

UNIVERSITY OF LAGOS
DEPARTMENT OF COMPUTER SCIENCES
FIRST SEMESTER 2017/2018 SESSION
CSC422: DATA COMMUNICATIONS
TERM PROJECT APRIL 2018

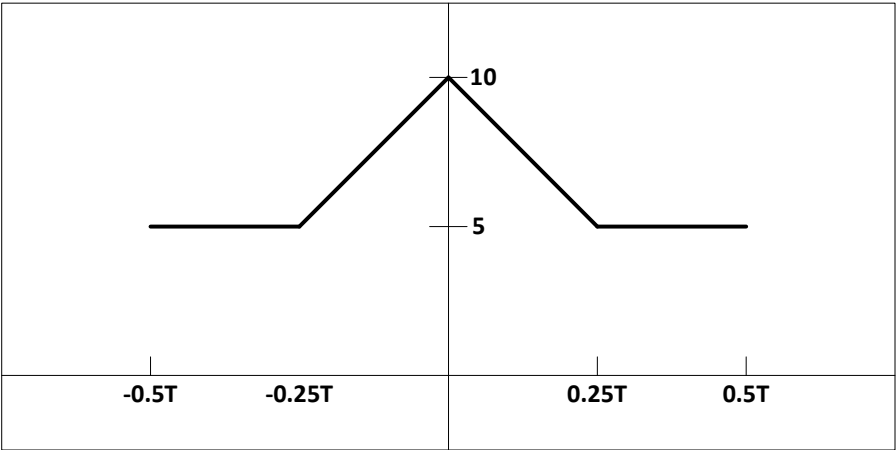
Instruction

- 1 You have been assigned to one of 16 groups. The listing of groups is on page 6 of this document. You and members of your group should implement the specifications below for the periodic signal assigned to your group.
- 2 Report your project as a Word document, typed with the Cambria font. Use font size 14 and 12 for headers and sub headers respectively and font size 10 for text in paragraphs. All equations must be typed on a separate line using the Equation Editor.
- 3 You and members of your group will present and defend your project on May 14, 2018. You will submit your project report immediately after project defence. Project defence will begin at 10.00 am. Each group will be given 10 minutes to present their project.

