NATIONAL SCIENCE OLYMPIAD
ROUND-I PAST PAPER 2023
BIOLOGY
(FOR ALL CLASSES)

1. Introduction

This document would help users easily find the past papers and understand the different topics. There may be some errors in past papers in their answers or questions. Student should verify all answers through teachers, Google etc.

Moreover, to understand these papers & other scenarios of the Olympiads links YouTube tutorials are given below. Watch the videos and clear your understanding.

Click to Watch Video about Syllabus https://youtu.be/ZH2Ad8tGAXo

Click to Watch Video about Model Paper
https://youtu.be/6yNQNLkC1RA

Click to Watch Video about Past Papers https://youtu.be/iG8htCRrW4I

Class 4th Biology Past Paper

1. Who was the first scientist to coin the term SMOG and to describe the layers of SMOG?

A) Nikola Tesla
B) Stephen Hawking
C) Dr Henry Antoine
D) Nicolaus Copernicus

Answer: c)

2. Which of the following pollutants are responsible for the cause of SMOG?

A) From incinerators
B) (b) Emissions from vehicles
C) (c) Both incinerators and emissions from vehicles
D) (d) None of the above

Answer: c)

3. Which of the following is called the secondary air pollutant?

A) PANs
B) Ozone
C) Carbon monoxide
D) Nitrogen Dioxide

Answer: b)

4. Which of the following particles is called the particulate pollutants?

A) Ozone
B) Radon
C) Fly Ash
D) Ethylene

Answer: c)

5. Which of the following agents is responsible for turning the Taj Mahal yellow?

A) Sulphur
B) Chlorine
C) Sulphur dioxide
D) Nitrogen dioxide

Answer: c)

6. Which of the following statements is true about SMOG?

A) SMOG is derived from the fog
B) SMOG is derived from smoke
C) SMOG is derived from water vapour
D) SMOG is derived from both fog and smoke

Answer: d)

7. What type of precautions should be taken to survive when the ozone level is high?

A) Drive less
B) Stay hydrated

Class 4th Biology Past Paper

C) Both A and B
D) Go for a long walk

Answer: (c)

8. What is the process of plants releasing water vapor into the air?

A) Transpiration
B) Respiration
C) Perspiration
D) Inspiration

Answer: A)

9. Which part of the flower contains the pollen?

A) Stamen
B) Pistil
C) Petal
D) Sepal

Answer: A)

10. What is the function of the liver in the human body?

A) Pumping blood
B) Digesting food
C) Filtering waste from the blood
D) Producing enzymes and detoxifying

Answer: D)

11. What is the process of plants making seeds without the involvement of seeds?

A) Germination
B) Fertilization
C) Pollination
D) Asexual reproduction

Answer: D)

12. Which gas do plants absorb from the air during photosynthesis?

A) Oxygen
B) Nitrogen
C) Carbon dioxide
D) Hydrogen

Answer: C)

13. What is the main function of the pancreas in the human body?

A) Pumping blood
B) Digesting food
C) Filtering waste from the blood
D) Regulating blood sugar levels

Answer: D)

14. What is the main function of the kidneys in the human body?

A) Pumping blood
B) Digesting food
C) Filtering waste from the blood

Class 4th Biology Past Paper

D) Producing hormones
Answer: C)

15. Which of the following is a sense organ for smelling?
A) Eyes
B) Nose
C) Ears
D) Tongue
Answer: B)

16. What is the largest planet in our solar system?
A) Earth
B) Mars
C) Jupiter
D) Saturn
Answer: C)

17. What is the function of the nervous system in the human body?
A) Pumping blood
B) Digesting food
C) Transmitting signals and controlling body activities
D) Filtering waste from the blood
Answer: C)

18. What do we call the tiny living things that can only be seen through a microscope?
A) Bacteria
B) Insects
C) Birds
D) Mammals
Answer: A)

19. Which of the following is a renewable source of energy?
A) Coal
B) Solar power
C) Oil
D) Natural gas
Answer: B)

20. What is the function of the respiratory system in the human body?
A) Pumping blood
B) Digesting food
C) Breathing air
D) Filtering waste from the blood
Answer: C)

21. What is the outer protective covering of the body in humans?
A) Fur
B) Skin
C) Scales
D) Feathers
Answer: B)

Class 4th Biology Past Paper

22. What is the smallest unit of life?
A) Cell
B) Organ
C) Tissue
D) Organism
Answer: A)

23. Which of the following senses is responsible for taste?
A) Sight
B) Hearing
C) Touch
D) Taste
Answer: D)

24. What is the purpose of the skeletal system in the human body?
A) Pumping blood
B) Providing support and protection
C) Digesting food
D) Producing hormones
Answer: B)

25. What is the green pigment in plant leaves that helps in photosynthesis?
A) Melanin
B) Hemoglobin
C) Chlorophyll
D) Carotene
Answer: C)

26. Which gas do humans breathe out during respiration?
A) Oxygen
B) Nitrogen
C) Carbon dioxide
D) Hydrogen
Answer: C)

27. What is the main function of the digestive system in humans?
A) Pumping blood
B) Breathing air
C) Breaking down and absorbing food
D) Producing energy
Answer: C)

28. Which sense organ is responsible for hearing?
A) Eyes
B) Nose
C) Ears
D) Tongue
Answer: C)

29. What is the process of the gradual change of a caterpillar into a butterfly?

Class 4th Biology Past Paper

A) Metamorphosis
B) Evolution
C) Adaptation
D) Hibernation
Answer: A)

30. What is the process by which plants make their own food using sunlight?
A) Respiration
B) Photosynthesis
C) Digestion
D) Circulation
Answer: B)

31. Which part of the plant is responsible for taking in sunlight and making food?
A) Roots
B) Leaves
C) Stem
D) Flowers
Answer: B)

32. What is the liquid that carries nutrients and oxygen to all parts of the body in humans?
A) Air
B) Blood
C) Water
D) Sap
Answer: B)

33. Which of the following is a cold-blooded animal?
A) Dog
B) Fish
C) Cat
D) Rabbit
Answer: B)

34. What is the function of the lungs in the human body?
A) Pumping blood
B) Digesting food
C) Breathing air
D) Filtering waste
Answer: C)

35. What is the main function of the heart?
A) Pumping blood
B) Digesting food
C) Breathing air
D) Producing energy
Answer: A)

36. Which of the following animals hibernates during winter?
A) Lion
B) Bear

Class 4th Biology Past Paper

C) Elephant
D) Monkey
Answer: B)

37. In the process of mitosis, how many daughter cells are produced?
A) One
B) Two
C) Three
D) Four
Answer: B)

38. What is the powerhouse of the cell that produces ATP?
A) Nucleus
B) Ribosome
C) Golgi apparatus
D) Mitochondria
Answer: D)

39. Which part of the human brain is responsible for coordination and balance?
A) Cerebrum
B) Cerebellum
C) Medulla oblongata
D) Thalamus
Answer: B)

40. What is the function of the chloroplast in plant cells?
A) Storage of nutrients
B) Synthesis of proteins
C) Photosynthesis
D) Cellular respiration
Answer: C)

41. Which process involves the conversion of glucose into ATP in the presence of oxygen?
A) Glycolysis
B) Fermentation
C) Krebs cycle
D) Aerobic respiration
Answer: D)

42. What is the process by which a caterpillar transforms into a butterfly?
A) Metamorphosis
B) Fission
C) Regeneration
D) Binary fission
Answer: A)

43. Which organelle is responsible for detoxifying harmful substances in a cell?
A) Lysosome
B) Peroxisome
C) Endoplasmic reticulum
D) Golgi apparatus

Class 4th Biology Past Paper

Answer: B)

44. What is the role of white blood cells in the human body?
A) Carrying oxygen
B) Fighting infections
C) Clotting blood
D) Carrying nutrients
Answer: B)

45. Which of the following is an example of a biotic factor in an ecosystem?
A) Sunlight
B) Soil
C) Water
D) Plants
Answer: D)

46. What is the primary function of the ribosomes in a cell?
A) Energy production
B) Protein synthesis
C) Lipid synthesis
D) Waste elimination
Answer: B)

47. Which blood vessel carries oxygenated blood from the lungs to the heart?
A) Pulmonary artery
B) Aorta
C) Pulmonary vein
D) Inferior vena cava
Answer: C)

48. What is the purpose of mucus in the respiratory system?
A) Facilitate gas exchange
B) Trap and remove dust and pathogens
C) Regulate blood pH
D) Produce energy
Answer: B)

49. Which of the following is a function of the endocrine system?
A) Digestion of food
B) Regulation of body temperature
C) Production of hormones
D) Pumping blood
Answer: C)

50. What is the function of the nucleolus in the cell?
A) Synthesizing lipids
B) Storing genetic information
C) Producing ribosomes
D) Breaking down cellular waste
Answer: C)

Class 4th Biology Past Paper

51. What is the largest organ in the human body?

A) Liver
B) Skin
C) Heart
D) Lungs
Answer: B)

52. Which process is responsible for the movement of water through a plant from roots to leaves?

A) Osmosis
B) Transpiration
C) Diffusion
D) Active transport
Answer: B)

53. What is the purpose of the diaphragm in the respiratory system?

A) Pumping blood
B) Producing sound
C) Separating the thoracic and abdominal cavities
D) Filtering air
Answer: C)

54. Which of the following is a function of the Golgi apparatus?

A) Cellular respiration
B) Protein modification and packaging
C) Energy production
D) DNA replication
Answer: B)

55. Question: What is the role of antibodies in the immune system?

A) Carrying oxygen
B) Fighting infections
C) Clotting blood
D) Transporting nutrients
Answer: B)

56. Which part of the human digestive system is responsible for absorbing nutrients into the bloodstream?

A) Stomach
B) Small intestine
C) Large intestine
D) Esophagus
Answer: B)

57. What is the function of the excretory system in the human body?

A) Producing hormones
B) Digesting food
C) Eliminating waste products
D) Pumping blood
Answer: C)

Class 4th Biology Past Paper

58. In which part of a flower are the male reproductive cells found?
A) Stamen
B) Pistil
C) Petal
D) Sepal
Answer: A)

59. What is the role of the enzyme amylase in digestion?
A) Breaking down proteins
B) Breaking down fats
C) Breaking down carbohydrates
D) Breaking down nucleic acids
Answer: C)

60. Which of the following is a function of the lymphatic system?
A) Pumping blood
B) Producing insulin
C) Carrying oxygen
D) Defending against infections
Answer: D)

61. What is the function of the vas deferens in the male reproductive system?
A) Producing sperm
B) Transporting urine
C) Carrying blood to the testes
D) Storing sperm
Answer: A)

62. Which gas is produced as a byproduct of cellular respiration in humans?
A) Oxygen
B) Nitrogen
C) Carbon dioxide
D) Hydrogen
Answer: C)

63. What is the function of the vestibular system in the human body?
A) Smelling
B) Hearing
C) Balancing and spatial orientation
D) Tasting
Answer: C)

64. What is the purpose of bile in the digestive system?
A) Breaking down proteins
B) Breaking down fats
C) Breaking down carbohydrates
D) Breaking down nucleic acids
Answer: B)

65. In the process of cellular respiration, where does glycolysis take place?
A) Cytoplasm

Class 4th Biology Past Paper

B) Nucleus
C) Mitochondria
D) Endoplasmic reticulum
Answer: A)

66. What is the role of the pituitary gland in the endocrine system?
A) Producing insulin
B) Regulating body temperature
C) Secreting growth hormones
D) Digesting food
Answer: C)

67. What is the process by which plants release water vapor into the air?
A) Transpiration
B) Respiration
C) Perspiration
D) Inspiration
Answer: A)

68. What is the purpose of the wings in birds?
A) Hearing
B) Flying
C) Seeing
D) Swimming
Answer: B)

69. What is the function of the gills in fish?
A) Breathing air
B) Filtering waste
C) Digesting food
D) Breathing underwater
Answer: D)

70. What is the process of an organism turning into a fossil over time?
A) Fossilization
B) Adaptation
C) Photosynthesis
D) Germination
Answer: A)

Class 5th Biology Past Paper

1. Which of the following statements is true about SMOG?

A) SMOG is derived from the fog
B) SMOG is derived from smoke
C) SMOG is derived from water vapour
D) SMOG is derived from both fog and smoke

Answer: d)

2. What type of precautions should be taken to survive when the ozone level is high?

A) Drive less
B) Stay hydrated
C) Both A and B
D) Go for a long walk

Answer: (c)

3. What is the process of plants releasing water vapor into the air?

A) Transpiration
B) Respiration
C) Perspiration
D) Inspiration

Answer: A)

4. Which part of the flower contains the pollen?

A) Stamen
B) Pistil
C) Petal
D) Sepal

Answer: A)

5. What is the function of the liver in the human body?

A) Pumping blood
B) Digesting food
C) Filtering waste from the blood
D) Producing enzymes and detoxifying

Answer: D)

6. What is the process of plants making seeds without the involvement of seeds?

A) Germination
B) Fertilization
C) Pollination
D) Asexual reproduction

Answer: D)

7. Which gas do plants absorb from the air during photosynthesis?

A) Oxygen
B) Nitrogen
C) Carbon dioxide

Class 5th Biology Past Paper

D) Hydrogen
Answer: C)

8. What is the main function of the pancreas in the human body?
A) Pumping blood
B) Digesting food
C) Filtering waste from the blood
D) Regulating blood sugar levels
Answer: D)

9. What is the main function of the kidneys in the human body?
A) Pumping blood
B) Digesting food
C) Filtering waste from the blood
D) Producing hormones
Answer: C)

10. Which of the following is a sense organ for smelling?
A) Eyes
B) Nose
C) Ears
D) Tongue
Answer: B)

11. What is the largest planet in our solar system?
A) Earth
B) Mars
C) Jupiter
D) Saturn
Answer: C)

12. What is the function of the nervous system in the human body?
A) Pumping blood
B) Digesting food
C) Transmitting signals and controlling body activities
D) Filtering waste from the blood
Answer: C)

13. What do we call the tiny living things that can only be seen through a microscope?
A) Bacteria
B) Insects
C) Birds
D) Mammals
Answer: A)

14. Which of the following is a renewable source of energy?

Class 5th Biology Past Paper

A) Coal
B) Solar power
C) Oil
D) Natural gas
Answer: B)

15. What is the function of the respiratory system in the human body?
A) Pumping blood
B) Digesting food
C) Breathing air
D) Filtering waste from the blood
Answer: C)

16. What is the outer protective covering of the body in humans?
A) Fur
B) Skin
C) Scales
D) Feathers
Answer: B)

17. What is the smallest unit of life?
A) Cell
B) Organ
C) Tissue
D) Organism
Answer: A)

18. Which of the following senses is responsible for taste?
A) Sight
B) Hearing
C) Touch
D) Taste
Answer: D)

19. What is the purpose of the skeletal system in the human body?
A) Pumping blood
B) Providing support and protection
C) Digesting food
D) Producing hormones
Answer: B)

20. What is the green pigment in plant leaves that helps in photosynthesis?
A) Melanin
B) Hemoglobin
C) Chlorophyll
D) Carotene

Class 5th Biology Past Paper

Answer: C)

21. Which gas do humans breathe out during respiration?
A) Oxygen
B) Nitrogen
C) Carbon dioxide
D) Hydrogen
Answer: C)

22. What is the main function of the digestive system in humans?
A) Pumping blood
B) Breathing air
C) Breaking down and absorbing food
D) Producing energy
Answer: C)

23. Which sense organ is responsible for hearing?
A) Eyes
B) Nose
C) Ears
D) Tongue
Answer: C)

24. What is the process of the gradual change of a caterpillar into a butterfly?
A) Metamorphosis
B) Evolution
C) Adaptation
D) Hibernation
Answer: A)

25. What is the process by which plants make their own food using sunlight?
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Answer: B)

26. Which part of the plant is responsible for taking in sunlight and making food?
A) Roots
B) Leaves
C) Stem
D) Flowers
Answer: B)

27. What is the liquid that carries nutrients and oxygen to all parts of the body in humans?
A) Air

Class 5th Biology Past Paper

B) Blood
C) Water
D) Sap
Answer: B)

28. Which of the following is a cold-blooded animal?
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31. Which of the following animals hibernates during winter?
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B) Bear
C) Elephant
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Answer: B)

32. In the process of mitosis, how many daughter cells are produced?
A) One
B) Two
C) Three
D) Four
Answer: B)

33. What is the powerhouse of the cell that produces ATP?
A) Nucleus
B) Ribosome
C) Golgi apparatus
D) Mitochondria
Answer: D)

Class 5th Biology Past Paper

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Answer: B)

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Answer: B)

39. What is the role of white blood cells in the human body?
A) Carrying oxygen
B) Fighting infections
C) Clotting blood
D) Carrying nutrients
Answer: B)

40. Which of the following is an example of a biotic factor in an ecosystem?
A) Sunlight
B) Soil

Class 5th Biology Past Paper

C) Water
D) Plants
Answer: D)

41. What is the primary function of the ribosomes in a cell?
A) Energy production
B) Protein synthesis
C) Lipid synthesis
D) Waste elimination
Answer: B)

42. Which blood vessel carries oxygenated blood from the lungs to the heart?
A) Pulmonary artery
B) Aorta
C) Pulmonary vein
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Answer: C)

43. What is the purpose of mucus in the respiratory system?
A) Facilitate gas exchange
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C) Regulate blood pH
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Answer: B)

44. Which of the following is a function of the endocrine system?
A) Digestion of food
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C) Production of hormones
D) Pumping blood
Answer: C)

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D) Breaking down cellular waste
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Class 5th Biology Past Paper

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A) Cellular respiration
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D) DNA replication
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50. Question: What is the role of antibodies in the immune system?
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B) Fighting infections
C) Clotting blood
D) Transporting nutrients
Answer: B)

51. Which part of the human digestive system is responsible for absorbing nutrients into the bloodstream?
A) Stomach
B) Small intestine
C) Large intestine
D) Esophagus
Answer: B)

52. What is the function of the excretory system in the human body?
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C) Eliminating waste products
D) Pumping blood
Answer: C)

53. In which part of a flower are the male reproductive cells found?
A) Stamen
B) Pistil

Class 5th Biology Past Paper

C) Petal
D) Sepal
Answer: A)

54. What is the role of the enzyme amylase in digestion?
A) Breaking down proteins
B) Breaking down fats
C) Breaking down carbohydrates
D) Breaking down nucleic acids
Answer: C)

55. Which of the following is a function of the lymphatic system?
A) Pumping blood
B) Producing insulin
C) Carrying oxygen
D) Defending against infections
Answer: D)

56. What is the function of the vas deferens in the male reproductive system?
A) Producing sperm
B) Transporting urine
C) Carrying blood to the testes
D) Storing sperm
Answer: A)

57. Which gas is produced as a byproduct of cellular respiration in humans?
A) Oxygen
B) Nitrogen
C) Carbon dioxide
D) Hydrogen
Answer: C)

58. What is the function of the vestibular system in the human body?
A) Smelling
B) Hearing
C) Balancing and spatial orientation
D) Tasting
Answer: C)

59. What is the purpose of bile in the digestive system?
A) Breaking down proteins
B) Breaking down fats
C) Breaking down carbohydrates
D) Breaking down nucleic acids
Answer: B)

Class 5th Biology Past Paper

60. In the process of cellular respiration, where does glycolysis take place?
A) Cytoplasm
B) Nucleus
C) Mitochondria
D) Endoplasmic reticulum
Answer: A)

61. What is the role of the pituitary gland in the endocrine system?
A) Producing insulin
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C) Secreting growth hormones
D) Digesting food
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62. What is the process by which plants release water vapor into the air?
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C) Perspiration
D) Inspiration
Answer: A)

