallow water is standing water ecosystem?
- Limnetic
  - Profundal
  - Pool
  - Littoral

Correct Ans. (d)

41. Which of the following is not recycled in an ecosystem?
- Nitrogen
  - Carbon
  - Energy
  - Hydrogen

Correct Ans. (c)

42. The amount of sunlight
- does not affect plant growth

- affects plant distribution
- does not affect plant distribution
- does not affect plant movements

Correct Ans. (b)

43. Which of the following plays a role in bringing variation in temperature?

- amount of precipitation
- distance from oceans
- presence of forests
- all of these

Correct Ans. (d)

44. Which of the following needs plenty of water for its elimination from the animal body?

- uric acid
- ammonia
- carbon dioxide
- oxygen

Correct Ans. (b)

45. Which of the following is not an important gas in the atmosphere?

- Nitrogen
- Carbon dioxide
- Oxygen
- Sulphur dioxide

Correct Ans. (d)

46. Under the influence of strong winds at high mountain, plants may develop

- Flag form
- Flowers
- Food storing organs
- Flattened leaves

Correct Ans. (a)

47. Which of the following is not true of the top soil?

- a. inhibited by plant roots and other living organisms
- b. containing no chemical substances and is less fertile
- c. approximately 10-20 cm in thickness
- d. is generally dark brown in colour because of humus

Correct Ans. (b)

48. Which of the following is the most constant abiotic factor of the environment?

- a. water
- b. gravity
- c. temperature
- d. soil

Correct Ans. (b)

49. Which of the following are the principal primary consumers in an aquatic ecosystem?

- a. small crustaceans
- b. insects
- c. rodents
- d. ruminants

Correct Ans. (a)

50. In which of the following life is most conspicuous?

- a. Limnetic zone
- b. Littoral zone
- c. Profundal zone
- d. All of these

Correct Ans. (b)

51. Which of the following would be the case in the absence of decomposers in an ecosystem?

- a. nutrients would be recycled
- b. new life would be produced as a usual
- c. nutrients would remain tied up in the dead bodies
- d. ecosystem would run normally

Correct Ans. (c)

52. Which of the following is not true of Limnetic zone?

- a. open water body
- b. presence of phytoplankton
- c. lighted zone
- d. presence of rooted plants

Correct Ans. (d)

53. As compared to standing water, oxygen concentration in moving water is:

- a. the same
- b. low
- c. high
- d. none of these

Correct Ans. (c)

54. Which of the following is the characteristic of running water?

- a. uneven distribution of oxygen
- b. animal are not sensitive to organic pollution
- c. animals show narrow range of tolerance
- d. low supply of oxygen

Correct Ans. (c)

55. Running water habitat in streams is also called:

- a. lentic water
- b. benthic
- c. lotic water
- d. none of these

Correct Ans. (c)

56. In contrast to aquatic habitat, land habitat for the organisms to inhabit is:

- a. tough and harsh
- b. easy
- c. more favourable
- d. not difficult

Correct Ans. (a)

57. The thick corky bark in plants act as a/an

- a. storage tissue
- b. insulting layer
- c. meristematic tissue
- d. water conducting tissue

Correct Ans. (b)

58. In which of the following, decomposition of litter occurs quickly?

- a. Coniferous alpine forest
- b. temperate deciduous forest
- c. alpine tundra
- d. tropical rain forest

Correct Ans. (d)

59. There is distinct stratification of vegetation and four layers in the forests are recognized in:

- a. arctic tundra
- b. deserts
- c. savanna
- d. temperate deciduous forests

Correct Ans. (d)

60. In which of the following decomposition of litter is slow and growing season shrinks to 3 or 4 months?

- a. tropical rain forests
- b. deserts
- c. coniferous alpine forest
- d. temperate deciduous forests

Correct Ans. (c)

61. Humidity is always low in

- a. alpine tundra
- b. deserts
- c. tropical rain forests
- d. temperate deciduous forests

Correct Ans. (b)

62. Which of the following is not the character of desert animals?

- a. presence of sweat gland
- b. presence of salt secreting glands
- c. excretion of nitrogenous wastes in the form concentrated urine
- d. large ears

Correct Ans. (a)

63. The tundra of high altitude is called:

- a. temperate tundra
- b. arctic tundra
- c. tropical tundra
- d. alpine tundra

Correct Ans. (d)

64. Arrange the following in descending order with regard to the annual amount of rainfall, starting with the first that receive maximum amount of rainfall and the last with minimum amount.