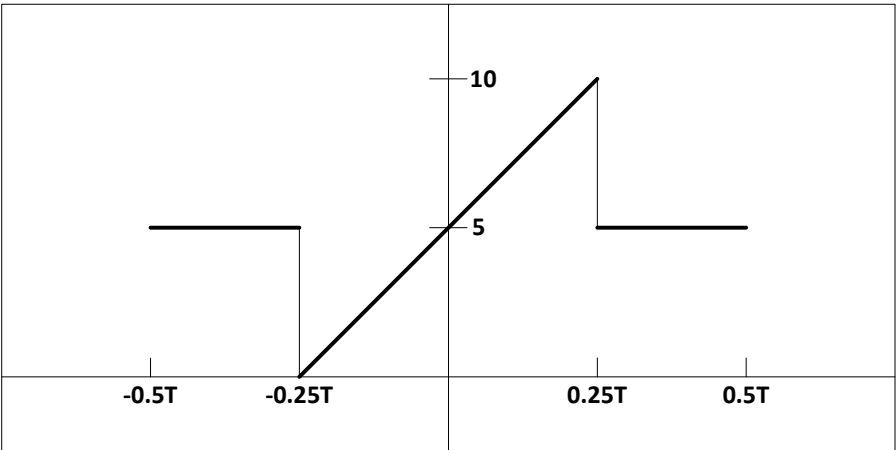
Specifications

- 1 Find the Fourier series expansion of the periodic signal assigned to your group. Report your derivation of its Fourier series in **Section I** of your report. Section I of your report is titled DERIVATION OF FOURIER SERIES FOR PERIODIC SIGNAL X (where X is the number of your group)
- 2 Download Octave and install for the remaining part of this project.
- 3 Using your derivation in Section I, write code in Octave to add the following number harmonics of the periodic signal.
 - i The fundamental and the first 4 harmonics (Figure 1 of your report)
 - ii The fundamental and the first 9 harmonics (Figure 2 of your report)
 - iii The fundamental and the first 29 harmonics (Figure 3 of your report)
 - iv The fundamental and the first 99 harmonics (Figure 4 of your report)
- 4 Plot the sum of the fundamental and harmonics in Octave. Include Octave generated plots in **Section II** of your report. Section II of your report is titled PLOTS OF THE FUNDAMENTAL AND SOME HARMONICS FOR PERIODIC SIGNAL X
- 5 List the Octave code for generating the harmonics in **Section III**. Section III of your report is titled CODELISTINGS FOR GENERATING PERIODIC SIGNAL X FROM ITS FUNDAMENTAL AND A SPECIFIED NUMBER OF HARMONICS
- 6 List all books and references you used in the **Reference** section of your report.