63. What is the purpose of the wings in birds?
A) Hearing
B) Flying
C) Seeing
D) Swimming
Answer: B)

64. What is the function of the gills in fish?
A) Breathing air
B) Filtering waste
C) Digesting food
D) Breathing underwater
Answer: D)

65. What is the process of an organism turning into a fossil over time?
A) Fossilization
B) Adaptation
C) Photosynthesis
D) Germination
Answer: A)

66. Who was the first scientist to coin the term SMOG and to describe the layers of SMOG?
A) Nikola Tesla
B) Stephen Hawking
C) Dr Henry Antoine

Class 5th Biology Past Paper

D) Nicolaus Copernicus

Answer: c)

67. Which of the following pollutants are responsible for the cause of SMOG?
A) From incinerators
B) (b) Emissions from vehicles
C) (c) Both incinerators and emissions from vehicles
D) (d) None of the above

Answer: c)

68. Which of the following is called the secondary air pollutant?
A) PANs
B) Ozone
C) Carbon monoxide
D) Nitrogen Dioxide

Answer: b)

69. Which of the following particles is called the particulate pollutants?
A) Ozone
B) Radon
C) Fly Ash
D) Ethylene

Answer: c)

70. Which of the following agents is responsible for turning the Taj Mahal yellow?
A) Sulphur
B) Chlorine
C) Sulphur dioxide
D) Nitrogen dioxide

Answer: c)

Class 6th Biology Past Paper

1. What is the main function of the digestive system?

a) Breathing
b) Digesting food
c) Pumping blood
Answer (b)

2. Where does the process of digestion begin?

a) Stomach
b) Mouth
c) Small intestine
Answer (b)

3. What is the function of saliva in the mouth?

a) To cool down food
b) To break down carbohydrates
c) To store food
Answer: (b)

4. What is the tube that connects the mouth to the stomach?

a) Trachea
b) Esophagus
c) Bronchus
Answer (b)

5. In which organ does most of the digestion and nutrient absorption take place?

a) Stomach
b) Liver
c) Small intestine
Answer (c)

6. What is the role of the stomach in digestion?

a) Absorbing nutrients
b) Breaking down proteins
c) Storing food
Answer (b)

7. Which digestive organ produces bile?

a) Pancreas
b) Gallbladder
c) Liver
Answer (c)

8. What is the function of bile in digestion?

a) Break down proteins

Class 6th Biology Past Paper

b) Emulsify fats
c) Digest carbohydrates
Answer (b)

9. Where is water absorbed in the digestive system?
a) Stomach
b) Small intestine
c) Large intestine
Answer (c)

10. What is the main function of the pancreas in digestion?
a) Producing insulin
b) Producing enzymes for digestion
c) Storing bile
Answer (b)

11. What is the role of the small intestine in digestion?
a) Absorb nutrients
b) Break down proteins
c) Store food
Answer (a)

12. What is the function of mucus in the stomach lining?
a) Break down food
b) Protect the stomach lining
c) Absorb nutrients
Answer (b)

13. Where does undigested food go after leaving the small intestine?
a) Large intestine
b) Liver
c) Stomach
Answer (a)

14. What is the final stage of digestion?
a) Stomach
b) Small intestine
c) Large intestine
Answer (c)

15. What is the function of the rectum in the digestive system?
a) Absorb nutrients
b) Store waste temporarily
c) Produce bile

Class 6th Biology Past Paper

Answer (b)

16. Which enzyme in the stomach helps break down proteins?

a) Amylase
b) Lipase
c) Pepsin
Answer (c)

17. What is the name of the process where nutrients pass through the walls of the small intestine into the bloodstream?

a) Absorption
b) Digestion
c) Assimilation
Answer (a)

18. What is the primary role of the large intestine in digestion?

a) Absorb water and salts
b) Break down proteins
c) Produce bile
Answer (a)

19. What is the waste material expelled from the body called?

a) Feces
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Class 6th Biology Past Paper

23. Which horizon contains a mixture of organic material and minerals?

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b) Dead plant material
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46. What is the main purpose of mitosis?

a) Growth and repair
b) Production of gametes
c) Genetic variation
Answer (a)

47. In which phase of the cell cycle does mitosis occur?

a) G1 phase
b) S phase
c) M phase
Answer (c)

48. How many daughter cells are produced in mitosis?

a) 1
b) 2
c) 4
Answer (b)

49. What is the end result of mitosis?

a) Haploid cells
b) Diploid cells
c) Gametes
Answer (b)

50. During which phase of mitosis do the chromosomes line up in the middle of the cell?

a) Prophase
b) Metaphase
c) Anaphase
Answer (b)

Class 6th Biology Past Paper

51. What is the purpose of meiosis?

a) Growth and repair
b) Production of gametes
c) Genetic variation
Answer (b)

52. How many rounds of division occur in meiosis?

a) 1
b) 2
c) 3
Answer (b)

53. What is the end result of meiosis?

a) Haploid cells
b) Diploid cells
c) Gametes
Answer (a)

54. During which phase of meiosis do homologous chromosomes separate?

a) Prophase I
b) Metaphase I
c) Anaphase I
Answer (c)

55. How many daughter cells are produced in meiosis?

a) 1
b) 2
c) 4
Answer(c)

56. Which process is responsible for creating genetic diversity?

a) Mitosis
b) Meiosis
c) Both
Answer (b)

57. What is the chromosome number in human somatic cells?

a) 23
b) 46
c) 92
Answer (b)

58. Which type of cells are produced by meiosis?

a) Body cells

Class 6th Biology Past Paper

b) Sex cells
c) Both
Answer (b)

59. In meiosis, when do homologous chromosomes exchange genetic material?
a) Prophase I
b) Metaphase I
c) Anaphase I
Answer (a)

60. What is the term for the process of a cell dividing into two identical daughter cells?
a) Meiosis
b) Mitosis
c) Binary fission
Answer (b)

61. In which phase of the cell cycle does DNA replication occur?
a) G1 phase
b) S phase
c) G2 phase
Answer(b)

62. What is the result of mitosis in plants?
a) Spores
b) Gametes
c) Somatic cells
Answer (c)

63. Which type of cell division is responsible for the growth of an organism?
a) Mitosis
b) Meiosis
c) Both
Answer (a)

64. During which phase of mitosis do the sister chromatids separate and move to opposite poles?
a) Prophase
b) Metaphase
c) Anaphase
Answer (c)

65. What is the purpose of the spindle fibers in cell division?
a) To move the cell
b) To separate chromosomes

Class 6th Biology Past Paper

c) To synthesize DNA
Answer (b)

66. What is the term for the cell division that produces identical daughter cells?
a) Mitosis
b) Meiosis
c) Both
Answer (a)

67. Which type of cells undergo meiosis in the human body?
a) Skin cells
b) Liver cells
c) Egg and sperm cells
Answer (c)

68. What is the importance of crossing over in meiosis?
a) It creates identical cells
b) It increases genetic diversity
c) It reduces the number of chromosomes
Answer (b)

69. How many chromosomes do human sex cells (sperm and egg) have?
a) 23
b) 46
c) 92
Answer (a)

70. In which phase of meiosis do the chromosomes align at the equator?
a) Prophase I
b) Metaphase I
c) Anaphase I
Answer (b)

Class 7th Biology Past Paper

1. What is the main function of the digestive system?

a) Breathing
b) Digesting food
c) Pumping blood
Answer (b)

2. Where does the process of digestion begin?

a) Stomach
b) Mouth
c) Small intestine
Answer (b)

3. What is the function of saliva in the mouth?

a) To cool down food
b) To break down carbohydrates
c) To store food
Answer: (b)

4. What is the tube that connects the mouth to the stomach?

a) Trachea
b) Esophagus
c) Bronchus
Answer (b)

5. In which organ does most of the digestion and nutrient absorption take place?

a) Stomach
b) Liver
c) Small intestine
Answer (c)

6. What is the role of the stomach in digestion?

a) Absorbing nutrients
b) Breaking down proteins
c) Storing food
Answer (b)

7. Which digestive organ produces bile?

a) Pancreas
b) Gallbladder
c) Liver
Answer (c)

8. What is the function of bile in digestion?

a) Break down proteins

Class 7th Biology Past Paper

b) Emulsify fats
c) Digest carbohydrates
Answer (b)

9. Where is water absorbed in the digestive system?
a) Stomach
b) Small intestine
c) Large intestine
Answer (c)

10. What is the main function of the pancreas in digestion?
a) Producing insulin
b) Producing enzymes for digestion
c) Storing bile
Answer (b)

11. What is the role of the small intestine in digestion?
a) Absorb nutrients
b) Break down proteins
c) Store food
Answer (a)

12. What is the function of mucus in the stomach lining?
a) Break down food
b) Protect the stomach lining
c) Absorb nutrients
Answer (b)

13. Where does undigested food go after leaving the small intestine?
a) Large intestine
b) Liver
c) Stomach
Answer (a)

14. What is the final stage of digestion?
a) Stomach
b) Small intestine
c) Large intestine
Answer (c)

15. What is the function of the rectum in the digestive system?
a) Absorb nutrients
b) Store waste temporarily
c) Produce bile

Class 7th Biology Past Paper

Answer (b)

16. Which enzyme in the stomach helps break down proteins?

a) Amylase
b) Lipase
c) Pepsin
Answer (c)

17. What is the name of the process where nutrients pass through the walls of the small intestine into the bloodstream?

a) Absorption
b) Digestion
c) Assimilation
Answer (a)

18. What is the primary role of the large intestine in digestion?

a) Absorb water and salts
b) Break down proteins
c) Produce bile
Answer (a)

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Class 7th Biology Past Paper

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Answer (a)

46. What is the main transport system in animals?
    a) Xylem
    b) Phloem
    c) Blood

Answer: C)

47. Which part of the plant is responsible for transporting water from the roots to the leaves?
    a) Xylem
    b) Phloem
    c) Stomata

Answer: A)

48. In which direction does water move in the xylem of a plant?
    a) Upward
    b) Downward
    c) Both upward and downward

Answer: A)

49. What gas is transported by the blood in animals?
    a) Oxygen
    b) Carbon dioxide
    c) Nitrogen

Answer: A)

50. What is the function of red blood cells in the blood?
    a) Carry oxygen
    b) Carry nutrients
    c) Produce hormones

Answer: A)

Class 7th Biology Past Paper

51. In which vessels does the exchange of gases occur in the lungs?
    a) Arteries
    b) Veins
    c) Alveoli

Answer: c)

52. What is the process by which plants lose water vapor to the atmosphere?
    a) Transpiration
    b) Photosynthesis
    c) Evaporation

Answer: A)

53. Which part of the plant controls the opening and closing of stomata?
    a) Leaves
    b) Roots
    c) Flowers

Answer: A)

54. What is the main sugar transported by the phloem in plants?
    a) Glucose
    b) Fructose
    c) Sucrose

Answer: C)

55. What is the function of the circulatory system in animals?
    a) Transport of nutrients
    b) Transport of oxygen
    c) Removal of waste products
    d) All of the above

Answer: D)

56. What is the role of hemoglobin in blood?
    a) Carries oxygen
    b) Carries nutrients
    c) Fights infection

Answer: A)

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    a) Gas exchange
    b) Water absorption
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Answer: A)

58. Where does the exchange of oxygen and carbon dioxide take place in the human body?

a) Lungs
b) Kidneys
c) Heart

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Answer: C)

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a) Arteries
b) Veins
c) Capillaries

Answer: A)

62. What is the primary function of the root hairs in plants?
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b) Water absorption
c) Reproduction

Answer: B)

63. What is the liquid component of blood called?
a) Plasma
b) Red blood cells
c) White blood cells

Answer: A)

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b) Nitrogen
c) Water

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Class 7th Biology Past Paper

b) Produce blood cells
c) Pump blood to the body
d) Store blood

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b) Filter air
c) Produce hormones

Answer: B)

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b) Carbon dioxide absorption
c) Blood pumping
d) Water storage

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c) Water transport

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Class 8th Biology Past Paper

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Answer (a)

Class 8th Biology Past Paper

65. What is the term for the process by which minerals are dissolved and carried downward through the soil?

a) Leaching
b) Weathering
c) Decomposition
Answer (a)

66. Which horizon is most affected by human activities like plowing or excavation?

a) A horizon
b) B horizon
c) C horizon
Answer (a)

67. What is the primary source of organic material in the O horizon?

a) Weathered rocks
b) Dead plant material
c) Minerals
Answer (b)

68. Which layer is closest to the Earth's surface in the soil profile?

a) A horizon
b) B horizon
c) O horizon
Answer (c)

69. Which horizon contains both minerals leached from above layers and minerals accumulated from above layers?

a) A horizon
b) B horizon
c) C horizon
Answer (b)

70. What is the importance of studying soil profiles?

a) To identify different soil types
b) To understand nutrient availability
c) Both a and b
Answer (c)

Class 9th Biology Past Paper

1. Which organelle is responsible for the final steps of aerobic respiration in eukaryotic cells?

A) Nucleus
B) Ribosome
C) Mitochondrion
D) Golgi apparatus
Answer: C)

2. In cellular respiration, what is the net gain of ATP molecules produced per molecule of glucose in glycolysis?

A) 2 ATP
B) 4 ATP
C) 8 ATP
D) 12 ATP
Answer: A)

3. What is the final product of glycolysis?

A) Pyruvate
B) Acetyl-CoA
C) Lactic acid
D) Carbon dioxide
Answer: A)

4. Which stage of cellular respiration produces the majority of NADH molecules?

A) Glycolysis
B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: B)

5. In anaerobic respiration, what is the end product in animal cells?

A) Ethanol
B) Lactic acid
C) Pyruvate
D) Carbon dioxide
Answer: B)

6. How is ATP synthase involved in cellular respiration?

A) It produces ATP during glycolysis
B) It transports electrons during the Krebs cycle
C) It generates ATP from ADP during oxidative phosphorylation
D) It breaks down ATP to release energy
Answer: C)

7. Which molecule serves as the primary electron carrier in cellular respiration?

Class 9th Biology Past Paper

A) NADH
B) FADH2
C) ATP
D) GTP
Answer: A)

8. What is the primary purpose of the Krebs cycle in cellular respiration?

A) Production of ATP
B) Breakdown of glucose
C) Oxidation of NADH
D) Synthesis of acetyl-CoA
Answer: B)

9. During which phase of cellular respiration is carbon dioxide fully released?

A) Glycolysis
B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: B)

10. In aerobic respiration, where does the electron transport chain occur?

A) Mitochondrial matrix
B) Inner mitochondrial membrane
C) Cytoplasm
D) Outer mitochondrial membrane
Answer: B)

11. What is the primary role of oxygen in cellular respiration?

A) Electron acceptor in the electron transport chain
B) Carrier of electrons in glycolysis
C) Production of ATP in the Krebs cycle
D) Activation of enzymes in glycolysis
Answer: A)

12. Which type of respiration is more efficient in terms of ATP production: aerobic or anaerobic?

A) Aerobic
B) Anaerobic
C) Both are equally efficient
D) Depends on the organism
Answer: A)

13. In which respiratory structure does the exchange of oxygen and carbon dioxide take place in the human respiratory system?

A) Trachea

Class 9th Biology Past Paper

B) Bronchi
C) Alveoli
D) Diaphragm
Answer: C)

14. What is the role of mucus in the respiratory system?

A) Facilitate gas exchange
B) Produce sound during speech
C) Trap and remove particles
D) Generate ATP
Answer: C)

15. Which gas is the primary product of cellular respiration and needs to be removed from the body during gas exchange?

A) Oxygen
B) Carbon dioxide
C) Nitrogen
D) Hydrogen
Answer: B)

16. What is the process by which oxygen enters the bloodstream from the alveoli?

A) Diffusion
B) Osmosis
C) Active transport
D) Filtration
Answer: A)

17. Which respiratory disorder is characterized by inflammation and narrowing of the airways, leading to difficulty in breathing?

A) Pneumonia
B) Asthma
C) Bronchitis
D) Tuberculosis
Answer: B)

18. What is the role of hemoglobin in the process of gas exchange?

A) Transport of oxygen
B) Production of carbon dioxide
C) Formation of mucus
D) Regulation of lung volume
Answer: A)

19. Which muscle is primarily responsible for the expansion of the chest cavity during inhalation?

Class 9th Biology Past Paper

A) Diaphragm
B) Intercostal muscles
C) Abdominal muscles
D) Quadriceps
Answer: A)

20. What is the function of the epiglottis during swallowing?
A) Facilitate gas exchange
B) Close the trachea to prevent food entry
C) Produce sound during speech
D) Filter particles from the air
Answer: B)

21. Which gas is more abundant in the atmosphere and diffuses into the lungs during inhalation?
A) Oxygen
B) Carbon dioxide
C) Nitrogen
D) Hydrogen
Answer: C)

22. What is the primary factor that drives the diffusion of gases during gas exchange?
A) Atmospheric pressure
B) Lung volume
C) Temperature
D) Concentration gradient
Answer: D)

23. In which part of the respiratory system does the process of external respiration occur?
A) Nose
B) Trachea
C) Alveoli
D) Bronchi
Answer: C)

24. What is the function of surfactant in the alveoli?
A) Trapping dust particles
B) Regulating airflow
C) Facilitating gas exchange
D) Producing mucus
Answer: C)

25. During exhalation, what happens to the diaphragm?
A) Contracts

Class 9th Biology Past Paper

B) Relaxes
C) Stays unchanged
D) Expands
Answer: B)

26. Which respiratory volume represents the maximum amount of air a person can exhale forcefully after a maximum inhalation?

A) Tidal volume
B) Inspiratory reserve volume
C) Expiratory reserve volume
D) Vital capacity
Answer: C)

27. What is the primary stimulus for the regulation of breathing rate and depth?

A) Oxygen levels in the blood
B) Carbon dioxide levels in the blood
C) pH of the blood
D) Hemoglobin concentration
Answer: B)

28. What is the term for the volume of air inspired and expired with each normal breath at rest?

A) Tidal volume
B) Vital capacity
C) Residual volume
D) Expiratory reserve volume
Answer: A)

29. In which part of the respiratory system are cilia present to help move mucus?

A) Trachea
B) Bronchi
C) Alveoli
D) Larynx
Answer: B)

30. Which gas is transported in the blood primarily bound to hemoglobin?

A) Oxygen
B) Carbon dioxide
C) Nitrogen
D) Hydrogen
Answer: A)

31. What is the role of the medulla oblongata in the regulation of breathing?

A) Monitoring oxygen levels
B) Initiating inhalation

Class 9th Biology Past Paper

C) Producing mucus
D) Facilitating gas exchange
Answer: B)

32. What is the function of the pleural membranes in the lungs?
A) Facilitate gas exchange
B) Provide mechanical support
C) Produce mucus
D) Create a fluid-filled space for reduced friction
Answer: D)

33. During exercise, what happens to the respiratory rate and tidal volume?
A) Decrease
B) Stay the same
C) Increase
D) Fluctuate randomly
Answer: C)

34. Which blood vessel carries oxygenated blood from the lungs to the heart?
A) Pulmonary artery
B) Pulmonary vein
C) Aorta
D) Vena cava
Answer: B)

35. What is the primary role of the alveolar macrophages in the lungs?
A) Facilitate gas exchange
B) Produce mucus
C) Remove dust and debris
D) Regulate airflow
Answer: C)

36. What is the name of the process by which oxygen is bound to hemoglobin in red blood cells?
A) Osmosis
B) Diffusion
C) Phagocytosis
D) Oxygenation
Answer: D)

37. Which of the following respiratory volumes cannot be measured directly with a spirometer?
A) Tidal volume
B) Inspiratory reserve volume
C) Expiratory reserve volume
D) Residual volume

Class 9th Biology Past Paper

Answer: D)

38. What is the primary function of the respiratory center in the brainstem?

A) Production of mucus
B) Regulation of breathing
C) Facilitation of gas exchange
D) Synthesis of hemoglobin
Answer: B)

39. Which component of tobacco smoke is responsible for reducing the ability of blood to carry oxygen?

A) Nicotine
B) Carbon monoxide
C) Tar
D) Hydrogen cyanide
Answer: B)

40. What is the term for the maximum volume of air a person can inhale after a normal inhalation?

A) Tidal volume
B) Inspiratory reserve volume
C) Expiratory reserve volume
D) Vital capacity
Answer: B)

41. Which respiratory disorder is characterized by the inflammation of the bronchial tubes?

A) Pneumonia
B) Asthma
C) Bronchitis
D) Emphysema
Answer: C)

42. What is the primary role of the ribcage in the process of breathing?

A) Production of mucus
B) Regulation of blood pH
C) Protection of the lungs
D) Expansion and contraction during respiration
Answer: D)

43. What is the term for a disease-causing agent, such as a bacterium or virus?

A) Pathogen
B) Antibody
C) Antigen
D) Leukocyte

Answer: A)

44. Which of the following is a primary function of the immune system?

A) Transport of oxygen
B) Regulation of temperature
C) Defense against pathogens
D) Nutrient absorption
Answer: C)

45. What is the role of antibodies in the immune system?

A) Attack pathogens directly
B) Recognize and neutralize antigens
C) Produce mucus
D) Regulate blood pressure
Answer: B)

46. Which immune cells are responsible for engulfing and digesting pathogens in a process called phagocytosis?

A) T cells
B) B cells
C) Macrophages
D) Plasma cells
Answer: C)

47. What is the term for a substance that triggers an immune response and can stimulate the production of antibodies?

A) Pathogen
B) Antibody
C) Antigen
D) Leukocyte
Answer: C)

48. Which type of immunity is acquired through vaccination or exposure to a disease?

A) Innate immunity
B) Passive immunity
C) Active immunity
D) Adaptive immunity
Answer: C)

49. What is the function of memory cells in the immune system?

A) Produce antibodies
B) Recognize and remember specific pathogens
C) Regulate inflammation
D) Remove damaged cells

Class 9th Biology Past Paper

Answer: B)

50. Which of the following is a viral disease that affects the respiratory system and has symptoms such as fever, cough, and body aches?

