

**FIJINATIONAL UNIVERSITY**

College of Agriculture, Fisheries & Forestry  
School of Agricultural Sciences and Forestry  
Department of Entomology & Plant Pathology

Trade Diploma in Forestry - Year II

Final Examination

Trimester I - 2018

**ENT 404: Pests of Forest and their Management**

**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 paper 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 is having four Sections – A, B, C and D. All questions of this part are compulsory. Second part is Descriptive Type which is having seven (7) questions. Attempt only any five questions from this part.

**I. OBJECTIVE TYPE QUESTIONS (50 Marks)**

To be answered only on the Answer Sheet.

Section A: Fill in the blanks. (15 Marks)

Section B: Multiple choice Questions. (15 Marks)

Section C: Matching type. (10 Marks)

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

**II. DESCRIPTIVE TYPE QUESTIONS (50 marks)**

There are seven (7) descriptive type questions provided, please attempt any five (5) questions only and write on the Answer Booklet. Answer every question from a new page to facilitate evaluation.

**I. OBJECTIVE TYPE QUESTIONS**

Total Marks: 50

**A. Fill in the blanks.** (15x1=15 Marks)

- ..... is a carbamate insecticide.
- Ryania is a pesticide derived from .....
- Biological control includes the use of..... varieties.
- The disease triangle consists of.....
- The scientific name of leaf spot disease is.....
- The division of forest pathology was started in year.....in USA.
- Virus infected leaves become.....
- The leaf spot disease is controlled by.....
- Late blight disease cause..... on leaf blade.
- The scientific name of Douglas-fir tussock moth is.....
- ..... have poison glands.
- There are ----- classes under phylum Arthropoda.
- ..... is largest order in animal kingdom.
- Millipedes generally feed on-----
- The relationship between the fuel, oxygen and heat can be called as-----
- .

**B. Multiple choice questions: Select the correct answer.** (15x1=15 Marks)

- The leaf curl viral disease causes.....

A.	Curling of leaves	B.	Yellowing of leaves
C.	Stunted stem	D.	Hardening of leaves

- Roger is effective against.....

A.	Late blight	B.	Powdery mildew
C.	Leaf curl virus	D.	Sooty mould

- LC50 is acute toxicity for.....

A.	Fumigants	B.	Malathion
C.	Carbofuron	D.	Mancozeb

- The larch casebearer first appeared in year.....

A.	1786	B.	1856
C.	1756	D.	1886

5. Bt from flour moth larvae was isolated in year.....
- |    |      |    |      |
|----|------|----|------|
| A. | 1911 | B. | 1811 |
| C. | 1895 | D. | 1899 |
6. Limonene is a botanical extracted from.....
- |    |             |    |             |
|----|-------------|----|-------------|
| A. | Orange peel | B. | Lemon peel  |
| C. | Banana peel | D. | Potato peel |
7. .... are causes of disturbance in the forest
- |    |          |    |                    |
|----|----------|----|--------------------|
| A. | Insects  | B. | Viruses            |
| C. | Diseases | D. | Insect and disease |
8. Rotenone is useful against.....pests in forest
- |    |             |    |             |
|----|-------------|----|-------------|
| A. | Defoliating | B. | Nursary     |
| C. | Thin trees  | D. | Thick trees |
9. Light traps are used for monitoring.....
- |    |                     |    |                         |
|----|---------------------|----|-------------------------|
| A. | Pine defoliators    | B. | Bread fruit defoliators |
| C. | Coconut defoliators | D. | Banana defoliators      |
10. Contact insecticides are best to manage.....
- |    |                |    |                   |
|----|----------------|----|-------------------|
| A. | Root disease   | B. | Stem disease      |
| C. | Foliar disease | D. | None of the above |
11. Oxygen gas makes up about----- of the surface atmosphere
- |    |            |    |            |
|----|------------|----|------------|
| A. | 20 percent | B. | 40 percent |
| C. | 30 percent | D. | 50 percent |
12. Estimated number of species on land are-----
- |    |             |    |             |
|----|-------------|----|-------------|
| A. | 6.5 million | B. | 2.2 million |
| C. | 8.7 million | D. | 4.2 million |
13. Estimated number of species on earth are-----
- |    |             |    |             |
|----|-------------|----|-------------|
| A. | 6.5 million | B. | 2.2 million |
| C. | 8.7 million | D. | 4.2 million |
14. Total number of species described as insects are-----
- |    |             |    |              |
|----|-------------|----|--------------|
| A. | 1.5 million | B. | 1.72 million |
| C. | 2.1 million | D. | 1 million    |
15. The size of smallest mite is----- long
- |    |         |    |         |
|----|---------|----|---------|
| A. | 1 mm    | B. | 0.09 mm |
| C. | 0.08 mm | D. | 0.07 m  |

**C. Match the following: (10x1=10 Marks)**

1. Regular pest	A.	Lepidoptera
2. Moths and butterfly order	B.	Isoptera
3. Carbofuran	C.	Respiration
4. 1930	D.	Jassid
5. Termite order	E.	Fungicide
6. Fumigants acts by	F.	Carbamet insecticide
7. 1899	G.	Bt from flour moth isolated
8. Ceresan is a	H.	Winter moth introduced
9. 1911	I.	Phosphoric acid
10. Monocrotophos based on	J.	Forest pathology started in USA

**D. Write 'True' or 'False'. (10x1=10 Marks)**

1.	Cloudy weather and humidity decreases the infection of late blight	
2.	The inoculum through contact cause viral disease Nematodes are segmented roundworms	
3.	Nematodes are segmented roundworms	
4.	Facultative pathogens can only feed on dead organic matter	
5.	Reproduction of the pathogens is necessary to complete its life cycle.	
6.	Chronic pests causes yearly damage	
7.	Insects boring in to a sapwood are indirect pests .	
8.	The inoculum may enter in plant cell cause powdery mildew	
9.	Diseases increase the growth and productivity of the plant	
10	Late blight is a root disease	

**II. Descriptive type Questions****(50 Marks)****Note: Attempt Any FIVE Questions Only. All carries equal TEN (10) marks.**

1.	List the pest of coconut and describe life cycle and management of Rhinoceros beetle in detail	(10)
2.	Define forest health. Discuss characteristics of healthy forest and major forest health problem.	(10)
3.	Describe the symptoms and control of dry root rot and root rot diseases.	(10)
4.	Describe symptoms and management of late blight and powdery mildew diseases.	(10)
5.	Describe symptoms and control of leaf spot and yellow vein mosaic virus.	(10)
6.	Describe nature of damage, life cycle and management of Gypsy moth.	(10)
7.	Discuss the difference between termite and ants.	(10)

The End  
Trade Diploma in Forestry, Year II, Trimester I, 2018  
ENT 404: Pests of Forest and their Management  
I. Objective Type Questions - Answer Sheet

Total Marks: 50

A.	1.	
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	
	9.	
	10.	
	11.	
	12.	
	13.	
	14.	
	15.	
B.	1.	
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	
	9.	
	10.	
	11.	
	12.	
	13.	

Student ID No.....

Date: .....

	14.	
	15.	
C.	1.	
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	
	9.	
	10.	
D.	1.	
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	
	9.	
	10.	

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