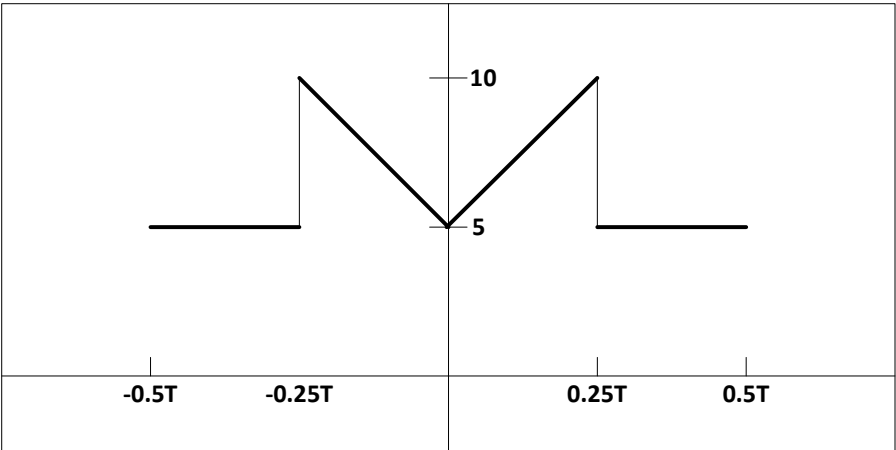
GROUP 1



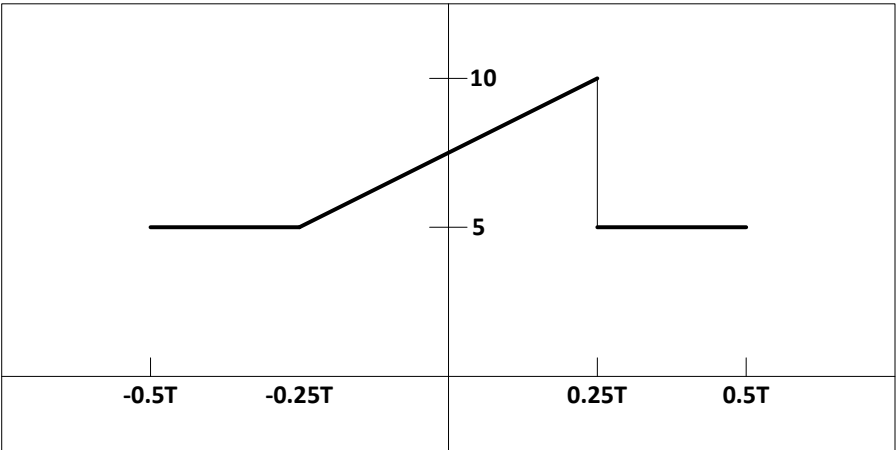
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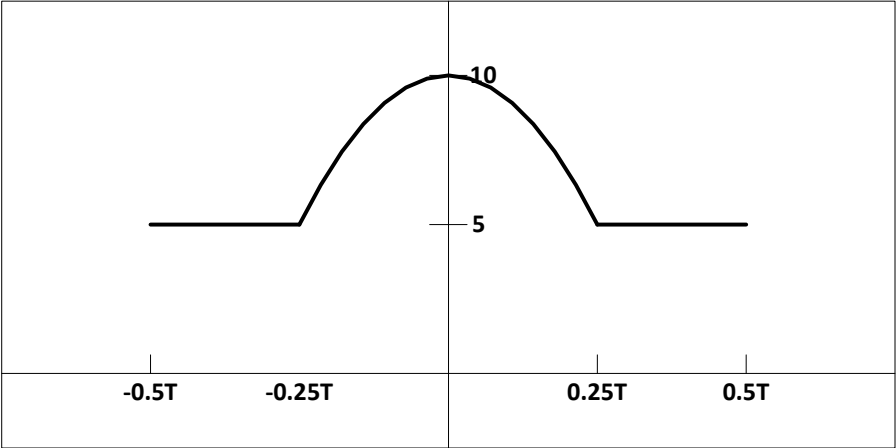
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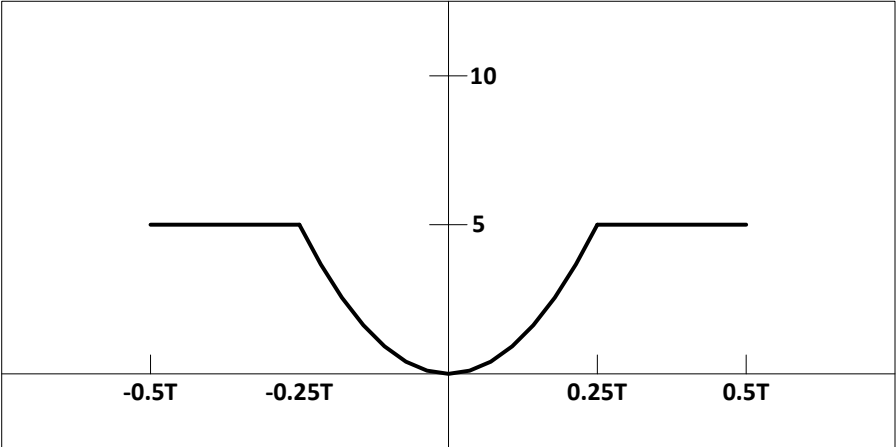
