

Examiners Report

2019 / 2020 Trinidad and Tobago Chemistry Olympiad Round 2 - Levels A and B

This Report is composed of the following parts:

- Executive Summary
- Conclusions
- Summary of Level A Examination
- Summary of Level B Examination

EXECUTIVE SUMMARY

The first edition of the Trinidad and Tobago Chemistry Olympiad (TTCO) encountered unforeseen and unprecedented conditions due to the Covid-19 Pandemic. Nevertheless, the members of the Steering Committee of the TTCO are excited to present the results of Round 2 of our national tournament, as an endeavour in portraying some sense of academic normality.

We had originally planned on inviting the Top 20 Performers of each level (A and B) to the Department of Chemistry to partake in a two-week long bootcamp in June at The UWI, St. Augustine, which would have combined elements of advanced theoretical and practical / laboratory-based instructions. It is not only us who have been affected. The national preparation of the other countries hoping to send a team to participate in the 2020 International Chemistry Olympiad (IChO) have also been significantly affected.

In an attempt to reward those students who were looking forward to participate in the 2020 IChO (Istanbul, Turkey) and represent their country with pride, the Steering Committee of the IChO decided to host a special tournament this year. It was held on the 23rd - 29th July 2020, and was a Remote Access Exam with only a theoretical component (as opposed to both theoretical and practical exams in previous years). This exam was supervised, and the students recorded for the four hour duration of the exam, in order to maintain academic integrity.

How does this affect Trinidad and Tobago's participation in subsequent IChOs? As per regulations, each country must observe two years of IChO tournament before becoming eligible to send a team to participate. We sent a representative to observe the 2019 IChO in Paris, France. For 2020, we were provided with the opportunity to satisfy the observation requirements by: (i) presenting to the Steering Committee of the IChO on the status and structure of the TTCO, and (ii) remote observation of the online 2020 IChO exam. The former was favourably received.

i.e. We will be eligible to send a team for full participation in the 2021 IChO, currently expected to be held in Osaka, Japan. This bodes well for our nascent TTCO, and the further development of Chemistry in Trinidad and Tobago.

To ensure that participation in the 2020 / 2021 TTCO Round 1 is not limited to only those students who have access to a computer and stable internet, we have decided to tentatively defer Round 1 to January 2021 (instead of November 2020).

We thank the schools, teachers, and students, who through their interest, efforts, and participation have contributed to the 1st edition of the TTCO being a resounding success.

Of those students qualifying from Round 1 to participate in Round 2, there were 139 students in Level A, and 131 in Level B.

Level A	Total Number of Students
Form 3	3
Form 4	33
Form 5	103

Level B	Total Number of Students
Lower 6	65
Upper 6	66

Both exams had structured / essay type questions (in contrast to the MCQs of Round 1) and were of a greater degree of complexity in comparison to Round 1.

Questions 1 and 2: Fundamentals, Stoichiometric Calculations, Inorganic, Analytical, and Laboratory-based Chemistry

Questions 3 and 4: Organic Chemistry

Question 5: Physical Chemistry

The performance across forms (and overall per Level) approximately resembled a normal distribution. Not expectedly, marks on individual questions were generally stratified according to the form level, and hence degree of syllabus completion. Nevertheless, we were pleased to observe the following:

(i) For Level A, the forms 3 and 4 students performed admirably - obtaining higher marks than some of the form 5 students.

(ii) Similarly for Level B, the Lower 6 students outshone some from Upper 6. In fact, of the Top 20 students in Level B, there were *five* from Lower 6.

We must specially congratulate the two significant outliers from the Level B exam:

(i) Dipak Anthony Balladin from Naparima College with 83%.

(ii) Saiel G. Neebar from Naparima Girls' High School with 78%.

The third (3rd) highest mark was 55%. We commend the above two students for the quality of their explanations and reasoning.

CONCLUSION

The interest and performance of the lower level students is a pleasing reflection of the health of Chemistry in Trinidad and Tobago, and our future participation in the International Chemistry Olympiad.

