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THE NATIONAL UNIVERSITY OF LESOTHO

BSc. ENVIRONMENTAL HEALTH

SUPPLEMENTARY EXAMS- 2023

VECTOR AND VERMIN CONTROL (EHS2302)

DURATION: 3 HRS   **MARKS:100**

INSTRUCTIONS:

- Answer **ALL** questions

- Each question must be started on a new page

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QUESTION 1

Define the following terms and phrases as used in Vector and Vermin Control: [2*5]

- Suppression;

- Integrated pest management;

- Sporadic feeders;

- Complete Metamorphosis ;

- Pneumonic plague.

QUESTION 2

Fill in the table below to differentiate between rats and mice   [10]

	Rats	Mice
Range(in feet)		
Gnawing damage		
Curiosity		
Feeding habits		
Habitat		

QUESTION 3

Read the scenario below and answer the questions that follow

It is argued that a safely built environment, including adequate housing conditions, is one of

the most elemental human needs. Nonetheless, around one billion (one-sixth) of the world's

population currently live in slums and squatters and a large proportion of refugees reside in

inadequate shelters. Housing in refugee camps is often overcrowded and of inferior quality. In

Sri Lankan refugee camps, a typical house is a small wooden one-room hut with a corrugated

iron roof. The houses are poorly ventilated, overcrowded, and have no chimney. A study of houses in Jalazone, a Palestinian refugee camp, documented the poor housing conditions and found that dampness was present in 72.5% of the houses, while 50.5% had mold, 37% had leaks, and only 41.5% were exposed to the sun. In addition, in Jalazone, 61% of the households had 3-5 people per room, while 16.5% of the households had over 5 people per room.

As an Environmental Health Practitioner, analyse the scenario above based on the following:

- State any five (5)Vectors that are likely to present in the refugee camp   [5]

- Which factors favour the survival of the vectors identified in 3a) above?   [5]

- Which Diseases are spread by vectors identified in 3a) above   [5]

- What mitigation measures can be put in place to control vectors identified in 3a) above

[5]

QUESTION 4

If you have a bed bug infestation, it is best to find it early, before the infestation becomes established or spreads. Treating a minor infestation, is far less costly and easier than treating the same infestation after it becomes more widespread.

However, low-level infestations are also much more challenging to find and correctly identify. Other insects, such as carpet beetles, can be easily mistaken for bed bugs. If you misidentify a

bed bug infestation, it gives the bugs more time to spread to other areas of the house or hitchhike a ride to someone else's house to start a new infestation.

Bites on the skin are a poor indicator of a bed bug infestation. Bed bug bites can look like bites from other insects (such as mosquitoes or chiggers), rashes (such as eczema or fungal infections), or even hives. Some people do not react to bed bug bites at all.

- Which environmental factors favour survival of bedbugs? [4]

- How can an EHP tell that the place is infested with bedbugs? [8]

- Why is it Important to know life cycle of a vector? [3]

- Why do vector control strategies sometime fail? [10]

QUESTION 5

- Design a program for controlling houseflies in food processing industry [20]

- Mention five(5) PPE that are used when applying the insecticides/pesticides [5]

- For the PPE mentioned in 5b) above, mention their characteristics. [5]

- Mention any five (5) equipment used when applying pesticides [5]