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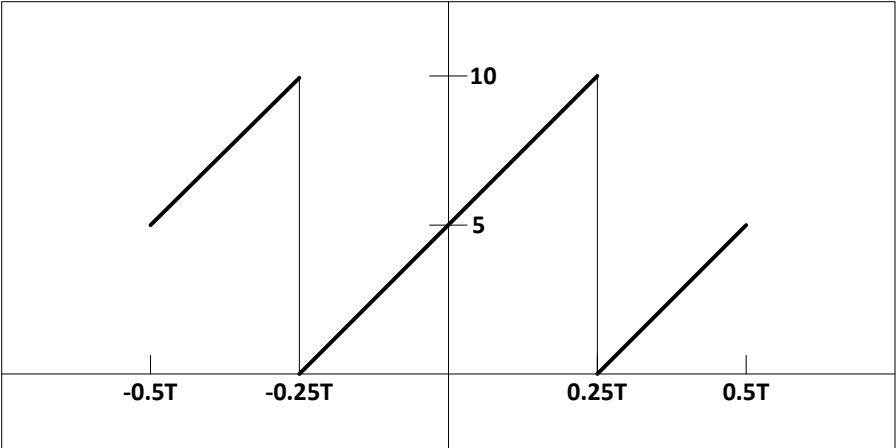
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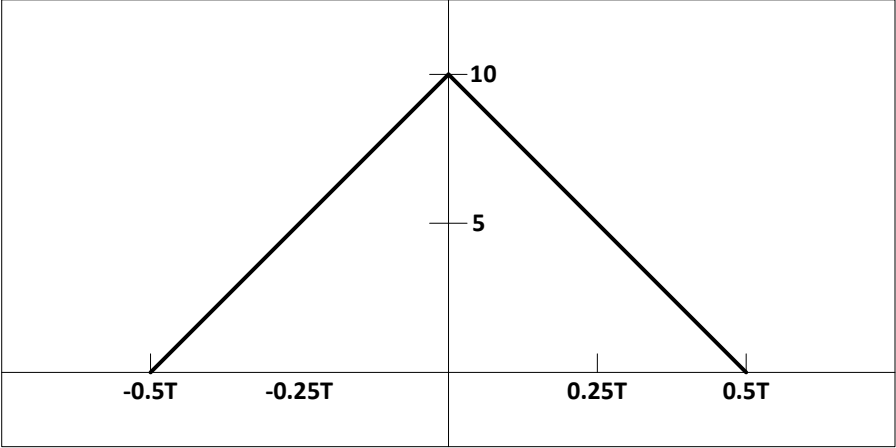
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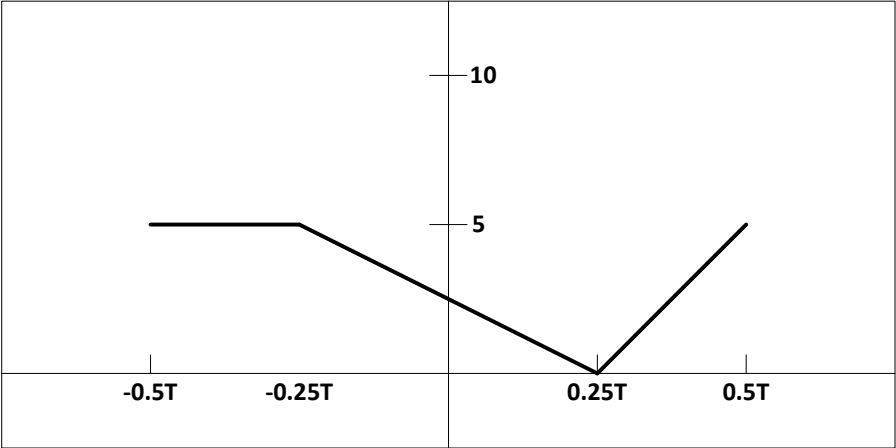
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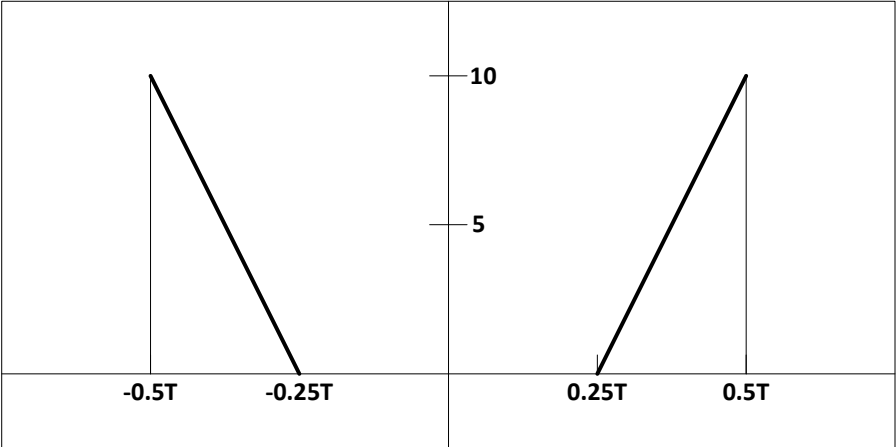
