Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2014/2015

COURSE NAME	:	SPECIAL TOPICS IN MULTIMEDIA COMPUTING
COURSE CODE	:	BIM 33603
PROGRAMME	:	3 BIM
EXAMINATION DATE	:	JUNE 2015/JULY 2015
DURATION	:	2 HOURS AND 30 MINUTES
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

Q1 (a) Give **THREE (3)** examples of future technology based on multimedia research advancement.

(3 marks)

(b) Explain **FOUR (4)** characteristics of multimedia system.

(8 marks)

(c) Identify the social and ethical issues associated with education and training in multimedia for the following scenarios:

i. Government and educational sites (particularly universities) are reliable whereas online documents that have unverifiable information are more likely to have questionable integrity.

(2 marks)

ii. Multimedia content is so readily available online, there is even more unease about whether people are being responsible while, for example, at work or school. Many organizations, therefore, have guidelines regarding, for example, the creation, transmission, downloading of any offensive or obscene material.

(2 marks)

Q2 **Figure Q2** shows an architecture of a prototype of a haptic interface for immersive E-Book reading experience.

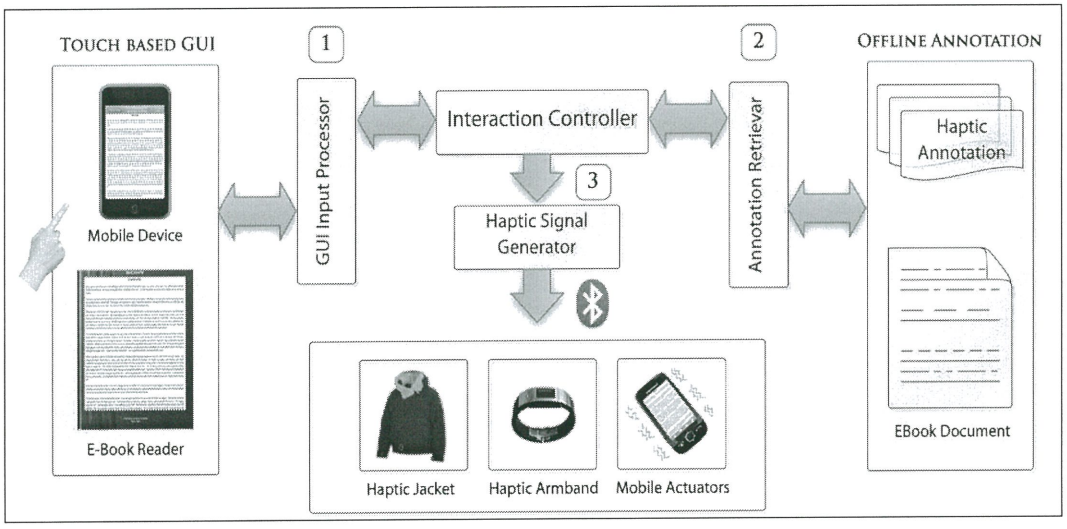

FIGURE Q2

(a) Discuss about haptic interface.

(6 marks)

(b) List **THREE (3)** offline annotation sub modules proposed for the prototype in **Figure Q2.**

(6 marks)

(c) Identify **FOUR (4)** functionalities of touch based GUI.

(8 marks)

(d) Compare **FOUR (4)** differences of roles between haptic interaction and interaction controller.

(8 marks)

(e) Construct a XML based annotation file for the eBook document proposed in **Figure Q2.**

(20 marks)

Q3 **Figure Q3** shows a diagram of the display system components for exploration with live stereoscopic 3D video in mixed reality environments.

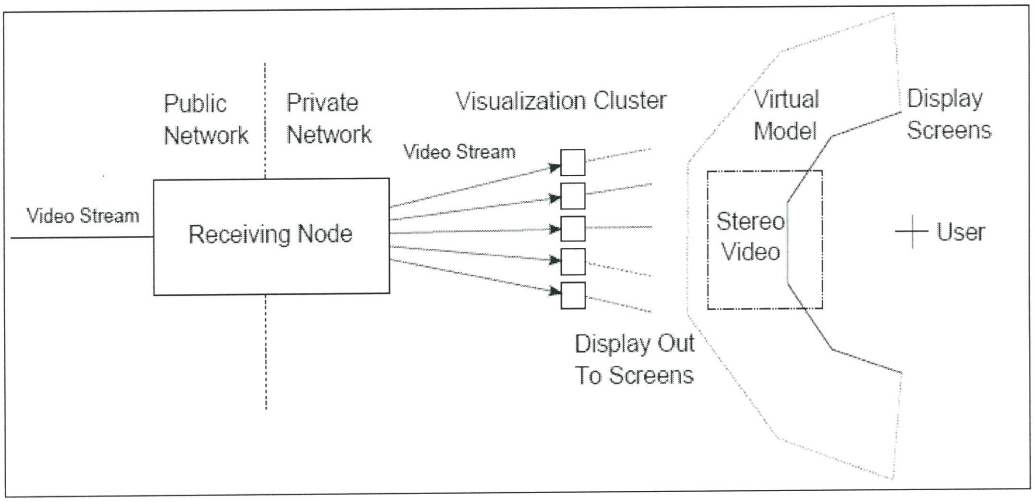

FIGURE Q3

(a) Give **TWO (2)** principles systems to achieve the visualization of live stereoscopic video mixed with virtual models of the environment.

(4 marks)

(b) Identify **ONE (1)** factor contributes to video latency issue.

(2 marks)

(c) Identify how virtual model scene and stereo video are displayed according to **Figure Q3.**

(2 marks)

(d) Suggest **THREE (3)** usage cases that would be used to augment the stereoscopic video feed.

(9 marks)

-END OF QUESTION-