Feedback from students (both in-person, and via messages that they scribbled in their answer booklets) following the Round 2 exam conveyed that they found it challenging and interesting, and were excited for the opportunity to be part of this internationally-supported event.

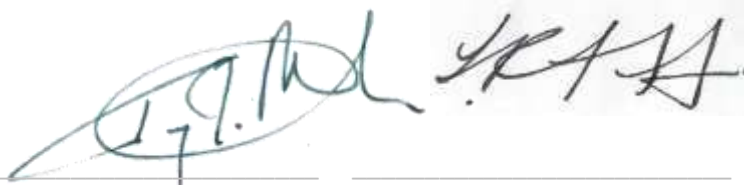
Official details of the prizes that will be distributed to schools and students will be forthcoming.

Once again, congratulations to all participants as we look forward to the 2020/21 edition of the Trinidad and Tobago Chemistry Olympiad!

CONGRATULATIONS!!!



Dr. Nigel Jalsa



Dr. Terry Mohammed Mrs. Laura Rambaran-Seepersad

TTCO Committee Signatures 2nd September, 2019.

SUMMARY OF ROUND 2 LEVEL A

Form 3:

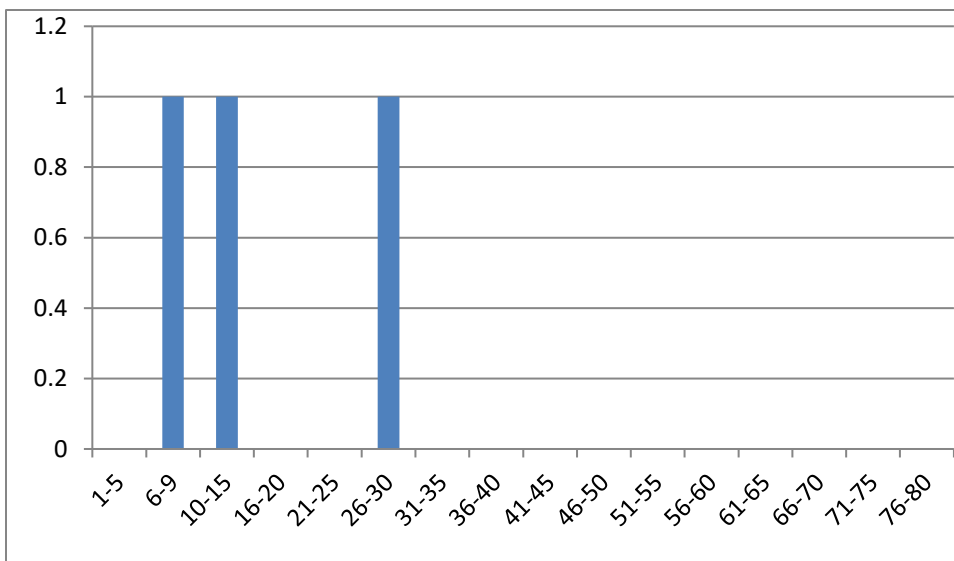
School	Form	Total (%)	Rank
Presentation College Chaguanas	3	27%	1st
Iere High School	3	10%	2nd
Iere High School	3	9%	3rd