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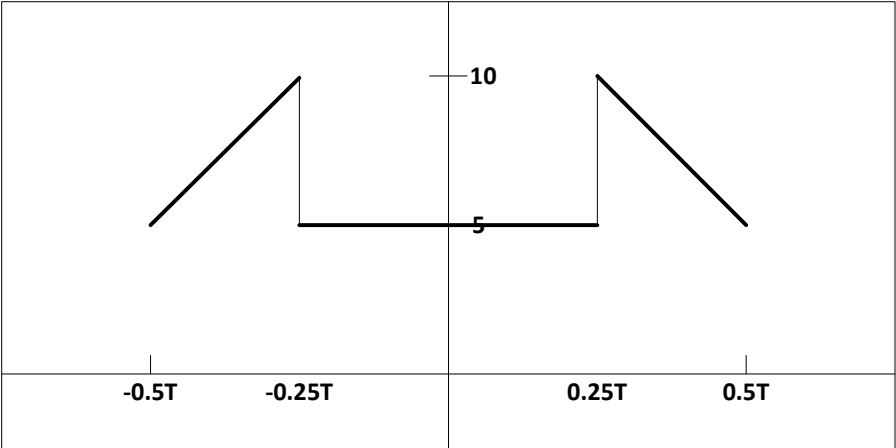
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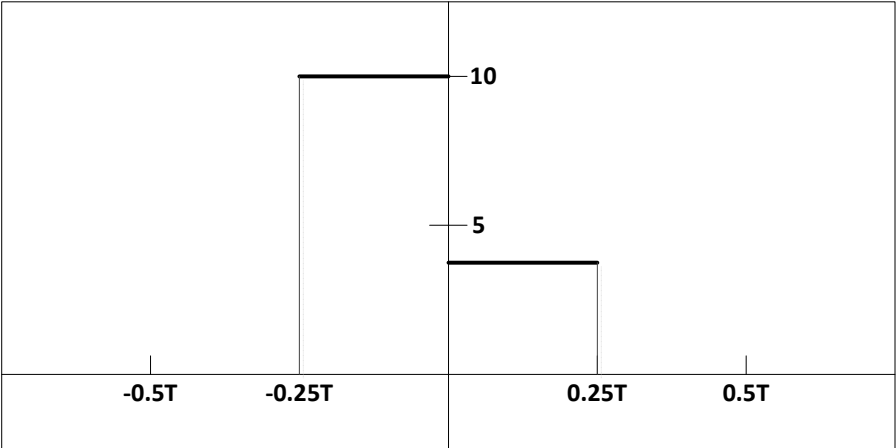
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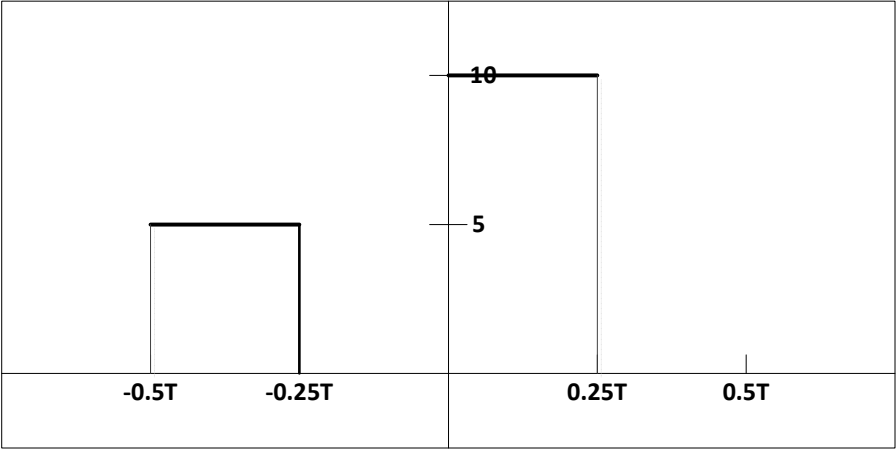
