



EDITION 1 2019



EETECH NEWS

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UiTM CAWANGAN TERENGGANU
KAMPUS DUNGUN

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WHAT ARE THE COMPONENTS INSIDE FERTILIZER?

BY SHAIFUL BAKHTIAR HASHIM, NORHIDAYATUL HIKMEE MAHZAN, DR SUKREEN HANA HERMAN, DR ZURITA ZULKIFLI.

Agriculture is an important sector in Malaysia. For many years, this sector has been the backbone of Malaysian economy by producing agricultural products for domestic consumption, as the earner of foreign exchange. Agriculture also contributes to the national Gross Domestic Products (GDP). It provides major employment for the people, especially from the rural areas.

Fertilizer is a component applied to the soil or plant in order to add more plant nutrients essential for growth of the plant. The good productivity of crops is directly dependent on soil fertility. Basically, Nitrogen (N), phosphorus (P) and potassium (K) are the macronutrients present in all fertilizers and represent the most important nutrients in agriculture. N, P and K elements in fertilizer is a complex comprised primarily of the [i]three primary nutrients which is required for healthy plant growth.

These three elements nutrients promote the growth of the plant in different ways which N promotes the growth of leaves and vegetation, P promotes root and growth and K promotes flowering, fruiting and keeps regulation of nutrient and water in plant cell. To improve the quality and quantity of crops and to get a good crop, one of the important things that the land or soil has is an adequate fertilizer and also contain sufficient nutrients. Soils that lack of these three nutrients, either naturally or because of cultivation will affect the plant growth. In cases where soils are lacking, nutrients must be put back into the soil in order to create the ideal environment for optimal plant growth. Each of the primary nutrients is essential in plant nutrition, serving a critical role in the growth, development, and reproduction of the plant. In agricultural technology, a variety of tools have been created to help farmers make their agricultural activities and get a good crop. Previous researchers have developed detection of N, P and K devices in soil from various methods, including optical, acoustic, electrical and electromagnetic, mechanical and electrochemical [1-3].

References:

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STEM @ UiTM TERENGGANU

DITULIS OLEH: NORHIDAYATUL HIKMEE MAHZAN,
SHAIFUL BAKHTIAR HASHIM, DR. BAKTIAR MUSA,
NURUL 'UYUN AHMAD, NORIZAN
MOHAMAD, MOHD FADZLI ISMAIL DAN MOHAMAD
TAIB MISKON

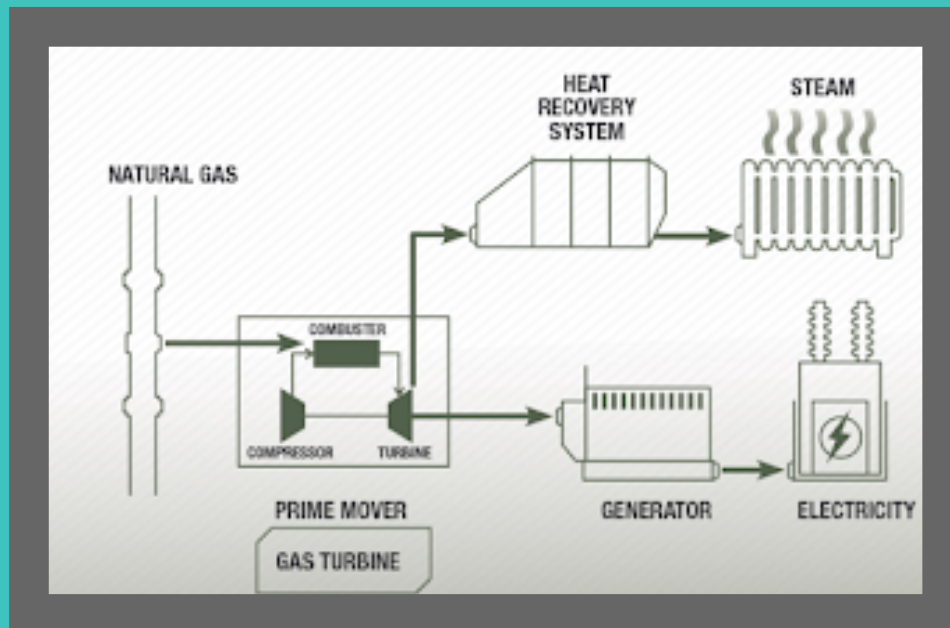
Perkataan STEM adalah berasal daripada singkatan SMET iaitu Sains, Matematik, Kejuruteraan dan Teknologi. Kemudian, National Science Foundation (NSF) meringkaskan pula kepada STEM (Sains, Teknologi, Kejuruteraan dan Matematik) bagi memudahkan penyebutan dan memantapkan maknanya bagi setiap elemen. Di UiTM Cawangan Terengganu, unit STEM diketuai oleh Dr Baktiar Musa sebagai Penyelaras dan dibantu oleh Norhidayatul Hikmee Mahzan, Shaiful Bakhtiar Hashim, Nurul 'Uyun Ahmad, Norizan Mohamad, dan Mohamad Taib Miskon sebagai Fasilitator yang terdiri daripada pensyarah-pensyarah bagi ketiga-tiga kampus (Dungun, Bukit Besi dan Chendering). Terdapat juga mentor mentee dari kalangan pelajar-pelajar dari ketiga-tiga kampus bagi membantu program-program dibawah unit STEM ini. Terdapat banyak program-program yang telah dijalankan dibawah unit STEM ini. Sebagai permulaannya ialah dengan menghantar seramai 5 orang pelajar dari Fakulti Kejuruteraan Elektrik ke Petrosains untuk menghadiri bengkel "Design Thinking Innovation Bootcamp" pada 30/01/2018 - 01/02/2018. Pelajar-pelajar ini akan dilatih dengan pelbagai kemahiran berfikir dan juga kemahiran menyelesaikan masalah. Setelah selesai menghadiri bengkel ini, 5 orang pelajar ini akan melatih rakan-rakan lain dalam program "Training of Trainer (ToT)" bagi mewujudkan satu kumpulan pelajar yang besar untuk unit STEM di UiTM Cawangan Terengganu.

