UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

MATHEMATICAL MODELLING OF THE SPREAD OF HEPATITIS C VIRUS BEING TRANSMITTED AND RECOVERABLE

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Report submitted in partial fulfillment of the requirement
for the degree of
Bachelor of Science (Hons.) Mathematics
Center of Mathematics Studies
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JULY 2016

ACKNOWLEDGEMENT

IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

Firstly, we are grateful to Allah S.W.T for giving us the strength to complete this project successfully. This final year project was prepared for Faculty of Computer Science and Mathematics, University of Technology MARA (UiTM). Basically for final year student in order to complete the undergraduate program that leads to the degree of Bachelor of Science (Hons) Mathematics.

We sincerely thankful for our dedicated supervisor, Madam Zati Iwani binti Abdul Manaf for the guidance and encouragement in finishing this final year project and willing to supervise us what we need to learn. Her passion for excellence and meaningful insight was inspiring and unrivalled which has been a huge contribution in achieving the mission and vision of this project. We also would like to express our gratitude to our lead coordinator, Madam Wan Khairiyah Hulaini binti Wan Ramli for allowing us to carry out this project successfully. Their contributions are specially appreciated and gratefully acknowledged. The completion of this project could not have been possible without the participation and help from them.

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ABSTRACT

Hepatitis C Virus (HCV) is one of the most popular infectious diseases had been known in the world. HCV is one of the serious diseases that can take our life. There are many factors that cause this infectious disease spread to anyone. SIR model had been used in our project for mathematical modelling of Hepatitis C Virus being transmitted and recoverable. SIR model is very popular model used for spread diseases in many researches that we had referred in finished our project. In our project, we studied the SIR model and we take the initial value of susceptible and infected of HCV and also the parameter from other researcher that use the SIR model in their research. We come out the graph for susceptible and infected as a result.

1 INTRODUCTION

1.1 BACKGROUND OF STUDY

Hepatitis C is the one of serious infectious diseases that affects human's liver. Infection with Hepatitis C virus (HCV) is a worldwide general wellbeing issue. According to the National Health Service (2000), if HCV is not given medical care, it can sometimes cause serious injure to the liver over many years. Be that as it may, with present day medications it is frequently conceivable to cure the disease and a great many people with it will have ordinary future.

The Hepatitis C virus is usually spread through blood to blood contact. World Health Organization (2007) expressed that people groups can get infected with this illness on the off chance that they contact with the blood of an infected person. The infection of HCV additionally can be spread from multiple points of view, for example, exposed sex, sharing syringe, needles and different extras likes cotton, boilers, and toothbrushes furthermore originate from a pregnant lady to her unborn baby. However, Hepatitis C is not spread by informal contact such as embracing, kissing or shaking hands, or by being around someone who is sneezing or coughing. This infection likewise not found in food and water.

Hepatitis C often does not have any noticeable symptoms until the liver has been significantly injured. This means many people have the disease without acknowledging it. World Health Organization (2007) found that the vast majority with an acute Hepatitis C disease do not show any hint of the infection. if Hepatitis C indications do happen, they typically show up inside two weeks to six month in the wake of being presented to the Hepatitis C infection (HCV). Manifestations can be incorporate muscle hurts, high temperature (fever), feeling tires constantly,