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SEMESTER END THEORY EXAMINATION
B.Sc. (Hons.) Horticulture

Semester	: II (New)	Term	: II	Academic Year	: 2020-21
Course No.	: H/ENTO-121	Title	: Fundamentals of Entomology		
Credits	: 3 (2+1)				
Day & Date	: Tuesday 23/11/2021	Time	: 10.00-12.00	Total Marks	: 80

- Note :**
- 1) Solve ANY EIGHT questions from SECTION-A
 - 2) Solve ANY TWELVE questions from SECTION-B
 - 3) ALL questions from SECTION-C are compulsory
 - 4) Send the PDF file of answer sheet to the email id of respective course teacher

SECTION-A

(Write the answers in 4-5 sentences only. Each question carries 4 marks)

Q. 1	Define Entomology. Enlist the characters responsible for dominance of class insecta.
Q. 2	Write in brief about Siphoning type of mouthparts of butterflies.
Q. 3	Give the functions of body wall of Insect.
Q. 4	Enlist the parts of digestive system of cockroach and explain in brief about gizzard.
Q. 5	Enlist different classes of phylum Arthropoda and state important characters of class insecta.
Q. 6	Write in brief about parts of insect antennae with well labeled diagram.
Q. 7	Enlist the distinguishing characters of order Lepidoptera along with four important families.
Q. 8	Define metamorphosis. Enlist types of metamorphosis observed in insects with examples.
Q. 9	Enlist different types of leg modifications in insects with suitable example.
Q. 10	Write short notes on (Any One) 1. Types of head positions in insects 2. Different types of wings in insects

SECTION-B

(Write the answers in one sentence only. Each question carries 2 marks)

Q. 11	(Answer in one sentence/Do as directed/Define etc.)
	(a) Write down the extended form and location of NBAll.
	(b) Define 'Pterothorax'.
	(c) Write down two major characters of class crustacea.
	(d) Who wrote the book 'Elements of Economic Entomology'.
	(e) Give an example of exarate and obtect type of pupae found in insect.
	(f) Mention order of Cockroach & Dragonfly.
	(g) Define the term Dipause.
	(h) Write down the function of peritrophic membrane.
	(i) Write down two examples of beneficial insects.
	(j) Give an example of oviparity and parthenogenetic type of reproduction in insect.
	(k) Write down the location and function of Johnston's organ.
	(l) Write down the two sub groups of class Hexapoda.
	(m) Define 'chaetotaxy'.
	(n) Write down the extended form and location of NCIPM.

SECTION-C

(Choose the correct option. Each question carry 1 mark)

Q. 12	1) The main characteristic feature/(s) of an insect is			
	a)	Three pairs of jointed legs	b)	Presence of wings
	c)	Pair of antenna	d)	All of the above
	2) Hypognathus type of head position is found in			
	a)	Red Cotton bug	b)	Cockroach
	c)	Beetles	d)	Termite
	3) Which type of antenna is found in butterfly			
	a)	Setaceous	b)	Filiform
	c)	Capitate	d)	Clavate
	4) Mixing of saliva with food material is the function of			
	a)	Labrum	b)	Mandible
	c)	Maxillae	d)	Hypopharynx
	5) Which is the segment of leg present between coxa & femur			
	a)	Trochanter	b)	Tarsus
	c)	Tibia	d)	None of these
	6) Halteres are present in			
	a)	Butterfly	b)	Thrips
	c)	House fly	d)	Wasp
	7) Fossorial type of legs are found in			
	a)	Mole cricket	b)	Preying mantid
	c)	Cricket	d)	Tiger beetle
	8) Aristate type of antenna is present in			
	a)	House fly	b)	Ants
	c)	Beetle	d)	Butterfly
	9) Insects are classified into the phylum			
	a)	Nematoda	b)	Mollusca
	c)	Arthropoda	d)	Hexapoda
	10) Stick insect belongs to the order			
	a)	Dermaptera	b)	Phasmida
	c)	Isoptera	d)	Coleoptera
	11) Mode of reproduction in moths is			
	a)	Viviparity type	b)	Paedogenesis type
	c)	Oviparity type	d)	Parthenogenesis type
	12) Chewing & lapping type of mouth parts are present in			
	a)	Honey bee	b)	Cockroach
	c)	House fly	d)	Thrips
	13) Crabs & prawns belong to the class			
	a)	Trilobita	b)	Crustacea
	c)	Myriapoda	d)	Arachnida
	14) Mustard sawflies belongs to the order			
	a)	Lepidoptera	b)	Diptera
	c)	Hymenoptera	d)	Hemiptera

15) Which type of leg modification is present in honey bees?			
a)	Jumping type	b)	Digging type
c)	Running type	d)	Pollen collecting type
16) Egg diapause is observed in			
a)	Pink bollworm	b)	Red hairy caterpillar
c)	Mango stone weevil	d)	Silkworm
17) Indian lac research institute started at Ranchi in the year			
a)	1925	b)	1916
c)	1934	d)	1914
18) In some insects, 'Arolium' a pad like structure found on			
a)	Antennae	b)	Legs
c)	Wings	d)	Head
19) Malpighian tubules are completely absent in			
a)	Grasshopper	b)	Cockroach
c)	Aphids	d)	Lemon butterfly
20) Example of order Orthoptera is			
a)	Termites	b)	Locusts
c)	Dragonflies	d)	Mayflies
21) Larva with well segmented body & three pairs of thoracic legs			
a)	Protopod larva	b)	Polypod larva
c)	Oligopod larva	d)	Apodous larva
22) The idea of insect classification in to orders was suggested by			
a)	J.G.Koenig	b)	R.E.Snodgrass
c)	Carl Linnaeus	d)	J.C.Fabricius
23) Leg modification in cockroach is			
a)	Ambulatorial type	b)	Cursorial type
c)	Raptorial type	d)	Saltatorial type
24) In moths & butterflies which type of metamorphosis is observed			
a)	Hemimetamorphosis	b)	Holometamorphosis
c)	Ametamorphosis	d)	Hypermetamorphosis