A) Tuberculosis
B) Influenza
C) Malaria
D) Hepatitis
Answer: B)

51. What is the role of the thymus gland in the immune system?

A) Produce antibodies
B) Filter blood
C) Maturation of T cells
D) Store red blood cells
Answer: C)

52. Which immune cells release chemicals, such as histamine, to initiate an inflammatory response?

A) T cells
B) B cells
C) Mast cells
D) Plasma cells
Answer: C)

53. What is the purpose of a vaccine?

A) Cure existing diseases
B) Provide passive immunity
C) Stimulate an immune response against a specific pathogen
D) Remove toxins from the body
Answer: C)

54. Which of the following is an example of a vector-borne disease transmitted by mosquitoes?

A) Tuberculosis
B) Dengue fever
C) Hepatitis
D) Pneumonia
Answer: B)

55. What is the main function of cytotoxic T cells in the immune system?

A) Produce antibodies
B) Destroy infected or abnormal cells
C) Regulate inflammation
D) Recognize antigens

Class 9th Biology Past Paper

Answer: B)

56. What is the main function of lipids in the body?
A) Building muscle tissue
B) Providing a quick source of energy
C) Insulating and protecting organs
D) Regulating blood sugar levels
Answer: C)

57. Which vitamin is essential for calcium absorption and bone health?
A) Vitamin C
B) Vitamin B12
C) Vitamin D
D) Vitamin K
Answer: C)

58. What is the primary source of dietary fiber?
A) Meat
B) Fruits and vegetables
C) Dairy products
D) Grains
Answer: B)

59. Which of the following is a trace mineral important for the formation of hemoglobin?
A) Calcium
B) Iron
C) Potassium
D) Magnesium
Answer: B)

60. What is the function of the pancreas in digestion?
A) Production of bile
B) Absorption of nutrients
C) Regulation of blood sugar
D) Secretion of digestive enzymes
Answer: D)

61. Which of the following is a water-soluble vitamin that acts as an antioxidant?
A) Vitamin A
B) Vitamin C
C) Vitamin D
D) Vitamin E
Answer: B)

Class 9th Biology Past Paper

62. What is the recommended daily intake of water for an average adult?

A) 1 liter
B) 2 liters
C) 3 liters
D) 4 liters
Answer: B)

63. What is the primary purpose of cellular respiration in living organisms?

A) Energy storage
B) Waste elimination
C) Nutrient absorption
D) Reproduction
Answer: A)

64. Where does glycolysis, the first stage of cellular respiration, take place in eukaryotic cells?

A) Mitochondria
B) Nucleus
C) Cytoplasm
D) Endoplasmic reticulum
Answer: C)

65. During which stage of cellular respiration is carbon dioxide produced?

A) Glycolysis
B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: B)

66. What is the final electron acceptor in the electron transport chain of cellular respiration?

A) Oxygen
B) Carbon dioxide
C) Nitrogen
D) Hydrogen
Answer: A)

67. In aerobic respiration, how many molecules of ATP are produced from one molecule of glucose?

A) 2
B) 30
C) 36
D) 4
Answer: C)

Class 9th Biology Past Paper

68. Which type of respiration occurs in the absence of oxygen, leading to the production of lactic acid or ethanol?

A) Aerobic respiration
B) Anaerobic respiration
C) External respiration
D) Internal respiration
Answer: B)

69. What is the main function of the respiratory system in the context of cellular respiration?

A) Oxygen production
B) Carbon dioxide elimination
C) Nutrient absorption
D) Energy storage
Answer: B)

70. During which phase of cellular respiration is water produced as a byproduct?

A) Glycolysis
B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: C)

Class 10th Biology Past Paper

1. What is the top layer of the soil called?

a) Bedrock
b) Subsoil
c) Topsoil
Answer (c)

2. Which horizon contains a mixture of organic material and minerals?

a) A horizon
b) B horizon
c) O horizon
Answer (a)

3. What is the layer below the topsoil that often contains minerals leached down from above layers?

a) A horizon
b) B horizon
c) C horizon
Answer (b)

4. Which horizon is also known as the parent material?

a) A horizon
b) B horizon
c) C horizon
Answer(c)

5. Which layer of the soil profile contains weathered rock particles and minerals?

a) Topsoil
b) Subsoil
c) Bedrock
Answer (b)

6. What is the term for the vertical section through all the soil horizons?

a) Soil column
b) Soil profile
c) Soil layer
Answer (b)

7. Which horizon is rich in minerals and nutrients and is crucial for plant growth?

a) A horizon
b) B horizon
c) C horizon
Answer (a)

8. What is the organic layer at the top of the soil profile called?

a) A horizon
b) B horizon
c) O horizon
Answer (c)

9. Which horizon is also known as the zone of accumulation?

a) A horizon
b) B horizon
c) C horizon
Answer (b)

10. Which process contributes to the formation of the O horizon?

a) Decomposition of organic matter
b) Erosion
c) Weathering of rocks
Answer (a)

11. What is the bedrock layer composed of?

a) Unweathered rock
b) Decomposed organic matter
c) Topsoil
Answer (a)

12. Which horizon is sometimes referred to as the "illuviation" horizon?

a) A horizon
b) B horizon
c) C horizon
Answer (b)

13. What does the C horizon primarily consist of?

a) Weathered rock fragments
b) Organic material
c) Topsoil
Answer (a)

14. In which horizon does leaching of minerals usually occur?

a) A horizon
b) B horizon
c) C horizon
Answer (a)

15. What is the term for the process by which minerals are dissolved and carried downward through the soil?

a) Leaching

Class 10th Biology Past Paper

b) Weathering
c) Decomposition
Answer (a)

16. Which horizon is most affected by human activities like plowing or excavation?

a) A horizon
b) B horizon
c) C horizon
Answer (a)

17. What is the primary source of organic material in the O horizon?

a) Weathered rocks
b) Dead plant material
c) Minerals
Answer (b)

18. Which layer is closest to the Earth's surface in the soil profile?

a) A horizon
b) B horizon
c) O horizon
Answer (c)

19. Which horizon contains both minerals leached from above layers and minerals accumulated from above layers?

a) A horizon
b) B horizon
c) C horizon
Answer (b)

20. What is the importance of studying soil profiles?

a) To identify different soil types
b) To understand nutrient availability
c) Both a and b
Answer (c)

21. What is the term for the long-term patterns of temperature, humidity, wind, and precipitation in an area?

a) Weather
b) Climate
c) Atmosphere
Answer (b)

22. Which of the following factors does climate include?

a) Short-term weather conditions

b) Long-term weather patterns
c) Both a and b
Answer (b)

23. Which climate zone is characterized by hot temperatures and heavy rainfall throughout the year?

a) Tropical
b) Temperate
c) Polar
Answer(a)

24. Animals with thick fur and layers of blubber are adapted to which type of climate?

a) Tropical
b) Arctic
c) Desert
Answer(b)

25. Which adaptation helps animals stay cool in hot climates?

a) Hibernation
b) Camouflage
c) Sweating
Answer (c)

26. In which climate zone would you find animals with adaptations for surviving in extreme cold?

a) Tropical
b) Temperate
c) Polar
Answer (c)

27. What is the process by which animals enter a state of inactivity to survive harsh conditions?

a) Migration
b) Hibernation
c) Camouflage
Answer (b)

28. Animals with large ears are often found in which type of climate?

a) Tropical
b) Desert
c) Polar
Answer (b)

29. Which adaptation allows animals to blend in with their surroundings?

a) Hibernation

Class 10th Biology Past Paper

b) Camouflage
c) Migration
Answer (b)

30. Which climate zone experiences distinct seasons with cold winters and warm summers?
a) Tropical
b) Temperate
c) Polar
Answer (b)

31. What is the term for the seasonal movement of animals from one region to another?
a) Hibernation
b) Migration
c) Camouflage
Answer(b)

32. How do animals in the desert often conserve water?
a) Hibernation
b) Camouflage
c) Nocturnal behavior
Answer (c)

33. Animals in the arctic tundra often have which adaptation to prevent heat loss?
a) Thick fur
b) Large ears
c) Layers of blubber
Answer (c)

34. Which climate zone is characterized by moderate temperatures with distinct seasons?
a) Tropical
b) Temperate
c) Polar
Answer (b)

35. What is the primary adaptation of animals in the temperate rainforest to the high levels of rainfall?
a) Thick fur
b) Gills for breathing underwater
c) Water-resistant fur or feathers
Answer (c)

36. Animals in the temperate grasslands often have adaptations for dealing with what environmental factor?
a) Limited water availability

b) Harsh winters
c) Frequent wildfires
Answer (a)

37. Which adaptation allows certain animals to survive in conditions of low oxygen, such as high altitudes?

a) Hibernation
b) Aestivation
c) Specialized respiratory systems
Answer (c)

38. What is the term for the shedding of leaves by trees in response to seasonal changes?

a) Migration
b) Hibernation
c) Deciduous
Answer (c)

39. Animals with the ability to enter a state of dormancy during hot, dry periods are said to undergo:

a) Hibernation
b) Estivation
c) Camouflage
Answer (b)

40. Which climate zone is characterized by extremely cold temperatures and a lack of vegetation?

a) Tropical
b) Temperate
c) Polar
Answer (c)

41. In which climate zone would you find animals with adaptations for conserving water due to high temperatures and low rainfall?

a) Tropical
b) Desert
c) Temperate
Answer (b)

42. Animals in the rainforest often have adaptations for life in the:

a) Hot and dry climate
b) Cold and icy climate
c) Hot and wet climate
Answer (c)

Class 10th Biology Past Paper

43. Which adaptation is common in animals living in cold climates to prevent heat loss?

a) Burrowing
b) Sweating
c) Countercurrent heat exchange
Answer (c)

44. What is the primary adaptation of animals in the polar region to the extreme cold?

a) Large ears
b) Thick fur
c) Camouflage
Answer (b)

45. Animals that burrow underground to escape extreme temperatures are exhibiting which adaptation?

a) Hibernation
b) Migration
c) Shelter-seeking behavior
Answer (c)

46. Which climate zone experiences mild temperatures with moderate rainfall and is known for its diverse plant and animal life?

a) Tropical
b) Temperate
c) Polar
Answer (b)

47. Animals in the deciduous forest often have adaptations for dealing with:

a) Harsh winters
b) Limited water availability
c) Hot and dry conditions
Answer (a)

48. What adaptation allows certain animals to change their fur color to match their surroundings?

a) Migration
b) Camouflage
c) Hibernation
Answer (b)

49. Animals in high-altitude regions may have adaptations for dealing with:

a) Limited sunlight
b) Low oxygen levels
c) Frequent wildfires
Answer (b)

Class 10th Biology Past Paper

50. Which adaptation is common in aquatic animals to help them float at different depths in the water?

a) Buoyancy
b) Hibernation
c) Migration
Answer (a)

51. Animals in the taiga (boreal forest) often have adaptations for surviving:

a) Harsh winters
b) High temperatures
c) Frequent wildfires
Answer (a)

52. What is the term for the process of animals moving to lower altitudes or latitudes to escape harsh winter conditions?

a) Hibernation
b) Estivation
c) Migration
Answer (c)

53. Animals in the savanna often have adaptations for dealing with:

a) Harsh winters
b) Frequent wildfires
c) Limited water availability
Answer (c)

54. Which adaptation allows some animals to survive in an inactive state during hot and dry periods?

a) Hibernation
b) Estivation
c) Camouflage
Answer (b)

55. Animals in the mangrove forest often have adaptations for living in:

a) Salty water
b) Freshwater lakes
c) Desert environments
Answer (a)

56. Animals in the grasslands may have adaptations for:

a) Climbing trees
b) Running quickly
c) Burrowing underground

Class 10th Biology Past Paper

Answer (b)

57. What is the term for the shedding and regrowth of antlers in certain animals as an adaptation?

a) Hibernation
b) Camouflage
c) Antler regeneration
Answer (c)

58. Animals in the alpine tundra often have adaptations for living in:

a) Harsh winters
b) High-altitude conditions
c) Hot and wet climates
Answer (b)

59. How do animals in the desert often cool themselves during hot days?

a) Burrowing underground
b) Sweating
c) Panting
Answer (c)

60. Which adaptation helps animals living in hot climates reduce their activity during the hottest part of the day?

a) Nocturnal behavior
b) Migration
c) Hibernation
Answer (a)

61. Animals in the oceanic zone may have adaptations for surviving in:

a) Shallow waters
b) The open sea
c) Freshwater environments
Answer (b)

62. How do animals in the Arctic adapt to the polar climate?

a) Hibernation
b) Blubber for insulation
c) Migration to warmer regions
Answer (b)

63. Animals in the chaparral biome often have adaptations for dealing with:

a) Harsh winters
b) Frequent wildfires
c) Limited sunlight

Class 10th Biology Past Paper

Answer (b)

64. What adaptation helps certain animals climb trees and navigate through forests?
a) Running speed
b) Camouflage
c) Prehensile tails
Answer (c)

65. Animals in the freshwater biome may have adaptations for living in:
a) Salty water
b) Lakes and rivers
c) The open ocean
Answer (b)

66. What adaptation allows animals to enter a state of deep sleep during cold winter months?
a) Hibernation
b) Estivation
c) Migration
Answer (a)

67. Animals in the intertidal zone often have adaptations for dealing with:
a) Harsh winters
b) Changing tides and wave action
c) Limited sunlight
Answer (b)

68. How do animals in the rainforest canopy adapt to their environment?
a) Thick fur
b) Flight
c) Prehensile limbs or tails
Answer (c)

69. Animals in the steppe biome may have adaptations for dealing with:
a) Frequent wildfires
b) Limited water availability
c) Harsh winters
Answer (b)

70. Which adaptation allows certain animals to enter a state of suspended animation during extreme environmental conditions?
a) Hibernation
b) Aestivation
c) Migration
Answer (b)

Class 10th Biology Past Paper

Class 11th Biology Past Paper

1. What is the basic building block of nucleic acids?

a. Amino acid
b. Nucleotide
c. Monosaccharide
d. Fatty acid
Answer: b.

2. Which biological molecule functions as an energy storage molecule in cells?

a. Proteins
b. Nucleic acids
c. Carbohydrates
d. Lipids
Answer: c.

3. What is the primary function of enzymes in biological systems?

a. Energy storage
b. Structural support
c. Catalyzing chemical reactions
d. Information storage
Answer: c.

4. Which of the following is a polysaccharide found in plant cell walls?

a. Starch
b. Glycogen
c. Cellulose
d. Chitin
Answer: c.

5. What is the structural unit of proteins?

a. Nucleotide
b. Monosaccharide
c. Amino acid
d. Fatty acid
Answer: c.

6. Which biological molecule is characterized by a hydrophobic tail and hydrophilic head?

a. Protein
b. Carbohydrate
c. Nucleic acid
d. Lipid
Answer: d

7. What is the basic building block of nucleic acids?

a. Amino acid

Class 11th Biology Past Paper

b. Nucleotide
c. Monosaccharide
d. Fatty acid
Answer: b.

8. Which biological molecule functions as an energy storage molecule in cells?
a. Proteins
b. Nucleic acids
c. Carbohydrates
d. Lipids
Answer: c.

9. What is the primary function of enzymes in biological systems?
a. Energy storage
b. Structural support
c. Catalyzing chemical reactions
d. Information storage
Answer: c.

10. Which of the following is a polysaccharide found in plant cell walls?
a. Starch
b. Glycogen
c. Cellulose
d. Chitin
Answer: c.

11. What is the structural unit of proteins?
a. Nucleotide
b. Monosaccharide
c. Amino acid
d. Fatty acid
Answer: c.

12. Which biological molecule is characterized by a hydrophobic tail and hydrophilic head?
a. Protein
b. Carbohydrate
c. Nucleic acid
d. Lipid
Answer: d.

13. What type of bond holds together the amino acids in a protein chain?
a. Ionic bond
b. Covalent bond
c. Hydrogen bond

d. Peptide bond
Answer: d.

14. Which nucleotide is found in RNA but not in DNA?
a. Adenine
b. Guanine
c. Uracil
d. Thymine
Answer: c.

15. What is the function of hemoglobin in the human body?
a. Energy storage
b. Oxygen transport
c. Enzyme catalysis
d. Genetic information storage
Answer: b.

16. Which of the following is a monosaccharide?
a. Glucose
b. Sucrose
c. Lactose
d. Maltose
Answer: a.

17. What is the main function of DNA in cells?
a. Energy storage
b. Protein synthesis
c. Enzyme catalysis
d. Cell structure support
Answer: b.

18. Which lipid is a major component of cell membranes?
a. Triglycerides
b. Phospholipids
c. Steroids
d. Waxes
Answer: b.

19. What is the primary function of carbohydrates in the human body?
a. Long-term energy storage
b. Structural support
c. Cell communication
d. Enzyme catalysis
Answer: a.

Class 11th Biology Past Paper

20. Which of the following is a function of RNA?
a. Stores genetic information
b. Transports oxygen in blood
c. Acts as an enzyme
d. Translates genetic code into proteins
Answer: d.

21. Which nucleic acid carries the instructions for protein synthesis?
a. DNA
b. RNA
c. tRNA
d. rRNA
Answer: a.

22. What is the function of ATP in cells?
a. Energy storage
b. Cell communication
c. Oxygen transport
d. Enzyme catalysis
Answer: a.

23. Which of the following is an example of a disaccharide?
a. Glucose
b. Fructose
c. Sucrose
d. Lactose
Answer: c.

24. What is the structure of DNA commonly described as?
a. Single helix
b. Double helix
c. Triple helix
d. Quadruple helix
Answer: b.