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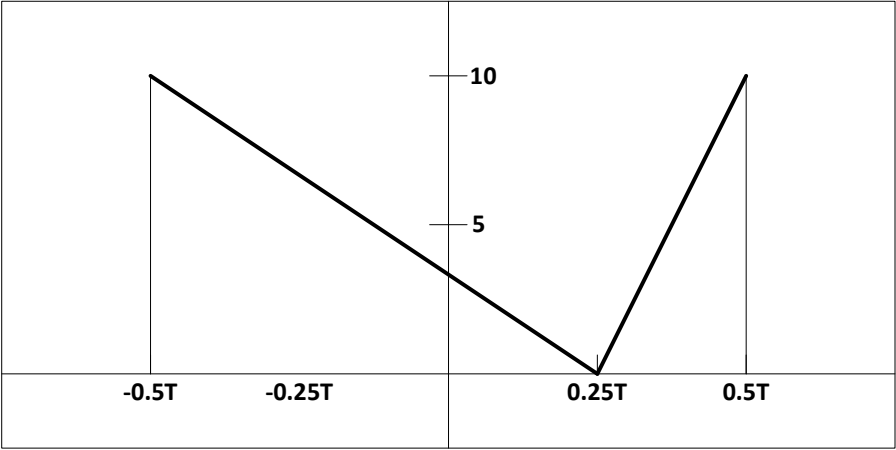
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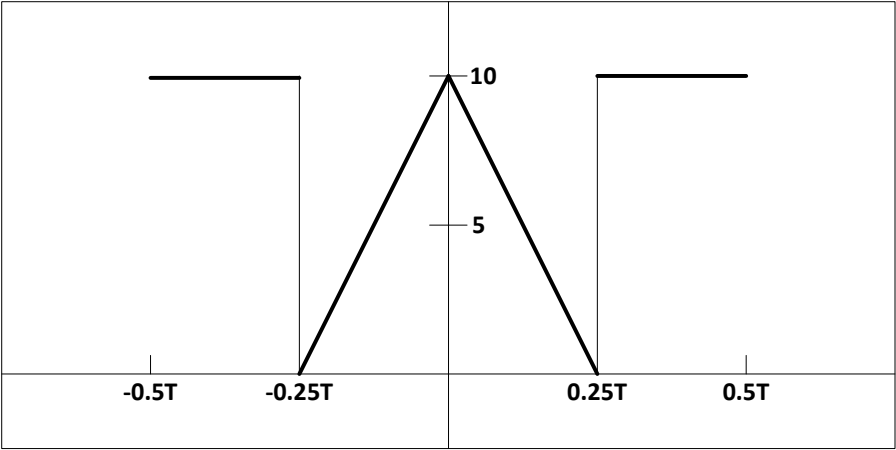
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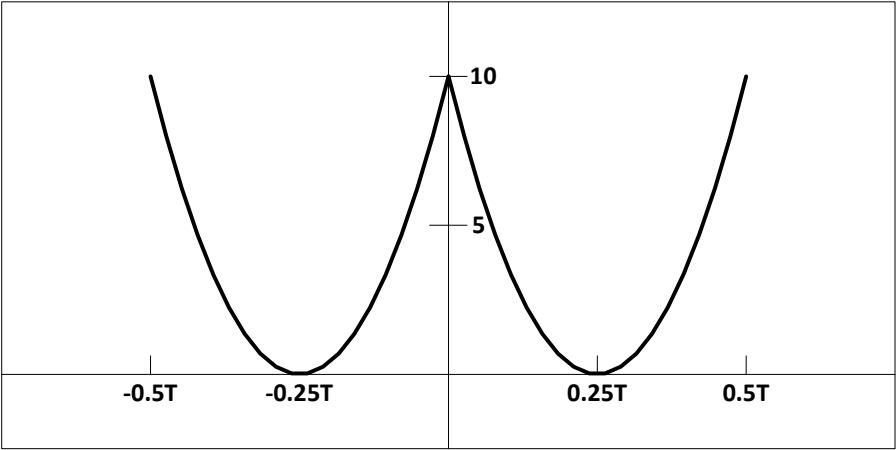
GROUP 14



