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# **Biology Mcqs For Lecturer & Subject Specialist Exams**

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**MCQS**

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# **Biology Mcqs For Lecturer & Subject Specialist Exams**

1. What is the main purpose of white blood corpuscles?

- A. To carry nutrients
- B. To combat infection
- C. To carry oxygen
- D. To give strength

Answer is = B

2. Total volume of blood in a normal human being is

- A. 5 - 6 liters
- B. 3 - 4 liters
- C. 8 - 10 liters
- D. 10 - 12 liters

Answer is = A

3. Red blood corpuscles are formed in the

- A. Liver
- B. Bone marrow
- C. Kidneys
- D. Heart

Answer is = B

4. Blood does not coagulate inside the body to the presence of

- A. Fibrin
- B. Heparin

C. Haemoglobin

D. Plasma

Answer is = B

5. Lungs are situated in the

A. Abdominal cavity

B. Buccal cavity

C. Pericardial cavity

D. Thoracic cavity

Answer is = D

6. How many numbers of bones in the human body of an adult ?

A. 210

B. 206

C. 250

D. 450

Answer is = B

7. The pancreas secretes

A. Insulin

B. Vitamin A

C. Bile juice

D. None

Answer is = A

8. The seat of memory in the human brain is located in the

A. Medulla oblongata

- B. Cerebrum
  - C. Cortex
  - D. Cerebellum
- Answer is = C

9. Tibia is a bone found in the

- A. Arm
- B. Skull
- C. Leg
- D. Face

Answer is = C

10. The main function of the kidney is

- A. To control blood pressure
- B. To control body temperature
- C. To remove waste products from the body
- D. To help in digestion of food

Answer is = C

11. The strongest muscle in the human body is found in

- A. hands
- B. neck
- C. buttocks
- D. legs

Answer is = C

12. What is gene?

- A. Sleep inducing drug

- B. Unit of heredity
- C. A type of body cell
- D. A kind of vitamin

Answer is = B

13. The function of haemoglobin is

- A. To transport oxygen
- B. Destruction of bacteria
- C. Prevention of anaemia
- D. Utilization of energy

Answer is = A

14. A vegetable containing sulphur is

- A. Potato
- B. Cabbage
- C. Brinjal
- D. Pumpkin

Answer is = B

15. Enzymes help in

- A. Respiration
- B. Digestion of food
- C. Immune system
- D. Reproduction

Answer is = B

16. Ptyalin is an enzyme produced in the

- A. Salivary glands

- B. Pituitary gland
- C. Thyroid glands
- D. Pancreas

Answer is = A

17. Heightened emotion is caused by

- A. Pituitary gland
- B. Thyroid glands
- C. Adrenal glands
- D. Salivary glands

Answer is = C

18. The shortest bone in the human body is

- A. Vertebrae
- B. Stapes
- C. Phalanges
- D. Metacarpals

Answer is = B

19. A balanced diet contains

- A. Animals protein
- B. Macro and micro nutrients
- C. Food nutrients for growth and maintenance
- D. Butter and ghee

Answer is = C

20. Wisdom teeth normally grow between the age of

A. 34-40

B. 17-30

C. 45-55

D. 10-17

Answer is = A

21. 'Dossier' means

A. the do of medicine

B. the actual things

C. relevant paper

D. unarranged papers

Answer is = C

22. Lack of————causes diabetes

A. Sugar

B. Insulin

C. Calcium

D. Vitamins

Answer is = B

23. Biopsy is done on

A. tissue taken from a dead body

B. tissue taken from living body

C. blood from veins

D. blood from arties

Answer is = B

24. Triple antigen vaccine is given children to protect them against

- A. polio
- B. whooping cough
- C. tuberculosis
- D. contagious diseases

Answer is = B

25. A man weighing 96 Kg consists of approximately -----liters of water

- A. 50 liters
- B. 66.5 liters
- C. 82 liters
- D. 42 liters

Answer is = B

26. What does blood consists of?

- 60 % plasma, 40 % crop
- 65 % plasma, 40 % crop
- 62 % plasma, 40 % crop
- 68% plasma, 45 % crop

Answer is = A

27. Breeding for disease resistance requires

- a) a good source of resistance
- b) Planned hybridisation
- c) Diseases test
- d) all of these

28. Polyploidy is induced through

- a) Irradiation

- b) Mutagenic chemicals
- c) Ethylene

d) Colchicine

29. Heterosis is

- a) Appearance of spontaneous mutations
- b) Induction of mutations
- c) Mixture of two or more traits
- d) Superiority of hybrids over their parents.

