



বিদ্যাসাগর বিশ্ববিদ্যালয়  
**VIDYASAGAR UNIVERSITY**  
**Question Paper**

**B.Sc. Honours Examinations 2022**

(Under CBCS Pattern)

**Semester - VI**

**Subject : ZOOLOGY**

**Paper : DSE 3-T**

**Full Marks : 40**

**Time : 2 Hours**

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

**Parasitology**

1. Answer any *four* questions : 5×4=20
- (a) Compare the structure of cyst and trophozoite stages of *Giardia intestinalis* with appropriate diagram. State the name of two drugs that can be used to treat a patient infected with *Giardia intestinalis*.
- (b) Describe the stages of pathogenesis of African sleeping sickness with the aid of a flow chart.
- (c) State the habitat of the promastigote stage of *Leishmania donovani* and describe its structure.
- (d) State the importance of nurse cell in the life cycle of *Trichinella spiralis*. Name the flea that acts as a vector for the causative agent of bubonic plague. Name the causative agent of the disease bubonic plague.

(e) What do you mean by carriers and vectors? Cite example of each.

(f) How can you distinguish between a male and a female *Ascaris lumbricoides*?

2. Answer any two questions :

10×2=20

(a) Describe the different morphological stages of the haemoflagellate *Trypanosoma gambiense* with appropriate diagram. Name an invertebrate vector and a mammalian vector as observed in the life history of *Trypanosoma sp.* State the clinical symptoms of being infected with *Trypanosoma gambiense*. 5+(1+1)+3

(b) Comment on the epidemiological status of *Wuchereria bancrofti*. Describe the typical structure of the microfilaria of *Wuchereria bancrofti* with appropriate diagram. State the clinical symptoms of elephantiasis. 3+4+3

(c) Compare the morphology of the male and female *Ancylostoma duodenale*. Provide a diagrammatic representation of the life cycle of the hook worm. What is Loeffler's syndrome? 4+4+2

(d) State the full form of the acronym PKDL with respect to infection by *Leishmania donovani*. State the process of diagnosis, treatment and prevention of *Taenia saginata* infection. What are viviparous and oviparous nematodes? Give one example for each type. 1+(2+2+2)+(1½+1½)

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**Or,**  
**Paper - DSE 3-T**  
**Endocrinology**

Full Marks : 40

Time : 2 Hours

1. Answer any *four* questions : 5×4=20
- (a) Precisely describe the role of insulin in (i) carbohydrate metabolism and (ii) fat metabolism. 3+2
  - (b) What do you mean by second messenger in hormone action? Briefly state the role of (i) cAMP and (ii) IP<sub>3</sub> as second messengers in hormone action. 1+(2+2)
  - (c) State the difference between the pathogenesis of simple goitre and exophthalmic goitre. what is adrenal virilism? 4+1
  - (d) Explain short-loop and long-loop feedback control of hormone secretion with examples. 5
  - (e) Write short note on Mobile receptor. 5
  - (f) “Pituitary is the master of endocrine orchestra”—Discuss. 5
2. Answer any *two* questions : 10×2=20
- (a) Name the adrenocortical sources of aldosterone and cortisol. Describe the physiological functions of aldosterone and cortisol. Give an account of hormonal control of ovulation in mammals. 1+6+3
  - (b) Describe the working principle of hormone bioassay using RIA. What do you mean by the luteal phase of menstrual cycle? Describe the functions of progesterone. 5+2+3
  - (c) With the help of suitable diagram describe the changes found in the uterine endometrium during menstrual cycle s. Briefly point out the hormonal regulation during these phases. 10
  - (d) Comment on mechanism of steroid hormone action. 10
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