



PAN AFRICA CHRISTIAN UNIVERSITY
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES
END OF SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF ARTS
IN COMMUNICATION
JANUARY-APRIL 2026 TRIMESTER
CAMPUS: ROYSAMBU- PHYSICAL
DEPARTMENT: COMMUNICATION, LANGUAGES AND LINGUISTICS
COURSE CODE: JMS205
COURSE TITLE: INTRODUCTION TO MULTIMEDIA DESIGN
EXAM DATE: APRIL 2026
DURATION: 3 HOURS

INSTRUCTIONS

- Read all questions carefully before attempting.
- Answer question ONE and any other TWO Questions
- All other PAC University examination rules and regulations apply

INSTRUCTIONS:

SECTION A IS COMPULSORY

SELECT ANY TWO QUESTIONS IN SECTION B

QUESTION ONE (10 marks)-Compulsory

- a) Explain the following terms as used in web and graphic design (2 marks)
- i) Responsive web design
 - ii) Typography
- b) Discuss the importance of layout and visual hierarchy in web pages (2 marks)

- c) Explain the role of graphic design in strengthening **brand identity** (2 marks)
- d) Differentiate between **linear and non-linear multimedia** (2 marks)
- e) Discuss **two advantages** of using multimedia in education. (2 marks)

SECTION B (Answer any 3 questions)

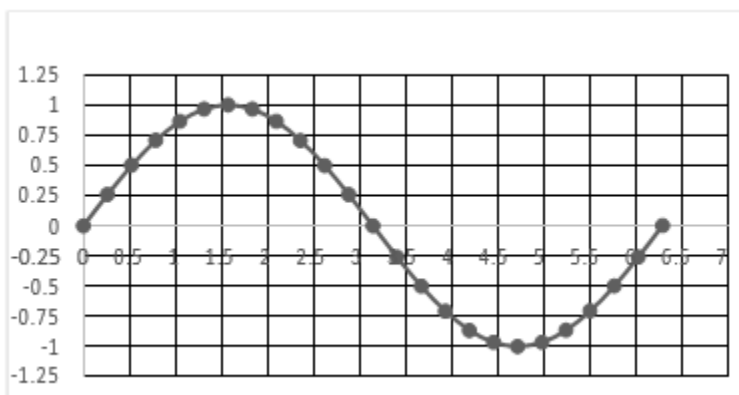
QUESTION TWO (10 marks)

- a) Given a character set and associated probability below, derive the codeword value for the character string **CAEE\$** using the **arithmetic coding** compression scheme. Assuming this is received at the destination, explain how the decoder determines the original string from the received codeword value. [10mks]

SYMBOL	PROBABILITY	RANGE
A	0.2	[0 to 0.2]
B	0.1	[0.2 to 0.3]
C	0.2	[0.3 to 0.5]
D	0.05	[0.5 to 0.55]
E	0.3	[0.55 to 0.85]
F	0.05	[0.85 to 0.90]
\$	0.01	[0.90 to 1.0]

QUESTION THREE (10 marks)

- a) In order to get video/audio into the computer, they need to be digitized. Clearly explain the **encoder design** involved in the digitization process and apply the encoder steps on the following signal, in a suitable manner, showing the resulting signal at each step. (6 marks)



b) Describe Huffman encoding algorithm

(4mks)

QUESTION FOUR (10 marks)

- a) PAC university plans to launch an interactive multimedia platform to support blended learning for both on-campus and remote students.
 - i) Analyze the multimedia components that should be included in the platform and justify their importance. (3 Marks)
 - ii) Evaluate how multimedia can enhance student engagement and knowledge retention compared to traditional teaching methods. (3 Marks)
 - iii) Identify potential technical and usability challenges that may arise and propose practical solutions. (4 Marks)

QUESTION FIVE (10 marks)

A company intends to develop a multimedia advertisement targeting young adults.

- i) Propose a design strategy that would make the advertisement visually appealing and interactive. (5 Marks)
- ii) Critically evaluate the role of **color, typography, audio, and animation** in influencing audience perception. (5 Marks)