

**Bangabasi College**  
**B. Sc. Part I Honours Test Examination, 2015**  
**ZOOLOGY HONOURS**

Full Marks: 100

Time: 2 Hours

*Answer Question Number 1 (Compulsory) and any 4 from the rest*

1. Answer any five of the following: 2×5 = 10
- What is recimic mixture?
  - Write two salient features of Phylum Apicomplexa.
  - What is tagmatization.
  - What is gluconeogenesis?
  - State the role of β - clamp loader in prokaryotes
  - Write two non reducing disaccharides.
  - Distinguish between Polyp and Medusa.
  - What is choanocyte?
  - What is coelomoduct?
2. a) State the role of Y chromosome in sex determination of human. Discuss the phenomenon of Sex Reversal in human. 2.5+2.5 = 5
- b) i) What is Pribnow box?  
ii) What is linker DNA?  
iii) State the Rho independent transcription process in Prokaryotes. 1+1+3=5
3. i) What is Klenow fragment?  
ii) Give the roles of the following enzymes:  
Topoisomerase (Type I&II), Helicase, Primase 2+3=5  
iii) Write the process of initiation in replication. 5
3. a) Describe different types of coral reefs with suitable diagrams. 5  
Describe the structure & function of the following:  
i) Gastrozoid or Gonozoid ii) Atrophore or Pneumatophore 2.5 x 2 = 5  
b) Draw and discuss the events of Torsion in Gastropods? 5
4. Describe the gross morphology of *Paramecium* sp. with neat diagram. Justify inclusion of *Entamoeba* sp. in phylum Sarcomastigophora. 6+4=10
- 5.(a) What is nerve impulse? Discuss the formation of Action potential with a graphical representation. 1+4 = 5
- or*
- Describe the propagation of nerve impulse through the synapses with proper diagramme. 5
- (b) How oxidoreductases and isomerases work? Discuss with specific examples. 2.5+2.5=5
6. How does different bonds are responsible for the protein complexity. What is the significance of metamerism. 6+4=10
7. What is Water vascular system? Name the different components of it. Describe the structure of Tube feet with a neat diagramme. 2+2+6=10
8. Place the following animals in their respective taxon (as per your syllabus) with at least two diagnostic features for each taxons: (*any four*) 2.5X4=10
- (a) Sea hare, (b) Liver fluke, (c) Sea lily, (d) *Plasmodium*, (e) Neptune's Cup, (f) *Loligo*, (g) *Chiton*

[Marks will be deducted for bad hand writing, untidiness and spelling mistakes]