

FACULTY OF LIFE SCIENCES

SYLLABUS

For

Bachelor of Science (Honours) Biotechnology

Semester VI

(Under Credit Based Continuous Evaluation Grading System)

Session: 2026-27



The Heritage Institution

**KANYA MAHA VIDYALAYA
JALANDHAR
(Autonomous)**

KANYA MAHAVIDYALAYA, JALANDHAR (AUTONOMOUS)

SCHEME AND CURRICULUM OF EXAMINATION OF FOUR YEAR UNDER GRADUATE DEGREE PROGRAMME

Session-2026-27

Bachelor of Science (Honours) Biotechnology Semester -VI									
Course Code	Course Title	Course Type	Paper Credits L-T-P	Hours per week L-T-P	Total Marks	Marks			Exam Time in Hrs
						L	P	CA	
BBTM-6065	Zoology-II	MDC	3-0-1	3-0-2	100	50	20	30	3+3

Bachelor of Science (Honours) Bio-Technology Semester-VI

Session: 2026-27

Course Title: Zoology-II

Course Code: BBTM-6065

(Theory)

COURSE OUTCOMES

After passing this course the student will be able to:

CO1: Students gain knowledge and skill in the fundamentals of animal sciences. understands the complex interactions among various living organisms.

CO2: Analyse complex interactions among the various animals of different phyla, their distribution and their relationship with the environment.

CO3: Understanding of Life history, mode of infection and pathogenicity of the following pathogens with reference to man, prophylaxis and treatment.

CO4: Knowledge of Arthropod vectors of human diseases.

Bachelor of Science (Honours) Bio-Technology Semester-VI

Session: 2026-27

Course Title: Zoology-II

Course Code: BBTM-6065

(Theory)

Time: 3 Hrs.

Credit: 3-0-0

Max. Marks: 100

Theory: 50

Practical: 20

CA: 30

Instructions for the Paper Setters: Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

UNIT-I

Origin of Life on Earth: Origin of earth and primitive earth conditions, Theories of origin of life (Theory of Extraterrestrial contact- Import of life through meteorites, Special creation theory, Oparin Haldane Theory, Abiogenesis, Evidences against theory of spontaneous generation of life, Biogenesis, Theory of chemical evolution, Miller & Urey Experiment). Evolution of Prokaryotes and Eukaryotes (unicellularity to multicellularity).

UNIT-II

Evolution: Definition, Scope and History, Theories of Evolution (Lamarckism, Darwinism, Hugo deVries and Modern theory of Evolution). Geological time scale.

UNIT-III

Introduction to Parasitology: pertaining to various terminologies in use.

Brief account of Life history, mode of infection and pathogenicity of the following pathogens with reference to man, prophylaxis and treatment.

Pathogenic Protozoans: Entamoeba, Trypanosoma, Giardia and Plasmodium.

Pathogenic Helminths: Tape Worm, Ascaris and Ancylostoma

UNIT-IV

Arthropod vectors of human diseases: Malaria, Yellow fever, Dengue haemorrhagic fever, Filariasis, Plague and Epidemic typhus. Distribution and control of the above mentioned vectors.

Suggested Readings:

1. Garcia, L.S. (2001), Diagnostic Medical Parasitology, (4th ed), ASM Press Washington.
2. Panikar, C. K. and Ghosh Sougata. (2018). Textbook of Medical Parasitology (8th Edition), Jaypee Brothers Medical Publishers (P Ltd.), New Delhi.
3. Harrison A. (2000). Principles of Medicine. Loker, Eric S. and Bruce V. Hofkin (2015). Parasitology: A Conceptual Approach, Garland Science, Taylor & Francis Group, New York and London.
4. Zimmer, C. 2000. Parasite Rex: Inside the Bizarre World of Nature's Most Dangerous Creatures, The Free Press, New York.

Bachelor of Science (Honours) Bio-Technology Semester-VI

Session: 2026-27

Course Title: Lab in Zoology-II

Course Code: BBTM-6065

(Practical)

COURSE OUTCOMES

After passing this course the student will be able to:

- CO1: Understand Homology, Analogy and Mimicry
- CO2: Familiarize with Human skeleton.
- CO3: The students will be able to understand human histology.
- CO4: Able to prepare slides of pathogenic protozoans.

Bachelor of Science (Honours) Bio-Technology Semester-VI

Session: 2026-27

Course Title: Lab in Zoology-II

Course Code: BBTM-6065

Time: 2 Hrs.

Practical: 20

Credit: 0-0-1

Note. The question paper will be set by the examiner based on the syllabus.

1. Study of Evolutionary phenomenon with the help of charts / models /videos: Homology, Analogy and Mimicry.
2. Study of the skeleton of human.
3. Study of the following prepared slides: histology of man (compound tissues).
4. Study of following prepared slides/specimen: Pathogenic Protozoans: Entamoeba, Trypanosoma, Giardia and Plasmodium. Pathogenic Helminths: Tape Worm, Ascaris and Ancylostoma. Arthropod vectors of human diseases: Anopheles, Culex, Aedes Mosquitoes, Rat flea.