

# Academic Exploration Competition

## Winning Entries and Feedback

by The Oxford & Cambridge Society of Malaysia

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### STEM Solution

Explore, design or build a solution to help combat COVID-19 or the effects of measures taken to mitigate it.

#### General comments

- Judges were generally impressed with the quality of some of the submissions, and acknowledged the effort put in by some of the participants in ensuring that points were well-researched and properly referenced.
- However, there were some entries that were a bit of a letdown as they were based on generalities, had poor cross-referencing, or did not have coherent arguments.
- The papers on SIR models had some good aims setting out. However, the overall consensus was that assumptions were not clearly explained, and the link with the mathematical model was not always clear.

**1st** Potential Treatment of Restriction Enzymes to Prevent Virus Replication by Inhibiting Synthesis of Viral Components

- [Yap Lek Yun, Tan Chong Han and Isaac Lim Wan Cheng](#)

Comments:

- The judges felt this was a novel idea, where the latest technology of gene transfer and CRISPR were attempted to be used in the innovation.
- Paper was well written and backed up with evidence / research.
- The authors also acknowledged the potential flaws in their proposed solution, which demonstrates maturity.
- However, there was a question whether this solution might be used clinically as a foreign restriction enzyme would be digested by the human body before it can have any therapeutic effects.

## 2nd Self sanitising, Reusable N95 respirators to Combat Covid-19

- **Ng Wi Rong**

### Comments

- A novel idea where the author attempted to design a mask with antiviral properties that would be 'self-sanisiting' vis-a-vis the materials that would go into it.
- Judges felt the idea was quite practical and innovative in its design, and was well-supported by research and references to literature.
- However, there were some questions as to the actual effectiveness of the proposed materials and indeed the potential toxicity of copper oxide in the mask. Also, it wasn't clear whether this proposed mask would actually have a cost advantage over the disposable N95 masks in the long run

## 3rd Exploring the Applications of Molecular Docking in Developing Novel Therapies Targeting SARS-CoV-2 Binding and Membrane Fusion

- **Ka Yeon Kim**

### Comments

- Although this was not a solution in itself, this was a well structured paper with clear headings and diagrams.
- It was backed by lots of research and had a good conclusion, and showed good understanding of the method.
- There was also a question on how this method would perform clinically.



## Humanities Essay

**What area of our lives do you think will be most indelibly changed by the COVID-19 outbreak and the measures taken to curtail it? What can be done to mitigate or harness the change you have identified?**

### General Comments

- The judges were impressed at the level of sophistication displayed by many of the essay submissions. We were also impressed by the amount of research that had been done by many of the entrants.
- Quite a few essays focused on the impact of Covid-19 on education; another favoured topic was the virus's impact on the economy. Many of these essays were well-crafted, and some contained some highly original ideas for ways to mitigate the impact.
- None of the essays considered Covid-19's impact on the environment or global warming - a topic which the judges would have liked to have seen featured.
- The three winning essays were all distinctive in focusing on areas which few other entrants, if any, had chosen: the impact of Covid-19 on domestic violence, its impact on xenophobia, and its impact on the legal system.

### 1st Wives of the Pandemic

- [Aryanna Kaur Bhinder](#)

#### Comments

- This was a well-written essay that dealt with a highly-emotive topic, domestic abuse, in a coherent and powerful way.
- A lot of evidence was utilised, and it was well-referenced throughout the text.
- Whilst domestic violence is an issue that has existed for a long time, the judges felt that this essay highlighted new aspects that have arisen as a result of Covid-19, and so communicated something new and insightful.
- Overall, this essay was able to combine a passionate and motivating tone with a high degree of academic rigour.

### 2nd Combating Xenophobia

- [Rebecca Lim Shu Ying](#)

#### Comments

- This essay dealt well with a highly complex issue.
- As with the first place essay, the issue of xenophobia has existed for a long time, but nevertheless the author of this essay was able to highlight new aspects in an insightful way.
- The suggestions for ways to mitigate the impact of the virus were extremely pragmatic - for example, the establishment of private hotlines for the reporting of instances of racism, as a way to overcome the reluctance of some communities to report these instances.
- There were some good extensions of existing ideas - for example, extending bystander training (currently done within some companies) to schools.
- Overall, this essay had a highly convincing tone.