25. Which amino acid is commonly referred to as the "building block of proteins"?
a. Glycine
b. Alanine
c. Glutamine
d. Leucine
Answer: a.

26. What is the function of ribosomes in cells?

a. Energy storage
b. Protein synthesis
c. Lipid synthesis
d. Genetic information storage
Answer: b.

27. Which of the following is a function of lipids in the human body?
a. Energy storage
b. Oxygen transport
c. Enzyme catalysis
d. Genetic information storage
Answer: a.

28. What is the primary function of insulin in the human body?
a. Energy storage
b. Oxygen transport
c. Blood sugar regulation
d. Protein synthesis
Answer: c.

29. Which polysaccharide is a storage form of glucose in animals?
a. Cellulose
b. Starch
c. Glycogen
d. Chitin
Answer: c.

30. What is the function of chitin in the cell walls of fungi and exoskeletons of insects?
a. Energy storage
b. Structural support
c. Oxygen transport
d. Protein synthesis
Answer: b.

31. Which of the following is a function of proteins in the human body?
a. Long-term energy storage
b. Blood clotting
c. Oxygen transport
d. Genetic information storage
Answer: b.

32. Which of the following is an example of a steroid?
a. Testosterone
b. Glucose

Class 11th Biology Past Paper

c. Cellulose
d. Glycogen
Answer: a.

33. What is the monomer of nucleic acids?
a. Amino acid
b. Nucleotide
c. Monosaccharide
d. Fatty acid
Answer: b.

34. Which of the following is a function of DNA polymerase during DNA replication?
a. Synthesizing RNA
b. Synthesizing DNA
c. Breaking down DNA
d. Breaking down RNA
Answer: b.

35. Which of the following is a function of tRNA in protein synthesis?
a. Carrying amino acids to ribosomes
b. Synthesizing RNA
c. Breaking down proteins
d. Storing genetic information
Answer: a.

36. What is the function of antibodies in the immune system?
a. Energy storage
b. Blood clotting
c. Defense against pathogens
d. Oxygen transport
Answer: c.

37. Which of the following is a characteristic of acellular life?
a. Cellular structure
b. DNA-based genetic material
c. Lack of cellular structure
d. Multicellularity
Answer: c.

38. What is a virus primarily composed of?
a. Proteins and nucleic acids
b. Carbohydrates and lipids
c. Amino acids and RNA
d. Polysaccharides and DNA

Answer: a.

39. What is the outer protein coat of a virus called?
a. Capsid
b. Envelope
c. Nucleoid
d. Ribosome
Answer: a.

40. Which of the following is not a type of acellular infectious agent?
a. Virus
b. Bacterium
c. Viroid
d. Prion
Answer: b.

41. What is the primary function of a viroid?
a. Cause plant diseases
b. Infect bacteria
c. Cause animal diseases
d. Encode proteins
Answer: a.

42. Which acellular agent is associated with "mad cow disease" in animals?
a. Virus
b. Bacterium
c. Viroid
d. Prion
Answer: d.

43. What is the role of reverse transcriptase in the life cycle of retroviruses?
a. Synthesizing DNA from RNA
b. Synthesizing RNA from DNA
c. Facilitating translation
d. Aiding in cell attachment
Answer: a.

44. What is a characteristic feature of retroviruses?
a. Double-stranded DNA genome
b. Single-stranded RNA genome
c. Lack of a protein coat
d. Presence of ribosomes
Answer: b.

Class 11th Biology Past Paper

45. What is the primary target of a bacteriophage?
a. Plant cells
b. Animal cells
c. Bacterial cells
d. Fungal cells
Answer: c.

46. Which statement is true about prions?
a. They have a lipid envelope.
b. They are composed of nucleic acids.
c. They primarily infect plants.
d. They cause misfolding of proteins.
Answer: d.

47. What is the genetic material of a viroid?
a. DNA
b. RNA
c. Proteins
d. Lipids
Answer: b.

48. What is the function of neuraminidase in influenza viruses?
a. Attachment to host cells
b. Protein synthesis
c. Viral release from host cells
d. RNA replication
Answer: c.

49. Which acellular agent is associated with causing diseases in plants?
a. Viroid
b. Prion
c. Retrovirus
d. Bacteriophage
Answer: a.

50. What is the function of the envelope in certain viruses?
a. Protection of genetic material
b. Host cell recognition
c. Replication of RNA
d. Protein synthesis
Answer: b.

51. Which of the following is an example of an RNA virus with a helical capsid?
a. Influenza virus

b. Herpes simplex virus
c. Tobacco mosaic virus
d. Adenovirus
Answer: a.

52. How do prions cause disease in organisms?
a. Disrupting cellular functions
b. Inducing apoptosis
c. Inhibiting protein synthesis
d. Stimulating immune response
Answer: a.

53. What is the primary function of the protein coat in a virus?
a. Facilitate viral attachment to host cells
b. Protect the genetic material
c. Promote protein synthesis
d. Act as an enzyme
Answer: b.

54. Which statement is true about bacteriophages?
a. They infect eukaryotic cells.
b. They have a lipid envelope.
c. They target bacteria.
d. They lack genetic material.
Answer: c.

55. What is the primary target of prions in the human body?
a. Nervous system
b. Respiratory system
c. Cardiovascular system
d. Immune system
Answer: a.

56. Which acellular agent is responsible for causing the common cold in humans?
a. Adenovirus
b. Rhinovirus
c. Influenza virus
d. Coronavirus
Answer: b.

57. What is the primary function of the RNA-dependent RNA polymerase in RNA viruses?
a. Synthesizing DNA
b. Synthesizing RNA from DNA
c. Synthesizing RNA from RNA

d. Synthesizing proteins
Answer: c.

58. Which statement is true about the genetic material of bacteriophages?
a. Double-stranded RNA
b. Single-stranded RNA
c. Double-stranded DNA
d. Single-stranded DNA
Answer: c.

59. What is the primary function of the enzyme lysozyme in bacteriophages?
a. Protein synthesis
b. Host cell recognition
c. Viral release from host cells
d. Cell wall degradation in bacteria
Answer: d.

60. Which of the following is an example of a retrovirus?
a. Herpes simplex virus
b. HIV (Human Immunodeficiency Virus)
c. Adenovirus
d. Papillomavirus
Answer: b.

61. What is the primary function of reverse transcriptase in retroviruses?
a. Synthesizing DNA from RNA
b. Synthesizing RNA from DNA
c. Facilitating translation
d. Breaking down RNA
Answer: a.

62. Which of the following is an example of a prion disease in animals?
a. Scrapie
b. Influenza
c. Dengue fever
d. Ebola
Answer: a.

63. How do viroids differ from viruses?
a. Viroids have a lipid envelope.
b. Viroids lack genetic material.
c. Viroids lack a protein coat.
d. Viroids infect only animals.
Answer: c.

Class 11th Biology Past Paper

64. Which acellular agent is associated with causing diseases in humans such as kuru and Creutzfeldt-Jakob disease?

a. Viroid
b. Prion
c. Retrovirus
d. Bacteriophage
Answer: b.

65. What is the primary function of the enzyme neuraminidase in influenza viruses?

a. Facilitate viral attachment to host cells
b. Protein synthesis
c. Viral release from host cells
d. RNA replication
Answer: c.

66. Which acellular agent is responsible for causing AIDS in humans?

a. Influenza virus
b. Human papillomavirus
c. HIV (Human Immunodeficiency Virus)
d. Epstein-Barr virus
Answer: c.

67. What is the primary genetic material of prions?

a. DNA
b. RNA
c. Proteins
d. Lipids
Answer: c.

68. Which of the following is a function of the envelope in certain viruses?

a. Protection of genetic material
b. Host cell recognition
c. Replication of RNA
d. Protein synthesis
Answer: b.

69. How do prions cause disease in organisms?

a. Disrupting cellular functions
b. Inducing apoptosis
c. Inhibiting protein synthesis
d. Stimulating immune response
Answer: a.

Class 11th Biology Past Paper

70. What is the primary function of the protein coat in a virus?

a. Facilitate viral attachment to host cells

b. Protect the genetic material

c. Promote protein synthesis

d. Act as an enzyme

Answer: b.

Class 12th Biology Past Papers

1. During dehydration, the body responds by:

a) Decreasing urine production
b) Increasing thirst
c) Decreasing sweating
d) Decreasing heart rate
Correct Answer: b)

2. Which of the following is an example of a behavioral response to maintain homeostasis?

a) Sweating
b) Shivering
c) Seeking shade on a hot day
d) Release of insulin
Correct Answer: c)

3. What is the primary role of the skin in maintaining homeostasis?

a) Production of hormones
b) Protection against pathogens
c) Regulation of body temperature
d) Synthesis of red blood cells
Correct Answer: c)

4. Which hormone is responsible for stimulating water reabsorption in the kidneys, conserving water in the body?

a) Aldosterone
b) Melatonin
c) Thyroxine
d) Epinephrine
Correct Answer: a)

5. The regulation of pH in the body is primarily carried out by the:

a) Liver
b) Kidneys
c) Lungs
d) Pancreas
Correct Answer: b)

6. How does the body respond to an increase in carbon dioxide levels in the blood to maintain pH balance?

a) Increased respiratory rate
b) Decreased heart rate
c) Increased urine production
d) Release of adrenaline

Correct Answer: a)

7. What is the role of the endocrine system in homeostasis?

a) It sends electrical signals to control body functions
b) It releases hormones that regulate various physiological processes
c) It filters and cleanses the blood
d) It provides structural support to organs
Correct Answer: b)

8. Which of the following is an example of a physiological response to increased blood pressure to maintain homeostasis?

a) Vasodilation
b) Increased heart rate
c) Sweating
d) Release of aldosterone
Correct Answer: a)

9. The term "osmoregulation" refers to the body's regulation of:

a) Blood pressure
b) Oxygen levels
c) Water balance
d) Blood sugar levels
Correct Answer: c)

10. Which of the following is an example of a homeostatic imbalance?

a) Normal body temperature regulation
b) Maintenance of blood glucose levels within the normal range
c) Development of a fever in response to infection
d) Sudden decrease in heart rate during exercise
Correct Answer: c)

11. Which biome is characterized by low temperatures, permafrost, and a short growing season?

a) Tropical Rainforest
b) Tundra
c) Desert
d) Temperate Grassland
Correct Answer: b)

12. The taiga biome is dominated by which type of vegetation?

a) Cacti
b) Coniferous trees
c) Deciduous trees
d) Grasses

Correct Answer: b)

13. Which biome is known for its diverse plant and animal life, as well as abundant rainfall throughout the year?

a) Desert
b) Temperate Deciduous Forest
c) Savanna
d) Tundra
Correct Answer: b)

14. The Amazon Rainforest is an example of which biome

a) Tropical Rainforest
b) Desert
c) Taiga
d) Temperate Grassland
Correct Answer: a)

15. Which biome is characterized by hot temperatures, sparse vegetation, and often experiences drought?

a) Desert
b) Tundra
c) Temperate Rainforest
d) Taiga
Correct Answer: a)

16. The grasslands biome, with tall grasses and grazing herbivores, is known as:

a) Tundra
b) Savanna
c) Temperate Deciduous Forest
d) Tropical Rainforest
Correct Answer: b)

17. Which biome experiences all four seasons, with cold winters and warm summers?

a) Tropical Rainforest
b) Tundra
c) Temperate Deciduous Forest
d) Desert
Correct Answer: c)

18. The Great Barrier Reef is associated with which terrestrial biome?

a) Coral Reefs
b) Desert
c) Temperate Rainforest
d) Tropical Rainforest

Correct Answer: a)

19. The Serengeti Plains, known for its annual wildebeest migration, is part of which biome?
a) Savanna
b) Temperate Grassland
c) Taiga
d) Desert
Correct Answer: a)

20. The Chaparral biome is characterized by:
a) Tall grasses and grazing herbivores
b) Coniferous trees and cold temperatures
c) Hot, dry summers and mild, wet winters
d) Permafrost and tundra vegetation
Correct Answer: c)

21. The dominant vegetation in the temperate rainforest biome is:
a) Coniferous trees
b) Deciduous trees
c) Mosses and ferns
d) Succulents
Correct Answer: a)

22. Which biome is characterized by a high diversity of plant and animal life, with moderate temperatures and precipitation?
a) Desert
b) Temperate Deciduous Forest
c) Taiga
d) Tropical Rainforest
Correct Answer: b)

23. The Kalahari Desert is an example of which biome?
a) Desert
b) Savanna
c) Tundra
d) Temperate Rainforest
Correct Answer: a)

24. The permafrost layer is a characteristic feature of the:
a) Tundra biome
b) Temperate Rainforest biome
c) Desert biome
d) Savanna biome
Correct Answer: a)

Class 12th Biology Past Papers

25. Which biome is often referred to as the "rain shadow" side of a mountain?

a) Desert
b) Tropical Rainforest
c) Temperate Deciduous Forest
d) Taiga
Correct Answer: a)

26. The dominant vegetation in the tundra biome is:

a) Coniferous trees
b) Grasses
c) Mosses and lichens
d) Deciduous trees
Correct Answer: c)

27. Which biome experiences the least amount of annual precipitation?

a) Desert
b) Savanna
c) Tropical Rainforest
d) Temperate Deciduous Forest
Correct Answer: a)

28. The African savanna is home to a variety of large herbivores and predators. This biome is characterized by:

a) Dense coniferous forests
b) Tall grasses and scattered trees
c) Mosses and lichens
d) Permafrost
Correct Answer: b)

29. The Mediterranean climate biome is known for its:

a) Extreme cold temperatures
b) Hot, dry summers and mild, wet winters
c) Abundant rainfall throughout the year
d) Dense tropical rainforests
Correct Answer: b)

30. The Sonoran Desert, located in North America, is an example of which biome?

a) Tundra
b) Desert
c) Savanna
d) Temperate Rainforest
Correct Answer: b)

Class 12th Biology Past Papers

31. The grasslands biome that extends across North America is known as the:

a) Pampas
b) Prairie
c) Steppe
d) Veld
Correct Answer: b)

32. Which biome is characterized by a layer of permanently frozen soil, preventing deep-rooted plant growth?

a) Tropical Rainforest
b) Tundra
c) Temperate Grassland
d) Desert
Correct Answer: b)

33. The dominant vegetation in the chaparral biome is:

a) Coniferous trees
b) Succulents
c) Deciduous trees
d) Grasses
Correct Answer: b)

34. The Everglades in Florida is an example of a:

a) Desert
b) Wetland
c) Temperate Deciduous Forest
d) Tropical Rainforest
Correct Answer: b)

35. The biome with the highest biodiversity and a high annual temperature is:

a) Desert
b) Temperate Deciduous Forest
c) Tropical Rainforest
d) Taiga
Correct Answer: c)

36. The term "chromosome" refers to:

a) A single strand of DNA
b) DNA and associated proteins
c) A segment of RNA
d) A protein structure
Correct Answer: b)

37. In humans, how many chromosomes are found in a somatic cell?

a) 23
b) 46
c) 22
d) 44
Correct Answer: b)

38. What is the purpose of mitosis in cell division?
a) Production of gametes
b) Genetic recombination
c) Growth and repair of somatic cells
d) Reduction of chromosome number
Correct Answer: c)

39. Which part of the cell cycle involves the actual division of the cell into two daughter cells?
a) G1 phase
b) S phase
c) G2 phase
d) M phase
Correct Answer: d)

40. During which phase of the cell cycle does DNA replication occur?
a) G1 phase
b) S phase
c) G2 phase
d) M phase
Correct Answer: b)

41. What is the role of telomeres in chromosomes?
a) Initiating DNA replication
b) Protecting the ends of chromosomes
c) Synthesizing RNA primers
d) Enhancing protein synthesis
Correct Answer: b)

42. Genetic information is transferred from the nucleus to the cytoplasm through:
a) DNA replication
b) Transcription
c) Translation
d) Replication
Correct Answer: b)

43. What is the primary function of DNA?
a) Energy storage
b) Structural support

c) Genetic information storage
d) Enzyme production
Correct Answer: c)

44. In eukaryotic cells, where is DNA primarily located?
a) Nucleus
b) Cytoplasm
c) Mitochondria
d) Endoplasmic reticulum
Correct Answer: a)

45. The shape of DNA is most commonly described as:
a) Single-stranded
b) Double helix
c) Triple helix
d) Tetrahedron
Correct Answer: b)

46. What are the building blocks of DNA?
a) Amino acids
b) Nucleotides
c) Proteins
d) Sugars
Correct Answer: b)

47. The "backbone" of the DNA double helix is composed of:
a) Sugars and nucleotides
b) Phosphates and nucleotides
c) Amino acids and nucleotides
d) Sugars and amino acids
Correct Answer: b)

48. How many base pairs are there in a complete turn of the DNA double helix?
a) 5
b) 10
c) 20
d) 30
Correct Answer: b)

49. The four nitrogenous bases in DNA are:
a) Adenine, Cytosine, Guanine, Uracil
b) Adenine, Cytosine, Guanine, Thymine
c) Adenine, Uracil, Guanine, Thymine
d) Adenine, Thymine, Cytosine, Ribose

Correct Answer: b)

50. Which base pairs with adenine in DNA?
a) Cytosine
b) Guanine
c) Thymine
d) Uracil
Correct Answer: c)

51. The process by which DNA is copied is called:
a) Transcription
b) Translation
c) Replication
d) Transformation
Correct Answer: c)

52. What is the role of RNA in protein synthesis?
a) RNA carries amino acids to the ribosome
b) RNA provides structural support for DNA
c) RNA serves as a template for DNA replication
d) RNA carries the genetic code from DNA to the ribosome
Correct Answer: d)

53. Which enzyme is responsible for unwinding the DNA double helix during replication?
a) RNA polymerase
b) Helicase
c) Ligase
d) DNA polymerase
Correct Answer: b)

54. What is the function of DNA polymerase in DNA replication?
a) Unwinds the DNA double helix
b) Synthesizes RNA primers
c) Synthesizes new DNA strands
d) Seals the gaps in the DNA backbone
Correct Answer: c)

55. Which of the following is a purine nitrogenous base?
a) Adenine
b) Thymine
c) Cytosine
d) Uracil
Correct Answer: a)

Class 12th Biology Past Papers

56. What is homeostasis?

a) The study of plants
b) The maintenance of a stable internal environment
c) The process of cell division
d) The synthesis of proteins
Correct Answer: b)

57. Which body system plays a crucial role in regulating temperature during homeostasis?

a) Nervous system
b) Respiratory system
c) Endocrine system
d) Cardiovascular system
Correct Answer: a)

58. What is the primary organ responsible for filtering and regulating blood composition in the human body?

a) Liver
b) Kidneys
c) Heart
d) Lungs
Correct Answer: b)

59. During exercise, the body temperature tends to rise. Which mechanism helps cool the body down to maintain homeostasis?

a) Vasoconstriction
b) Shivering
c) Sweating
d) Increased heart rate
Correct Answer: c)

60. Which hormone is responsible for regulating blood sugar levels in the body?

a) Insulin
b) Estrogen
c) Testosterone
d) Adrenaline
Correct Answer: a)

61. The process by which a response to a stimulus reinforces the stimulus, leading to an even greater response, is known as:

a) Negative feedback
b) Positive feedback
c) Neutral feedback
d) Inhibitory feedback
Correct Answer: b)

Class 12th Biology Past Papers

62. What is the role of glucagon in blood sugar regulation?

a) Increases blood sugar levels
b) Decreases blood sugar levels
c) Maintains constant blood sugar levels
d) Stimulates insulin production
Correct Answer: a)

63. In the context of homeostasis, what does the term "set point" refer to?

a) The ideal temperature for enzymatic reactions
b) The target value or range for a physiological variable
c) The point at which positive feedback occurs
d) The threshold for pain perception
Correct Answer: b)

64. Which of the following is an example of a physiological response to cold temperatures in order to maintain homeostasis?

a) Vasodilation
b) Sweating
c) Shivering
d) Increased heart rate
Correct Answer: c)

65. The process of maintaining a stable internal environment through self-regulating mechanisms is mainly controlled by the:

a) Nervous system
b) Immune system
c) Reproductive system
d) Endocrine system
Correct Answer: a)

66. Which structure in the brain is often referred to as the "master gland" because it controls the endocrine system?

a) Hypothalamus
b) Pituitary gland
c) Pineal gland
d) Thalamus
Correct Answer: b)

67. What is the primary function of the hypothalamus in homeostasis?

a) Regulation of body temperature
b) Control of hunger and thirst
c) Coordination of voluntary movements
d) Maintenance of blood pressure

Correct Answer: a)

68. Which of the following is an example of negative feedback in homeostasis?

a) Blood clotting
b) Childbirth contractions
c) Regulation of body temperature
d) Ovulation
Correct Answer: c)

69. In the context of homeostasis, what does the term "effector" refer to?

a) A sensor that detects changes in the environment
b) The control center that processes information
c) A molecule that triggers a response
d) A structure that carries out the response to a stimulus
Correct Answer: d)

70. Which electrolyte is important for muscle contraction and nerve impulse transmission and is regulated by the body's homeostatic mechanisms?

a) Sodium
b) Potassium
c) Calcium
d) Chloride
Correct Answer: c)

IGCSE Biology Past Paper

1. Which of the following is a characteristic feature of viroids?

A) Double-stranded DNA genome
B) Enveloped structure
C) Lack of protein coat
D) Multicellularity

Answer: c.

