



UCSC

University of Colombo, Sri Lanka

University of Colombo School of Computing



**DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY
(EXTERNAL)**

Academic Year 2024 — 3rd Year Examination — Semester 5

**IT5405 (R) — Fundamentals of Multimedia
(Repeat Paper)**

Structured Question Paper
(2 Hours)

To be completed by the candidate

Index Number

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Important Instructions

- The duration of the paper is **2 hours**.
- The medium of instructions and questions is English. Students should answer in the medium of English language only.
- This paper has **4 questions** on **10 pages**. Answer **all** questions.
- All questions carry **equal** marks.
- Write your answers **only on the space provided** on this question paper.
- Do not tear off any part of this question paper. Under no circumstances may this paper (or any part of this paper), used or unused, be removed from the Examination Hall by a candidate.
- Note that questions appear on both sides of the paper. If a page or part of a page is not printed, please inform the supervisor/invigilator immediately.
- Any electronic device capable of storing and retrieving text, including electronic dictionaries, smartwatches, and mobile phones, is not allowed.
- Calculators are **not allowed**.
- *All Rights Reserved*. This question paper can NOT be used without proper permission from the University of Colombo School of Computing.

**To be completed by
the examiners**

1	
2	
3	
4	
Total	

- 1) (a) How does multimedia play a crucial role in conducting business online (ebusiness)? Describe briefly using **five (05)** examples.

(15 marks)

ANSWER IN THIS BOX

(b) “Discrete roles might be needed for a multimedia production team”. Briefly describe how IT can be used to perform the following roles:

- I. Project Manager
- II. Multimedia Designer
- III. Interface Designer/ Writer
- IV. Video Specialist
- V. Audio Specialist

(10 marks)

ANSWER IN THIS BOX

2. (a) Write down the formula to calculate the size of a digital audio recording file.

(05 marks)

ANSWER IN THIS BOX

- (b) Briefly discuss the Windows Meta File (WMF) and the Enhanced Meta File.

(05 marks)

ANSWER IN THIS BOX

(c)

Briefly explain **three (03)** different types of colour models mentioning the advantages and limitations.

(15 marks)

ANSWER IN THIS BOX

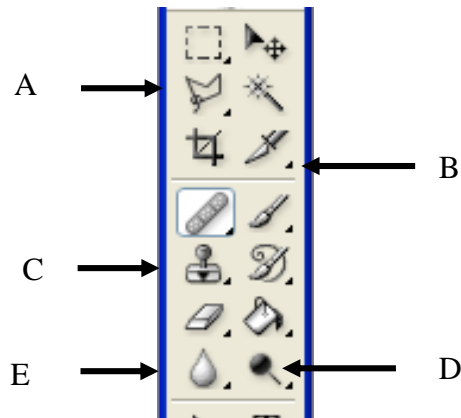
3. (a) Write down **five (05)** functionalities of the Charge Coupled Device (CCD) in a video camera.

(10 marks)

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

- (b) Identify sub-tools in Photoshop for labels from A to E.

(10 marks)



ANSWER IN THIS BOX

A -

B -

C -

D -

E -

- (c) What is the “Lempel Ziv-Welch” Compression algorithm? Explain briefly.

(05 marks)

ANSWER IN THIS BOX

4 (a)

Briefly explain the Dynamic range and the Gamma correction in Photoshop.

(05 marks)

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

- (b) Briefly discuss using an illustration, what is meant by the *Depth of field* .

(10 marks)

ANSWER IN THIS BOX

- (c) Fill in the following table highlighting the difference between Analog audio recording and Digital audio recording using the given key points.

(10 marks)

ANSWER IN THIS BOX

Feature	Analog Audio Recording	Digital Audio Recording
Method		
Media		
Noise & Degradation		
Editing		
Portability		