Mean for Form 3

15.05

SD for Form 3

10.26

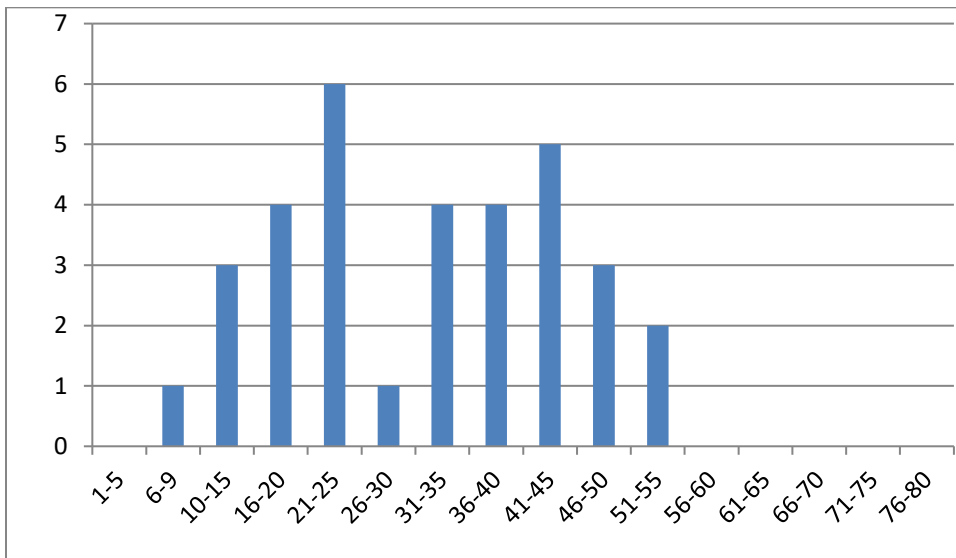


	Round 2 Questions						Total (%)
	1 (20)	2 (34)	3 (8)	4 (7)	5 (24)	Total (93)	
Highest	14	10	0	1	0	25	27%
Lowest	8	0	0	0	0	8	9%
Mean	10.3	3.3	0.0	0.3	0.0	14.0	15%
Standard deviation	3.2	5.8	0.0	0.6	0.0	9.5	10%
Median	9	0	0	0	0	9	10%

Form 4:

School	Form	Total (%)	Rank
Presentation College Chaguanas	4	54%	1st
Presentation College Chaguanas	4	52%	2nd
Hillview College	4	47%	3rd
St. Joseph's Convent Port of Spain	4	47%	3rd

Mean for Form 4 SD for Form 4
 30.37 13.48

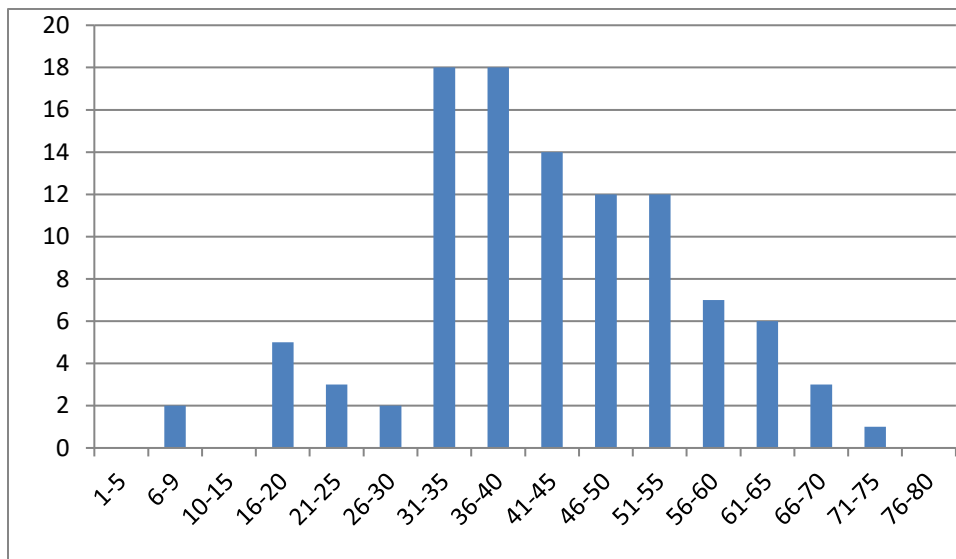


	Round 2 Questions						Total (%)
	1 (20)	2 (34)	3 (8)	4 (7)	5 (24)	Total (93)	
Highest	19	25	2	3	10	50	54%
Lowest	3	2	0	0	0	7	8%
Mean	12.1	12.6	0.4	0.5	2.7	28.2	30%
Standard deviation	3.8	8.2	0.8	0.9	3.1	12.5	13%
Median	12	13	0	0	1	29	31%