- a. temperate deciduous forest
- b. deserts
- c. grasslands
- d. tropical rain forests

Correct Ans. (d-a-c-b)

65. Arrange the following ecosystem in descending order in respect of the rate of decomposition of organic matter (litter) on the forest floor, starting from the one with high rate of decomposition.

- a. coniferous alpine forest
- b. temperate deciduous forests
- c. tropical rain forests
- d. alpine tundra

Correct Ans. (c-b-a-d)

66. Epiphytes are more abundant in a:

- a. temperate deciduous forests
- b. deserts
- c. tropical rain forest

d. grasslands

Correct Ans. (c)

67. All are abiotic factors except

a. animals

b. sunlight

c. air

d. soil

Correct Ans. (a)

ICMS College System

CHAPTER 14

Choose the most appropriate answer:

1. The killing of prey in large number in an area:

- a. increases predator population
- b. balances the ecosystem
- c. reduces the predator population
- d. does not affect the predator population

Correct Ans. (c)

2. A species in an area with out its natural predator leads to:

- a. Useful results
- b. Disastrous results
- c. Balances ecosystem
- d. None of these

Correct Ans. (b)

3. Roundworm and Plasmodium are example of:

- a. Symbionts
- b. Endoparasites
- c. Ectoparasites
- d. Predators

Correct Ans. (b)

4. An interaction between two organisms in which neither can survive without the other is:

- a. Predation
- b. Parasitism
- c. Commensalisms
- d. Mutualism

Correct Ans. (d)

5. Mycorrhizae and lichens are examples of:

- a. Mutualism
- b. Commensalism
- c. Grazing
- d. Predation

Correct Ans. (a)

6. The final result of overgrazing is:

- a. Green fields
- b. More food
- c. Barren fields
- d. Pleasant weather

Correct Ans. (c)

7. The back of forth movements of chemical elements between organisms and environment is called:

- a. Biological cycle
- b. Biochemical cycle
- c. Biogeochemical cycle
- d. Biodiversity

Correct Ans. (c)

8. Consider the following:

- I. CO<sub>2</sub>
- II. Carbohydrates
- III. Lipids
- IV. Proteins

Which one of the following groups is used by the animals as source of Carbon.

- a. I, II & IV
- b. I, III & IV
- c. II, III & IV
- d. I, II & III

Correct Ans. (c)

9. Nitrogen is vital to plants and animals for the synthesis of:

- a. Sucrose
- b. Proteins
- c. Fructose
- d. Waxes

Correct Ans. (b)

10. Which of the following is the source of soil nitrates?

- a. Decomposition of cellulose
- b. Decomposition of Lipids
- c. Decomposition of Proteins
- d. Decomposition of Glycogen and starches

Correct Ans. (c)

11. Nitrification is the conversion of:
- Nitrates into ammonia
  - Ammonia into nitrates
  - Nitrates into free nitrogen
  - Amino acids into ammonia

Correct Ans. (b)

12. Nitrosomonas converts:
- Ammonia to nitrites
  - Ammonia to nitrates
  - Amino acids to ammonia
  - Ammonia to amino acids

Correct Ans. (a)

13. Nitrification takes place in:
- Anaerobic condition
  - Aerobic Condition
  - Not affected by any of the above conditions
  - All of these

Correct Ans. (b)

14. Which one of the following is concerned with non-symbiotic nitrogen fixation?

- Nitrobacter
- Rhizobium
- Closteridium
- Nitrosomonas

Correct Ans. (c)

15. Denitrifying bacteria converts:

- Nitrites into nitrates
- Ammonia into nitrates
- Free nitrogen into nitrates
- Nitrates into free nitrogen

Correct Ans. (d)

16. Which of the following concerned with denitrification?

- Pseudomonas
- Nitrosomonas
- Nitrobacter
- Nostoc

Correct Ans. (a)

17. Consider the following:

- Nitrification
- Nitrogen fixation
- Denitrification
- Thunderstorm

Which one of the following groups increase soil fertility?

