

**BACHELOR OF ARTS**

**(HONOURS)**

**ASSIGNMENT**

**JANUARY 2021**

**STATISTICAL METHODS FOR  
PSYCHOLOGICAL RESEARCH- II (BPCC 108)**

**SCHOOL OF SOCIAL SCIENCES (SOSS)  
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 will carry 30% weightage while 70% weightage is given for term-end examination (total 100 marks).

BPCC108 is a 4 + 2 credits course and has two assignments and one tutorial.

**Assignment I** has 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 understanding/knowledge about the topic in a systematic, to-the-point, and coherent manner.

**Assignment II** has Middle Category Questions (MCQs). These 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 clearly understand concepts and processes.

**Tutorial:** The course on Statistical Methods for Psychological Research- II will include tutorial, that is compulsory. It will be in form of activities and evaluated by your academic counsellor. You should carefully read the course material and apply the information while answering the tutorial. These activities are meant to develop your ability to relate your knowledge to day-to day life experiences. The tutorial will be made available to you along with the assignments and they have to be submitted at your study centre.

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 according to the word-limit set for a particular section. Remember, writing answers to assignment questions will improve your writing skill and sharpen your understanding of the concepts. It will also help you prepare for the term-end examination.

### Submission

| Ses-<br>sion     | Last Date of Sub-<br>mission* | To be Sent  |
|------------------|-------------------------------|---|
| For January 2021 | 31 <sup>st</sup> October 2021 | The Coordinator of<br>the Study Centre<br>allotted to you |
|                  | (Please check the dates       |   |

\* You need to submit the assignments within the stipulated time for being eligible to appear in the term-end examination.

Please obtain a receipt from the study centre for the assignments submitted and retain it. Also keep a photocopy of the assignments with you. The Study Centre will return the assignments to you after they are evaluated. The completed assignment should be sent **only** to the Coordinator of the Study Centre allotted to you.

**Following instructions are to be carefully followed before writing the assignments:**

1. You will find it useful to keep the following points in mind:
  - i. **Planning:** Read the assignments carefully. Go through the Units on which they are based. Make some points regarding each question and then re-arrange these in a logical order.
  - ii. **Organisation:** Read the study material carefully, analyse it, and then prepare 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;
    - c) is written correctly giving adequate consideration to your expression, style and presentation
  - iii. **Presentation:** Once you are satisfied with your answers, you can write down the final version for submission. Write each answer neatly with proper spacing, and underline the points you wish to emphasise. Make sure that the answer is around the suggested word limit.
2. Use A4 size ruled paper for your response and tie all the pages carefully. Allow a four cm margin on the left and leave some space between each answer. This will facilitate the evaluator to write useful comments in the margin at appropriate places.
3. **Answers should be in your own handwriting.** Do not print or type the answers. Do not copy your answers from the study material sent to you by the University or from other learners. If you copy, you will get zero marks for the respective question.
4. You need to attach a copy of the TMA with the completed assignment before submitting it.
5. In case you have requested for a change of Study Centre, you should submit your Tutor Marked Assignments only to the original Study Centre until the change of Study Centre is notified by the University.
6. If you find that there is any factual error in evaluation of your assignments, e.g., any portion of assignment response has not been evaluated or total of score recorded on assignment response is incorrect, you should approach the coordinator of your study center for correction and transmission of correct score to headquarters.

Wish you all the best!

Discipline of Psychology  
SOSS, IGNOU, New Delhi

**STATISTICAL METHODS FOR PSYCHOLOGICAL RESEARCH- II (BPCC 108)**

**Tutor Marked Assignments (TMA)**

**Course Code: BPCC 108**

**Assignment Code: Asst /TMA /January 2021**

**Total Marks: 100**

**NOTE: All assignments are compulsory.**

**Instructions:**

1. Have a title page. Include details like Name, Enrolment number, Email id, Regional Centre, Study Centre, Programme Title and code, Course title and code and Tutorial code.
2. Use A4 size paper for the tutorial (ruled/ bank).
3. For making tables, blank pages can be used and tables/ graphs (if any) to be drawn in pencil.
4. Content should not be plagiarised.

**Part A**  
**Assignment One**

**Answer the following questions in about 500 words each (wherever applicable).**

**Each question carries 20 marks.**

$$2 \times 20 = 40$$

1. Explain the concept of inferential statistics. Discuss hypothesis testing with a focus on its procedure.
2. Compute One Way ANOVA for the following data:

|         | Scores obtained on Emotional Intelligence Scale |    |    |    |    |    |    |    |    |    |
|---------|---|----|----|----|----|----|----|----|----|----|
| Group A | 23  | 34 | 32 | 25 | 31 | 25 | 21 | 32 | 35 | 34 |
| Group B | 43  | 32 | 21 | 16 | 34 | 36 | 22 | 24 | 15 | 32 |
| Group C | 32  | 34 | 34 | 54 | 23 | 12 | 32 | 17 | 17 | 28 |

**Assignment Two**

**Answer the following questions in about 100 words each (wherever applicable).  
Each question carries 5 marks.**

6 x 5 = 30

4. Explain the assumptions of parametric and nonparametric tests.
4. What is chi-square? Describe the assumptions for the application of  $\chi^2$  Test.
5. Compute Mann Whitney U for the following data

|                | <b>Scores obtained on Stress Scale</b> |    |    |    |    |    |    |    |    |    |
|----------------|--|----|----|----|----|----|----|----|----|----|
| <b>Group A</b> | 12                                     | 15 | 17 | 13 | 10 | 11 | 21 | 13 | 21 | 11 |
| <b>Group B</b> | 23                                     | 45 | 54 | 17 | 15 | 36 | 15 | 23 | 11 | 10 |

6. Explain the computation of one sample median test with the help of suitable example.
7. What is Kruskal Wallis ANOVA test? Compare between Kruskal Wallis ANOVA tests and one way ANOVA parametric test.
8. Explain the procedure for computation of mean and standard deviation using Microsoft Excel.



|                       |                                     |       |      |          |                | d)   | ence  | fer-<br>ence | Low-<br>er | Up-<br>per |
|-----------------------|-------------------------------------|-------|------|----------|----------------|------|-------|--------------|------------|------------|
| Examination<br>Stress | Equal var-<br>iances<br>assumed     | 1.615 | .222 | .62<br>7 | 18             | .543 | 3.800 | 6.321        | -<br>9.401 | 17.20<br>1 |
|                       | Equal var-<br>iances not<br>assumed |       |      | .62<br>7 | 16<br>.8<br>23 | .543 | 3.800 | 6.321        | -<br>9.466 | 17.26<br>8 |

**5 marks**

**Activity 2:** Collect data from 10 males and 10 females about the age at which they started their first job. Compute Mann Whitney U test to find out if significant difference exists between males and females with regard to age at which they started their first job. Ensure that you tabulate the raw data and show the calculations with the help of formulae discussed in the course material of BPCC108.

15 Marks

**Activity 3:** Take any one unit from BPCC108 and write a review of the same in about 1000 words. The review needs to be in your own words and should cover the important aspects of the unit. Also include in review the relevance of measures of central tendency and measures of variability in research.

10 Marks

**ALL THE BEST**