2. What is the primary target of bacteriophages during infection?

A) Animal cells
B) Plant cells
C) Fungal cells
D) Bacterial cells

Answer: d.

3. Which of the following acellular agents is known for causing diseases in animals, including humans?

A) Prion
B) Viroid
C) Retrovirus
D) Bacteriophage

Answer: a.

4. How do retroviruses differ from other RNA viruses in terms of their replication process?

A) They replicate in the host cytoplasm.
B) They replicate using RNA-dependent RNA polymerase.
C) They replicate in the host nucleus.
D) They replicate using reverse transcriptase.

Answer: c.

5. Which of the following is a characteristic feature of prions?

A) Enveloped structure
B) Protein-based infectious agents
C) Presence of a capsid
D) Viroid-like structure

Answer: b.

6. In the context of acellular life, what is a bacteriophage's tail composed of?

A) Lipids
B) Proteins
C) Nucleic acids
D) Polysaccharides

Answer: b.

7. Which of the following is an example of an enveloped virus?

IGCSE Biology Past Paper

A) Tobacco mosaic virus
B) Adenovirus
C) Influenza virus
D) Rhinovirus

Answer: c.

8. How do viroids primarily cause diseases in plants?
    A) By disrupting cellular functions
    B) By inducing apoptosis
    C) By inhibiting protein synthesis
    D) By causing misfolding of proteins

Answer: a.

9. What is the primary genetic material of prions?
    A) DNA
    B) RNA
    C) Proteins
    D) Lipids

Answer: c.

10. Which of the following is a function of the envelope in certain viruses?
    A) Protection of genetic material
    B) Host cell recognition
    C) Replication of RNA
    D) Protein synthesis

Answer: b.

11. Which type of respiration is more efficient in terms of ATP production: aerobic or anaerobic?

A) Aerobic
B) Anaerobic
C) Both are equally efficient
D) Depends on the organism

Answer: A)

12. In which respiratory structure does the exchange of oxygen and carbon dioxide take place in the human respiratory system?

A) Trachea
B) Bronchi
C) Alveoli
D) Diaphragm

Answer: C)

13. What is the role of mucus in the respiratory system?

A) Facilitate gas exchange

B) Produce sound during speech
C) Trap and remove particles
D) Generate ATP
Answer: C)

14. Which gas is the primary product of cellular respiration and needs to be removed from the body during gas exchange?

A) Oxygen
B) Carbon dioxide
C) Nitrogen
D) Hydrogen
Answer: B)

15. What is the process by which oxygen enters the bloodstream from the alveoli?

A) Diffusion
B) Osmosis
C) Active transport
D) Filtration
Answer: A)

16. Which respiratory disorder is characterized by inflammation and narrowing of the airways, leading to difficulty in breathing?

A) Pneumonia
B) Asthma
C) Bronchitis
D) Tuberculosis
Answer: B)

17. What is the role of hemoglobin in the process of gas exchange?

A) Transport of oxygen
B) Production of carbon dioxide
C) Formation of mucus
D) Regulation of lung volume
Answer: A)

18. Which muscle is primarily responsible for the expansion of the chest cavity during inhalation?

A) Diaphragm
B) Intercostal muscles
C) Abdominal muscles
D) Quadriceps
Answer: A)

19. What is the function of the epiglottis during swallowing?

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A) Facilitate gas exchange
B) Close the trachea to prevent food entry
C) Produce sound during speech
D) Filter particles from the air
Answer: B)

20. Which gas is more abundant in the atmosphere and diffuses into the lungs during inhalation?

A) Oxygen
B) Carbon dioxide
C) Nitrogen
D) Hydrogen
Answer: C)

21. What is the primary factor that drives the diffusion of gases during gas exchange?

A) Atmospheric pressure
B) Lung volume
C) Temperature
D) Concentration gradient
Answer: D)

22. In which part of the respiratory system does the process of external respiration occur?

A) Nose
B) Trachea
C) Alveoli
D) Bronchi
Answer: C)

23. What is the function of surfactant in the alveoli?

A) Trapping dust particles
B) Regulating airflow
C) Facilitating gas exchange
D) Producing mucus
Answer: C)

24. During exhalation, what happens to the diaphragm?

A) Contracts
B) Relaxes
C) Stays unchanged
D) Expands
Answer: B)

25. Which respiratory volume represents the maximum amount of air a person can exhale forcefully after a maximum inhalation?

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A) Tidal volume
B) Inspiratory reserve volume
C) Expiratory reserve volume
D) Vital capacity
Answer: C)

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36. Which of the following respiratory volumes cannot be measured directly with a spirometer?
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38. Which component of tobacco smoke is responsible for reducing the ability of blood to carry oxygen?

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C) Defense against pathogens
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61. What is the recommended daily intake of water for an average adult?
A) 1 liter
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IGCSE Biology Past Paper

62. What is the primary purpose of cellular respiration in living organisms?

A) Energy storage
B) Waste elimination
C) Nutrient absorption
D) Reproduction
Answer: A)

63. Where does glycolysis, the first stage of cellular respiration, take place in eukaryotic cells?

A) Mitochondria
B) Nucleus
C) Cytoplasm
D) Endoplasmic reticulum
Answer: C)

64. During which stage of cellular respiration is carbon dioxide produced?

A) Glycolysis
B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: B)

65. What is the final electron acceptor in the electron transport chain of cellular respiration?

A) Oxygen
B) Carbon dioxide
C) Nitrogen
D) Hydrogen
Answer: A)

66. In aerobic respiration, how many molecules of ATP are produced from one molecule of glucose?

A) 2
B) 30
C) 36
D) 4
Answer: C)

67. Which type of respiration occurs in the absence of oxygen, leading to the production of lactic acid or ethanol?

A) Aerobic respiration
B) Anaerobic respiration
C) External respiration
D) Internal respiration
Answer: B)

IGCSE Biology Past Paper

68. What is the main function of the respiratory system in the context of cellular respiration?

A) Oxygen production
B) Carbon dioxide elimination
C) Nutrient absorption
D) Energy storage
Answer: B)

69. During which phase of cellular respiration is water produced as a byproduct?

A) Glycolysis
B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: C)

70. Which organelle is responsible for the final steps of aerobic respiration in eukaryotic cells?

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C) Mitochondrion
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O-Levels Biology Past Paper

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A) It produces ATP during glycolysis
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C) It generates ATP from ADP during oxidative phosphorylation
D) It breaks down ATP to release energy
Answer: C)

15. Which molecule serves as the primary electron carrier in cellular respiration?
A) NADH
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C) ATP
D) GTP
Answer: A)

16. What is the primary purpose of the Krebs cycle in cellular respiration?
A) Production of ATP
B) Breakdown of glucose
C) Oxidation of NADH
D) Synthesis of acetyl-CoA
Answer: B)

17. During which phase of cellular respiration is carbon dioxide fully released?
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B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: B)

18. In aerobic respiration, where does the electron transport chain occur?
A) Mitochondrial matrix
B) Inner mitochondrial membrane
C) Cytoplasm
D) Outer mitochondrial membrane
Answer: B)

19. What is the primary role of oxygen in cellular respiration?
A) Electron acceptor in the electron transport chain
B) Carrier of electrons in glycolysis
C) Production of ATP in the Krebs cycle
D) Activation of enzymes in glycolysis
Answer: A)

O-Levels Biology Past Paper

20. Which type of respiration is more efficient in terms of ATP production: aerobic or anaerobic?

A) Aerobic
B) Anaerobic
C) Both are equally efficient
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Answer: A)

21. In which respiratory structure does the exchange of oxygen and carbon dioxide take place in the human respiratory system?

A) Trachea
B) Bronchi
C) Alveoli
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Answer: C)

22. What is the role of mucus in the respiratory system?

A) Facilitate gas exchange
B) Produce sound during speech
C) Trap and remove particles
D) Generate ATP
Answer: C)

23. Which gas is the primary product of cellular respiration and needs to be removed from the body during gas exchange?

A) Oxygen
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C) Nitrogen
D) Hydrogen
Answer: B)

24. What is the process by which oxygen enters the bloodstream from the alveoli?

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B) Osmosis
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Answer: A)

25. Which respiratory disorder is characterized by inflammation and narrowing of the airways, leading to difficulty in breathing?

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O-Levels Biology Past Paper

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30. What is the primary factor that drives the diffusion of gases during gas exchange?

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Answer: D)

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O-Levels Biology Past Paper

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A) Tidal volume
B) Inspiratory reserve volume
C) Expiratory reserve volume
D) Residual volume
Answer: D)

37. What is the primary function of the respiratory center in the brainstem?
A) Production of mucus
B) Regulation of breathing

C) Facilitation of gas exchange
D) Synthesis of hemoglobin
Answer: B)

38. Which component of tobacco smoke is responsible for reducing the ability of blood to carry oxygen?

A) Nicotine
B) Carbon monoxide
C) Tar
D) Hydrogen cyanide
Answer: B)

39. What is the term for the maximum volume of air a person can inhale after a normal inhalation?

A) Tidal volume
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C) Expiratory reserve volume
D) Vital capacity
Answer: B)

40. Which respiratory disorder is characterized by the inflammation of the bronchial tubes?

A) Pneumonia
B) Asthma
C) Bronchitis
D) Emphysema
Answer: C)

41. What is the primary role of the ribcage in the process of breathing?

A) Production of mucus
B) Regulation of blood pH
C) Protection of the lungs
D) Expansion and contraction during respiration
Answer: D)

42. What is the term for a disease-causing agent, such as a bacterium or virus?

A) Pathogen
B) Antibody
C) Antigen
D) Leukocyte
Answer: A)

43. Which of the following is a primary function of the immune system?

A) Transport of oxygen
B) Regulation of temperature

C) Defense against pathogens
D) Nutrient absorption
Answer: C)

44. What is the role of antibodies in the immune system?
A) Attack pathogens directly
B) Recognize and neutralize antigens
C) Produce mucus
D) Regulate blood pressure
Answer: B)

45. Which immune cells are responsible for engulfing and digesting pathogens in a process called phagocytosis?
A) T cells
B) B cells
C) Macrophages
D) Plasma cells
Answer: C)

46. What is the term for a substance that triggers an immune response and can stimulate the production of antibodies?
A) Pathogen
B) Antibody
C) Antigen
D) Leukocyte
Answer: C)

47. Which type of immunity is acquired through vaccination or exposure to a disease?
A) Innate immunity
B) Passive immunity
C) Active immunity
D) Adaptive immunity
Answer: C)

48. What is the function of memory cells in the immune system?
A) Produce antibodies
B) Recognize and remember specific pathogens
C) Regulate inflammation
D) Remove damaged cells
Answer: B)

49. Which of the following is a viral disease that affects the respiratory system and has symptoms such as fever, cough, and body aches?
A) Tuberculosis

B) Influenza
C) Malaria
D) Hepatitis
Answer: B)

50. What is the role of the thymus gland in the immune system?
A) Produce antibodies
B) Filter blood
C) Maturation of T cells
D) Store red blood cells
Answer: C)

51. Which immune cells release chemicals, such as histamine, to initiate an inflammatory response?
A) T cells
B) B cells
C) Mast cells
D) Plasma cells
Answer: C)

52. What is the purpose of a vaccine?
A) Cure existing diseases
B) Provide passive immunity
C) Stimulate an immune response against a specific pathogen
D) Remove toxins from the body
Answer: C)

53. Which of the following is an example of a vector-borne disease transmitted by mosquitoes?
A) Tuberculosis
B) Dengue fever
C) Hepatitis
D) Pneumonia
Answer: B)

54. What is the main function of cytotoxic T cells in the immune system?
A) Produce antibodies
B) Destroy infected or abnormal cells
C) Regulate inflammation
D) Recognize antigens
Answer: B)

55. What is the main function of lipids in the body?
A) Building muscle tissue
B) Providing a quick source of energy

A-Levels Biology Past Paper

C) Insulating and protecting organs
D) Regulating blood sugar levels
Answer: C)

56. Which vitamin is essential for calcium absorption and bone health?
A) Vitamin C
B) Vitamin B12
C) Vitamin D
D) Vitamin K
Answer: C)

57. What is the primary source of dietary fiber?
A) Meat
B) Fruits and vegetables
C) Dairy products
D) Grains
Answer: B)

58. Which of the following is a trace mineral important for the formation of hemoglobin?
A) Calcium
B) Iron
C) Potassium
D) Magnesium
Answer: B)

59. What is the function of the pancreas in digestion?
A) Production of bile
B) Absorption of nutrients
C) Regulation of blood sugar
D) Secretion of digestive enzymes
Answer: D)

60. Which of the following is a water-soluble vitamin that acts as an antioxidant?
A) Vitamin A
B) Vitamin C
C) Vitamin D
D) Vitamin E
Answer: B)

61. What is the recommended daily intake of water for an average adult?
A) 1 liter
B) 2 liters
C) 3 liters
D) 4 liters

Answer: B)

62. What is the primary purpose of cellular respiration in living organisms?

A) Energy storage
B) Waste elimination
C) Nutrient absorption
D) Reproduction
Answer: A)

63. Where does glycolysis, the first stage of cellular respiration, take place in eukaryotic cells?

A) Mitochondria
B) Nucleus
C) Cytoplasm
D) Endoplasmic reticulum
Answer: C)

64. During which stage of cellular respiration is carbon dioxide produced?

A) Glycolysis
B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: B)

65. What is the final electron acceptor in the electron transport chain of cellular respiration?

A) Oxygen
B) Carbon dioxide
C) Nitrogen
D) Hydrogen
Answer: A)

66. In aerobic respiration, how many molecules of ATP are produced from one molecule of glucose?

A) 2
B) 30
C) 36
D) 4
Answer: C)

67. Which type of respiration occurs in the absence of oxygen, leading to the production of lactic acid or ethanol?

A) Aerobic respiration
B) Anaerobic respiration
C) External respiration
D) Internal respiration

Answer: B)

68. What is the main function of the respiratory system in the context of cellular respiration?
A) Oxygen production
B) Carbon dioxide elimination
C) Nutrient absorption
D) Energy storage
Answer: B)

69. During which phase of cellular respiration is water produced as a byproduct?
A) Glycolysis
B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: C)

70. Which organelle is responsible for the final steps of aerobic respiration in eukaryotic cells?
A) Nucleus
B) Ribosome
C) Mitochondrion
D) Golgi apparatus
Answer: C)

DAE Biology Past Paper

1. Which respiratory disorder is characterized by inflammation and narrowing of the airways, leading to difficulty in breathing?

A) Pneumonia
B) Asthma
C) Bronchitis
D) Tuberculosis
Answer: B)

2. What is the role of hemoglobin in the process of gas exchange?

A) Transport of oxygen
B) Production of carbon dioxide
C) Formation of mucus
D) Regulation of lung volume
Answer: A)

3. Which muscle is primarily responsible for the expansion of the chest cavity during inhalation?

A) Diaphragm
B) Intercostal muscles
C) Abdominal muscles
D) Quadriceps
Answer: A)

4. What is the function of the epiglottis during swallowing?

A) Facilitate gas exchange
B) Close the trachea to prevent food entry
C) Produce sound during speech
D) Filter particles from the air
Answer: B)

5. Which gas is more abundant in the atmosphere and diffuses into the lungs during inhalation?

A) Oxygen
B) Carbon dioxide
C) Nitrogen
D) Hydrogen
Answer: C)

6. What is the primary factor that drives the diffusion of gases during gas exchange?

A) Atmospheric pressure
B) Lung volume
C) Temperature
D) Concentration gradient
Answer: D)

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7. In which part of the respiratory system does the process of external respiration occur?

A) Nose
B) Trachea
C) Alveoli
D) Bronchi
Answer: C)

8. What is the function of surfactant in the alveoli?

A) Trapping dust particles
B) Regulating airflow
C) Facilitating gas exchange
D) Producing mucus
Answer: C)

9. During exhalation, what happens to the diaphragm?

A) Contracts
B) Relaxes
C) Stays unchanged
D) Expands
Answer: B)

10. Which respiratory volume represents the maximum amount of air a person can exhale forcefully after a maximum inhalation?

A) Tidal volume
B) Inspiratory reserve volume
C) Expiratory reserve volume
D) Vital capacity
Answer: C)

11. What is the primary stimulus for the regulation of breathing rate and depth?

A) Oxygen levels in the blood
B) Carbon dioxide levels in the blood
C) pH of the blood
D) Hemoglobin concentration
Answer: B)

12. What is the term for the volume of air inspired and expired with each normal breath at rest?

A) Tidal volume
B) Vital capacity
C) Residual volume
D) Expiratory reserve volume
Answer: A)

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13. In which part of the respiratory system are cilia present to help move mucus?
A) Trachea
B) Bronchi
C) Alveoli
D) Larynx
Answer: B)

14. Which gas is transported in the blood primarily bound to hemoglobin?
A) Oxygen
B) Carbon dioxide
C) Nitrogen
D) Hydrogen
Answer: A)

15. What is the role of the medulla oblongata in the regulation of breathing?
A) Monitoring oxygen levels
B) Initiating inhalation
C) Producing mucus
D) Facilitating gas exchange
Answer: B)

16. What is the function of the pleural membranes in the lungs?
A) Facilitate gas exchange
B) Provide mechanical support
C) Produce mucus
D) Create a fluid-filled space for reduced friction
Answer: D)

17. During exercise, what happens to the respiratory rate and tidal volume?
A) Decrease
B) Stay the same
C) Increase
D) Fluctuate randomly
Answer: C)

18. Which blood vessel carries oxygenated blood from the lungs to the heart?
A) Pulmonary artery
B) Pulmonary vein
C) Aorta
D) Vena cava
Answer: B)

19. What is the primary role of the alveolar macrophages in the lungs?
A) Facilitate gas exchange

B) Produce mucus
C) Remove dust and debris
D) Regulate airflow
Answer: C)

20. What is the name of the process by which oxygen is bound to hemoglobin in red blood cells?
A) Osmosis
B) Diffusion
C) Phagocytosis
D) Oxygenation
Answer: D)

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B) Nucleus
C) Cytoplasm
D) Endoplasmic reticulum
Answer: C)

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B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: B)

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50. What is the final electron acceptor in the electron transport chain of cellular respiration?