Form 5:

School	Form	Total (%)	Rank
Couva East Secondary School	5	72%	1st
Fatima College	5	70%	2nd
Hillview College	5	69%	3rd
Queen's Royal College	5	69%	3rd

Mean for Form 5 SD for Form 5
 42.15 13.36



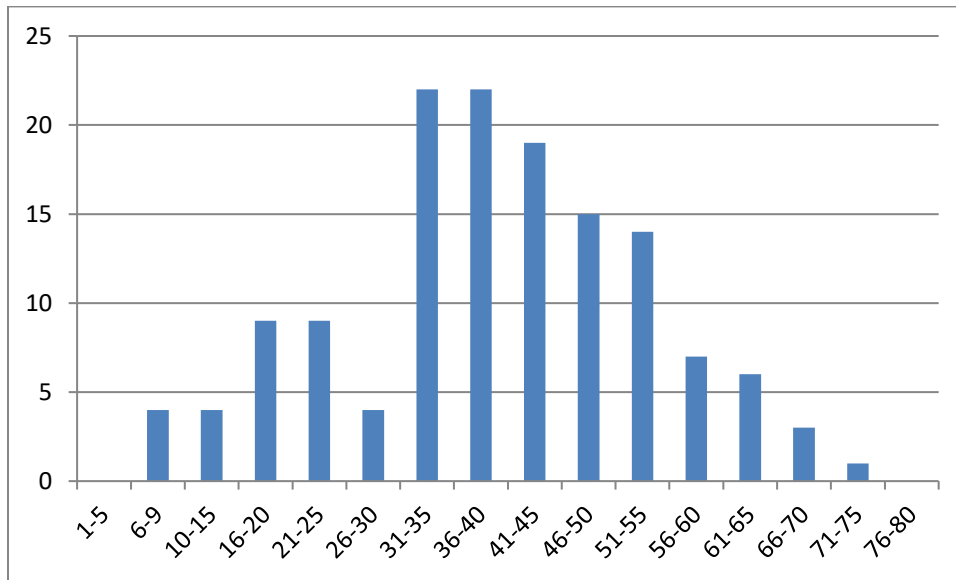
	Round 2 Questions						Total (%)
	1 (20)	2 (34)	3 (8)	4 (7)	5 (24)	Total (93)	
Highest	19	32	8	4	17	67	72%
Lowest	2	1	0	0	0	6	6%
Mean	12.1	19.8	0.9	0.6	5.7	39.2	42%
Standard deviation	3.3	7.3	1.5	0.9	3.7	12.4	13%
Median	12	19	0	0	6	39	42%

Overall Level A Performance:

Mean for Level A SD for Level A

38.77

14.60



Students who would have qualified for Round 3 of the TTCO (Top 20)

