

PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF HEALTH AND APPLIED SCIENCES

DEPARTMENT OF HEALTH SCIENCES

QUALIFICATION: BACHELOR OF ENVIRONMENTAL HEALTH SCIENCES	
QUALIFICATION CODE: 08BEHS	LEVEL: 5
COURSE CODE: MAP512S	COURSE NAME: MEDICAL MICROBIOLOGY AND PARASITOLOGY.
SESSION: JANUARY 2019	PAPER: THEORY
DURATION: 2.5 HOURS	MARKS: 100

SUPPLEMENTARY/SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER:	PROF SR MOYO
MODERATOR:	DR L AKU – AKAI

<p style="text-align: center;">INSTRUCTIONS</p> <ol style="list-style-type: none">1. Answer all the questions as specified under each section (A, B, C and D).2. Sections A, B and must be answered on the question paper. Only section D will be answered on separate scripts.3. Write clearly, neatly and legibly.4. Do not use the left margin of the exam paper. This is for the examiner.5. No books notes and any other additional aids are allowed.6. Mark all answers clearly with their respective question number.
--

THIS QUESTION PAPER CONSISTS OF 6 PAGES (Including this front page)

SECTION A [40 MARKS]

Answer all questions in this section

QUESTION 1

[10]

Select the correct answer out of a choice of 4 (A, B, C and D) there is only **one** correct answer for which 1 mark will be given. This section carries a total of **10** marks.

Example:

Who is the current president of Namibia

- A. Dr Sam Nujoma
 - B. Dr Hage Geingob**
 - C. Dr Hifikepunye Pohamba
 - D. All the above
-

1.1 Bacteria able to grow both in the absence or presence of oxygen are termed?

- A. Microaerophilic
- B. Aerobe
- C. Facultative anaerobe
- D. Anaerobic

1.2 Most eukaryotic cells reproduce by

- A. Budding
- B. Meitosis
- C. Binary fussion
- D. Spore formation

1.3 A bulging canned beef container will probably be caused by

- A. *Escherichia coli*
- B. *Clostridium perfringens*
- C. *Clostridium tetani*
- D. *Clostridium botulinum*

1.4 The stage of malaria parasite that infects red blood cells is called

- A. Ring form
- B. Merozoite
- C. Hypnozoites
- D. All the above

- 1.5 Typhoid fever is caused by
- A. Proteus spp
 - B. Shigella spp
 - C. Salmonella spp
 - D. Streptococcus spp
- 1.6 The following microorganisms are non spore producers except
- A. Pseudomonas spp
 - B. Mycobacterium spp
 - C. Clostridium spp
 - D. Streptococcus spp
- 1.7 *Trypanosoma cruzi* is the causative agent of
- A. Sleeping sickness
 - B. Chaga's disease
 - C. Elephantiasis
 - D. None of the above
- 1.8 *Escherichia coli* are found in the human body as normal flora of
- A. Mouth
 - B. Urinary tract
 - C. Respiratory tract
 - D. Intestinal tract
- 1.9 Which intestinal parasite causes more infections in the world, infecting about 1.2 billion people worldwide
- a. Hook worm
 - b. Malaria parasite
 - c. *Ascaris lumbricoides*
 - d. None of the above
- 1.10 Which of the following is a dry heat sterilizing method
- a. Boiling
 - b. Autoclaving
 - c. Pasteurization
 - d. Flaming

QUESTION 2 **[15]**

Define the following terms

- 2.1 Ectoparasite (3)
- 2.2 Parasitism (3)
- 2.3 Protozoa (3)
- 2.4 Vector (3)
- 2.5 Infection (3)

QUESTION 3 **[15]**

Explain the following concepts:

- 3.1 Ecosystem. (2)
- 3.2 Bioremediation. (4)
- 3.3 Biochemical Oxygen Demand (BOD). (5)
- 3.4 Eutrophication and its effects on aquatic life. (4)

SECTION B [20 MARKS]

Answer all questions in this section.

QUESTION 4 **[20]**

- 4.1 Differentiate between immediate and definitive host. (5)
- 4.2 Differentiate between infection and infestation. (5)
- 4.3 Identify the classes of parasites. (5)
- 4.4 From the identified classes above explain how the subgroup of Protozoa can be differentiated according to movement. (5)

SECTION C [45 MARKS]

Choose and answer ALL questions in this section.