A) Oxygen
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C) Nitrogen
D) Hydrogen
Answer: A)

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C) 36
D) 4
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B) Anaerobic respiration
C) External respiration
D) Internal respiration
Answer: B)

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B) Carbon dioxide elimination
C) Nutrient absorption
D) Energy storage
Answer: B)

54. During which phase of cellular respiration is water produced as a byproduct?

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B) Krebs cycle
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D) Fermentation
Answer: C)

55. Which organelle is responsible for the final steps of aerobic respiration in eukaryotic cells?

A) Nucleus
B) Ribosome
C) Mitochondrion
D) Golgi apparatus
Answer: C)

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56. In cellular respiration, what is the net gain of ATP molecules produced per molecule of glucose in glycolysis?

A) 2 ATP
B) 4 ATP
C) 8 ATP
D) 12 ATP
Answer: A)

57. What is the final product of glycolysis?

A) Pyruvate
B) Acetyl-CoA
C) Lactic acid
D) Carbon dioxide
Answer: A)

58. Which stage of cellular respiration produces the majority of NADH molecules?

A) Glycolysis
B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: B)

59. In anaerobic respiration, what is the end product in animal cells?

A) Ethanol
B) Lactic acid
C) Pyruvate
D) Carbon dioxide
Answer: B)

60. How is ATP synthase involved in cellular respiration?

A) It produces ATP during glycolysis
B) It transports electrons during the Krebs cycle
C) It generates ATP from ADP during oxidative phosphorylation
D) It breaks down ATP to release energy
Answer: C)

61. Which molecule serves as the primary electron carrier in cellular respiration?

A) NADH
B) FADH2
C) ATP
D) GTP
Answer: A)

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62. What is the primary purpose of the Krebs cycle in cellular respiration?
A) Production of ATP
B) Breakdown of glucose
C) Oxidation of NADH
D) Synthesis of acetyl-CoA
Answer: B)

63. During which phase of cellular respiration is carbon dioxide fully released?
A) Glycolysis
B) Krebs cycle
C) Electron transport chain
D) Fermentation
Answer: B)

64. In aerobic respiration, where does the electron transport chain occur?
A) Mitochondrial matrix
B) Inner mitochondrial membrane
C) Cytoplasm
D) Outer mitochondrial membrane
Answer: B)

65. What is the primary role of oxygen in cellular respiration?
A) Electron acceptor in the electron transport chain
B) Carrier of electrons in glycolysis
C) Production of ATP in the Krebs cycle
D) Activation of enzymes in glycolysis
Answer: A)

66. Which type of respiration is more efficient in terms of ATP production: aerobic or anaerobic?
A) Aerobic
B) Anaerobic
C) Both are equally efficient
D) Depends on the organism
Answer: A)

67. In which respiratory structure does the exchange of oxygen and carbon dioxide take place in the human respiratory system?
A) Trachea
B) Bronchi
C) Alveoli
D) Diaphragm
Answer: C)

68. What is the role of mucus in the respiratory system?

A) Facilitate gas exchange
B) Produce sound during speech
C) Trap and remove particles
D) Generate ATP
Answer: C)

69. Which gas is the primary product of cellular respiration and needs to be removed from the body during gas exchange?

A) Oxygen
B) Carbon dioxide
C) Nitrogen
D) Hydrogen
Answer: B)

70. What is the process by which oxygen enters the bloodstream from the alveoli?

A) Diffusion
B) Osmosis
C) Active transport
D) Filtration
Answer: A)

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1. What is the powerhouse of the cell?

a. Nucleus
b. Mitochondria
c. Endoplasmic reticulum
d. Golgi apparatus
Answer: b.

2. Which of the following is a monosaccharide?

a. Glucose
b. Sucrose
c. Starch
d. Cellulose
Answer: a.

3. Which blood type is considered the universal donor?

a. A
b. B
c. AB
d. O
Answer: d.

4. What is the largest organ in the human body?

a. Liver
b. Skin
c. Heart
d. Lungs
Answer: b.

5. Which gas is responsible for the greenhouse effect on Earth?

a. Oxygen
b. Nitrogen
c. Carbon dioxide
d. Hydrogen
Answer: c.

6. What is the process by which plants make their own food?

a. Respiration
b. Photosynthesis
c. Transpiration
d. Fermentation
Answer: b.

7. Which hormone is responsible for the regulation of blood sugar levels?

a. Insulin

Bachelors Biology Past Paper

b. Estrogen
c. Testosterone
d. Thyroxine
Answer: a.

8. What is the function of red blood cells?
a. Transporting oxygen
b. Fighting infections
c. Clotting blood
d. Producing antibodies
Answer: a.

9. Which part of the human brain is responsible for coordination and balance?
a. Cerebrum
b. Cerebellum
c. Medulla oblongata
d. Hypothalamus
Answer: b.

10. What is the basic unit of heredity?
a. Gene
b. Chromosome
c. DNA
d. RNA
Answer: a.

11. Which of the following is a function of the liver?
a. Pumping blood
b. Digesting food
c. Producing bile
d. Filtering urine
Answer: c.

12. What is the process by which water is lost through the stomata of leaves?
a. Transpiration
b. Osmosis
c. Diffusion
d. Photosynthesis
Answer: a.

13. Which gas is essential for photosynthesis?
a. Oxygen
b. Nitrogen
c. Carbon dioxide

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d. Hydrogen
Answer: c.

14. What is the main function of white blood cells?
a. Carrying oxygen
b. Clotting blood
c. Fighting infections
d. Transporting nutrients
Answer: c.

15. Which of the following is an example of a vestigial organ in humans?
a. Appendix
b. Liver
c. Spleen
d. Kidney
Answer: a.

16. What is the powerhouse of photosynthesis in plant cells?
a. Chloroplast
b. Nucleus
c. Mitochondria
d. Endoplasmic reticulum
Answer: a.

17. Which gas is released during cellular respiration?
a. Oxygen
b. Nitrogen
c. Carbon dioxide
d. Hydrogen
Answer: c.

18. What is the largest part of the human brain?
a. Cerebrum
b. Cerebellum
c. Medulla oblongata
d. Hypothalamus
Answer: a.

19. Which organelle is responsible for protein synthesis?
a. Nucleus
b. Ribosome
c. Golgi apparatus
d. Lysosome
Answer: b.

Bachelors Biology Past Paper

20. Which vitamin is synthesized by the skin when exposed to sunlight?
a. Vitamin A
b. Vitamin B12
c. Vitamin C
d. Vitamin D
Answer: d.

21. What is the function of the alveoli in the lungs?
a. Pumping blood
b. Exchanging gases
c. Filtration of blood
d. Digesting food
Answer: b.

22. Which type of tissue connects muscle to bone?
a. Epithelial tissue
b. Nervous tissue
c. Connective tissue
d. Muscle tissue
Answer: c.

23. What is the role of hemoglobin in red blood cells?
a. Carrying oxygen
b. Fighting infections
c. Clotting blood
d. Digesting food
Answer: a.

24. Which enzyme is responsible for breaking down proteins in the stomach?
a. Amylase
b. Lipase
c. Protease
d. Nuclease
Answer: c.

25. What is the process by which a cell divides into two identical daughter cells?
a. Mitosis
b. Meiosis
c. Fertilization
d. Budding
Answer: a.

26. Which part of the human eye is responsible for adjusting the focus of the lens?

a. Retina
b. Cornea
c. Iris
d. Ciliary muscle
Answer: d.

27. What is the primary function of the kidneys?
a. Producing urine
b. Digesting food
c. Pumping blood
d. Storing bile
Answer: a.

28. Which of the following is a function of the pancreas?
a. Producing insulin
b. Filtering blood
c. Producing bile
d. Storing glucose
Answer: a.

29. What is the role of the gallbladder in the digestive system?
a. Producing bile
b. Storing bile
c. Digesting proteins
d. Absorbing nutrients
Answer: b.

30. Which type of joint allows for the most movement?
a. Ball and socket joint
b. Hinge joint
c. Pivot joint
d. Gliding joint
Answer: a.

31. What is the function of the lymphatic system in the body?
a. Pumping blood
b. Fighting infections
c. Digesting food
d. Regulating body temperature
Answer: b.

32. Which hormone is responsible for the development of male secondary sexual characteristics?
a. Estrogen

b. Testosterone
c. Insulin
d. Thyroxine
Answer: b.

33. What is the function of the thyroid gland?
a. Regulating metabolism
b. Producing insulin
c. Filtering blood
d. Storing bile
Answer: a.

34. Which of the following is a function of the spleen?
a. Producing red blood cells
b. Filtering blood
c. Storing bile
d. Digesting proteins
Answer: b.

35. What is the purpose of mucus in the respiratory system?
a. Transporting oxygen
b. Trapping dust and pathogens
c. Digesting food
d. Regulating body temperature
Answer: b.

36. Which type of cell is responsible for the production of antibodies?
a. Red blood cell
b. White blood cell
c. Platelet
d. Nerve cell
Answer: b.

37. What is the role of the thymus gland in the immune system?
a. Producing antibodies
b. Filtering blood
c. Maturation of T cells
d. Storing bile
Answer: c.

38. Which of the following is a function of the endocrine system?
a. Transporting nutrients
b. Regulating body temperature
c. Producing hormones

Bachelors Biology Past Paper

d. Fighting infections
Answer: c.

39. What is the function of the small intestine in the digestive system?
a. Absorbing nutrients
b. Storing bile
c. Producing insulin
d. Filtering blood
Answer: a.

40. Which gas is produced during fermentation?
a. Oxygen
b. Nitrogen
c. Carbon dioxide
d. Hydrogen
Answer: c.

41. What is the role of the epiglottis in the respiratory system?
a. Pumping blood
b. Regulating body temperature
c. Preventing food from entering the trachea
d. Producing mucus
Answer: c.

42. Which of the following is a function of the nervous system?
a. Producing hormones
b. Regulating body temperature
c. Transmitting signals
d. Storing bile
Answer: c.

43. What is the purpose of the myelin sheath in nerve cells?
a. Regulating metabolism
b. Protecting the cell
c. Speeding up nerve impulse transmission
d. Storing energy
Answer: c.

44. Which organ is responsible for detoxifying harmful substances in the blood?
a. Liver
b. Kidney
c. Pancreas
d. Spleen
Answer: a.

Bachelors Biology Past Paper

45. What is the function of the cornea in the eye?
a. Adjusting focus
b. Detecting light
c. Protecting the eye
d. Transmitting signals to the brain
Answer: c.

46. Which part of the human ear is responsible for detecting sound vibrations?
a. Cochlea
b. Eardrum
c. Auditory nerve
d. Vestibule
Answer: b.

47. What is the role of the adrenal glands in the endocrine system?
a. Regulating metabolism
b. Producing insulin
c. Releasing stress hormones
d. Storing bile
Answer: c.

48. Which type of tissue covers and protects the body's surfaces?
a. Epithelial tissue
b. Nervous tissue
c. Connective tissue
d. Muscle tissue
Answer: a.

49. What is the function of the trachea in the respiratory system?
a. Exchanging gases
b. Pumping blood
c. Transporting nutrients
d. Transmitting signals
Answer: a.

50. Which of the following is a function of the cardiovascular system?
a. Producing hormones
b. Transporting nutrients and oxygen
c. Regulating body temperature
d. Storing bile
Answer: b.

51. What is the purpose of the peristaltic movements in the digestive system?
a. Filtering blood

Bachelors Biology Past Paper

b. Breaking down proteins
c. Absorbing nutrients
d. Moving food through the digestive tract
Answer: d.

52. Which of the following is a function of the respiratory system?
a. Producing hormones
b. Exchanging gases
c. Absorbing nutrients
d. Storing bile
Answer: b.

53. What is the function of the gallbladder?
a. Producing bile
b. Storing bile
c. Digesting proteins
d. Absorbing nutrients
Answer: b.

54. Which of the following is a function of the skeletal system?
a. Producing hormones
b. Regulating body temperature
c. Providing support and protection
d. Storing bile
Answer: c.

55. What is the purpose of the alveoli in the respiratory system?
a. Exchanging gases
b. Filtering blood
c. Digesting food
d. Regulating body temperature
Answer: a.

56. Which organ is responsible for storing and releasing urine?
a. Liver
b. Kidney
c. Bladder
d. Pancreas
Answer: c

57. SIV is the abbreviation of:
a. Simian immunodeficiency virus
b. Siluridae immunodeficiency virus
c. Synodontidae immunodeficiency virus
d. None of the above
Answer: a

58. In individuals with HIV, opportunistic infections are:
a. More frequent
b. Less frequent

c. Non-existent
d. None of the above

Answer: a

59. HIV is a _____
a. Lentivirus
b. Capripoxvirus
c. Gallivirus
d. Papillomavirus

Answer: a

60. Simian immunodeficiency virus is known to affect
a. non-human primates
b. Birds
c. Rabbits
d. None of the above

Answer: a

61. Which of the following statements is correct?
a. Atmosphere is the major reservoir for plants
b. Nitrogen is the most abundant nutrient for plants
c. Nitrogen cycle is a sedimentary cycle
d. All

Answer: a

62. Nitrogen is absorbed by the plants in the form of
a. Ammonium
b. Nitrites
c. Nitrates
d. All

Answer: d

63. Nitrogen fixation is the conversion of
a. N2 to N
b. N2 to NH3
c. N2 to NO3–
d. N2 to urea

Answer: b

64. Important enzymes involved in nitrogen fixation are
a. Nitrogenase and hydrogenase
b. Nitrogenase and hexokinase
c. Nitrogenase and peptidase
d. Nitrogenase and hydrolyase

Answer: a

65. Symbiotic nitrogen-fixing cyanobacteria are not present in
    a. Azolla
    b. Gnetum
    c. Anthoceros
    d. Cycas

Answer: b

66. How many molecules of ATP are required to fix one molecule of nitrogen?
    a. 12
    b. 20
    c. 6
    d. 16

Answer: d

67. Ammonification is the formation of
    a. Ammonia from nitrates by decomposers
    b. Ammonia from nitrogen
    c. Ammonia from amino acids
    d. Ammonia from nitrates by nitrogen fixers

Answer: c

68. Conversion of nitrates to nitrogen is called
    a. Ammonification
    b. Nitrification
    c. Nitrogen fixation
    d. Denitrification

Answer: d

69. Conversion of nitrites to nitrates is called
    a. Nitrosococcus
    b. Clostridium
    c. Nitrobacter
    d. Nitrosomonas

Answer: c

70. Conversion of ammonia to nitrite and then to nitrates is called
    a. Ammonification
    b. Denitrification
    c. Assimilation
    d. Nitrification

Answer: d

Masters Biology Past Paper

1. What is the primary function of the Golgi apparatus in eukaryotic cells?

A) Protein synthesis
B) ATP production
C) Lipid synthesis
D) Protein modification and sorting
Correct Answer: D)

2. In a population, what is the term for the total collection of alleles for a particular gene at a given time?

A) Genotype
B) Phenotype
C) Gene pool
D) Allelic frequency
Correct Answer: C)

3. Which enzyme is responsible for unwinding the DNA double helix during DNA replication?

A) DNA polymerase
B) Helicase
C) RNA polymerase
D) Ligase
Correct Answer: B)

4. What is the role of the electron transport chain in cellular respiration?

A) Production of ATP
B) Glycolysis
C) Synthesis of glucose
D) Oxidation of glucose
Correct Answer: A)

5. Which of the following is not a type of RNA molecule involved in protein synthesis?

A) mRNA (messenger RNA)
B) tRNA (transfer RNA)
C) rRNA (ribosomal RNA)
D) siRNA (small interfering RNA)
Correct Answer: D)

6. What is the function of the enzyme amylase in the digestive system?

A) Breakdown of lipids
B) Breakdown of proteins
C) Breakdown of nucleic acids
D) Breakdown of carbohydrates
Correct Answer: D)

7. Which of the following is a characteristic of prokaryotic cells?

Masters Biology Past Paper

A) Nucleus
B) Membrane-bound organelles
C) Presence of a cell wall
D) Larger size
Correct Answer: C)

8. What is the process by which a cell engulfs large particles by wrapping its cell membrane around them?

A) Pinocytosis
B) Exocytosis
C) Endocytosis
D) Phagocytosis
Correct Answer: D)

9. Which of the following is a key component of the innate immune system?

A) B cells
B) T cells
C) Antibodies
D) Macrophages
Correct Answer: D)

10. In the context of evolutionary biology, what is genetic drift?

A) Changes in allele frequency due to selective pressures
B) Changes in allele frequency due to random events
C) The movement of genes between populations
D) The exchange of genetic material during meiosis
Correct Answer: B)

11. Which of the following is a characteristic feature of eukaryotic cells but not of prokaryotic cells?

A) Nucleus
B) Cell wall
C) Ribosomes
D) Plasma membrane
Correct Answer: A)

12. What is the role of the enzyme reverse transcriptase in retroviruses?

A) Synthesis of DNA from RNA
B) Synthesis of RNA from DNA
C) Breakdown of RNA
D) Protein synthesis
Correct Answer: A)

13. During which phase of the cell cycle does DNA replication occur?

Masters Biology Past Paper

A) G1 phase
B) S phase
C) G2 phase
D) M phase
Correct Answer: B)

14. What is the primary function of the enzyme lysozyme?

A) Digestion of lipids
B) Digestion of proteins
C) Digestion of nucleic acids
D) Digestion of bacterial cell walls
Correct Answer: D)

15. In genetics, what is the term for a heritable change in the DNA sequence of an organism?

A) Mutation
B) Polymorphism
C) Translocation
D) Recombination
Correct Answer: A)

16. What is the role of the enzyme RNA polymerase in transcription?

A) Synthesis of DNA
B) Synthesis of RNA from DNA
C) Synthesis of proteins
D) Breakdown of RNA
Correct Answer: B)

17. Which of the following is an example of a second messenger in signal transduction pathways?

A) cAMP (cyclic AMP)
B) DNA
C) mRNA
D) tRNA
Correct Answer:A)

18. What is the function of the enzyme DNA ligase in DNA replication?

A) Unwinding the DNA double helix
B) Synthesizing RNA primers
C) Connecting Okazaki fragments
D) Proofreading DNA
Correct Answer: C)

19. In evolutionary biology, what is convergent evolution?

A) Evolution of similar traits in different species due to a common ancestor

Masters Biology Past Paper

B) Evolution of different traits in different species due to a common environment
C) Evolution of similar traits in different species without a common ancestor
D) Evolution of identical traits in different species
Correct Answer: C)

20. Which of the following is a characteristic of facilitated diffusion?
A) Movement of substances against their concentration gradient
B) Requires energy input
C) Movement of substances with the aid of transport proteins
D) Passive transport of water molecules
Correct Answer: C)

21. What is the primary function of the enzyme DNA helicase during DNA replication?
A) Synthesis of DNA
B) Unwinding the DNA double helix
C) Connecting Okazaki fragments
D) Proofreading DNA
Correct Answer: B)

22. Which of the following is a characteristic feature of an enzyme-catalyzed reaction?
A) Decreases the activation energy of the reaction
B) Slows down the rate of the reaction
C) Raises the activation energy of the reaction
D) Inhibits substrate binding
Correct Answer: A)

23. In cellular respiration, where does the citric acid (Krebs) cycle occur?
A) Cytoplasm
B) Mitochondrial matrix
C) Endoplasmic reticulum
D) Nucleus
Correct Answer: B)

24. Which of the following is a characteristic of allosteric enzymes?
A) Always active
B) Inhibited by the substrate
C) Have multiple active sites
D) Can be regulated by binding of molecules at sites other than the active site
Correct Answer: D)

25. What is the function of the enzyme catalase in cells?
A) Breakdown of carbohydrates
B) Synthesis of proteins
C) Detoxification of hydrogen peroxide

Masters Biology Past Paper

D) Synthesis of lipids
Correct Answer: C)

26. In the context of ecology, what is the term for the maximum population size that a particular environment can support?