30. The quickest method of plant breeding is

- a) introduction
- b) Selection
- c) Hybridisation
- d) Mutation Breeding

31. The new varieties of plants are produced by

- a) Introduction and mutation
- b) Selection and hybridisation
- c) Mutation and Selection
- d) Selection and Introduction

32. Pure line breed refers to

- a) heterozygosity only
- b) homozygosity only
- c) homozygosity and self assortment
- d) heterozygosity and linkage

33. A scientist wants to study the viral effects on plants. Which of the following part of the plant should be excluded?

- a) pith
- b) shoot apex
- c) phloem
- d) cortex

34. Somatic hybridisation is achieved through

- a) Grafting
- b) Conjugation
- c) Protoplast fusion
- d) Recombinant DNA technology

35. Bagging is done to

- a) Avoid cross pollination
- b) Avoid self pollination
- c) Achieve desired pollination
- d) Prevent contamination from foreign pollen

36. A technique of micropropagation is

- a) Multiple root production
- b) Somatic embryogenesis
- c) Growth of micro organisms on culture medium
- d) Multiple shoot production and embryo rescue

## **Answers**

27. d) all of these

- 28. d) Colchicine
- 29. d) Superiority of hybrids over their parents.
- 30. d) Mutation Breeding
- 31. b) Selection and hybridisation
- 32. b) homozygosity only
- 33. b) shoot apex
- 34. c) Protoplast fusion
- 34. d) Prevent contamination from foreign pollen
- 36. b) Somatic embryogenesis

### **Multiple Choice Questions on Biochemistry**

37. Which of the following mineral element facilitates insulin binding to cell receptor site?
- a) Zinc
  - b) Selenium
  - c) Copper
  - d) Chromium
38. Which of the following is a folate analog?
- a) Carnosine
  - b) Aniserine
  - c) Azaserine
  - d) Methotrexate
39. ATP concentration is maintained relatively constant during muscle contraction by
- a) Increasing the metabolic activity
  - b) The action of creatine phosphokinase
  - c) The action of adenylate kinase

d) all of the above

40. The cone of retina

a) Are responsible for colour vision

b) Are much more numerous than rods

c) Have red, blue and green light- sensitive pigment that differ because of small difference in the retinal

prosthetic group

d) Do not use transducin in signal transduction

42. The C 21 steroid hormones include

a) Vitamin D3

b) Estradiol

c) Testosterone

d) Aldosterone

42. Which of the following oxidoreductases form hydrogen peroxide as one of its products?

a) Oxidases

b) Peroxidases

c) Dehydrogenases

d) Oxygenases

43. The major protein responsible for the storage of iron

a) Ferredoxin

b) Ferretin

c) Hemosiderine

d) Transferine

44. Which of the following is an excitatory neurotransmitter?

- a) Glutamate
- b) GABA
- c) Glycine
- d) Taurine

45. Which of the following is not involved in enzyme regulation?

- a) Covalent modification
- b) Competitive inhibition
- c) Suicide inhibition
- d) Allosteric activation

46. The preferred substrate for hexokinase is

- a) Glucose
- b) Fructose
- c) Glucose and fructose are equally preferred
- d) None of these

## **Answers**

37. d) Chromium

38. d) Methotrexate

39. d) all of the above

40. a) Are responsible for colour vision

41. d) Aldosterone

42. a) Oxidases

43. b) Ferretin

44. a) Glutamate

45. c) Suicide inhibition

46. a) Glucose

## **MCQ on Biochemistry - Amino acids**

1. Amino acids are

- a) building blocks of carbohydrates
- b) building blocks of nucleic acids
- c) building blocks of lipids
- d) building blocks of proteins

2. Amino acids have

- a) both amino group and carboxyl group
- b) both amino group and keto group
- c) amino group only
- d) carboxyl group only

