KOLEJ UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF COMPUTING AND INFORMATION TECHNOLOGY

ACADEMIC YEAR 2020/2021

APRIL/MAY EXAMINATION

COMPUTER SCIENCE BACS3033
SOCIAL AND PROFESSIONAL ISSUES

MONDAY, 10 MAY 2021   TIME: 9.00 AM – 12.00 NOON (3 HOURS)

BACHELOR OF COMPUTER SCIENCE (HONOURS) IN DATA SCIENCE
BACHELOR OF COMPUTER SCIENCE (HONOURS) IN SOFTWARE ENGINEERING

BACHELOR OF INFORMATION TECHNOLOGY (HONOURS) IN INFORMATION SECURITY
BACHELOR OF INFORMATION TECHNOLOGY (HONOURS) IN SOFTWARE SYSTEMS
DEVELOPMENT

Instructions to Candidates:

Answer **ALL** questions in the requested format or template provided.

- This is an open book final online assessment. You MUST answer the assessment questions on your own without any assistance from other persons.
- You must submit your answers within the following time frame allowed for this online assessment:
  o The deadline for the submission of your answers is **half an hour** from the end time of this online assessment.
- Penalty as below **WILL BE IMPOSED** on students who submit their answers late as follows:
  o The final marks of this online assessment will be reduced by 10 marks for answer scripts that are submitted within 30 minutes after the deadline for the submission of answers for this online assessment.
  o The final marks of this online assessment will be downgraded to zero (0) mark for any answer scripts that are submitted after one hour from the end time of this online assessment.
- Extenuation Mitigating Circumstance (EMC) encountered, if any, must be submitted to the Faculty/Branch/Centre within 48 hours after the date of this online assessment. All EMC applications must be supported with valid reasons and evidence. The UC EMC Guidelines apply.

FOCS Additional Instructions to Candidates:
- Include your **FULL NAME**, **STUDENT ID** and **PROGRAMME OF STUDY** in your submission of answer.
- Read all the questions carefully and understand what you are being asked to answer.
- Marks are awarded for your own (original) analysis. Therefore, use the time and information to build well-constructed answers.

This question paper consists of 4 questions on 5 printed pages.

STUDENT'S DECLARATION OF ORIGINALITY

By submitting this online assessment, I declare that this submitted work is free from all forms of plagiarism and for all intents and purposes is my own properly derived work. I understand that I have to bear the consequences if I fail to do so.

Final Online Assessment Submission

Course Code:

Course Title:

Signature:

Name of Student:

Student ID:

Date:

Question 1

a)

> TikTok is a short-form, video-sharing app that allows users to create and share 15-second videos on any topic. Its creator, Bytedance, runs a different version of the app, Douyin, in its home market, China. Both versions of TikTok offer a wide selection of sounds and song snippets, along with the option to add special effects and filters. You can also add videos created on your phone. The company promotes the app as a video-sharing social network.
>
> *Quoted from Influencer MarketingHub. 2021*

Discuss constrains of TikTok app by applying the Lessig's **FOUR (4)** Modalities analysis based on the above context. (12 marks)

b) Discuss any **TWO (2)** consequences and strategies to reduce digital inequalities worldwide.
(4 marks)

c) Information Technology (IT) and Operational Technology (OT) have provided smarter decisions to optimize business performances and processes. From your opinion, list and explain **THREE (3)** challenges faced by manufacturing companies while engage in IT/OT convergence process. (9 marks)
[Total: 25 marks]

Question 2

Answer the following questions based on the given *Gambling Addiction* case study:

Case Study on Gambling Addiction

Gambling addiction is the phenomenon of frequent gambling in spite of the fact that the gambler is under the constant risk of losing money. Gambling is the complex of activities which are supposed to provide the person with a chance to make enormous money in the shortest terms and the most common place which is associated with gambling is a casino. Casino is one of the oldest forms of gambling and it is characterized with the fact that people come to this place and play various games with the aim to win money. Of course they have to donate something to be able to win and most often this donation is lost without profit. The spread of popularity of gambling has increased with the development of the Internet because there are many services and organizations which work in the same way as casinos enabling the player to win money without producing the material or spiritual product.

Obviously, the temptation of gaining easy money is very strong and the gambler becomes so involved into the game, that he can lose his money and property being unable to stop on time. Very often the gamblers who have lost everything commit suicide being unable to pay debts or find money for another game session. More than a half of gamblers who try to find money for the game commit crimes of different complexity risking their freedom and breaking the rules of morality. The final stages of gambling addiction are quite sad, because the person practically loses his/her mind and he/she thinks only about gambling experiencing the constant stress, frustration, anxiety, etc. Gambling addiction is the problem which is characterized with the fact that the gambler spends the majority of his/her time gambling or thinking about this activity causing harm to his/her psychological health. The young person who is interested in the problem of gambling addiction is able to learn more about the matter observing the definite case about the problem and studying its details scrupulously.

Source: Acasestudy.com

This question paper consists of 4 questions on 5 printed pages.

Question 2 (Continued)

a)   Discuss a pulling factor for gambling addiction as mentioned in the case study. Provide examples to support your point.   (6 marks)

b)   The case study has indicated that the population of online gamblers has increased with the development of the Internet. Justify **THREE (3)** characteristics of internet gambling that make it potentially more dangerous than betting at a physical location.   (9 marks)

c)   Gambling additions affect gamblers' psychological health is clearly stated in the case study. Recommend **FIVE (5)** ways how parents should handle children who are online gamblers.
                                                                               (10 marks)
                                                                       [Total: 25 marks]

Question 3

a)   Internet Corporation for Assigned Names and Numbers (ICANN) is a global multi-stakeholder organization that was created by the U.S. government and it's Department of Commerce. It coordinates the Internet DNS, IP addresses, and autonomous system numbers and involves the continued management of these evolving systems and the protocols that underlie them. Discuss how ICANN maintains transparency in handling the above mentioned stuff under Internet governance.   (9 marks)

b)   Compare and contrast the role played by World Wide Web Consortium (W3C) and Internet2 (I2) in term of maintaining Internet standards.   (6 marks)

c)   In recent years, user privacy has become an important aspect in the development of the Internet of Things (IoT) services due to their privacy invasive nature.

   i)   How does Malaysian Law protect users' privacy? Justify your answer.   (5 marks)

   ii)   Propose a method on how user privacy protection can be improved in future.   (5 marks)
                                                                       [Total: 25 marks]

Question 4

a)   Azman works as a cleaner in ZOZ City mall. Recently the mall management received a complaint that the mall cleaners sleep in the prayer room during working hours. Therefore the management decided to fix a surveillance camera in the prayer room in the mall. The surveillance system provides online monitoring of the prayer room through cameras recording function 24/7. The mall management didn't put any notice regarding this matter. Moreover the prayer room is used by the mall visitors as well.

     i)   Discuss whether the mall management has violated Azman's privacy.   (5 marks)

     ii)   How should the management differentiate between privacy and surveillance in this case?

                                      (5 marks)

     iii)   Analyze the act of mall management by using Act Utilitarianism and justify whether the management act is considered ethical or unethical.   (5 marks)

b)   Satellites are manmade objects put into orbit. They often affect our lives without our realizing it: they make us safer, provide modern conveniences, and broadcast entertainment.

     i)   Describe how satellite technologies are used for safety purpose.   (5 marks)

     ii)   Justify how the terrorists misuse the satellite technology in the warfare.   (5 marks)
                                              [Total: 25 marks]