

**BANC-111**

**BACHELOR OF SCIENCE  
(HONOURS)  
ANTHROPOLOGY**

**(BSCANH)**

**ASSIGNMENT**

**July 2023-January 2024**

**COURSE CODE: BANC-111**

**BANC 111: HUMAN POPULATION GENETICS**



**SCHOOL OF SOCIAL SCIENCES  
INDIRA GANDHI NATIONAL OPEN UNIVERSITY  
MAIDAN GARHI, NEW DELHI-110068**

Dear Learner,

As we have informed you in the Programme Guide, evaluation at IGNOU consists of two parts: i) continuous evaluation through assignments, and ii) term-end examination. In the final result, assignments of a course carry 30% weightage while 70% weightage is given for term-end examination.

You will have to do three Tutor Marked Assignments (TMA) for a six-credit course and two TMAs for a four-credit course. This Assignment booklet has TMA for the core course **BANC- 111 Human Population Genetics** which is a six-credit course. The booklet, therefore, has three TMAs per course whose total marks add up to 100 and carry a weightage of 30 %.

**Assignment I** have Descriptive Category Questions (DCQs). These are meant for writing essay type answers, with an introduction and a conclusion. These are intended to test your ability to describe your understanding/knowledge about the topic in a systematic, to-the-point and coherent manner.

**Assignment II** has Middle Category Questions (MCQs) and Short Category Questions SCQs. These (MCQs) questions require you to first analyse the topic in terms of arguments and explanations and then write the answers in a concise manner. They are meant to test your ability to distinguish, compare and contrast, or clear understanding of the concepts and processes. The SCQs questions are meant to improve your skill of recall in brief the relevant/precise information about persons, writing, events, or clear understanding of concepts and processes.

**Assignment III** has questions based on the project manual. These questions would help you to understand how to frame a project synopsis and your test your knowledge of applying the tools and techniques in the field situation.

Before you attempt the assignments, please read the instructions carefully provided in the Programme Guide. It is important that you write the answers to all the TMA questions in your own words. Your answers should be within the approximate range of the word-limit set for a particular section. Remember, writing answers to assignment questions will improve your writing skills and prepare you for the term-end examination.

As mentioned in the Programme Guide, you need to submit all the assignments within the stipulated time for being eligible to appear in the term-end examination.

**Submission of the completed assignments:**

| <b>Cycle</b> | <b>Last date of submission</b> | <b>Place of submission</b>                |
|--------------|--------------------------------|-------------------------------------------|
| July 2023    | 30 <sup>th</sup> April 2024    | Coordinator of the student's study center |
| January 2024 | 31 <sup>st</sup> October 2024  |                                           |

You must obtain an email acknowledgement till the lockdown is in place, thereafter as per guidelines made available by the Government of India, that would be notified via our website [www.ignou.ac.in](http://www.ignou.ac.in), you may visit the study centre to submit your assignment and obtain the receipt from the Study Centre for the assignments submitted and retain it. If possible, keep a xerox copy of the assignments with you.

The Study Centre will have to return the assignments to you after they are evaluated. Please insist on this. The Study Centre has to send the marks to the Student Evaluation Division at IGNOU, New Delhi.

We expect you to answer each question as per guidelines for each category as mentioned in the assignment. You will find it useful to keep the following points in mind:

- 1) **Planning:** Read the assignments carefully, go through the Units on which they are based. Make some points regarding each question and then rearrange them in a logical order.
- 2) **Organisation:** Be a little selective and analytic before drawing up a rough outline of your answer. Give adequate attention to your introduction and conclusion.  
  
Make sure that your answer:
  - a) is logical and coherent;
  - b) has clear connections between sentences and paragraphs, and
  - c) is written correctly giving adequate consideration to your expression, style and presentation.
- 3) **Presentation:** Once you are satisfied with your answer, you can write down the final version for submission, writing each answer neatly and underlining the points you wish to emphasize. Make sure that the answer is within the stipulated word limit.

**Wish you all the best!**

**Discipline of Anthropology  
SOSS, IGNOU, New Delhi**

BANC 111: Human Population Genetics  
TUTOR MARKED ASSIGNMENT  
(TMA)

Course Code: BANC 111

Assignment Code: BANC 111/ASST/TMA/ July 2023-January 2024

Total Marks: 100

Read the instructions carefully and answer accordingly. There are three Sections in the Assignment. Answer all questions from all the sections.

Assignment I

Answer the following in about 500 words each. 20x2= 40

- a. Discuss Mendel's laws of inheritance with suitable examples.
- b. Define Genetic polymorphism? Discuss various genetic markers that exhibit polymorphism

Assignment II

Answer any **two** of the following questions in about 250 words each. 10x2=20

- a. What are complex diseases? Briefly discuss the role of environmental factors affecting complex diseases.
- b. Briefly describe the family Pongidae
- c. Write an account positive and negative assortative mating.

Answer the following questions in about 50 words each. 2x5=10

- a. Consanguineous Marriages
- b. Hypertension
- c. Gene Flow
- d. Sickle Cell Haemoglobin
- e. Bottleneck effect

Assignment III

Answer the following questions in about 250 words 10x3=30

- a. Briefly describe the procedure for phenotyping of ABO and RH blood groups with suitable diagrams.
- b. Describe the procedure for the Glucose-6-Phosphate Dehydrogenase Deficiency (G6PD) test.
- c. Briefly describe the technique to detect the tasting ability of a person using the serial dilution method.