

BOARD OF SECONDARY EDUCATION KARACHI.

S.S.C- (ANNUAL) EXAMINATION- 2023.

BIOLOGY (THEORY) PAPER - I

CLASS IX (SCIENCE GROUP)

Time: 3 Hours

(Marks: 60)

SECTION " A " (20%)

MULTIPLE CHOICE QUESTIONS (MCQ's) (12 Marks)

Q.1. 12 MCQs will be given from whole syllabus. Each carries 1 Mark.

SECTION " B " (40%)

(SHORT ANSWERS QUESTIONS)

(24 marks)

Note: Answer any Eight (8) questions from this section. Each carries 3 marks.

SECTION " C " (40%)

(DESCRIPTIVE ANSWER QUESTIONS)

(24 Marks)

Note: Answer any four (4) questions from this section. Each carries 8 marks.

CHAPTER NO. 1

GASEOUS EXCHANGE.

MULTIPLE CHOICE QUESTIONS (MCQ's): PAGE NO: 14 ii, iii, iv, v, vi, vii, ix

SHORT QUESTIONS:

1. Difference between Photosynthesis and Respiration.
2. Define Diaphragm
3. Differentiate between breathing, gaseous exchange and respiration.
4. Distinguish between inspiration and expiration.
5. What is lung cancer?
6. How the asthma is characterized?
7. Name five animals which use their body surface for gaseous exchange.

(DESCRIPTIVE ANSWER QUESTIONS):

1. Discuss human respiratory system with the help of suitable illustrations.
2. Explain the process of ventilation in man.
3. Why smoking is dangerous? How it is related with respiratory disorders?

CHAPTER NO. 2

HOMEOSTASIS

MULTIPLE CHOICE QUESTIONS (MCQ's): PAGE NO. 38 ii, iii, iv, vi, vii, ix, x.

SHORT QUESTIONS:

1. Draw a neat and labelled diagram of nephron.
2. What is kidney stone?
3. How human skin maintains temperature in cold conditions?
4. When dialysis is required?
5. Why filtration at Para tabular capillaries called ultra-filtration?
6. Define the following: Osmoregulation , Thermoregulation, Excretion
7. Difference between Transpiration and Guttation.
8. Define Lenticels.
9. Difference between Mesophytes and Xerophytes.
10. Difference between Unicellular and Multicellular.
11. Draw a neat and labelled diagram of Human kidney.

DESCRIPTIVE ANSWER QUESTIONS):

1. Describe the urinary system of man with the help of diagram.
2. Describe the structure of nephron within the L.S of kidney.
3. Describe different disorder of kidneys and their treatment.

CHAPTER NO. 3

COORDINATION AND CONTROL

MULTIPLE CHOICE QUESTIONS (MCQ's): PAGE NO: 64 ii, iii, v, vi, viii, xii, xiii, xiv, xv,

SHORT QUESTIONS:

1. Difference between Nervous coordination and Chemical coordination.
2. Define Reflex action., ciliary body , pupil.
3. How reflex action works by a reflex – arc?
4. What is Epilepsy?
5. Why thyroid gland swell up and give the name of the disease?
6. Define testosterone.
7. Draw and neat diagram Human brain.

DESCRIPTIVE ANSWER QUESTIONS):

1. Discuss the detailed structure of human brain?
2. What is endocrine system? Discuss the gland involved in regulation of blood glucose and how?
3. What is diabetes mellitus? Explain some ways of its management.
4. Write a note on human eye or ear.

CHAPTER NO. 4

SUPPORT AND MOVEMENT

MULTIPLE CHOICE QUESTIONS (MCQ's): PAGE NO. 81 iii, iv, v, vi, viii, ix

SHORT QUESTIONS:

1. What are the main functions of skeleton?
2. Distinguish between bone and cartilage.
3. Draw neat and labeled diagram of hinge joint and ball and socket joint.
4. What is ricket? Give its causes.
5. Distinguish between ligament and tendon.
6. Write types of common of Arthritis.
7. Define Flexion and extension.

DESCRIPTIVE ANSWER QUESTIONS):

1. Prove that the skeletal system is a dynamic system.
2. Describe the flexion and extension in human arm.
3. Explain disorders of bones and their causes.

