

**FIJI NATIONAL UNIVERSITY****College of Agriculture, Fisheries & Forestry****School of Agricultural Sciences****B. Sc. (Ag.) First Year Second Trimester– 2017****ENT 502 – General Entomology****Time Allowed: 3.00 hours plus (10 minutes reading time) Total Marks: 100****INSTRUCTIONS:**

1. This paper consists of six pages including two pages Answer Sheet.
2. Please check to see that all your answer script is complete.
3. Answer all the Objective Type Questions on the Answer Sheet and Descriptive Type Questions in the Answer Booklet only..
4. No written or printed material and mobile phones are allowed in the examination hall
5. Marks allocated for each question appears at the side of each question so allocate your time accordingly.
6. This paper is divided into Two parts. First part contains Objective Type Questions which has four Sections – A, B, C, and D. All questions in this part are compulsory. Second part is Descriptive Type which has **eight (8)** questions. Attempt only any **six (6)** questions from this part.

**I. OBJECTIVE TYPE QUESTIONS (20 Marks)****To be answered only on the Answer Sheet.**

Section A: Fill in the blanks. (10 Marks)

Section B: Multiple choice Questions. (10 Marks)

Section C: Matching type. (10 Marks)

Section D: Write True or False. (10 Marks)

**II. DESCRIPTIVE TYPE QUESTIONS (30 marks)**

There are **eight (8)** descriptive type questions provided, please **attempt any six (6) questions only** and write on the Answer Booklet. Answer every question from a new page to facilitate evaluation.

Student I D No.: .....

Date.....

## I. OBJECTIVE TYPE QUESTIONS

Note: Answer only on the Answer Sheet

Time: 45 Minutes

Total Marks: 40

A. Fill in the blanks.

(10x1=10 Marks)

1. Estimated number of species on the land are-----.
2. The process of molting in insect is called-----.
3. ----- implies differential growth so that some parts of the body grow more than others resulting in a change of form.
4. House fly takes----- days from egg hatch to pupation at----- degree Celsius.
5. Estimated number of species in ocean are-----
6. The period of development within the egg is known as ----- development.
7. The body of insects consists of layer of walls called-----
8. .... are found in the larvae of Holometabolous insects
9. ----- wing is small in size and insect cannot fly.
10. The insect egg is fertilized as it passes down the ----- at the time of oviposition.

B. Multiple choice questions: Select the correct answer.

(10x1=10 Marks)

1. Estimated number of species on earth are-----

A.	8.6 million	B.	7.7 million
C.	8.8 million	D.	8.7 million

2. The weight increase from egg to mature larva in case of blowfly is----- times.

A.	450	B.	350
C.	360	D.	460

3. The weight increase from egg to mature larva in case of honey bee is----- times.

A.	1200	B.	1600
C.	1000	D.	1500

4. About----- species are found under phylum Arthropoda in all habitat

A.	8,00,000	B.	9,00,000
C.	6,00,000	D.	7,00,000

5. Feeding and locomotion do not take place in-----

A.	Larval stage	B.	Pupal stage
C.	Egg stage	D.	Adult stage

6. The spiracles are found on-----

A.	Head	B.	Mesothorax
C.	Metathorax	D.	abdomen

7. The muscoid type of larva is found in-----

A.	Housefly	B.	whitefly
C.	bowfly	D.	Dragonfly

8. A pair of mandible located behind

A.	Labrum	B.	Labium
C.	Maxillae	D.	Hypopharynx

9. The housefly larvae regularly pass through----- instars

A.	five	B.	Four
C.	Three	D.	Six

10. Above each side of ----- antennae is located.

A.	Frons	B.	Clypeus
C.	Ommatidia	D.	Gena

(C) Match the following

(10X1= 10 marks)

1.	The 1 <sup>st</sup> opening of head	A.	Post embryonic
2.	The corneal lens	B.	Mouth
3.	The larvae produce light	C.	Cockroaches
4.	Hemimetabolous	D.	Ommatidia
5.	Hypermetabola	E.	Lepidoptera
6.	Period after hatching of egg	F.	Elateriform
7.	Structure of mandible	G.	Oligopod larvae

8.	7-9 instars	H.	Strepsiptera
9.	Moths	I.	Dragonfly
10.	Thorasic leg	J.	triangular

C. Write 'True' or 'False'.

(10x1=10 Marks)

1.	About 2,20,000 species are described under order Lepidoptera	
2.	The change of bodily form from egg to adult is metamorphosis	
3.	Natatorial legs are present in water beetle	
4.	Pupal stage is found in hemimetabolous type of metamorphosis	
5.	Piercing and sucking type of mouthparts is found in bugs.	
6.	The mouthpart helps to determine the family of the insects	
7.	Biting and chewing type mouthparts found in beetles	
8.	The forewing of grass hopper is known as tagmina	
9.	Genital organs of insects are found at anterior end of the body	
10	The organization of insect body in to major unit is called tagmosis	

## II. Descriptive type Questions

(60 Marks)

Note: Attempt Any SIX Questions Only. All carries equal TEN marks.

1	Discuss factors affecting growth in insects	(10)
2	Discuss metamorphosis in detail	(10)
3	Discuss mouth parts and types of mouth parts in detail	(10)
4	Discuss the characters of phylum Arthropoda in detail.	(10)
5	Discuss the classes in insects. Also discuss the orders of agricultural importance.	(10)
6	Discuss the Head, Thorax and Abdomen of insect in detail	(10)
7	Discuss leg and types of legs in insects in detail.	(10)
8	Discuss pupa and types of pupa in insects	(10)

The End

Date: .....

Marks obtained: .....

Name: .....

Student I D No.: .....

**B. Sc. (Ag.) First Year Second Trimester– 2017**

**ENT 502 – General Entomology**

**I. Objective Type Questions - Answer Sheet**

**Time: 45 Minutes**

**Total Marks: 40**

A.	1.		
	2.		
	3.		
	4.		
	5.		
	6.		
	7.		
	8.		
	9.		
	10.		
B.	11.		
	12.		
	13.		
	14.		
	15.		
	16.		
	17.		
	18.		
	19.		
	20.		

C.	21.		
	22.		
	23.		
	24.		
	25.		
	26.		
	27.		
	28.		
	29.		
	30.		
D.	31.		
	32.		
	33.		
	34.		
	35.		
	36.		
	37.		
	38.		
	39.		
	40.		

Xxxxxxxxxxxxxx