- I, III & IV
- I, II & IV
- II, III & IV
- I, II & III

Correct Ans. (b)

18. Energy flow in the ecosystem is:

- Cyclic
- Two directional
- One directional
- Not needed

Correct Ans. (c)

19. From the top carnivores energy is:

- Passed to the herbivores
- Recycled and passed on to the producers
- Passed to the consumers
- Lost to the space in the form of heat

Correct Ans. (d)

20. Of the total sunlight that strikes the green plants, the amount absorbed by the chlorophyll is about

- a. one half
- b. one third
- c. two third
- d. one fourth

Correct Ans. (a)

21. The amount of absorbed energy that is used in photosynthesis and stored as chemical energy of food is almost:

- a. 20%
- b. 25%
- c. 35%
- d. 50%

Correct Ans. (b)

22. At each step in the transfer of energy from one organism to another, a large part of the energy is:

- a. Fixed
- b. Utilized
- c. Stored
- d. Lost

Correct Ans. (d)

23. Net primary productivity is determined by the relative rates of:

- a. photosynthesis
- b. respiration
- c. both a & b
- d. none of these

Correct Ans. (c)

24. Primary productivity is the production of new organic matter at the

- a. Consumers level
- b. Producers level
- c. Decomposers level
- d. Herbivores level

Correct Ans. (b)

25. Energy and nutrients enter a community by way of the

- a. producers
- b. consumers
- c. scavengers
- d. decomposers

Correct Ans. (a)

26. A group of interconnected food chains is called a

- a. pyramid of energy
- b. complex food chain
- c. food web
- d. food cycle

Correct Ans. (c)

27. The rate of which light energy is converted to the chemical energy of organic molecules is the ecosystem's

- a. net primary productivity
- b. gross primary productivity
- c. net secondary productivity
- d. gross secondary productivity

Correct Ans. (b)

28. About how much of the chemical energy within producer tissues becomes chemical energy within herbivore tissues?

- a. 1%
- b. 10%
- c. 60%
- d. 90%

Correct Ans. (b)

29. About how much of the absorbed light energy by the green plants becomes chemical energy within the producers tissues?

- a. 1%
- b. 10%
- c. 50%

d. 75%

Correct Ans. (b)

30. Arrange the following types of ecosystems in terms of their net primary productivity in descending order, starting with the one being the most productive and last the least productive?

- a. Temperate deciduous forests
- b. Deserts
- c. Grasslands
- d. Tropical rain forests

Correct Ans. (d-a-c-b)

31. Which of the following kingdoms contains species that can fix nitrogen?

- a. Fungi
- b. Protista
- c. Plantae
- d. Monera

Correct Ans. (d)

32. Mutualism is an interaction between two species in which

- a. both are harmed
- b. both benefit
- c. one benefits and the other is neither helped nor harmed
- d. one benefits and the other is harmed

Correct Ans. (b)

33. Match the following terms with their definitions

- a. ammonification 1. conversion of atmospheric nitrogen ( $N_2$ ) into nitrates
- b. denitrification 2. conversion of organic nitrogen (in amino acids) into ammonia
- c. nitrification 3. conversion of nitrite or nitrates into atmospheric nitrogen
- d. nitrogen fixation 4. conversion of ammonium into nitrites and nitrate.

Correct Ans. (a-2; b-3; c-4; d-1)

34. From the top carnivores energy is:

- a. transferred to the producers
- b. transferred to the herbivores
- c. available to the ecosystem and is recycled
- d. not available to the ecosystem again but is lost to the space

Correct Ans. (d)

35. The nodule in a plant root, where nitrogen-fixing bacteria live, forms from cells of the

- a. epidermis
- b. cortex
- c. endodermis
- d. vascular cambium

Correct Ans. (b)

36. Bacteria that live in the nodules of pea and beans belong to which of the following genera?

- a. Rhizobium
- b. Clostridium
- c. Pseudomonas
- d. Nitrobacter

Correct Ans. (a)

37. Which of the following plants will enrich the soil with nitrogen?

- a. Corn
- b. Wheat
- c. Rice
- d. Bean

Correct Ans. (d)

38. The carbon and hydrogen present in the bodies of animals in the forms of various compounds are released to the environment during the processes of

- a. photosynthesis
- b. transpiration

- c. respiration and decomposition
- d. denitrification

Correct Ans. (c)

ICMS College System

# CHAPTER 15

Choose the most appropriate answer:

1. The concentration of CO<sub>2</sub> in atmosphere is:

- a. 0.3%
- b. 0.03%
- c. 3.0%
- d. 30.0%

Correct Ans. (b)

2. It is a poisonous gas and 1% of it in air can kill a person in 5 minutes:

- a. N<sub>2</sub>
- b. CO<sub>2</sub>
- c. CO
- d. NO<sub>2</sub>

Correct Ans. (c)