A) Carrying capacity
B) Limiting factor
C) Population density
D) Growth rate
Correct Answer: A)

27. Which of the following is a function of the smooth endoplasmic reticulum in eukaryotic cells?

A) Protein synthesis
B) Lipid synthesis and metabolism
C) Ribosome assembly
D) DNA replication
Correct Answer: B)

28. What is the role of NADPH in cellular processes?

A) Electron carrier in photosynthesis
B) Electron carrier in cellular respiration
C) Donates electrons in anabolic reactions
D) Accepts electrons in catabolic reactions
Correct Answer: C)

29. In molecular biology, what is the central dogma?

A) DNA replication → Transcription → Translation
B) Transcription → Translation → DNA replication
C) Translation → Transcription → DNA replication
D) DNA replication → Translation → Transcription
Correct Answer: A)

30. Which of the following is a characteristic of a prokaryotic cell?

A) Nucleus
B) Membrane-bound organelles
C) Linear chromosomes
D) Circular DNA
Correct Answer: D)

31. What is the primary function of the enzyme topoisomerase during DNA replication?

A) Synthesis of DNA
B) Unwinding the DNA double helix
C) Connecting Okazaki fragments

Masters Biology Past Paper

D) Preventing supercoiling of DNA
Correct Answer: D)

32. Which of the following is a key component of the extracellular matrix in animal cells?
A) Cellulose
B) Collagen
C) Chitin
D) Peptidoglycan
Correct Answer: B)

33. What is the function of the enzyme ligase in DNA repair?
A) Unwinding the DNA double helix
B) Connecting Okazaki fragments
C) Removing damaged nucleotides
D) Proofreading DNA
Correct Answer: C)

34. In population genetics, what does the term "allele frequency" refer to?
A) The number of alleles in a population
B) The proportion of a specific allele in a population
C) The dominance of an allele
D) The genetic diversity of a population
Correct Answer: B)

35. Which of the following is a component of the innate immune system that recognizes and binds to foreign pathogens?
A) Antibodies
B) T cells
C) Complement proteins
D) Memory cells
Correct Answer: C)

36. What is the function of the enzyme RNAase in cells?
A) Synthesis of RNA
B) Breakdown of RNA
C) Synthesis of proteins
D) Breakdown of proteins
Correct Answer: B)

37. In the context of evolution, what is the bottleneck effect?
A) A sudden decrease in population size leading to reduced genetic diversity
B) A sudden increase in population size leading to increased genetic diversity
C) Gene flow between isolated populations
D) Gradual accumulation of genetic changes over time

Correct Answer: A)

38. What is the primary function of the enzyme restriction endonuclease in molecular biology?
A) Synthesizing DNA
B) Cutting DNA at specific recognition sequences
C) Ligating DNA fragments
D) Amplifying DNA
Correct Answer: B)

39. Which of the following is a characteristic of an autotrophic organism?
A) Obtains energy from organic compounds
B) Cannot produce its own food
C) Produces its own food through photosynthesis or chemosynthesis
D) Relies on predation for nutrition
Correct Answer: C)

40. What is the role of the enzyme reverse transcriptase in retrotransposons?
A) Synthesis of DNA from RNA
B) Synthesis of RNA from DNA
C) Breakdown of RNA
D) Protein synthesis
Correct Answer: A)

41. Which of the following statements is true about chlorofluorocarbons?
A)Chlorofluorocarbons are used as refrigerants
B) Chlorofluorocarbons are used as fuel for air crafts
C) Chlorofluorocarbons are used as repairers of the ozone layer
D) Chlorofluorocarbons are used as repairers of the troposphere
Correct Answer: A)

42. The accumulation of chlorofluorocarbons above in the atmosphere results in the depletion of _____.
A) Exosphere
B) Mesosphere
C) The ozone layer
D) All of the above
Correct Answer: C)

43. Which of the following compounds are called ozone-depleting substances?
A)Carbon dioxide
B)Chlorofluorocarbons
C)Hydrofluorocarbons
D) All of the above
Correct Answer: D)

Masters Biology Past Paper

44. Which of the following is a substitute for chlorofluorocarbons?

A)Hydrocarbons
B)Difluoroethane
C)Hydrofluorocarbons
D)Dichlorodifluoromethane
Correct Answer: D)

45. Which of the following is not true about the consequence of ozone layer depletion?

A) Causes tides
B)Increase in the UV rays
C) Increased malignant melanoma
D) Affects agricultural productivity
Correct Answer: A)

46. When was the first ozone hole discovered?

A) In the early 1950s
B) Between 1960 and 1970
C) Between 1980 and 1990
D) 1990 to above
Correct Answer: C)

47. The Montreal Protocol is an international treaty designed to protect the _____.

A) Food chain
B) Global warming
C) Ozone layer depletion
D) Controlling the pollution
Correct Answer: C)

48. The ozone layer depletion is found in _____.

A) Ionosphere
B) Lithosphere
C) Troposphere
D) Stratosphere
Correct Answer: D)

49. Which day is called the World's Ozone day or the International Day for the preservation of the ozone layer?

A) March 9th
B) July 12th
C) September 16th
D) November 14th
Correct Answer:C)

Masters Biology Past Paper

50. The Chlorofluorocarbons (CFC) used in refrigerators is _____.

A) Freon
B) Methane
C) Ammonia
D)Carbon dioxide
Correct Answer: A)

51. Which of the following is a symptom of AIDS?

A) Fever
B) Swollen lymph nodes
C) Tiredness
D) All of the above
Correct Answer:D)

52. The first ever instance of AIDS was reported in

A) USA
B) France
C) Russia
D)None of the above
Correct Answer:A)

53. HIV parasitizes ____

A) Y-helper cells
B) T-helper cells
C) K-helper cells
D) None of the above
Correct Answer:B)

54. HIV can also spread through

A) Sharing water
B) Breathing in infected droplets
C) Sharing needles
D) Kissing
Correct Answer:C)

55. How many stages of HIV infection exist?

A) 3
B) 2
C) 1
D) No stages
Correct Answer:A)

Masters Biology Past Paper

56. HIV is thought to have originated from
A) Birds
B) Mosquitos
C) Chimpanzees
D) None of the above
Correct Answer:C)

57. SIV is the abbreviation of:
A) Simian immunodeficiency virus
B) Siluridae immunodeficiency virus
C) Synodontidae immunodeficiency virus
D) None of the above
Correct Answer:A)

58. In individuals with HIV, opportunistic infections are:
A) More frequent
B) Less frequent
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D) None of the above
Correct Answer:A)

59. HIV is a _____
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B) Capripoxvirus
C) Gallivirus
D) Papillomavirus
Correct Answer:A)

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61. Which of the following statements is correct?
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B) Nitrogen is the most abundant nutrient for plants
C) Nitrogen cycle is a sedimentary cycle
D) All
Correct Answer: A)

Masters Biology Past Paper

62. Nitrogen is absorbed by the plants in the form of
A) Ammonium
B) Nitrites
C) Nitrates
D) All
Correct Answer: D)

63. Nitrogen fixation is the conversion of
A) N2 to N
B) N2 to NH3
C) N2 to NO3–
D) N2 to urea
Correct Answer: B)

64. Important enzymes involved in nitrogen fixation are
A) Nitrogenase and hydrogenase
B) Nitrogenase and hexokinase
C) Nitrogenase and peptidase
D) Nitrogenase and hydrolyase
Correct Answer: A)

65. Symbiotic nitrogen-fixing cyanobacteria are not present in
A)Azolla
B) Gnetum
C) Anthoceros
D) Cycas
Correct Answer: B)

66. How many molecules of ATP are required to fix one molecule of nitrogen?
A) 12
B) 20
C) 6
D) 16
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A) Ammonia from nitrates by decomposers
B) Ammonia from nitrogen
C) Ammonia from amino acids
D) Ammonia from nitrates by nitrogen fixers
Correct Answer: C)

68. Conversion of nitrates to nitrogen is called
A) Ammonification

B) Nitrification
C) Nitrogen fixation
D) Denitrification
Correct Answer: D)

69. Conversion of nitrites to nitrates is called
A) Nitrosococcus
B) Clostridium
C) Nitrobacter
D) Nitrosomonas
Correct Answer: C)

70. Conversion of ammonia to nitrite and then to nitrates is called
A) Ammonification
B) Denitrification
C) Assimilation
D) Nitrification
Correct Answer: D)

NATIONAL SCIENCE OLYMPIAD
ROUND-II PAST PAPER 2023
ENGLISH GRAMMAR
(FOR ALL CLASSES)

1. Introduction

This document would help users easily find the past papers and understand the different topics. There may be some errors in past papers in their answers or questions. Student should verify all answers through teachers, Google etc.

Moreover, to understand these papers & other scenarios of the Olympiads links YouTube tutorials are given below. Watch the videos and clear your understanding.

Click to Watch Video about Syllabus https://youtu.be/ZH2Ad8tGAXo

Click to Watch Video about Model Paper
https://youtu.be/6yNQNLkC1RA

Click to Watch Video about Past Papers https://youtu.be/iG8htCRrW4I

Round-II Past Paper of National Science Olympiad

1. The peacock is our national bird. Subject of the sentence is?
   a. The peacock
   b. National bird
   c. Both of them
   d. None of these

Answer: A

2. What is your father name? The statement is
   a. interrogative
   b. assertive
   c. imperative
   d. None of these

Answer: A

3. Get me a piece of paper. This statement is
   a. exclamatory
   b. assertive
   c. interrogative
   d. imperative

Answer: D

4. The bird _____ I caught flew away
   a. what
   b. this
   c. which
   d. their

Answer: C

5. Get me a piece of paper. This statement is
   a. exclamatory
   b. assertive
   c. interrogative
   d. imperative

Answer: D

6. Which word is a preposition in the sentence: “The cat jumped _____ the fence.”
   a. The
   b. Cat
   c. Jumped
   d. Over

Round-II Past Paper of National Science Olympiad

Answer: D

7. Choose the correct plural form of "lady":
a. ladys
b. ladies
c. ladie
d. lady's

Answer: B

1. Which word is a preposition in the sentence: "The cat is _____ the table."
a. The
b. Cat
c. Is
d. under

Answer: D

9. Identify the noun in the sentence: “The sunshine made me happy.”
a. The
b. made
c. happy
d. sunshine

Answer: D

10. Which pronoun can replace the underlined words in the sentence: "My brother and I enjoy playing games.
a. We
b. us
c. them
d. their

Answer: We

11. Which sentence is in the future tense?
a. They are playing soccer now
b. She read a book yesterday
c. We will go to the beach next weekend
d. He is eating lunch.

Answer: C

12. Which sentence is in the present continuous tense?
a. They are playing soccer now
b. She read a book yesterday
c. We will go to the beach next weekend
d. He was eating lunch.

Round-II Past Paper of National Science Olympiad

Answer: A

13. Which sentence is in the future tense?
    a. They are playing soccer now
    b. She read a book yesterday
    c. We will go to the beach next weekend
    d. He is eating lunch.

Answer: C

14. Father /my/me/trusts
    a. Trusts me my father
    b. Father my me trusts
    c. Trusts father me my
    d. My father trusts me

Answer: D

15. They _____ the movie last night. Choose the correct form of the verb to complete the sentence.
    a. watched
    b. watching
    c. watches
    d. watch

Answer: A

16. They _____ the movie last night. Choose the correct form of the verb to complete the sentence.
    a. watched
    b. watching
    c. watches
    d. watch

Answer: A

17. What is past tense of the verb eat?
    a. eating
    b. eats
    c. ate
    d. eat

Round-II Past Paper of National Science Olympiad

Answer: C

18. They _____ the movie last night. Choose the correct form of the verb to complete the sentence.
    a. watched
    b. watching
    c. watches
    d. watch

Answer: A

19. What is the correct way to write the abbreviation for "Monday"?
    a. MO.
    b. Mon
    c. mond
    d. Mond.

Answer: B

20. Which word is an adjective in the sentence: “The happy children played in the park.”
    a. children
    b. park
    c. happy
    d. played

Answer: C

21. Which word is a conjunction in the sentence: "I wanted to go swimming, so I put on my swimsuit."
    a. I
    b. swimming
    c. wanted
    d. so

Answer: D

22. Choose the synonyms for the word “Eager.”
    a. Interested
    b. Finish
    c. Terminate
    d. Just

Round-II Past Paper of National Science Olympiad

Answer: A

23. Choose the synonyms for the word “Smart.”
    a. Slow
    b. Finish
    c. Intelligent
    d. Just

Answer: C

24. Choose the antonyms for the word “Abound.”
    a. destitute
    b. rival
    c. intelligent
    d. Just

Answer: A

25. _____ is used for two peoples.
    a. between
    b. among
    c. None of them
    d. Both a and b

Answer: A

26. My favorite movie will be _____ television tonight.
    a. on
    b. at
    c. over
    d. of

Answer: A

27. He is bathing _____ the river.
    a. in
    b. on
    c. at
    d. under

Answer: A

Round-II Past Paper of National Science Olympiad

28. She carried an umbrella _____ her head
    a. over
    b. on
    c. under
    d. none of them

Answer: A

29. There is some milk in the fridge. Change the sentence into negative sentence.
    a. There is no milk in the fridge
    b. There were no milk in the fridge
    c. Were there some milk in the fridge
    d. All of them

Answer: A

30. Feminine of wizard is?
    a. Witch
    b. sir
    c. lizard
    d. nephew

Answer: A

31. Appreciation is related to Reward in the same way as Disgrace is related to _____?
    (A) Crime
    (B) Guilt
    (C) Allegation
    (D) Punishment
    Answer: D

32. Retirement is related to Service in the same way as Dismissal is related to _____?
    (A) Agreement
    (B) Communication
    (C) Discipline
    (D) Adoption
    Answer: C

Round-II Past Paper of National Science Olympiad

33. Drummer is related to Orchestra in the same way as Minister is related to _____?
(A) Voter
(B) Constituency
(C) Cabinet
(D) Department
Answer: C

34. Starvation is related to Nutrition in the same way as Exhaustion is related to _____?
(A) Energy
(B) Bravery
(C) Freshness
(D) Courage
Answer: A

35. Accident is related to Carefulness in the same way as Disease is related to _____?
(A) Sanitation
(B) Treatment
(C) Medicine
(D) Doctor
Answer: A

36. Author is related to Book in the same way as Choreographer related to _____?
(A) Drama
(B) Dance
(C) Masque
(D) Opera
Answer: B

37. Thick is related to Thin in the same way as Idle is related to _____?
(A) Virtuous
(B) Business
(C) Active
(D) Activity
Answer: C

Round-II Past Paper of National Science Olympiad

38. Court is related to Justice in the same way as School is related to?
    (A) Teacher
    (B) Student
    (C) Ignorance
    (D) Education
    Answer: A

39. Choose the best word to fill in the blank. Hira _____ to know which languages are spoken in Ecuador.
    (A) Wants
    (B) Wanted
    (C) Want

Answer: A

40. "Mort" means _____.
    (A) dead
    (B) dieing
    (C) death

Answer: A

41. The details of the accident were hard for the driver to _____ because it happened so fast.
    (A) narrative
    (B) Fable
    (C) mythical
    (D) recount

Answer: D

42. “Complete or humiliating failure” is described as
    (A)MSUE
    (B)SUBSEQUENTLY
    (C)Racket
    (D)Fiasco

Answer: D

43. Which of the following is an oxymoron?
    (A)Eat your broccoli
    (B)Agree to disagree
    (C)Hide and seek
    (D)Play the field

Answer: B

Round-II Past Paper of National Science Olympiad

44. What is the use of components in a sentence that are grammatically the same or similar in their construction, sound, meaning or meter called:
(A) Parallelism
(B) Foreshadowing
(C) Alliteration
(D) Suspense
Answer: A

45. A _____ looks like a winking child who still has something to say.
(A)Semicolon
(B)Comma
(C)Quotation
(D)Colon
Answer: D

46. Use a _____ before FANBOYS when it joins independent clauses in a compound sentence.
(A)Semicolon
(B)Comma
(C)Quotation
(D)Colon
Answer: B

47. The root SENT, SENS means:
(A)to think, determine
(B)to believe, trust
(C) to feel
(D) to believe
Answer: C

48. What is the term for a word that is spelled the same but has different meanings and pronunciations?
(A) Homonym
(B) Synonym
(C) Antonym
(D) Homophone
Answer: A

49. Identify the sentence with a misplaced modifier:

(A) Running quickly, the finish line was crossed by the athlete.
(B) The athlete crossed the finish line quickly.
(C) Quick as lightning, the finish line was crossed by the athlete.
(D) The finish line was crossed by the athlete, running quickly.

Answer: A

50. Choose the correct sentence:
(A) Neither of the answers are correct.
(B) Neither of the answers is correct.
(C) Neither of the answers were correct.
(D) Neither of the answers was correct.

Answer: B

51. What literary device involves a part representing the whole or the whole representing a part?
(A) Hyperbole
(B) Metonymy
(C) Synecdoche
(D) Oxymoron

Answer: C

52. Identify the sentence with a subjunctive mood:
(A) If I was you, I would study harder.
(B) If I were you, I would study harder.
(C) If I have been you, I would study harder.
(D) If I am you, I would study harder.

Answer: b) If I were you, I would study harder.

53. What is an anaphora?
(A) A type of metaphor
(B) The repetition of a word or phrase at the beginning of successive clauses
(C) A figure of speech that combines contradictory words
(D) A type of rhyme scheme

Answer: b) The repetition of a word or phrase at the beginning of successive clauses

54. Which sentence uses an ellipsis correctly?
(A) The cat...jumped over the fence.
(B) The cat jumped...over the fence.
(C) The cat jumped over...the fence.
(D) The cat jumped over the fence....

Round-II Past Paper of National Science Olympiad

Answer: a) The cat...jumped over the fence.

55. In the phrase "tooth and nail," what literary device is being used?
    (A) Simile
    (B) Alliteration
    (C) Oxymoron
    (D) Hyperbole

Answer: c) Oxymoron

56. Identify the correct use of a semicolon:
    (A) I enjoy hiking; it's relaxing.
    (B) I enjoy hiking, it's relaxing.
    (C) I enjoy hiking: it's relaxing.
    (D) I enjoy hiking - it's relaxing.

Answer: a) I enjoy hiking; it's relaxing.

57. What is the term for a word that is imitative of the sound it represents?
    (A) Metaphor
    (B) Onomatopoeia
    (C) Allusion
    (D) Euphemism

Answer: b) Onomatopoeia

58. Choose the sentence with the correct use of a dangling participle:
    (A) Walking to class, the rain started to fall.
    (B) While walking to class, the rain started to fall.
    (C) Walking to class, I got caught in the rain.
    (D) Walking to class, umbrellas were opened.

Answer: C

59. What is the term for a play on words that relies on multiple meanings or similar sounds of words?
    (A) Pun
    (B) Irony
    (C) Hyperbole
    (D) Allegory

Answer: A

60. Identify the sentence with correct subject-verb agreement:
    (A) The group of students is excited for the field trip.
    (B) The group of students are excited for the field trip.

(C) The group of students were excited for the field trip.
(D) The group of students was excited for the field trip.

Answer: A

61. What is a zeugma?
(A) A type of metaphor
(B) The repetition of similar vowel sounds
(C) A figure of speech in which a word applies to multiple parts of the sentence
(D) A type of parallelism

Answer: C

62. Choose the sentence with the correct use of "affect" and "effect":
(A) The medicine had a positive affect on his health.
(B) The medicine had a positive effect on his health.
(C) His attitude had an affect on the outcome.
(D) His attitude had an effect on the outcome.

