



Thursday, the 23rd January, 2014

NOTIFICATION

No. 11 /2014

Dated : 23/01/2014

Subject : Changes in the syllabi of B.Sc. Part-I to Final, Practical course of the subject Zoology

It is notified for general information of all concerned that the authorities of the University has accepted changes in the syllabus of B.Sc.Part-I (Sem-I & II), B.Sc.Part-II (Sem-III & IV), B.Sc. Final (Sem-V & VI) for the practical course of the subject Zoology to be implemented from the Academic Sessions 2014-15 for B.Sc. Part-I, 2015-16 for B.Sc. Part-II and 2016-17 for B.Sc. Final respectively. The syllabus of practical course for the subject Zoology for B.Sc.Part-I (Sem-I & II) shall be as per Appendix-A, appended herewith.

Sd/-
(A.D.Chauhan)

Registrar,
Sant Gadge Baba Amravati University

Appendix-A

B.Sc.Part-I (Sem-I & II) (Zoology) to be implemented from Academic Session 2014-15.

- A) The existing Practical course of 1S Zoology of Semester-I (Prospectus No.2014121) be substituted by the following :-

LIFE AND DIVERSITY OF NON-CHORDATA

Practical : Two practical per week each of 3 period's duration. The Examination shall be of 4 hrs duration and of 50 marks.

I-Life and diversity of non-chordata

1. Observation, Classification up to classes and sketching of the following animals, (Specimens or Models):
 - Phylum Protozoa: *Plasmodium* trophozoite, *Euglena*, *Entamoeba histolytica*.
 - Phylum Porifera: Sycon, Bath sponge, *Euplectella*.
 - Phylum Coelenterata: *Obelia*, *Aurelia*, *Tubipora*.
 - Phylum Helminthes: *Taenia*, *Ascaris* (male & female).
 - Phylum Annelida: Nereis, Earthworm, Leech,
 - Phylum Arthropoda: Prawn, *Limulus*, *Aranea*, *Scolopendra*, *Julus*, Moth, Mosquito.
 - Phylum Mollusca: Chiton, Pila, Dentalium, Unio, Octopus.
 - Phylum Echinodermata: *Antedon*, *Holothuria*, *Echinus*, Sea star, Brittle star
 - Phylum Hemichordata: *Balanoglossus*
2. Study of Permanent slides:
L.S.Sycon, nematocyst, Ascaris egg, T.S. Ascaris through gonads, T.S.Leech through crop, Compound eye of insect,
3. Dissections: (Only Demonstration)
 - a) Leech/Earthworm: Alimentary canal, Reproductive system, Nervous system,
 - b) Grasshopper/Cockroach: digestive system, Nervous system, Reproductive system
 - c) *Pila*: Nervous system.
 - d) Culture of *Paramecium* and *Volvox* (To be given to all students)
4. Mountings :
 - a) Mouth parts of mosquito (male and female): wings, legs, mouth parts
 - b) Cockroach: Mouth parts, Salivary gland, Trachea, Spiracle
 - c) Housefly: Mouth parts, legs, wings
 - d) *Paramecium* and *Volvox*

Distribution of Marks during Practical Examination: Time : 4 hrs.

i) Identification and comments on spots (1-8) - 4 specimens, 4 slides.....	12 Marks
ii) Labeling of dissection-diagrams provided (Two)	10 Marks
iii) Permanent stained micro preparation. -.....	08 Marks
iv) Study tour diary -	04 Marks
v) Permanent stained micro preparation Submitted by examinee.....	04 Marks
vi) Certified class record -	05 Marks
vii) Check list of 20 locally available invertebrate fauna.....	02 Marks
viii) Viva- voce -	05 Marks

Total: - 50 Marks

Note:

- 1] One or two short excursion / study tours are compulsory for observation of animals in their natural habitat.
- 2] Candidates shall be required to produce at the practical examination the following.
 - Practical record book duly signed by the teacher in charge and Certified by the Head of the department as bonafide work of the Candidate.
 - Five permanent stained micro preparations.
 - Study tour report and field diary duly signed by the teacher.

B) The existing Practical course of 2S Zoology of Semester-II (Prospectus No.2014121) be substituted by the following :-

CELL AND DEVELOPMENTAL BIOLOGY

I) Cell Biology :-

1. Use, care and maintenance of microscope.
2. Bacterial Culture, Gram staining.
3. Permeability tests using erythrocytes.
4. Preparation of Polytene chromosome in Chironomous or Drosophila larva.
5. Preparation of various stages of mitosis in Onion root tip.
6. Preparation of various stages of meiosis in grasshopper testis.

II) Developmental Biology.

1. Study of stages of Gametogenesis in rat/frog, (Permanent Stained Slides)
2. Study of different of types animal eggs
3. Study of developmental stages (Life Cycle) of Cockroach, Housefly, mosquito, Butterfly, Moth, Frog (Any Four).
4. Sperm in physiological saline using phase contrast optics.
5. Observation of live chick embryos.
6. Slides of developmental stages of frog: Cleavage, blastula, gastrula, neurula, and tadpoles.
7. Slides of developmental stages of chick embryos at 24, 36, 48, 72 hrs of incubation.
8. Mounting of Chick Embryos
9. Study of different types of placenta with suitable histological slides or visual diagrams.

Distribution of Marks during Practical Examination: Time : 4 hrs.

i) Identification and comments on spots (1-8) – 4 Cytological , 4 Embryological ...	16 Marks
ii) Cytological Preparation.....	10 Marks
iii) Mounting of Chick Embryo/Life Cycle coments.....	10 Marks
iv) Certified class record -	05 Marks
v) Collection of developmental stages of Pest Insects.....	04 Marks
viii) Viva- voce	05 Marks

Total: -50 Marks