### 3rd Taking a Look at Virtual Courts

- [Sudeepta Sarkar](#)

#### Comments

- The judges liked this essay's narrow focus on a very specific issue - the impact of the virus on the court system, and the move to virtual courts.
- The sections dealing with the impact on the 'open court principle' and the changes to the 'nature of advocacy' were thought-provoking and insightful.
- The writer drew on extensive evidence, which was well-referenced.
- Overall, this was a strong, coherent essay.



## Humanities Essay

### Honourably Mentioned

The Effects of COVID-19 on the Education Field

- [Vyshnavi](#)

Comments

Made some admirably pragmatic suggestions that impressed the judges - for example, using the radio and mosque loudspeakers in rural areas to broadcast lessons.

The Ethics and Jurisprudence of Contact-tracing

- [Bryan Tan Wee Chuan](#)

Comments

Was notable for outlining discussions of natural law and legal positivism in a way that was simple and clear to read.

The Driving Force of Mass Media and Fake News

- [Tia Tatyana Yu Ning Foong Siddle](#)

Comments

Made some interesting observations about the nature of subconscious bias.

Changes in Education

- [Ng Yin Joe](#)

Comments

Was an extremely clear and well-structured essay, skillfully blending a mixture of issues and recommendations.

The Human Experience in the COVID-19 Outbreak

- [Lee Ee Jenn](#)

Comments

Stood out for its coherence, perceptiveness, and for being an interesting read. Notable turns of phrase included the following: "pinpointing an area of our lives that has been indelibly changed by the outbreak is a task so straightforward it becomes difficult"; "previously detested routine is what we now desperately need."

The Coronavirus Impact Broken Down

- [Vigneshwaran a// Sundrasagar](#)

Comments

Provided an interesting and readable analysis of the historical reasons shaping America's response to the virus, and started a comparison with the Chinese and Taiwanese responses that the judges would have liked to have seen extended.

The Changes in Economic Thinking which will Influence Global Supply, Accelerated by COVID-19

- **Nigel Leong**

Comments

Was an unusual topic for a school student to choose, yet was handled in an extremely professional and clearly-written way.



## Computer Science

**Develop an Android app that could help control the spread of COVID-19 or negate some of the negative social and mental wellbeing repercussions of MCOs.**

### General Comments

- There was a solid attempt from everyone who participated.
- It showed that all the participants were capable of designing, developing and deploying mobile applications.
- All the entries proved their usefulness by providing Covid19-related information to the user. Several were even capable of retrieving and presenting the up-to-date infection numbers for Malaysia.
- Although targeting different areas and groups of people, all the entries had the potential of being picked up and used by a large number of people. It is clear that some thought had been put into the potential reach of each application.
- Some entries incorporated many features and functionalities into the app. One even included a chat-bot. However, all these features and functionalities were not always integrated in a coherent manner. In these cases, less is more.

### 1st Rona Rush Game App

- **Maximus Abela and Gavin Gan**

Comments

- The winning entry didn't try to do too much.
- It had a straightforward premise and objective.
- The user interface design was simple and intuitive, allowing the user to use it immediately, without having to go through a lengthy tutorial.
- The user experience was fully functional, efficient and logically structured resulting in something that made the user return to the application repeatedly.

### Honourably Mentioned

#### Hand Wash Timer

- **Chong Quok Tern**

Comments

- Another application that didn't try to do too much.

- The user interface was simple and pleasing to the eye without many jarring colours nor too many visual elements competing for the relatively limited on-screen real-estate.

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## Prizes

Cash prizes will be sent to the winners via electronic transfer.  
Certificates and medals will be presented to the winners in person at a ceremony in December if the Covid-19 situation and regulations allow.

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| <ul style="list-style-type: none"><li>▪ <b>1<sup>st</sup> prize:</b> RM500 cash</li><li>▪ <b>2<sup>nd</sup> prize:</b> RM300 cash</li><li>▪ <b>3<sup>rd</sup> prize:</b> RM200 cash</li></ul> | <ul style="list-style-type: none"><li>▪ Certificate and medal</li><li>▪ Prize giving ceremony once it is safe to hold a large-scale function.</li><li>▪ Publication on our website and YouTube channel.</li></ul> |
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**Congratulations and special thanks to all the winners and those who took part. We hope that you enjoyed the academic challenge.**

**A huge thank you also goes to the three teams of judges who spent many hours reviewing and moderating the entries to find our winning entries and those with Honourable Mentions.**

**For further enquiries, please send an email to [president@oxbridgemalaysia.org](mailto:president@oxbridgemalaysia.org).**

**Yours sincerely,**

**The Oxford & Cambridge Society of Malaysia**