ASSIGNMENT BOOKLET

Elective Course
in
Animal Diversity – II
Bachelor’s Degree Programme in Science
(B.Sc.)

It is compulsory to submit the assignment before filling in the examination form.

(Valid from 1st January, 2012 to 31st December, 2012)

Please Note

- You can take electives (56 to 64 credits) from a minimum of TWO and a maximum of Four science disciplines, viz. Physics, Chemistry, Life Sciences and Mathematics.

- You can opt for elective courses worth a MINIMUM OF 8 CREDITS and a MAXIMUM OF 48 CREDITS from any of these four disciplines.

- At least 25% of the total credits that you register for in the elective courses from Life Sciences, Chemistry and Physics disciplines must be from the laboratory courses. For example, if you opt for a total of 64 credits of elective in these 3 disciplines, at least 16 credits should be from lab courses.

- You cannot appear in the Term-End Examination of any course without registering for the course. Otherwise, your result will not be declared and the onus will be on you.

SCHOOL OF SCIENCES
Indira Gandhi National Open University
Maidan Garhi
New Delhi – 110068
(For January, 2012 Cycle)
Dear Student,

We hope you are familiar with the system of evaluation to be followed for the Bachelor’s Degree Programme. At this stage you may probably like to re-read the section on assignments in the Programme Guide for Elective Courses that we sent you after your enrolment. A weightage of 30 per cent, as you are aware, has been earmarked for continuous evaluation which would consist of one tutor-marked assignment for this course.

Instructions for Formatting Your Assignments

Before attempting the assignment please read the following instructions carefully.

1) On top of the first page of your TMA answer sheet, please write the details exactly in the following format:

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PLEASE FOLLOW THE ABOVE FORMAT STRICTLY TO FACILITATE EVALUATION AND TO AVOID DELAY.

2) Use only foolscap size writing paper (but not of very thin variety) for writing your answers.

3) Leave 4 cm margin on the left, top and bottom of your answer sheet.

4) Your answers should be precise.

5) While solving problems, clearly indicate the question number along with the part being solved. Be precise. Recheck your work before submitting it.

6) It is compulsory to submit the assignment before filling in the examination form.

Answer sheets received after the due date shall not be accepted.

We strongly feel that you should retain a copy of your assignment response to avoid any unforeseen situation and append, if possible, a photocopy of this booklet with your response.

We wish you good luck.
1. a) Explain briefly how cephalochordates have adapted to their surroundings? (5)
   b) Mention at least four important affinities between echinoderms and chordates. (5)

2. Briefly explain the following terms. (10)
   i. Holostyly
   ii. Diphycercal tail
   iii. Swim bladder
   iv. Living fossils
   v. Neoteny

3. a) Where was the Archaeopteryx discovered? How did this fossil prove that birds share
    a common ancestry with the reptiles? (5)
   b) Explain the adaptation in bats to flying. (5)

4. a) Explain keratinization in terrestrial vertebrates. (5)
   b) State the differences between digestive system of herbivores and carnivores. (5)

5. a) Briefly discuss the mechanism of pulmonary respiration in frog. (5)
   b) Write short note on foramen of Panizza. (5)

6. Write short notes on: (10)
   i. Kidney blood circulation
   ii. Types of mammalian uteri.

7. a) What are pit organs in reptiles? How do vipers and boas locate the prey? (5)
   b) Briefly write the functions of the following hormones. (5)
      i. Adrenocorticotropic hormone
      ii. Parathormone
      iii. Aldosterone
      iv. Testosterone
      v. Progesterone.

8. a) Define the term ‘instinct’ and explain how instinctive behaviour develops. (5)
   b) Explain the phenomenon of ‘evolution of behaviour’. (5)

9. a) Describe territorial behaviour and dominance hierarchy. How are these
    behaviour helpful in organizing vertebrate social organizations? (5)
   b) Mention two most important benefits and two disadvantages of social life in
    animals. (5)

10. a) Explain the mechanism of bioluminescence. (5)
   b) Explain the different ways by which limbless animals move. (5)