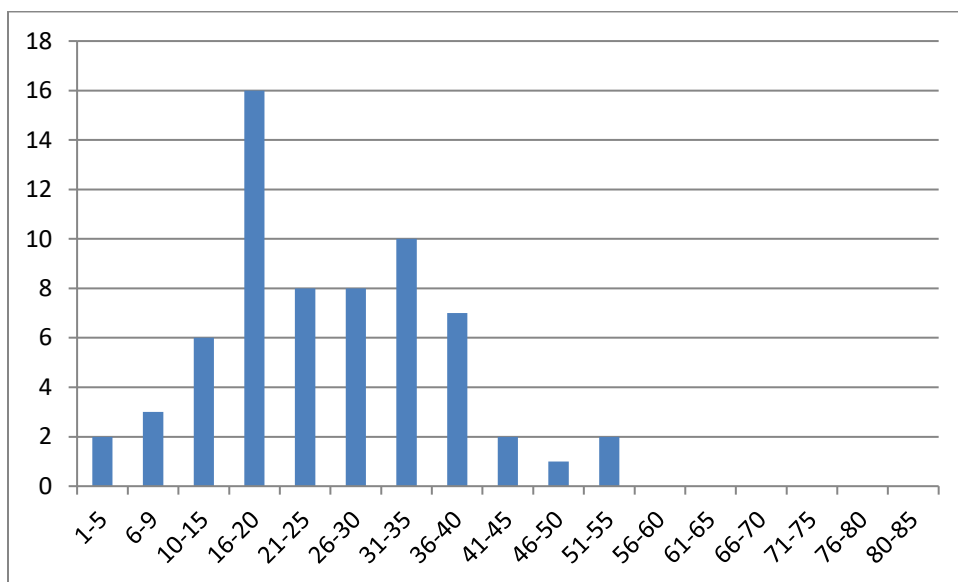
School	Form	Total (%)	Rank
Couva East Secondary School	5	72%	1st
Fatima College	5	70%	2nd
Hillview College	5	69%	3rd
Queen's Royal College	5	69%	3rd
Presentation College Chaguanas	5	65%	5th
Couva East Secondary School	5	63%	6th
St. Augustine Girls' High School	5	63%	6th
St. Augustine Girls' High School	5	62%	8th
Naparima Girls' High School	5	61%	9th
Fatima College	5	60%	10th
Naparima College	5	59%	11th
San Fernando Central Secondary School	5	59%	11th
Fatima College	5	58%	13th
Naparima College	5	58%	13th
Couva East Secondary School	5	56%	15th
Naparima College	5	56%	15th
Naparima College	5	56%	15th
Couva East Secondary School	5	55%	18th
Naparima Girls' High School	5	55%	18th
Presentation College Chaguanas	5	55%	18th
St. Augustine Girls' High School	5	55%	18th
St. Joseph's Convent San Fernando	5	55%	18th

SUMMARY OF ROUND 2 LEVEL B

Lower 6:

School	Form	Total (%)	Rank
Pre-Science N1	L6	55%	1st
Presentation College Chaguanas	L6	52%	2nd
Presentation College Chaguanas	L6	46%	3rd

Mean for Lower 6 SD for Lower 6
 25.01 11.51

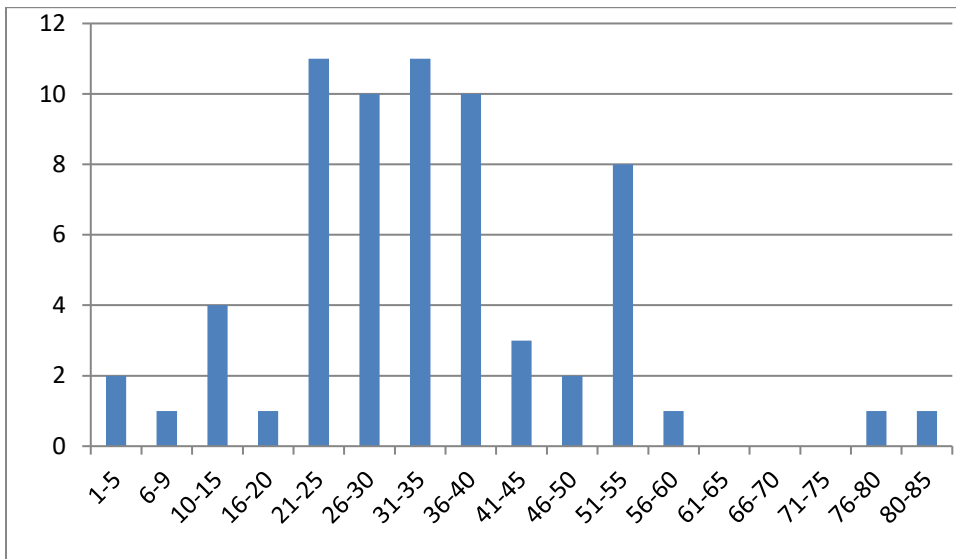


	Round 2 Questions					Total (121)	Total (%)
	1 (17)	2 (47)	3 (6)	4 (21)	5 (30)		
Highest	11	36	6	21	23	66	55%
Lowest	0	2	0	0	0	5	4%
Mean	2.7	15.8	2.5	2.9	6.3	30.3	25%
Standard deviation	2.9	7.8	2.7	3.6	5.6	13.9	12%
Median	2	17	1	2	5	27	22%