3. The simplest amino acid is

- a) Proline
- b) methionine
- c) glycine
- d) serine

4. Which of the following amino acid is a 'α-helix terminator'?

- a) tryptophan
- b) phenyl alanine
- c) tyrosine
- d) proline

5. The first amino acid in a polypeptide chain is

- a) Serine
- b) Valine
- c) Alanine
- d) Methionine

6. Which of the following amino acid has buffering capacity

- a) Tryptophan
- b) cysteine
- c) histidine
- d) arginine

7. Which of the following is an  $\alpha$  imino acid

- a) serene
- b) threonine
- c) valine
- d) proline

8. The naturally occurring form of amino acid in proteins

- a) L-amino acids only
- b) D-amino acids only
- c) both L and D amino acids
- d) none of these

9. Sulphur containing amino acids are

- a) Cysteine and methionine
- b) Methionine and threonine
- c) Cysteine and threonine

d) Cysteine and serine

10. Aromatic amino acids include

- a) Phenylalanine, tyrosine and tryptophan
- b) Phenylalanine, serine and tryptophan
- c) Threonine, tyrosine and tryptophan
- d) Asparagine, tyrosine and tryptophan

11. Positively charged basic amino acids are

- a) Lysine and arginine
- b) Lysine and asparagine
- c) Glutamine and arginine
- d) Lysine and glutamine

12. Acidic amino acids include

- a) Arginine and glutamate
- b) Aspartate and asparagine
- c) Aspartate and lysine
- d) Aspartate and glutamate

13. Amino acids with hydroxyl groups are

- a) serine and alanine
- b) Alanine and valine
- c) serine and threonine
- d) Valine and isoleucine

14. The 21st amino acid is

- a) hydroxy lysine

- b) hydroxyl proline
- c) selenocysteine
- d) citrulline

15. Absorbance at 280nm exhibited by protein is due to

- a) aliphatic amino acids
- b) all amino acids
- c) Non-polar amino acids
- d) aromatic amino acids

## Answers

1-d

2-a

3-c

4-d

5-d

6-c

7-d

8-a

9-a

10-a

11-a

12-d

13-c

14-c

15-d

## **MCQ on Biochemistry - Nucleic acids (RNA)**

1. RNA is the genetic material in
  - a) Viruses only
  - b) In some viruses and some prokaryotes
  - c) In some viruses and some prokaryotes and rarely in eukaryotes
  - d) Only in some viruses
  
2. RNA is
  - a) Single stranded
  - b) Double stranded
  - c) Triple stranded
  - d) Both a and b
  
3. The sugar in RNA is
  - a) Deoxyribose
  - b) Ribose
  - c) Hexose
  - d) Fructose
  
4. Nucleotides in RNA are joined by
  - a) 3'5' phosphodiester bond
  - b) 3'4' phosphodiester bond
  - c) 3'2' phosphodiester bond
  - d) 3'6' phosphodiester bond
  
5. Thymine in DNA is replaced by
  - a) Guanine in RNA

- b) Adenine in RNA
- c) Cytosine in RNA
- d) Uracil in RNA

6. The most abundant type of RNA in the cell is

- a) rRNA
- b) mRNA
- c) tRNA
- d) hnRNA

7. Which of the following RNA serves as adaptor molecule during protein synthesis

- a) rRNA
- b) mRNA
- c) tRNA
- d) hnRNA

8. rRNA is synthesised in

- a) nucleus
- b) Cytoplasm
- c) RER
- d) Nucleolus

9. cDNA is

- a) complementary to mRNA
- b) complementary to rRNA
- c) complementary to tRNA
- d) complementary to hnRNA

10. Amino acids are attached to the

- a) acceptor arm of tRNA
- b) anti-codon arm of tRNA
- c) codon arm of tRNA
- d) none of these

11. Ribozymes are

- a) enzymes with catalytic activity
- b) RNAs with catalytic activity
- c) proteins with catalytic activity
- d) nucleic acids with catalytic activity

12. RNA is primarily seen in

- a) nucleus
- b) Cytoplasm
- c) RER
- d) SER

13. Ribose sugar in RNA is

- a) D-ribose
- b) L-ribose
- c) Both L and D form
- d) None of these

14. Which of the virus has double stranded RNA as genetic material?

- a) Tobacco mosaic virus
- b) Influenza virus
- c) Rous Sarcoma virus

d) Reoviruses

15. Ribosomes are composed of

- a) DNA and RNA
- b) RNA and proteins
- c) DNA and Proteins
- d) RNA only

## **Answers:**

1-d

2-a

3-b

4-a

5-d

6-a

7-c

8-d

9-a

10-a

11-b

12-b

13-a

14-d

15-b