QUESTION 5 [20]

5.1 Outline the theory of Spontaneous generation (5)

5.2 Summarize the Germ theory of disease (5)

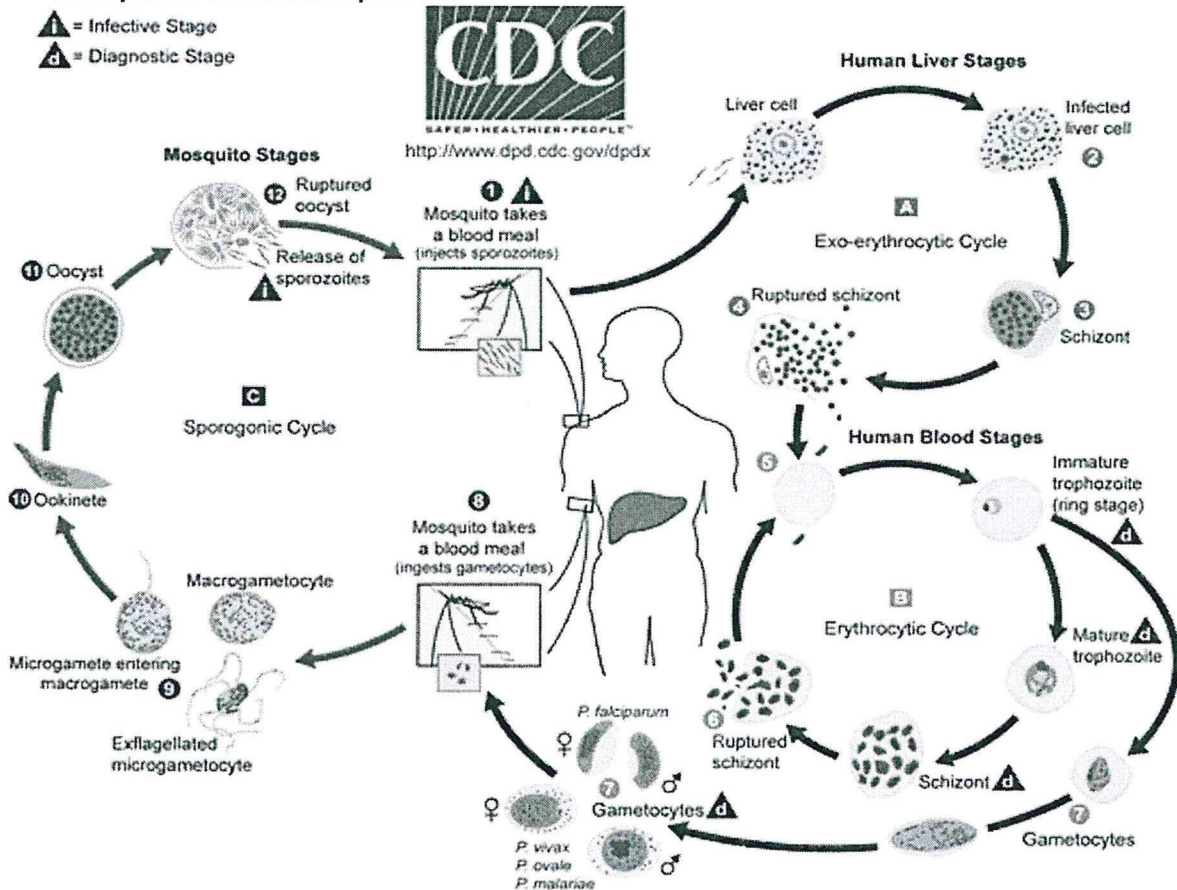
5.3 Evaluate contributions of the following scientists in the development of microbiology.

5.3.1 Louis Pasteur (5)

5.3.2 Robert Koch (5)

QUESTION 6 [25]

Life cycle of the malaria parasite



Above is the life cycle of plasmodium species. Answer the questions below in relation to this species.

- 6.1 How does man get infected by this parasite (4)
- 6.2 How do you prevent infection caused by this parasite (4)
- 6.3 Briefly describe two stages of development that take place in the intermediate host of this parasite. (4)
- 6.4 What is the definitive host of parasite and explain the developmental process that takes place in this host (4)
- 6.5 Discuss the infective stage of this parasite to the mosquito (4)

-----END-----