	Α	Reg. No. :									
Question Paper Code: U8A65											
B.E. / B.Tech. DEGREE EXAMINATION, NOV 2023											
One Credit											
Agriculture Engineering											
21UAG865 – COMMERCIAL BEEKEEPING											
(Regulations 2021)											
Dur	ation: 1.30 hours						Ν	laxim	um:	50 M	arks
Answer ALL Questions											
PART A - $(6 \times 1 = 6 \text{ Marks})$											
1.	Which organ has b purpose?	een modified in a w	orker l	bee into	sting	g for c	lefense			CC	01 <b>-</b> U
	a) Ovipositor	b) Wax gland	c) Ma	andibula	ar gla	nd	d) M	louth j	parts		
2.	Wax gland is presen								CC	01 -U	
	(a) Queen bee	(b)Worker bee	(0	) Drone	bee			d)	All th	e abc	ve
3.	Shape of the Queen	cell is								CO	1 <b>-</b> U
	(a) Irregular shape	(b) Hexagonal shape	e (c	e) Squar	e shaj	pe	(d) E	Both (a	a) ar	ıd (b)	
4.	Which of the follow	ving bee species are d	lomesti	cated?						CC	01 -U
	(a) Indian bee	(b) Little bee	(c	(c) Rock bee			(d) All the above				
5.	Where is the wax g	orker be	er bee? CO1 - U								
	(a) $4^{th} - 8^{th}$ abdominal segments			(b) $4^{th} - 5^{th}$ abdominal segments							
	(c) $4^{th} - 7^{th}$ abdominal segments (d) $4^{th} - 6^{th}$				5 <sup>th</sup> abd	lomen	inal seg	gment	S		
6.	Who got noble prize for work on dances of honey bees?									CO	1 <b>-</b> U
	(a) Karl von Frisch (b) Langstroth (c) Marthandam						(d) Newton				
PART - B (6 x 2= 12 Marks)											
7.	Which are the wild	honey bees and hive	bees? ]	How ca	n you	differ	entiate	betwe	een	COI	– U

- The two types of bees on the basis of nesting site and comb structure? COI = 0
- 8. Explain about the duties of worker bees.

CO1 – U

9.	Hov	v to identify the symptoms of Nosema disease? How can you control it	? CO1 – U		
10.	Wha	at is the function of queen, drone and worker?	CO1 – U		
11.	Wha	at are the symptoms of attack prevention and control of wax moth?	CO1 – U		
12.	List	out the different types of bees and their scientific name with family?	CO1 – U		
		PART – C (2 x 16= 32 Marks)			
13.	(a)	Analysis the problems faced by the beekeepers during start small apiary unit	CO1 – U	(16)	
		Or			
	(b)	Explain the different caste of honey bees and how the bees are split their duties.	CO1 – U	(16)	
14.	(a)	Calculate the benefit cost ratio analysis of 100 bee hives apiary Or	CO2 -App	(16)	
	(b)	Calculate the benefit cost ratio analysis of 50 bee hives apiary	CO2 -App	(16)	

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