# UTHM
### Universiti Tun Hussein Onn Malaysia

# UNIVERSITI TUN HUSSEIN ONN MALAYSIA

## FINAL EXAMINATION
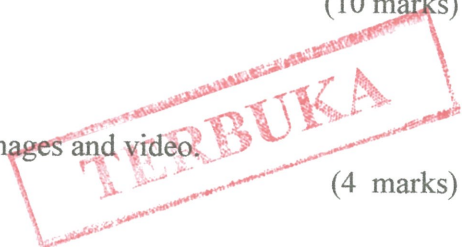## SEMESTER II
## SESSION 2016/2017

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|---|---|---|
| COURSE NAME | : | DIGITAL MEDIA PROCESSING |
| COURSE CODE | : | BIM 33303 |
| PROGRAMME CODE | : | BIM |
| EXAMINATION DATE | : | JUNE 2017 |
| DURATION | : | 2 HOURS 30 MINUTES |
| INSTRUCTION | : | ANSWER **ALL** QUESTIONS |

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

**Q1**    (a)    State the purpose of audio coding.

(2 marks)

        (b)    Explain how do you define an efficient audio source coding algorithm.

(6 marks)

        (c)    Discuss the connection between sound perceptibility in the human ear and masking.

(10 marks)

**Q2**    (a)    Using different scenarios, explain **TWO (2)** situations where dynamic range can occur.

(6 marks)

        (b)    How can you verify that filters are used for 'corrective' equalization, as opposed to creative equalization.

(10 marks)

**Q3**    (a)    Explain the difference between still images and video.

(4 marks)

        (b)    List **TWO (2)** types of video scanning.

(2 marks)

        (c)    Explain the underlying idea of digital video coding/compression.

(10 marks)

**Q4**    (a)    How can motion be detected?

(2 marks)

        (b)    Provide **THREE (3)** examples of application of motion detection.

(6 marks)

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(c) Discuss the similarities and differences between image differencing and background subtraction for video segmentation.

(10 marks)

**Q5** Discuss how video analytics can be applied in providing evidence in cases whereby students were caught cheating during examinations.

(12 marks)

- END OF QUESTIONS -

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