

2019 NESTEC REPORT

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BACKGROUND

Historically, the idea for the National Engineering Science and Technology Essay Competition, NESTEC was conceived after an untoward incident at 2018 International Conference on Exhibition Power and Telecommunication, ICEPT held in Port Harcourt, Rivers State where students who participated in the technical competition were poorly rewarded. To address the reward system and make the competition robust, it was necessary to take off the burden of organizing such an event from NIEEE and rather partner with it.

Thus, NESTEC has the manifold objectives;

1. To unlock the untapped potentials among youths in the field of engineering science
2. Promote research and scholarship among engineering students
3. Encourage and develop capacity for technical paper and essay writing
4. Introduce the students into mainstream trending and advances in engineering science and technology
5. Create local and global opportunities for students and young graduate engineering personnel to showcase their talents.

STRUCTURE OF THE COMPETITION

The competition is structure to allow for participation, engagement, and transparency in outcome. Participation is nationwide and is made to cover all the institutions of higher learning, both public and private universities, polytechnic and monotechnic.

The participants whose papers passed the screening and met the requirements are published on the blog. This enables interactivity between the authors and public. The assessors were also noting responses and could ask questions along with the public. Authors were advised to respond appropriately to questions asked by anyone. The assessors were not known to the authors and even among the assessors their identities were not known till the award day. This was to allow for independent assessment and transparency.

ASSESSMENT CRITERIA

The assessment/grading criteria were based on the following;

1. Originality in idea – 20%

Means paper submitted has fresh, new insight, approach and solution to existing national problem and need

2. Paper meeting the need of the Nigerian society – 20%

Means solutions proffer have the capacity to solve the nation's problem and or meeting her needs

3. Clarity and neatness in presentation – 20%

Means the presentation is clear both in typing and language. The organization is well structure and arrange in a format for easy understanding. Diagrams, charts, histograms, photos etc are used where necessary

4. Technical evaluation of work - 30%

Means technical and or engineering solution is offered

5. Public Interactivity: comments, questions and answers on Engineers' Forum blog – 10%

Means the public is engaged with the subject matter and it elicits much interest and comments albeit positively. The author is active in responding to questions and showing clear understanding to his/her work.

MOVEMENT OF PAPER TO THE LIBRARY

Papers were moved to the LIBRARY (<https://engineersforum.com.ng/category/library/technical-papers/>) from the main page of the blog after 48 hours of visibility for continuous interaction.

Assessors were provided forms to compute their scores and submit to the Technical Committee for final collation and grading on 7th of November 2019. All assessors worked independently.

While we acknowledge that the volume of work was light to deal only on field of specialty, it was expected that assessors can still interact with all authors irrespective of area of specialty. Each assessor was expected to ask each author a minimum of two questions on the paper.

Submission of score sheet was to info@engineersforum.com.ng on 7th of November 2019. However, final score sheet was submitted on the 11th November, 2019. The Technical Committee completed collation less than 24 hours to the event day.

Winners were declared on 14th November 2019 at Sheraton & Towers Hotel, Ikeja, Lagos.

PAPERS SUBMITTED

A total of 150 abstracts were received and 139 papers were submitted. Only 13 papers were published thus automatically qualifying authors to the final. This implies that 126 papers were screened out for not meeting the required standards. It was noticed that most students did not read the published INSTRUCTION. This led to many of the disqualification.

Our projections were to received 500 papers and accept 50% for publishing. This would have required engaging more assessors. The low participation could be attributed to being its maiden edition and low publicity.

ACCEPTED PAPER TITLES, AUTHORS AND VIEWS ON BLOG

SN	AUTHOR	PAPER TITLE	VIEW ON BLOG	SCORE
1	Abdulbaki A. Ahmad	Smart Grid: The Viable Route to Trousing Nigeria's Recurring System Collapses	594	82.33
2	Abednego I. Wakili	Enhanced Oil Recovery (EOR) in Onshore Drilling; Using a Pneumatic System	414	61.33
3	Ukeje Chukwudike C.	Addictive Manufacturing for Components Production in Nigeria: Benefits, Challenges, and Way	178	71.33
4	Ntah Frankline E.	Use Of Biogas In Relevance To The Needs Of The Nigerian Society	524	74.67
5	Iheme Chimaotuodi	Plug-in Electric Vehicles: A Challenge To Nigerian Engineers	1269	65.33
6	Wojuola Oladamola Moses	Additive Manufacturing Technology- An Imperative for Best Manufacturing Practices	1115	80.0
7	Idris Sadiq Musa	A Glove Based System for Hearing Impaired Victims	748	65.67
8	Eze, Ebuka Harrison	Engineer's View on Scrap Metal Recycling in Nigeria	946	73.33
9	Abdulhammed Y. Olayinka	Recycling Of Carbon Dioxide (CO ₂) To Fuel; A Solution To Global Warming	354	74.0
10	Daramola O. Favour	Maritime Industry in Nigeria Challenges and Sustainable Prospect	429	62.33
11	Oluwawemimo Ogunmoyela	A Plastic Road From A Gabrage Patch: The Modern World Of Plastics	271	74.0
12	Ebikemefa E. Clinton	Encouraging Cassiterite Mining By Artisans; A Way Forward For Economic Development In Nigeria	1224	61.67
13	Okereke Oscar	Sustainability in Renewable Energy Production In Nigeria: A Materials Engineering perspective.	652	59.0