3. CO is produced when fossil fuels are burnt in air in the presence of limited supply of:

- a. H<sub>2</sub>
- b. CO<sub>2</sub>
- c. N<sub>2</sub>
- d. O<sub>2</sub>

Correct Ans. (d)

4. Green house effect is the result of:

- a. Air pollution
- b. Forestation
- c. Ultra violet radiations
- d. Water pollution

Correct Ans. (a)

5. Acid rains in the result of:

- a. Clear air
- b. Burning of fossil fuels
- c. Forestation
- d. None of these

Correct Ans. (b)

6. Stone cancer is caused by:

- a. Bacteria
- b. Virus
- c. Acid Rain
- d. Grazing

Correct Ans. (c)

7. Repeated crop production result in:

- a. Increase in soil fertility
- b. Decrease in soil fertility
- c. Accumulation of more organic matter
- d. Increase in soil nutrients

Correct Ans. (b)

8. Which of the following groups of crops grown continuously is not suitable?

- a. Wheat, Pea and Corn
- b. Corn, Pea and Rice
- c. Wheat, Rice and Corn
- d. Rice, Pea and Wheat

Correct Ans. (c)

9. The removal of surface soil by the action of water or wind is called:

- a. Soil depletion
- b. Sod Bound
- c. Pollution
- d. Soil erosion

Correct Ans. (d)

10. Man cut down forests and has:

- a. Disturbed native plants and native animals
- b. Contributed to the cleanliness of air
- c. Produced good effects on natural environment
- d. Encouraged native plants and animals

Correct Ans. (a)

11. Fossil fuels are:

- a. Geothermal, Biomass and natural gas

- b. Ocean-thermal gradient, waves, oil and tides
  - c. Coal, oil and natural gas
  - d. Coal, geothermal and oil
- Correct Ans. (c)

12. Splitting of the nucleus of radioactive atom releases:

- a. Energy
- b. Electricity
- c. Water
- d. Air

Correct Ans. (a)

13. The real problem and difficulties of depending upon nuclear energy is that:

- a. it is extremely expensive
- b. it is exhaustible
- c. it has environmental hazards
- d. None of these

Correct Ans. (c)

14. An accident in a nuclear reactor at Chernoble Nuclear Power Plant occurred during 1986 in:

- a. USA
- b. USSR
- c. China
- d. Korea

Correct Ans. (b)

15. The average flow of solar energy per square kilometer on earth's surface is:

- a. 80,000 Kilowatts
- b. 180,000 kilowatts
- c. 200,000 kilowatts
- d. 280,000 kilowatts

Correct Ans. (b)

16. The digestion of organic wastes by bacteria for the generation of energy is termed:

- a. Hydrogenation
- b. Pyrolysis
- c. Biodegradation
- d. Bioconversion

Correct Ans. (c)

17. The recommended diet per day for an average young man should contain:

- a. 2400 calories
- b. 1400 calories
- c. 24000 calories
- d. 3400 calories

Correct Ans. (a)

18. Minimum protein requirement for an average adult is between:

- a. 75 – 100 grams
- b. 50 – 75 grams
- c. 37 – 62 grams
- d. 20 – 30 grams

Correct Ans. (c)

19. Protein deficiency in early childhood mainly affects:

- a. Bone formation
- b. Learning capacity
- c. Digestive system
- d. Circulatory system

Correct Ans. (b)

20. Calcium deficient diet in early childhood causes bones deformation which may lead to disease called:

- a. Leprosy
- b. Tuberculosis
- c. Rickets
- d. Small Pox

Correct Ans. (c)

21. Which of the following groups is infectious diseases?

- a. Goiter, Small Pox and Tetanus
- b. Tetanus, Measles and Diphtheria
- c. Anemia, Small Pox and Pneumonia

d. Measles, Tuberculosis and Goiter

Correct Ans. (b)

22. Stresses and anxiety of fast life may contribute to the development of:

- a. Tuberculosis
- b. Small pox
- c. Pneumonia
- d. Heart disease and blood pressure

Correct Ans. (d)

23. The first insecticide used on a large scale was

- a. 2, 4-D
- b. DDT
- c. Methane
- d. Mercury

Correct Ans. (b)

24. The accumulation of carbon dioxide on global scale tends to warm the air in the lower level of the atmosphere. Which of the following factor does not contribute to this phenomenon?

