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GIET UNIVERSITY, GUNUPUR – 765022

B. Sc (AG) (Third Semester – Regular) Examinations, December – 2020

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.

(10 x 0.5 = 5 Marks)

- _____ is known as seedgall nematode
- In male nematode, the rectum joins with the hind part of the testis forming a common opening known as _____
- White tip of rice is caused due to _____
- Anguina tritici* causes _____ disease of wheat
- In, Adenophorea, the stylet is called as _____.
- The name nematode was derived from Greek words _____ and _____.
- The first plant parasitic nematode is known as _____.
- Region of female reproductive system where sperm are stored after copulation is _____.
- In, Secernentea, the stylet is called as _____.
- Study on animal and human parasites are known as _____.

Q. 2. Define (or) Explain the following in one or two sentences.

(5 x 1 = 5 Marks)

- Functions of digestive system
- Cuticle
- somatic musculature
- Examples of five helminthes with scientific name
- Oesophagus

Q3. Match the following

(10 x 0.5 = 5 Marks)

Column – A		Column – B	
(a)	cyst nematode	(i)	<i>Paratylenchus</i> spp
(b)	Pin nematode	(ii)	1859
(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>Radopholus similis</i>
(g)	Nematology	(vii)	<i>Meloidogyne</i> spp
(h)	Root – knot nematode	(viii)	<i>Ditylenchus dipsaci</i>
(i)	Father of American Nematology	(ix)	<i>Ditylenchus angustus</i>
(j)	Ufra disease	(x)	<i>Globodera</i> spp.

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Q4. Write True or False against each statement**(10 x 0.5 = 5 Marks)**

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

PART – B**Attempt ANY FIVE questions. All question carries equal marks****(6 x 5 = 30 Marks)**

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

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