PAPERS SUBMITTED PER FIELD OF ENGINEERING

SN	PAPER FROM FIELD OF ENGINEERING	NUMBER
1	Electrical & Electronic	4
2	Metallurgical & Materials	4
3	Petroleum Engineering	1
4	Chemical Engineering	1
5	Biomedical Engineering	1
6	Marine Engineering	1
7	Mining Engineering	1

SCHOOLS WITH ACCEPTED PAPERS

SN	SCHOOL	NUMBER OF PARTICIPANTS
1	University of Nigeria, Nsukka	3
2	University of Lagos	1
3	Kano State University of Science and Technology	1
4	Lagos State Polytechnic	2
5	Abubakar Tafawa Balewa, Bauchi	1
6	Federal University of Technology, Akure	1
7	Bell University of Technology, Ota	1
8	Nigeria Maritime Technology	1
9	Yaba College of Technology	1
10	University of Jos	1

PARTICIPATION PER GEOPOLITICAL REGION

SN	REGION	NUMBER
1	North West	1
2	North East	1
3	North Central	1
4	South West	6
5	South East	3
6	South South	1

MEDIA CAMPAIGN/PUBLICITY

This was done through the following media

1. Online media blog www.engineersforum.com.ng , News Agency of Nigeria
2. Social Media such as Face book, Instagram and Whatsapp
3. Print Media such as Guardians Newspaper, The Nations, Tribune
4. Short video on social media
5. Campus awareness campaign to University of Lagos, Lagos State University Epe Campus, Yaba College of Technology, Lagos State Polytechnic, handbill sharing at Covenant and Bell University of Technology, Ota and participating schools across the country at ICEPT Uyo

LOGISTICS

Finalists outside Lagos state were provided accommodation in a hotel for two nights with meals. Transportation was arranged for their movement between lodging hotel and event venue, Sheraton Ikeja. For finalists within Lagos state, their transport fares were reimbursed.

A buffet was organized for participants and all those in attendance at Sheraton hotel, Ikeja

ASSESSORS

The assessors were chosen from both academic and industry sectors for efficient assessment results. The following persons were nominated as assessors;

SN	ASSESSOR	DESIGNATION
1	Engr. Dr Tolulope O. Akinbulire	Associate Professor, Dept of Elect/Elect, University of Lagos
2	Engr. Dr Adesina A Oluwole	Principal Lecturer, Dept of Mechanical, Yaba College of Tech
3	Engr. Kofo A. Popoola	Principal Lecturer, Dept of Building, University of Lagos
4	Engr Victor Akpan	CEO, Vicak Consults
5	Engr Emeka Ibeh	CEO, Celmar Technologies
6	Engr Austyn Duru	Co-founder and Consultant at Modulus

WINNERS

Winners were given prize money and certificates

1. Abdulbaki Ahmad N300,000
2. Wojuola Oladamola N250,000
3. Frankline Ntah N200,000

All finalists and winners were given Certificate of Participation

PARTNERS

The following professional and student bodies were partnered with

1. The Nigerian Society of Engineers, Ikeja Branch
2. The Nigerian Institute of Electrical & Electronic Engineers
3. The Nigerian Institution of Mechanical Engineers
4. The Nigerian Universities Engineering Students Association
5. Nigerian Association of Polytechnic Students

SPONSORS

There was no sponsor. The event was bankrolled by Blue Apple.

FINANCE

Available on request

OBSERVATIONS

The following observations were made

SN	OBSERVATION	REMARK
1	NESTEC requires wide publicity for more participation	Notice of NESTEC 2020 to be sent to Association of Vice Chancellors and Registrars for wider information dissemination and authentication of event
2	A standard format for technical paper writing to be adopted	Already in place
3	Transport fare of all finalists coming in from outside Lagos to be taken care by promoter	Noted for implementation
4	Event to start early and on schedule	Noted for implementation
5	All finalists to be allowed to present papers on the award day	To be considered if needful
6	Event to hold on weekend to allow for improved students attendance	Noted for implementation
7	Finalists to be given tag on event day	Noted for implementation
8	Certificate of finalists to bear FINALIST and not certificate of participation	Noted for implementation

CONCLUSION

The quality of preparation and organization of the event was applauded. With the successful hosting of the maiden edition without sponsor, for sustainability, Blue Apple through its foundation The Blue Apple Foundation is seeking for corporate sponsor(s).