CHAPTER NO. 5

REPRODUCTION.

MULTIPLE CHOICE QUESTIONS (MCQ's): PAGE NO. 103 ii, iii, v, vi, vii, viii, ix, x,

SHORT QUESTIONS:

1. Distinguish between asexual and sexual reproduction, Epigial and Hypogial Germination.
2. Draw neat and labeled diagram of F.S of Angiospermic flower.
3. Draw neat and labeled diagram of Ovule.
4. What are STD;s?
5. List of the male reproductive organs of rabbit with gland.
6. Difference between vegetative propagation and artificial propagation.
7. Define nucellus and micropyle.
8. Difference between Self-pollination and cross pollination.
9. What is double fertilization?
10. Define parthenocarpy

11. Difference between Spermatogenesis and Oogenesis.
12. Write Male and female reproductive organ in Rabbit.
13. Difference between External Fertilization and Internal Fertilization.

DESCRIPTIVE ANSWER QUESTIONS):

1. What is pollination? Give adaptive characters of wind and insect pollinated flowers.
2. Describe different types of asexual reproduction in animals.
3. What is germination? Give the condition of germination also describe the methods of different germination.

CHAPTER NO. 6 INHERITANCE.

MULTIPLE CHOICE QUESTIONS (MCQ's): PAGE NO. 131 i, ii, iv, v, vi, vii, ix

SHORT QUESTIONS:

1. Difference between: Homologous Chromosome and Heterologous chromosome. Heterozygous and Homozygous
2. Relate artificial selection with natural selection.
3. Define the following: heredity, inheritance, Variations, Co-Dominant. Incomplete Dominance.

DESCRIPTIVE ANSWER QUESTIONS):

1. Describe the Watson and Crick model of DNA.
2. State and explain the law of segregation of Mendel's
3. Explain the Darwin of theory of natural selection.

CHAPTER NO. 7 MAN AND HIS ENVIRONMENT.

MULTIPLE CHOICE QUESTIONS (MCQ's): PAGE NO. ii, iii, iv, vi, vii, ix

SHORT QUESTIONS:

1. What is pyramid of number?
2. What is greenhouse effect?
3. Draw the diagram of nitrogen cycle.
4. Define Environmental biology.
5. Define biosphere.
6. Difference between population and community.
7. Define Ecosystem, Producers, Consumers. Primary and secondary consumers. Global warming.
8. Difference between Abiotic and biotic components.
9. Define Food chain and food web.
10. Define Nitrogen Cycle. Deforestation.

DESCRIPTIVE ANSWER QUESTIONS):

1. Describe biotic factors of an ecosystem.
2. Describe nitrogen cycle as biogeochemical cycle in detail.
3. What is pollution? Describe different types of hazardous effects caused by air pollution.

CHAPTER NO. 8 BIOTECHNOLOGY.

MULTIPLE CHOICE QUESTIONS (MCQ's): PAGE NO. i, iii, iv, v, vi, ix, x

SHORT QUESTIONS:

1. What are some advantages and disadvantages of fermentation in food processing?
2. What factors can affect the fermentation process?
3. Define Biotechnology and classical biotechnology?
4. Write are the different types of fermentation?
5. Difference between Lactic and Alcoholic Fermentation.
6. Define p-53
7. Uses of single cell protein.

DESCRIPTIVE ANSWER QUESTIONS):

1. What factor can affect the fermentation process?
2. Describe the contribution of Louis Pasteur toward development of classical biotechnology.
3. Write difference types of fermentation?

CHAPTER NO. 9

PHARMACOLOGY.

MULTIPLE CHOICE QUESTIONS (MCQ's): PAGE NO. 197 i, ii, iii, iv, vi, vii

SHORT QUESTIONS:

1. Why antibiotics are not effective against viral infection?
2. Why the sedative is used for?
3. Why addiction is considered as harmful condition?
4. Define pharmacists.
5. Define Vaccine.
6. What is antiseptic?
7. Why addiction is considered as harmful condition?
8. How vaccine work against pathogen? Explain the process with the help of diagram.

DESCRIPTIVE ANSWER QUESTIONS):

1. How bacteria produces antibiotic resistance?
2. Describe the mode of vaccination.