

**FIJI NATIONAL UNIVERSITY**

College of Agriculture, Fisheries &amp; Forestry

School of Agricultural Sciences

Trade Diploma in Animal Husbandry, Trimester III Final Examination - 2017

**ENT 415: Apiculture****Time Allowed: 3.00 hours plus (10 minutes reading time) Total Marks: 100****INSTRUCTIONS:**

1. This paper consists of **eight** pages including **three** 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 (5)** 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.

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# I. OBJECTIVE TYPE QUESTIONS

Note: Answer only on the Answer Sheet provided

Total Marks: 50

**A. Fill in the blanks.**

(15x1=15 Marks)

01. Honeybee belongs to Phylum .....
02. Queens are transported in ..... cage.
03. Acarine disease is caused by----- mite.
04. Nosema disease mostly attacks in----- season.
05. The number of workers in a honeybee colony may be-----.
06. *Apis mellifera* belongs to family-----.
07. European foul disease is caused by-----.
08. The dark coloured honey has----- flavour.
09. The mite enters in to bee through-----
10. In a beehive ventilation is made in----- cover.
11. Workers in honey bee have----- sting
12. In class Arachnida largest is scorpion measuring----- long
13. The smokers should not be .....
14. The extraction of honey should be done in----- time.
15. Most notable robber moth is -----

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

16. The temperature inside beehive is found.

A.	25 <sup>0</sup> C	B.	30 <sup>0</sup> C
C.	40 <sup>0</sup> C	D.	35 <sup>0</sup> C

17. The nectar is composed of

A.	20-40% Sucrose	B.	10-20% Sucrose
C.	22-30% Sucrose	D.	30-40% Sucrose

18. Nosema disease is caused by

A.	Bacteria	B.	Virus
C.	Protozoa	D.	Fungi

19. The hive frame is made up of

A.	Steel	B.	Wood
C.	Aluminium	D.	Iron

20. The size of four legs of stand of beehive is

A.	4-6 inches	B.	6-9 inches
C.	6-8 inches	D.	5-8 inches

21. The ripened honey consists

A.	30% Dextrose	B.	40% Dextrose
C.	32% Dextrose	D.	35% Dextrose

22. The postal stamps on honey production were issued on

A.	12 October, 2006	B.	16 October, 2006
C.	26 October, 2006	D.	18 October, 2006

23. Eggs of honeybee hatched in

A.	05 days	B.	06 days
C.	03 days	D.	04 days

24. Scraper is used for scraping

A.	Propolis	B.	Honey
C.	Bee wax	D.	Worker bee

25. Radial extractor is used by

A.	Small beekeepers	B.	Commercial beekeepers
C.	House beekeepers	D.	None of them

26. The Bee veil is used to protect----- of working person

A.	Hand	B.	Stomach
C.	Face	D.	None of the above

27. Radial extractor is used by

A.	Small beekeepers	B.	Commercial beekeepers
C.	House beekeepers	D.	None of them

28. Radial extractor is used by

A.	Small beekeepers	B.	Commercial beekeepers
C.	House beekeepers	D.	None of them

29. Radial extractor is used by

A.	Small beekeepers	B.	Commercial beekeepers
C.	House beekeepers	D.	None of them

30. Radial extractor is used by

A.	Small beekeepers	B.	Commercial beekeepers
C.	House beekeepers	D.	None of them

**C. Match the following:**

**(10x1=10 Marks)**

31.	Chalk brood disease caused by	A.	6 weeks
32.	Propolis is a substance	B.	Virus
33.	Workers are having stings	C.	3 weeks
34.	Stone brood disease caused by	D.	<i>Aspergillus flavus</i>
35.	The queens are having sting	E.	Sword shaped
36.	Bee having good honey gathering quality	F.	<i>Apis mellifera</i>
37.	The workers have life span	G.	<i>Bacillus larvae</i>
38.	American foul disease is caused by	H.	<i>Pericystis apis</i>
39.	The drones have life span	I.	Barbed
40.	Sac brood disease is caused by	J.	resinous

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

41.	Female honey bee can lay about 12000 eggs per day	
42.	Hive tool is made up of steel	
43.	The extraction of honey should be done in day time	
44.	Drones are without stings	
45.	The real bee product is propolis	
46.	Propolis is collected from bee hive.	
47.	The round dance of bees indicates distance of less than 50 m	
48.	Nosema disease is caused by virus	
49.	The dark coloured honey has stronger flavour	
50.	The life span honey bee is 2-3 years	

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

1.	Discuss the organization of bee colony along with morphological features of three casts of honeybee	(10)
2.	Discuss the life history of honeybee along with periods of developments of different casts	(10)
3.	Discuss the beehive instruments in detail.	(10)
4.	Discuss the characters of Phylum Arthropoda and classes under Phylum Arthropoda	(10)
5.	Discuss the extraction of honey from beehive in detail.	(10)
6.	Discuss the diseases and pests of honeybee in detail.	(10)
7.	Discuss about honey, its component, colour, flavour and use.	(10)

**The End**

Date: .....

Marks obtained: .....

Name: .....

Student ID No.: .....

**Trade Diploma in Animal Husbandry, Trimester III, 2017**

**Course No. & Title: ENT 415: Apiculture**

**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.	16.		
	17.		
	18.		
	19.		
	20.		
	21.		

	22.		
	23.		
	24.		
	25.		
	26.		
	27.		
	28.		
	29.		
	30.		

C.	31.		
	32.		
	33.		
	34.		
	35.		
	36.		
	37.		
	38.		
	39.		
	40.		
D.	41.		
	42.		
	33.		

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	45		
	46.		
	47.		
	48.		
	49.		
	50.		