GROUP 15



GROUP 16



Group 1

140805036	4	ABDULLAH, Abass Anda
140805002	4	ENIKUOMEHIN, Jedidiah Oluwadamilola
140805007	4	KAREEM, Basirat Abimbola
140805039	4	OKOI, Godwin Udumo
140805020	4	SOJIRIN, Seyikemi Nkechi

Group 2

150805508	4	ABUDU, Daniel Olaribigbe
140805021	4	AKINOLA, Olamide Isaiah
150805502	4	EZEoke, Chiamaka Ann
150805517	4	KEKERE-EKUN, Fawaz Kayode
140805071	4	OKOLI, Chinonso J.

Group 3

140805049	4	ACHUGBU, Stephanie Chidera
150805509	4	AKINYEMI, Olumuyiwa Ayomide
150805510	4	EZIUKWU, Raphael Ugochukwu
140805016	4	KOLAPO, Olalekan Ibrahim
140805009	4	OKUNAIYA, Boluwatife Oladele
140805054	4	SULAIMAN, Teniola Faith

Group 4

140805008	4	ADEBAYO-LATEEF, Adetola Mubarak
140805013	4	AKPOBORIE, Oreva Emmanuel
140805046	4	FADENI, Ayoola Praise-Jah
140805012	4	LAWAL, Ahmed Oladapo
140805037	4	OKUSANYA, Taiye Oladamola
140805045	4	TANKO, Stephen David

Group 5

140805038	4	ADEDEJI, Ayomide Elizabeth
150805512	4	ALAMU, Benjamin Oluwaseun
150805524	4	FAKEYE, Adedeji Mogboluwaga
150805505	4	LAWAL, Omotola Ifeoluwa
140805023	4	OLAWALE, Isaac Modade-Oluwa

Group 6

140805042	4	ADELEKE, Ayobami Matthew
140805059	4	ANALOGBEI, Chibueze Chukwuma
150805521	4	FAMILUSI, Samuel Oluwatumilara
150805518	4	MBA-UDEH, John
140805029	4	OLUWALOLOPE, Hope Ayoola

Group 7

140805057	4	ADEMOSU, Oladipupo Adeniyi
140805003	4	AREOLA, Ayomide Emmanuel
140805006	4	FASIPE, Timilehin Michael
150805511	4	ODUBERU, Junior Opeyemi
140805025	4	ONI, Adeola Comfort

Group 8

140805073	4	ADENIJI Dare, Afeez
140805001	4	AWOTUNDE, Oluwaseyi Juliana
140805033	4	OLORUNSHO, Alli Idowu
150805501	4	ODUFUWA, Oluwanifise Ebun-Oluwa
140805028	4	OSELUKWUE, Isaac Chukwuemeke

Group 9

140805018	4	ADENIYI, Emmanuel Ayodeji
140805052	4	BABATUNDE, Oyinkansola
150805522	4	GANSALLO, Oluwaseun Samuel
140805031	4	ODUNTAN, Murtadha Oladele
150805519	4	OSHIN, Ayomide Oluwatobi

Group 10

150805513	4	ADESINA, Ayomide Paul
140805041	4	BAKARE, Olayemi Afeez
140805010	4	GEORGE, Olamide Sylvester
140805034	4	ODUNYEMI, Ayomitide Oluwatosin
140805062	4	OWOEYE, Sodiql Olalekan

Group 11

110805010	4	ADESUNLOYE, Adeola Babatunde
140805014	4	BAKARE, Peace Ekundayo
140805024	4	IDOWU, Oluwaseun Olanrewaju
140805044	4	OGBORU, Favour
140805005	4	OYEKANMI, Paul Oluwadamilola

Group 12

140805027	4	AKINLOYE, Akeem
150805516	4	BASSEY, Atanang Akan
140805030	4	IKELE, Chukwuemeka Emmanuel
140805032	4	OGBUAGU, Marshall Chisom
140805065	4	OYEKEYE, Samuel Oluseyi

Group 13

140805053	4	ADULOJU, Olatomiwa Oluwadamilola
140805056	4	COLLINS-DAVIES, Charles Owolabi
140805067	4	JINADU, Ahmad Adekunle
140805066	4	OGUNLUSI, Victor Ejiko
140805047	4	OZOEKWE-AWAGU, Ifenna Josemaria

Group 14

150805506	4	AINA, Ayotomide Peter
150805523	4	DANIELS, Christian Ekene
140805004	4	JODA, Opemipo Oreoluwa
150805503	4	OGUNYE, Bisola Modupe
150805520	4	RAHMAN, Farid Kehinde

Group 15

150805507	4	AKANDE, Adedeji Moshood
140805051	4	EJEH, Michael Omachoko
140805022	4	KADIRI, Olasunkanmi Oluwatobi
140805063	4	OKEDELE, Promise Caleb
140805048	4	RAJI, Victor Damisa

Group 16

140805040	4	AKINGBADE, Akinwale Micheal
140805011	4	EKESIOBI, Oscar Kenechukwu
140805064	4	KALU, Stephen Uma
150805504	4	OKOH, Promise Isioma
160805515	4	RONE-ORUGBOH, Ajoritsedere