Answer: B

63. What is the term for a brief and indirect reference to a person, place, thing, or idea of historical, cultural, literary, or political significance?
(A) Paradox
(B) Symbolism
(C) Allusion
(D) Allegory

Answer: C

64. Identify the sentence with correct parallel structure:
(A) She enjoys reading, hiking, and to travel.
(B) She enjoys to read, hike, and travel.
(C) She enjoys reading, hiking, and traveling.
(D) She enjoys reading, to hike, and traveling.

Answer: C

65. What is the term for a statement that contradicts itself?
(A) Paradox
(B) Irony
(C) Hyperbole
(D) Oxymoron

Answer: A

Round-II Past Paper of National Science Olympiad

66. Choose the sentence with the correct use of a comma splice:
    (A) The book was fascinating, I couldn't put it down.
    (B) The book was fascinating; I couldn't put it down.
    (C) The book was fascinating: I couldn't put it down.
    (D) The book was fascinating I couldn't put it down.

Answer: B

67. What is the term for the attribution of a personal nature or human characteristics to something non-human?
    (A) Anthropomorphism
    (B) Personification
    (C) Allegory
    (D) Parody

Answer: C

68. Identify the sentence with the correct use of the subjunctive mood:
    (A) If she would have known, she could have helped.
    (B) If she knows, she can help.
    (C) If she knew, she could have helped.
    (D) If she had known, she could have helped.

Answer: D

69. What is the term for a comparison between two unlike things using "like" or "as"?
    (A) Allegory
    (B) Simile
    (C) Paradox
    (D) Synecdoche

Answer: B

70. Choose the sentence with the correct use of "their," "there," and "they're":
    (A) Their going to the park over there because they're excited.
    (B) They're going to the park over their because there excited.
    (C) They're going to the park over there because they're excited.
    (D) There going to the park over they're because their excited.

Answer: C

Round-II Past Paper of National Science Olympiad

71. What is the term for the repetition of initial consonant sounds in a series of words?

(A) Alliteration
(B) Assonance
(C) Consonance
(D) Onomatopoeia

Answer: A

72. Identify the sentence with correct capitalization:

(A) The sun sets in the West, doesn't it?
(B) The Sun sets in the west, doesn't it?
(C) The sun sets in the west, Doesn't it?
(D) The sun sets in the west, doesn't It?

Answer: A

73. What is a chiasmus?

(A) A type of rhyme scheme
(B) A figure of speech involving exaggeration
(C) A rhetorical device in which words or concepts are repeated in reverse order
(D) A type of parallel structure

Answer: C

74. Choose the sentence with the correct use of "fewer" and "less":

(A) There were fewer people at the concert than I expected.
(B) There were less people at the concert than I expected.
(C) There were fewer amount of people at the concert than I expected.
(D) There were less amount of people at the concert than I expected.

Answer: A

75. What is the term for a figure of speech in which a part is substituted for a whole or a whole for a part?

(A) Metaphor
(B) Synecdoche
(C) Alliteration
(D) Oxymoron

Answer: B

76. Identify the sentence with correct punctuation:

(A) She said; "I'll be there in five minutes."
(B) She said "I'll be there in five minutes."
(C) She said, "I'll be there in five minutes."
(D) She said "I'll be there in five minutes".
Answer: C

77. What is a cacophony?
(A) A harmonious blend of sounds
(B) A harsh, discordant mixture of sounds
(C) A type of rhetorical question
(D) A form of rhyme scheme
Answer: B

78. What is the term for a word that is spelled the same but has different meanings and pronunciations?
a) Homonym
b) Synonym
c) Antonym
d) Homophone
Answer: a

79. Identify the sentence with a misplaced modifier:
a) Running quickly, the finish line was crossed by the athlete.
b) The athlete crossed the finish line quickly.
c) Quick as lightning, the finish line was crossed by the athlete.
d) The finish line was crossed by the athlete, running quickly.
Answer: a

80. Choose the correct sentence:
a) Neither of the answers are correct.
b) Neither of the answers is correct.
c) Neither of the answers were correct.
d) Neither of the answers was correct.
Answer: b

81. What literary device involves a part representing the whole or the whole representing a part?
a) Hyperbole
b) Metonymy
c) Synecdoche
d) Oxymoron
Answer: c

82. Identify the sentence with a subjunctive mood:
a) If I was you, I would study harder.
b) If I were you, I would study harder.
c) If I have been you, I would study harder.

d) If I am you, I would study harder.
Answer: b

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a) The cat...jumped over the fence.
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c) I enjoy hiking: it's relaxing.
d) I enjoy hiking - it's relaxing.
Answer: a

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b) While walking to class, the rain started to fall.
c) Walking to class, I got caught in the rain.
d) Walking to class, umbrellas were opened.
Answer: c

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b) Irony

c) Hyperbole
d) Allegory
Answer: a

90. Identify the sentence with correct subject-verb agreement:
a) The group of students is excited for the field trip.
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c) The group of students were excited for the field trip.
d) The group of students was excited for the field trip.
Answer: a

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b) The repetition of similar vowel sounds
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a) The medicine had a positive affect on his health.
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c) His attitude had an affect on the outcome.
d) His attitude had an effect on the outcome.
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c) Allusion
d) Allegory
Answer: c

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a) She enjoys reading, hiking, and to travel.
b) She enjoys to read, hike, and travel.
c) She enjoys reading, hiking, and traveling.
d) She enjoys reading, to hike, and traveling.
Answer: c

95. What is the term for a statement that contradicts itself?
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b) Irony
c) Hyperbole
d) Oxymoron
Answer: a

96. Choose the sentence with the correct use of a comma splice:
a) The book was fascinating, I couldn't put it down.

Round-II Past Paper of National Science Olympiad

b) The book was fascinating; I couldn't put it down.
c) The book was fascinating: I couldn't put it down.
d) The book was fascinating I couldn't put it down.
Answer: b

97. What is the term for the attribution of a personal nature or human characteristics to something non-human?
a) Anthropomorphism
b) Personification
c) Allegory
d) Parody
Answer: b

98. Identify the sentence with the correct use of the subjunctive mood:
a) If she would have known, she could have helped.
b) If she knows, she can help.
c) If she knew, she could have helped.
d) If she had known, she could have helped.
Answer: d

99. What is the term for a comparison between two unlike things using "like" or "as"?
a) Allegory
b) Simile
c) Paradox
d) Synecdoche
Answer: b

100. Choose the sentence with the correct use of "their," "there," and "they're":
a) Their going to the park over there because they're excited.
b) They're going to the park over their because there excited.
c) They're going to the park over there because they're excited.
d) There going to the park over they're because their excited.
Answer: c

NATIONAL SCIENCE OLYMPIAD
ROUND-III PAST PAPER 2023
GENERAL KNOWLEDGE
(FOR ALL CLASSES)

1. Introduction

This document would help users easily find the past papers and understand the different topics. There may be some errors in past papers in their answers or questions. Student should verify all answers through teachers, Google etc.

Moreover, to understand these papers & other scenarios of the Olympiads links YouTube tutorials are given below. Watch the videos and clear your understanding.

Click to Watch Video about Syllabus https://youtu.be/ZH2Ad8tGAXo

Click to Watch Video about Model Paper
https://youtu.be/6yNQNLkC1RA

Click to Watch Video about Past Papers https://youtu.be/iG8htCRrW4I

Final Round (Round-III) Past Papers of National Science Olympiad

1. Who was the first President of Pakistan?

a) Allama Iqbal
b) Liaquat Ali Khan
c) Iskander Mirza
d) Ayub Khan
Answer: c

2. The Lahore Resolution, which eventually led to the creation of Pakistan, was passed in which year?

a) 1937
b) 1940
c) 1947
d) 1949
Answer: b

3. The Indus Valley Civilization is primarily associated with which modern-day country?

a) India
b) Pakistan
c) Bangladesh
d) Nepal
Answer: b

4. Who is known as the founder of Pakistan?

a) Allama Iqbal
b) Liaquat Ali Khan
c) Quaid-e-Azam Muhammad Ali Jinnah
d) Zulfikar Ali Bhutto
Answer: c

5. The Pakistan Resolution was presented at which session of the All-India Muslim League?

a) Lucknow Session
b) Karachi Session
c) Lahore Session
d) Delhi Session
Answer: c

6. The first constitution of Pakistan was adopted in which year?

a) 1947
b) 1956
c) 1962
d) 1973
Answer: b

7. Which mountain range separates Pakistan from Afghanistan?

a) Himalayas
b) Karakoram Range
c) Hindu Kush
d) Pamir Mountains
Answer: c

8. Which of the following rivers does not flow through Pakistan?
a) Indus
b) Jhelum
c) Chenab
d) Yamuna
Answer: d

9. What was the name of the capital city of Pakistan before Islamabad?
a) Lahore
b) Karachi
c) Rawalpindi
d) Quetta
Answer: b

10. The Simla Agreement between India and Pakistan was signed in which year?
a) 1965
b) 1971
c) 1972
d) 1974
Answer: c

11. The Battle of Plassey, a significant event in the history of British India, took place in which year?
a) 1757
b) 1857
c) 1947
d) 1965
Answer: a

12. Which Pakistani leader was known as the "Iron Lady"?
a) Fatima Jinnah
b) Benazir Bhutto
c) Asma Jahangir
d) Hina Rabbani Khar
Answer: b

13. The historic "March 23 Resolution" demanding a separate state for Muslims of India was passed by the All-India Muslim League in which year?
a) 1940
b) 1942
c) 1945
d) 1947
Answer: a

14. The Rann of Kutch dispute was a territorial conflict between Pakistan and which country?
a) China
b) Afghanistan
c) India

d) Iran
Answer: c

15. The first Prime Minister of Pakistan was:
a) Liaquat Ali Khan
b) Iskander Mirza
c) Zulfikar Ali Bhutto
d) Ayub Khan
Answer: a

16. The province of Balochistan shares its border with which two countries?
a) India and Afghanistan
b) Afghanistan and Iran
c) China and Iran
d) Afghanistan and China
Answer: b

17. The "Red Fort" in Delhi was the site of the trial of which historic figure?
a) Allama Iqbal
b) Sir Syed Ahmed Khan
c) Quaid-e-Azam Muhammad Ali Jinnah
d) Bahadur Shah Zafar
Answer: d

18. The "Tashkent Agreement" signed in 1966 was a peace agreement between India and Pakistan after which conflict?
a) First Kashmir War
b) Second Kashmir War
c) 1965 War
d) Bangladesh Liberation War
Answer: c

19. Which famous Pakistani scientist won the Nobel Prize in Physics for his work on the photoelectric effect?
a) Abdul Qadeer Khan
b) Pervez Hoodbhoy
c) Abdus Salam
d) Atta-ur-Rahman
Answer: c

20. The largest desert in Pakistan is known as:
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d) Nara Desert
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b) Karachi
c) Rawalpindi
d) Quetta
Answer: b

30. The Simla Agreement between India and Pakistan was signed in which year?
a) 1965
b) 1971
c) 1972
d) 1974
Answer: c

31. Which famous scientist formulated the laws of motion and universal gravitation?
a) Isaac Newton
b) Albert Einstein
c) Galileo Galilei
d) Marie Curie
Correct Answer: a

32. What is the largest bone in the human body?
a) Femur
b) Humerus
c) Tibia
d) Radius
Correct Answer: a

33. Which continent is known as the "Dark Continent"?
a) Europe
b) Asia
c) Africa
d) South America
Correct Answer: c

34. Who painted the famous artwork "Starry Night"?
a) Pablo Picasso
b) Vincent van Gogh
c) Leonardo da Vinci
d) Michelangelo
Correct Answer: b

35. What is the process by which water vapor turns into water droplets?
a) Evaporation
b) Condensation
c) Sublimation
d) Precipitation
Correct Answer: b

36. What is the chemical symbol for gold?
a) Ag
b) Au
c) Go
d) Gd
Correct Answer: b

37. Which gas do humans primarily inhale and use for respiration?
a) Oxygen
b) Carbon Dioxide
c) Nitrogen
d) Hydrogen
Correct Answer: a

38. Who wrote the play "Romeo and Juliet"?
a) William Shakespeare
b) Mark Twain
c) Charles Dickens
d) Jane Austen
Correct Answer: a

39. What is the largest land animal on Earth?
a) Elephant
b) Blue Whale
c) Giraffe
d) Hippopotamus
Correct Answer: a

40. Which gas do humans exhale during respiration?
a) Oxygen
b) Carbon Dioxide
c) Nitrogen
d) Hydrogen
Correct Answer: b

41. Who is known as the "Father of Modern Physics"?
a) Isaac Newton

b) Albert Einstein
c) Galileo Galilei
d) Marie Curie
Correct Answer: b

42. What is the capital of Australia?
a) Sydney
b) Melbourne
c) Canberra
d) Brisbane
Correct Answer: c

43. What is the process by which rocks are broken down into smaller particles by wind, water, or other natural forces?
a) Erosion
b) Sedimentation
c) Deposition
d) Subduction
Correct Answer: a

44. Who discovered penicillin, the first antibiotic?
a) Alexander Fleming
b) Louis Pasteur
c) Robert Koch
d) Jonas Salk
Correct Answer: a

45. What is the smallest planet in our solar system?
a) Mercury
b) Venus
c) Mars
d) Jupiter
Correct Answer: a

46. Which famous scientist proposed the heliocentric model of the solar system?
a) Isaac Newton
b) Albert Einstein
c) Nicolaus Copernicus
d) Galileo Galilei
Correct Answer: c

47. What is the chemical symbol for water?
a) H2O
b) CO2

c) O2
d) N2
Correct Answer: a

48. Which planet has the most visible rings?
a) Earth
b) Mars
c) Jupiter
d) Saturn
Correct Answer: d

49. Who wrote the novel "To Kill a Mockingbird"?
a) Harper Lee
b) J.K. Rowling
c) George Orwell
d) Mark Twain
Correct Answer: a

50. What is the largest type of shark?
a) Great White Shark
b) Hammerhead Shark
c) Tiger Shark
d) Whale Shark
Correct Answer: d

51. What is the capital of France?
a) London
b) Paris
c) Madrid
d) Berlin
Answer: b

52. Which planet is known as the "Red Planet"?
a) Venus
b) Mars
c) Jupiter
d) Saturn
Answer: b

53. What is the smallest prime number?
a) 0
b) 1
c) 2

d) 3
Answer: c

54. How many sides does a triangle have?
a) 2
b) 3
c) 4
d) 5
Answer: b

55. Which is the longest river in the world?
a) Nile
b) Amazon
c) Mississippi
d) Yangtze
Answer: a

56. What is the process by which plants make their own food?
a) Respiration
b) Photosynthesis
c) Digestion
d) Circulation
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a) Earth
b) Venus
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d) Jupiter
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a) Oxygen
b) Carbon dioxide
c) Nitrogen
d) Hydrogen
Answer: a

59. Which is the largest ocean on Earth?
a) Atlantic Ocean
b) Indian Ocean
c) Pacific Ocean
d) Arctic Ocean
Answer: c

60. What is the capital of China?
a) Tokyo
b) Beijing
c) Seoul
d) Shanghai
Answer: b

61. How many continents are there on Earth?
a) 4
b) 6
c) 7
d) 8
Answer: c

62. Which is the largest land mammal?
a) Lion
b) Elephant
c) Giraffe
d) Rhino
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Answer: c

72. The largest desert in Pakistan is known as:
a) Thar Desert
b) Cholistan Desert
c) Kharan Desert

d) Nara Desert
Answer: b

73. The concept of "natural rights" was advocated by:
A) Karl Marx
B) John Locke
C) Vladimir Lenin
D) Adam Smith
Answer: B

74. The political ideology that emphasizes the abolition of social classes and the establishment of a classless society is known as:
A) Capitalism
B) Feudalism
C) Socialism
D) Anarchism
Answer: C

75. The famous "Boston Tea Party" was a protest against:
A) Taxation without representation
B) British monarchy
C) French influence
D) Religious discrimination
Answer: A

76. Which river is associated with the ancient civilization of Mesopotamia?
A) Nile
B) Ganges
C) Tigris and Euphrates
D) Yangtze
Answer: C

77. The system of apartheid was a policy of racial segregation implemented in:
A) India
B) United States
C) South Africa
D) Brazil
Answer: C

78. The "Treaty of Versailles," signed after World War I, placed heavy reparations and restrictions on which country?
A) Italy
B) France
C) Germany
D) United Kingdom
Answer: C

79. The "Cuban Missile Crisis" of 1962 was a confrontation between:
A) USA and Soviet Union
B) Cuba and Mexico

C) France and Germany
D) China and Japan
Answer: A

80. The caste system is most closely associated with the social structure of:
A) Ancient Egypt
B) Ancient Greece
C) Medieval Europe
D) Ancient India
Answer: D

81. The term "Enlightenment" refers to a period in history marked by:
A) Scientific advancements
B) Religious conflicts
C) Technological innovations
D) Philosophical and intellectual growth
Answer: D

82. Which famous scientist developed the theory of relativity?
a) Isaac Newton
b) Albert Einstein
c) Galileo Galilei
d) Nikola Tesla

Answer: b)

83. The Great Barrier Reef is located in which country?
a) Australia
b) Brazil
c) India
d) South Africa

Answer: a)

84. Which ocean is the largest?
a) Atlantic Ocean
b) Indian Ocean
c) Arctic Ocean
d) Pacific Ocean

Answer: d)

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a) Berlin
b) London
c) Paris

d) Rome

Answer: c)

86. Who painted the Mona Lisa?
    a) Vincent van Gogh
    b) Leonardo da Vinci
    c) Pablo Picasso
    d) Michelangelo

Answer: b)

87. What is the process by which plants make their own food using sunlight?
    a) Respiration
    b) Photosynthesis
    c) Digestion
    d) Fermentation

Answer: b)

88. Which mountain is the tallest in the world?
    a) Mount Kilimanjaro
    b) Mount Everest
    c) Mount McKinley
    d) Mount Fuji

Answer: b)

89. What is the largest mammal on Earth?
    a) African Elephant
    b) Blue Whale
    c) Polar Bear
    d) Giraffe

Answer: b)

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    a) William Shakespeare
    b) Charles Dickens
    c) Jane Austen
    d) Mark Twain

Answer: a)

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    c) Nitrogen
    d) Hydrogen

Answer: b)

92. Which planet is known as the "Red Planet"?
    a) Venus
    b) Mars
    c) Jupiter
    d) Saturn

Answer: b)

93. Which famous scientist formulated the laws of motion and universal gravitation?
    a) Isaac Newton
    b) Galileo Galilei
    c) Albert Einstein
    d) Nikola Tesla

Answer: a)

94. What is the currency of Japan?
    a) Yen
    b) Won
    c) Euro
    d) Rupee

Answer: a)

95. What is the world's longest river?
    a) Amazon River
    b) Nile River
    c) Mississippi River
    d) Yangtze River

Answer: b)

96. Which continent is known as the "Dark Continent"?
    a) Europe
    b) Africa
    c) Asia
    d) Australia

Answer: b)

97. What is the largest type of shark?
    a) Hammerhead Shark
    b) Tiger Shark
    c) Great White Shark
    d) Bull Shark

Answer: c)

98. Which planet is known for its beautiful rings?
    a) Mars
    b) Jupiter
    c) Saturn
    d) Uranus

Answer: c)

99. Who is the author of the Harry Potter book series?
    a) J.R.R. Tolkien
    b) George R.R. Martin
    c) J.K. Rowling
    d) C.S. Lewis

Answer: c)

100. What famous historic event is commemorated on July 4th in the United States?
    a) Thanksgiving
    b) Independence Day
    c) Veterans Day
    d) Labor Day

Answer: b)

THANKS