Gratia Christian College
宏恩基督教學院

Examination

Programme	:	General Education
Academic Year (Semester)	:	2025 - 2026 (Semester 1)
Course Code	:	GEN3403A
Course Title	:	Introduction to Statistics
Date	:	22/12/2025 (Mon)
Time	:	10:00 am – 12:00 pm
Time Allowed	:	2 Hours
Weighting	:	40% of the Overall Marks

Student ID No. : _____

This paper has **3** pages (including this cover page).

Instructions to candidates:

1. This question paper consists of 2 sections. Section A contains 20 multiple-choice questions which should be done in 30 minutes. Section B contains 5 data analysis questions which should be done in 90 minutes.
2. Section A should be completed in Moodle using a safe exam browser. Section B should be completed in the Answer Sheet Microsoft Word file on Moodle. You should export the file into PDF format before submitting to Moodle.
3. This paper carries 100 marks, which are allocated to each question as indicated.
4. Section A is closed book. Section B is open book. You can use any notes or notes in your VDI/notebook, but you cannot use your phone or any other electronic device. If any unauthorized materials or aids are found on a candidate during the examination, the candidate will be subject to disciplinary action.

Do not turn this page until you are told to do so.

You should hand in this question paper after the examination.

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Section B: Data Analysis (60 marks)

Report the answers for all the questions and copy the appropriate graphs into the answer sheet in Microsoft Word format. At the end of the exam, please upload your answers in PDF format through Moodle. You should use SPSS to analyse the dataset.

The report has a word limit of 300 words. The total marks awarded for the content of the report are 56 marks, and 4 additional marks are given for (1) APA-style reporting (2 marks) and (2) effective communication for results (2 marks). Partial marks will also be given for relevant SPSS output.

Internet Addiction.sav contains data from a sample of undergraduate university students in Malawi, a country in East Africa ($N = 591$). It contains data on these main variables:

- **Internet Addiction**: Internet addiction is measured through an Internet Addiction Test (IAT), which contains 20 items about Internet addiction on a 0-5 scale (0 = does not apply, 1 = rarely, 5 = always). A sample item is "How often do you find that you stay on-line longer than you intended?" Higher scores indicate more severe addiction.
- **Common Mental Health Symptoms**: Common Mental Health Symptoms are measured through 20 yes/no questions about 20 common mental health symptoms. For every "yes", participants score one point. Higher scores indicate more symptoms. A sample item is "Do you often have headaches?"

The researchers also collected **Gender** (female, male, prefer not to say) and **Age Group** (15-19 years, 20-24 years, 25-29 years) data from the sample.

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The following is the codebook for the important variables:

Codebook of InternetAddiction.sav

Variable Name	Variable Label	Type of Variable	Additional Information
Gender		Categorical	1 = female, 2 = male, 3 = prefer not to say
Age_grp		Categorical	1 = 15-19 years old, 2 = 20-24 years old, 3 = 25-29 years old
IA	Internet Addiction	Quantitative	Average score of internet addiction test. Higher score indicates more severe addiction.
CMH	Common Mental Health	Quantitative	Total number of common mental health symptoms.
IAT1-IAT20			Separate item scores for IAT.

Write a report of the results, including answers to the following three questions:

1. What are the counts and percentages of male and female students in this sample? (4 marks)
2. Describe the distribution of common mental health symptoms by using a histogram with a normal distribution curve to help you, and put the histogram into your answer. Then, answer the question: what is the typical number of common mental health symptoms in this sample, and write down the corresponding variability statistic, minimum, maximum, skewness, and kurtosis values. (8 marks)
3. What is the internal consistency reliability of the Internet Addiction Test (IAT)? (4 marks)

And answering these two questions below by checking statistical assumptions and using appropriate statistical tests:

4. List the means and standard deviations of internet addiction scores of different age groups. Do different age groups have different degrees of internet addiction? If so, how? (20 marks)
5. Is there a relationship between internet addiction and the number of common mental health symptoms? Comment on the strength and direction of this relationship. (20 marks)

~ END OF EXAM PAPER ~

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