This, we hope will help to sustain the event at long run and also realize its objectives.

PHOTOS



PIC 1 THE CEO/CONVENER ENGR AKAN MICHAEL GIVING HIS OPENING SPEECH

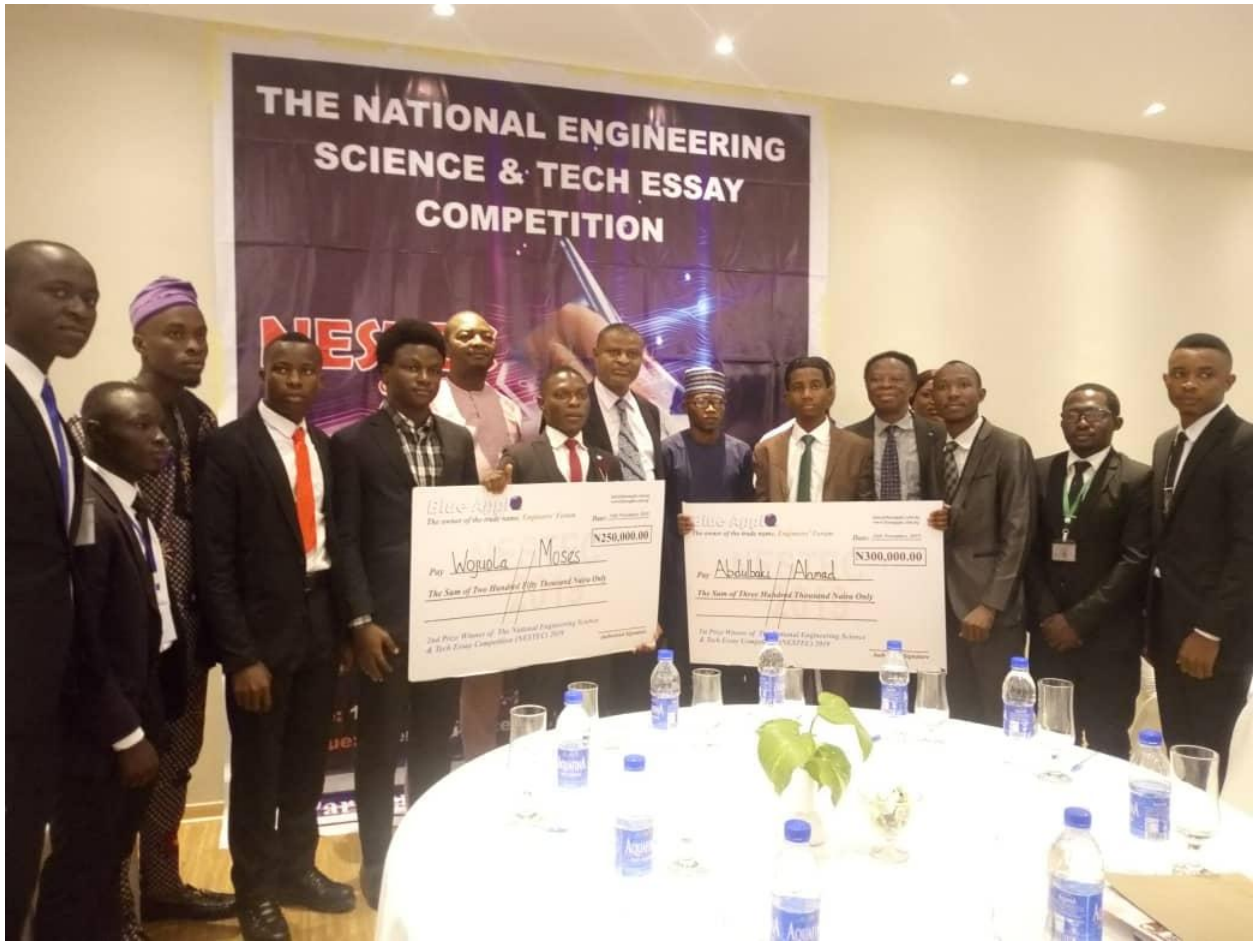


PIC 2 NESTEC FINALISTS BEING ADDRESSED BY MR OLULEKE ADEGBOLA, CEO LAGOS ENERGY ACADEMY WHILE GUESTS WATCHED

NESTEC



PIC 3 FIRST PRIZE WINNER MR AHMAD ABDULBAKI OF KANO STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY MAKING HIS PRESENTATION



PIC 4 PHOTO SESSION WITH WINNERS, THE CONVENER AND GUESTS