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GIET UNIVERSITY, GUNUPUR – 765022
B. Sc. (Ag.) (Third Semester) Examinations, February – 2023
PPT 212 – FUNDAMENTALS OF NEMATOLOGY

Time: 2 hrs

Maximum : 50 Marks

The figures in the right hand margin indicate marks.

PART – A

Q.1. Fill in the blanks with suitable word / figure. (0.5 x 10 = 5 Marks)

- a. In male nematode, the rectum joins with the hind part of the testis forming a common opening as _____.
- b. Region of female reproductive system where sperm are stored after copulation is _____.
- c. In Adenophorea, the stylet is called as _____.
- d. _____ is known as seedgall nematode.
- e. White tip of rice is caused due to _____.
- f. Study of animal and human parasites are known as _____.
- g. Wheat seed gall nematode was 1st reported by _____.
- h. Tundu disease is associated with _____ crop.
- i. Scientific name of reniform nematode is _____.
- j. _____ glands are responsible for the production of gelatinous mucopolysaccharide matrix.

Q. 2. Define (or) Explain the following in one or two sentences. (1 x 5 = 5 Marks)

- a. Functions of digestive system
- b. Cuticle
- c. Somatic musculature
- d. Microvilli
- e. Odontostylet

Q3. Match the following (0.5 x 10 = 5 Marks)

Column – A		Column – B	
(a)	Cyst nematode	(i)	<i>Paratylenchusspp</i>
(b)	Pin nematode	(ii)	Sugarbeet cyst nematode
(c)	Burrowing nematode	(iii)	N.A. Cobb
(d)	Schacht	(iv)	Longest nematode
(e)	<i>Paralongidorus</i>	(v)	Plant nematode
(f)	Stem and bulb nematode	(vi)	<i>Radopholussimilis</i>
(g)	Nematology	(vii)	<i>Meloidogyne spp</i>
(h)	Root – knot nematode	(viii)	<i>Ditylenchusdipsaci</i>
(i)	Father of American Nematology	(ix)	<i>Ditylenchusangustus</i>
(j)	Ufra disease	(x)	<i>Globodera spp.</i>

Q4. Write True or False against each statement

(0.5 x 10 = 5 Marks)

- a. *Paratylenchus* spp. is also known as lesion nematodes.
- b. Sexual dimorphism is observed in *Meloidogyne*, *Heterodera* and *Globodera* spp.
- c. In Tylenchid type of excretory system a single tube runs throughout the nematode body length.
- d. Nematodes are bilaterally symmetrical.
- e. Odontostylet is present in the class Adenophorea.
- f. Study on animal and human parasites are known as Plant Nematology.
- g. Digestive system of nematodes includes only Stomodeum.
- h. There are three types of somatic musculature.
- i. Monodelphic and distodelphic condition is found in case of *Xiphinema* spp.
- j. In female nematode, the rectum joins with the hind part of the testis forming a common opening known as cloaca.

PART – B

Attempt ANY FIVE questions. All question carries equal marks

(6 x 5 = 30 Marks)

5. Explain in details about excretory system of nematodes with suitable diagram.
6. Explain about female reproductive system of nematode with suitable ray diagram.
7. Write about structure and function of nervous system of nematode.
8. Explain about different parts of digestive system. What are the important functions of digestive system of nematode.
9. Write about symptoms, biology, spread of diseases and integrated nematode management of economically important nematodes affecting vegetables.
10. Describe biology of nematodes and the process of embryogenesis.

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