

SAINIK SCHOOL, AMARAVATHINAGAR

XI

HOLIDAY HOMEWORK – 2019 – 2020

Class: XI

Subject: BIOLOGY

SL.N O	TOIPC	ACTIVITY	TIME	LEARNING OUT COMES	ANNEXURE
1	NUTRITION AND DIGESTION	READING AND WRITING	5 HRS	KNOWLEDGE , UNDERSTANDING, DIAGRAM SKILL	A
2	RESPIRATION	READING AND WRITING	5 HRS	KNOWLEDGE , UNDERSTANDING, DIAGRAM SKILL	B
3	CIRCULATION	READING AND WRITING	5 HRS	KNOWLEDGE , UNDERSTANDING, DIAGRAM SKILL	C
4	EXCRETION	READING AND WRITING	5 HRS	KNOWLEDGE , UNDERSTANDING, DIAGRAM SKILL	D
5	PROJECT	WORKING MODEL, STATIC MODEL, STATISTICAL REPORT, LEARNING BY DOING	24 HRS	KNOWLEDGE, UNDERSTANDING, APPLICATION, SKILL, EXPOSURE, EXPERIENCE	E

ANNEXURE :

- A. NUTRITION AND DIGESTION – 10 questions
- B. RESPIRATION – 12 questions
- C. CIRCULATION - 11 questions
- D. EXCRETION - 12 questions
- E. PROJECT - any 3

TEACHER'S NAME:

SIGNATURE

Recommended By

Approved By

Vice Principal

Principal

ANNEXURE A
NUTRITION AND DIGESTION

Read and write the following questions.

1. Structure of a teeth notes with diagram
2. Digestion in mouth
3. Structure of alimentary canal
4. Digestion in stomach
5. Digestion in small duodenum
6. Role of small intestine in digestion and absorption.
7. Assimilation
8. Hormonal Regulation of digestion
9. Peptic ulcer, Hepatitis, appendicitis, gallstone
10. Process of Digestion of carbohydrates, protein, fatty acids.

ANNEXURE B
RESPIRATION

Read and write the following questions.

1. Mode of respiration in different invertebrates.
2. Thoracic cavity
3. Inspiration
4. Expiration
5. Respiratory volumes
6. Gas exchange in alveoli
7. Role of hemoglobin in gas exchange
8. Bohr effect, Haldane effect, Herring breuer reflex
9. Partial pressure
10. Co₂ transport
11. Regulation of respiration
12. Pneumonia, TB, COLD, SARC

ANNEXURE C
CIRCULATION

Read and write the following questions.

1. Mode of circulation in different invertebrates.
2. Double circulation

3. Functioning of human Heart
4. Origin and conducting of heart beat
5. Cardiac cycle
6. ECG
7. Echo cardiogram
8. Arthrosclerosis
9. Heart attack, Angina pectoris
10. Blood composition
11. Lymph.

ANNEXURE D

EXCRETION

Read and write the following questions

1. Mode of excretion in different invertebrates
2. Structure of a kidney
3. Structure of a nephron
4. Juxta medullary nephron
5. Urine formation process
6. Countercurrent mechanism
7. Regulation of excretion
8. Micturition
9. Kidney failure, kidney stone
10. Autolysis
11. Autoanalyser
12. Sugar analysis in human



ANNEXURE E- PROJECTS

Select any three of the following individual projects

1. Study and describe three locally available common flowering plants from each of the following families (Solanaceae, Fabaceae and Liliaceae) and make herbarium of it.
2. Study of T.S. of dicot and monocot roots and stems (primary).
3. Study of osmosis by potato osmometer.
4. Study of plasmolysis in epidermal peels (e.g. Rhoeo leaves)
5. Study of distribution of stomata in the upper and lower surface of leaves.

6. Comparative study of the rates of transpiration in the upper and lower surface of leaves.
7. Study the presence of sugar, starch, proteins and fats in any plant and animal materials.
8. Study paper chromatography
9. Study the rate of respiration in flower buds/leaf tissue and germinating seeds.
10. Study parts of a compound microscope.
11. Study of any 5 of the followings Bacteria, Oscillatoria, Spirogyra, Rhizopus, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant and one dicotyledonous plant and lichen
Amoeba, Hydra, Liverfluke, Ascaris, leech,
Earthworm, prawn, silkworm, honeybee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.
12. Study of tissues and diversity in shapes and sizes of plant and animal cells
palisade cells,
guard cells, parenchyma, collenchyma, sclerenchyma, xylem, phloem, squamous epithelium, muscle
fibers and mammalian blood cells.
13. Study the mitosis in onion root tips cells and Make a static model
14. Study of different modifications in root, stem and leaves.
15. Study and identification of different types of inflorescence.
16. Study the following
 - a. Anaerobic respiration
 - b. Phototropism
 - c. Apical bud removal
 - d. Suction due to transpiration
17. Prepare a model of human skeleton and different types of joints.
18. Prepare a model of external morphology of cockroach.