

**PANKUMBI SECONDARY SCHOOL
FORM TWO MIRD TERM EXAMINATION S 2019SEP
BIOLOGY**

TIME:2.30HRS

Thursday 12th September 13

INSTRUCTIONS:

1. This paper consists of three sections A, B and C.
2. Answer ALL questions carefully in section A and B and ONE question from section C.
3. Except for diagram that must be drawn in pencil all writing must be in blue or black pen.
4. Write your examination number on every page of your answer sheet.

SECTION A (30 MARKS)

1. For each of the items (i) – (x) choose the correct answer from the given alternatives and write its letter in space provided.

- i) Which of these diseases are inherited?
a) Malaria b) Polio c) Sickle cell anemia d) Influenza
- ii) Tonoplast is the membrane found in
a) Nucleus b) Cell vacuole c) Lysosome d) Chloroplast
- iii) Proteins and lipids molecules are major constituent of
a) Cell wall b) Cell c) Cell membrane d) Organ
- iv) The organism called Treponema pallidum is a pathogen which can be transmitted from one person to another through
a) Food contamination b) Water contamination
c) Sexual intercourse d) Air droplets
- v) Which is most likely to cause HIV transmission?
a) Urine b) Saliva c) Flesh blood d) Sweat
- vi) Organs having similar functions but different origin and development are
a) Homologous organs b) Analogous organs
c) Vestigeal organs d) Exoskeleton
- vii) A group of individuals of the same species is called:
a) Community b) A population c) An ecosystem d) Niche
- viii) Which of the following components of blood is concerned with the transport of gases in the body
a) Leucocytes b) Erythrocytes c) Thrombocytes d) Fibrinogen
- ix) Water conducting tissue in plant are mainly
a) Phloem and xylem b) Phloem c) Xylem d) Collenchyma
- x) A cell with a contractive property
a) Sperm b) Neurone c) Muscle cell d) Epithelial cell

| i | ii | iii | iv | v | vi | vii | viii | ix | x |
|---|----|-----|----|---|----|-----|------|----|---|
| | | | | | | | | | |

2. Match the responses in LIST B with phrases in LIST A by writing the letter of the correct response from LIST B in the space provided.

| LIST A | LIST B |
|--|-----------------------------|
| i) Special muscle which make up heart | A. Cardiac muscle |
| ii) A protective membrane which surrounds the heart | B. Coronary artery |
| iii) Supplies oxygenated blood to the heart | C. Coronary vein |
| iv) Separates the right ventricle from the pulmonary artery | D. Diastolic blood pressure |
| v) Pumping action | E. Double circulation |
| vi) The circulation of blood between the heart and the lungs | F. Heart beat |
| vii) The higher pressure resulted when the ventricles are fully contracted. | G. Left ventricle |
| viii) The circulation of blood where it passes twice through the heart for one complete circulation. | H. Pericardium |
| ix) Brings deoxygenated blood to the heart | I. Perilymph |
| x) A ventricle which has relatively a less thick wall. | J. Pulmonary circulation |
| | K. Pulmonary vein |
| | L. Pulse rate |
| | M. Right ventricle |
| | N. Semilunar valve |
| | O. Single circulation |
| | P. Smooth muscle |
| | Q. Systematic circulation |
| | R. Systolic blood pressure |
| | S. Tricuspid valve |
| | T. Vena cava |

| i | ii | iii | iv | v | vi | vii | viii | ix | x |
|---|----|-----|----|---|----|-----|------|----|---|
| | | | | | | | | | |

3. The following statements are either correct or not correct. Write **TRUE** if the statement is correct or **FALSE** if the statement is not correct.

- i) During aerobic respiration oxygen is given out _____
- ii) Root hairs increases the surface area of plant roots for water absorption _____
- iii) Sharing of towel can spread STIs _____
- iv) Spiracles are respiratory surface for insects _____
- v) Carbon dioxide is a by-product of photosynthesis _____
- vi) All cells contain genetic materials _____
- vii) Gutation occurs through stomatal pores _____
- viii) Malaria is caused by a female anopheles mosquito _____
- ix) Animal cells lose water and become plasmolyzed _____
- x) Starch is converted into maltose in presence of trypsin _____

SECTION B (50 MARKS)

4.a) Name any four factors required for the formation of starch in plants

- i) _____
- ii) _____
- iii) _____
- iv) _____

b) Why is water an essential part of our diet? (Give four reasons)

- i) _____
- ii) _____
- iii) _____
- iv) _____

5.a) What is gaseous exchange?

b) Five four differences between respiration and photosynthesis

6(a) .Draw awell longtidunal section of internal mammalian heart and labell ten importance parts

b)define the following terms;1;osmosis

(2)diffusion (3)mass flow

C) Mention the components of blood vessels

7.a) Define the following terms

- i) Respiration
- ii) Anaerobic respiration
- iii) Aerobic respiration

b) Give any four features of a respiratory surface.

- i) _____
- ii) _____
- iii) _____
- iv) _____

8.a) How can one administer First Aid to the victims of Poisoning from swallowing.

b) Describe any two disorders/ diseases of circulatory system.

SECTION C (20 MARKS)

9. Citing examples in each case outline the ways in which insects are both beneficial and harmful to humans.

10. Write an essay on cholera using the following guidelines

- Causative agent
- Mode of transmission
- Symptoms
- Prevention/ control
- Treatment

END.