- a. heavy industrialization
- b. urbanization
- c. burning of fossil fuel
- d. forestation

Correct Ans. (d)

25. Due to the repeated crop production in the same soil, some nutrients are not returned to the soil and as a result soil fertility is reduced. This is called:

- a. soil erosion
- b. soil depletion
- c. sod bound
- d. none of these

Correct Ans. (b)

26. As a result of destruction of natural habitat of the living organisms by the activity of man, these organisms, either die out or on

the verge of extinction. Therefore these organisms are known to be the:

- a. endangered species
- b. cultivated species
- c. hybrid species
- d. expanding species

Correct Ans. (a)

27. Which of the following is advantage of the hydro electric power as compared to other sources of energy?

- a. more expensive
- b. hazardous
- c. clean and pollution free
- d. none of these

Correct Ans. (c)

28. The energy produced due to natural radioactive decay in the earth's core is called:

- a. Ocean thermal gradient
- b. Geothermal
- c. Tidal power
- d. Hydroelectric power

Correct Ans. (b)

29. Which of the following is the option (possibility) before the biologists to be used as human food in future?

- a. farm industry'
- b. seaweeds (kelps)
- c. cigarettes industries
- d. computer

Correct Ans. (b)

30. Which of the following is approximate rate of child mortality in Pakistan due to malnutrition ?

- a. 10%
- b. 20%
- c. 30%
- d. 40%

Correct Ans. (a)

31. The deficiency of which of these causes anemia in man?

- a. Ca
- b. Iron
- c. Na
- d. Iodine

Correct Ans. (b)

32. The deficiency of iodine in the diet causes malfunctioning of

- a. salivary glands
- b. liver
- c. thyroid gland
- d. pancreas

Correct Ans. (c)

33. Which of the following was totally eradicated from the world by the year 1980?

- a. tuberculosis
- b. small pox
- c. pneumonia
- d. influenza

Correct Ans.  
(b)

34. Which of the following is an infectious disease?

- a. tuberculosis
- b. blood pressure
- c. goiter
- d. heart disease

Correct Ans. (a)

35. According to health reports, a smoker runs a risk of reducing his/her life expectancy for every cigarette he/she smokes by about

- a. zero minutes
- b. one minute
- c. five minutes
- d. 12 minutes

Correct Ans. (D)

## CHAPTER 16

Choose the most appropriate answer:

1. Responses built in nervous system as part of animal's inherited structure are termed:

- a. Learning
- b. Creative
- c. Formative
- d. Instinctive

Correct Ans. (d)

2. The tendency of young birds to fly in flocks with integrated movement is termed:

- a. Allelomimetic behaviour
- b. Eliminative behaviour
- c. Investigative behaviour
- d. Agonistic behaviour

Correct Ans. (a)

3. Agonistic behaviour is the:

- a. tendency to seek out optimum environmental conditions
- b. Fighting with the intruders
- c. Making noises and holding their heads up
- d. The lifting out of the faces and urine out of the nest by the parent birds

Correct Ans. (b)

4. The modification of behaviour by previous experience is called:

- a. Ingestive behaviour
- b. Learning behaviour
- c. Digestive behaviour
- d. Perceptive behaviour

Correct Ans. (b)

5. The response of animals to stimuli which are rewarded is called:

- a. Latent learning
- b. Insight learning
- c. Conditioned reflex type I
- d. Conditioned reflex type II

Correct Ans. (d)

6. Which of the following are organized into a "peck order" or dominance hierarchy?

- a. monkeys
- b. hens
- c. black birds
- d. cats

Correct Ans. (b)

7. In which of the following there is a tendency for the males to lead the flock?

- a. sheep
- b. monkeys
- c. cats
- d. none of these

Correct Ans. (b)

8. In which of the following there is a tendency for the females to lead the flock?

- a. sheep
- b. howling monkeys
- c. cats
- d. none of these

Correct Ans. (a)

9. The young ones of precocial birds

- a. can walk at hatching and do not stay in the nest
- b. needs sometime rest time at hatching and cannot walk
- c. can not walk without their real mother
- d. can not attaché themselves to any other moving object

Correct Ans. (a)

10. Which of the following is true of the howling monkeys?

- a. males carry the young ones from place to place
- b. the old males are very careful of the young ones
- c. the females carry the young ones from place to place
- d. the adult females fight with each other

Correct Ans. (c)