Upper 6:

School	Form	Total (%)	Rank
Naparima College	U6	83%	1st
Naparima Girls' High School	U6	78%	2nd
Naparima Girls' High School	U6	55%	3rd

Mean for Upper 6 SD for Upper 6
 32.85 15.64

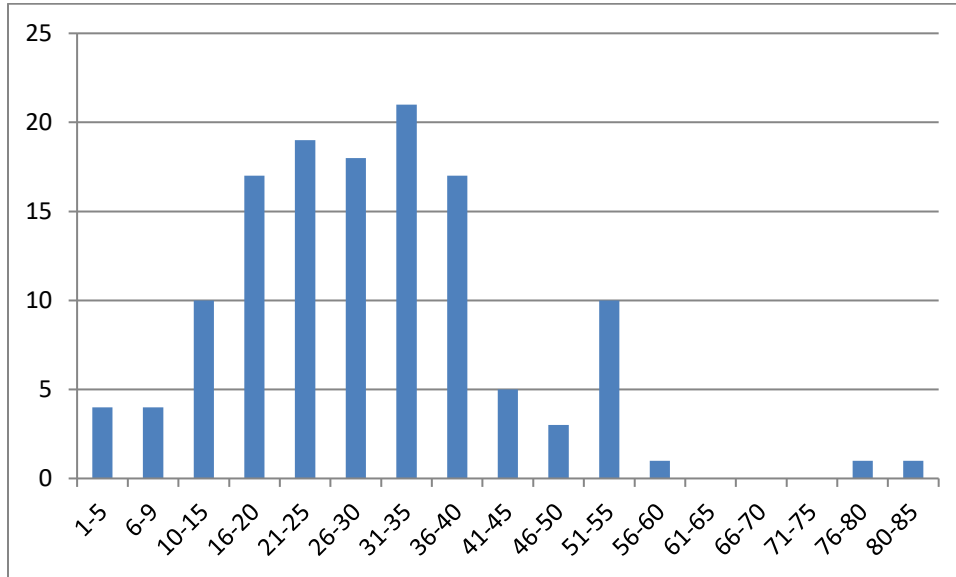


	Round 2 Questions					Total (121)	Total (%)
	1 (17)	2 (47)	3 (6)	4 (21)	5 (30)		
Highest	17	39	6	18	22	101	83%
Lowest	0	0	0	0	0	0	0%
Mean	8.2	15.5	3.8	6.4	5.8	39.7	33%
Standard deviation	4.4	8.2	2.6	4.6	4.9	18.9	16%
Median	8	15	5	6	4	40	33%

Overall Level B Performance:

Mean for Level B
28.99

SD for Level B
14.26



Students who would have qualified for Round 3 of the TTCO (Top 20)

School	Form	Total (%)	Rank
Naparima College	U6	83%	1st
Naparima Girls' High School	U6	78%	2nd
Naparima Girls' High School	U6	55%	3rd
Pre-Science N1	L6	55%	3rd
St Augustine Girls' High School	U6	54%	5th
Naparima College	U6	53%	6th
Presentation College Chaguanas	U6	53%	6th
Naparima College	U6	52%	8th
Naparima Girls' High School	U6	52%	8th
Presentation College Chaguanas	L6	52%	10th
St Augustine Girls' High School	U6	51%	11th
St Joseph's Convent Port of Spain	U6	51%	11th
St Joseph's Convent Port of Spain	U6	51%	11th
Fatima College	U6	50%	14th
Naparima Girls' High School	U6	46%	15th
Presentation College Chaguanas	L6	46%	15th
St Joseph's Convent San Fernando	L6	45%	17th
Naparima Girls' High School	U6	44%	18th
St Joseph's Convent San Fernando	U6	44%	18th
Naparima College	U6	40%	20th
Presentation College Chaguanas	L6	40%	20th

END OF REPORT