Antara program-program lain yang telah dilaksanakan dibawah unit STEM adalah seperti berikut:

- (a) School Bootcamp for RBTX 2018 Challenge
- (b) Training of Trainer for STEM
- (c) Rangers Petrosains RBTX 2018
- (d) Challenge (Qualification Zone)
- (e) Bengkel Arduino di SMK Teja Putra
- (f) Petrosains RBTX 2018 Challenge (Grand Final)
- (g) Program STEM di SMK Paka
- (h) Hari Kokurikulum dan STEM 2019 di SMK Balai Besar
- (i) Program STEM FKK Bukit Besi Bersama SMK Bukit Besi
- (j) Jalinan Kerjasama (bidang Matematik) bersama SM Sains Dungun
- (k) Program STEM FKM Bukit Besi Bersama SMK Kompleks Rantau Abang

Program yang terbesar dibawah unit STEM adalah "Hari Mentor Mentee @ UiTMCT" dimana program ini melibatkan kerjasama antara Jabatan Pendidikan Negeri Terengganu, UiTM Cawangan Terengganu dan juga 9 buah sekolah yang merupakan sekolah angkat UiTM Cawangan Terengganu. Program ini telah dilaksanakan di Dewan Aspirasi, UiTM Kampus Dungun. Selain daripada itu juga, STEM UiTM Cawangan Terengganu juga terlibat dalam menjayakan program "Minggu Sains Negara" yang telah dianjurkan oleh pihak Pusat Sains Kreativiti Terengganu (PSKT) selama 2 tahun berturut-turut. Program-program yang telah dijalankan dibawah unit STEM ini adalah untuk memupuk minat dikalangan pelajar-pelajar sekolah dalam Sains, Teknologi, Kejuruteraan dan Matematik.

GAS DISTRICT COOLING, CO-GENERATION SYSTEM



BY FATHIAH ZAKARIA

Kuala Lumpur City Center (KLCC), Kuala Lumpur International Airport (KLIA), and Putrajaya are among the high profile development area and national icons that used co-generation system to provide electricity and chilled water (air-conditioner) [1]. Gas district cooling use a central source to supply cooling to a number of buildings instead of multiple individual air conditioner system. This solution provides a very energy-efficient system which offers operating flexibility, noise and vibration free. Co-generation system is self-generating electricity and re-uses waste heat to maximize overall process efficiency. Co-generation is a scenario where simultaneous production of two kinds of energy (electricity and steam) from the same source at the same time. Electricity is generated from the gas turbine. Waste heat from the gas turbine exhaust is channelled to a waste heat boiler to generate steam which is used as primary energy source to generate chilled water. An Auxiliary Fired Boiler is also installed to supplement steam production needed to produce chilled water [2]. The overall co-generation system is illustrated as in figure above.

Chilled water will be distributed through an underground piping system to heat exchangers in buildings. The heat exchangers are used to transfer the chilling energy from the water to the internal building. Cold air is then dissipated within the building via a typical fan coil unit and air handling unit. Then, warm water returns to the heat exchangers for a continuous closed loop cooling process again.

By utilizing the heat from the gas turbine to produce steam, the co-generation system is able to improve the overall efficiency of the plant. If you have chances to be in the KLCC and Putrajaya perimeters, don't forget to have a look at the buildings which have a big amount of steam come out from the rooftop, it might be a Gas District Cooling plants!

References

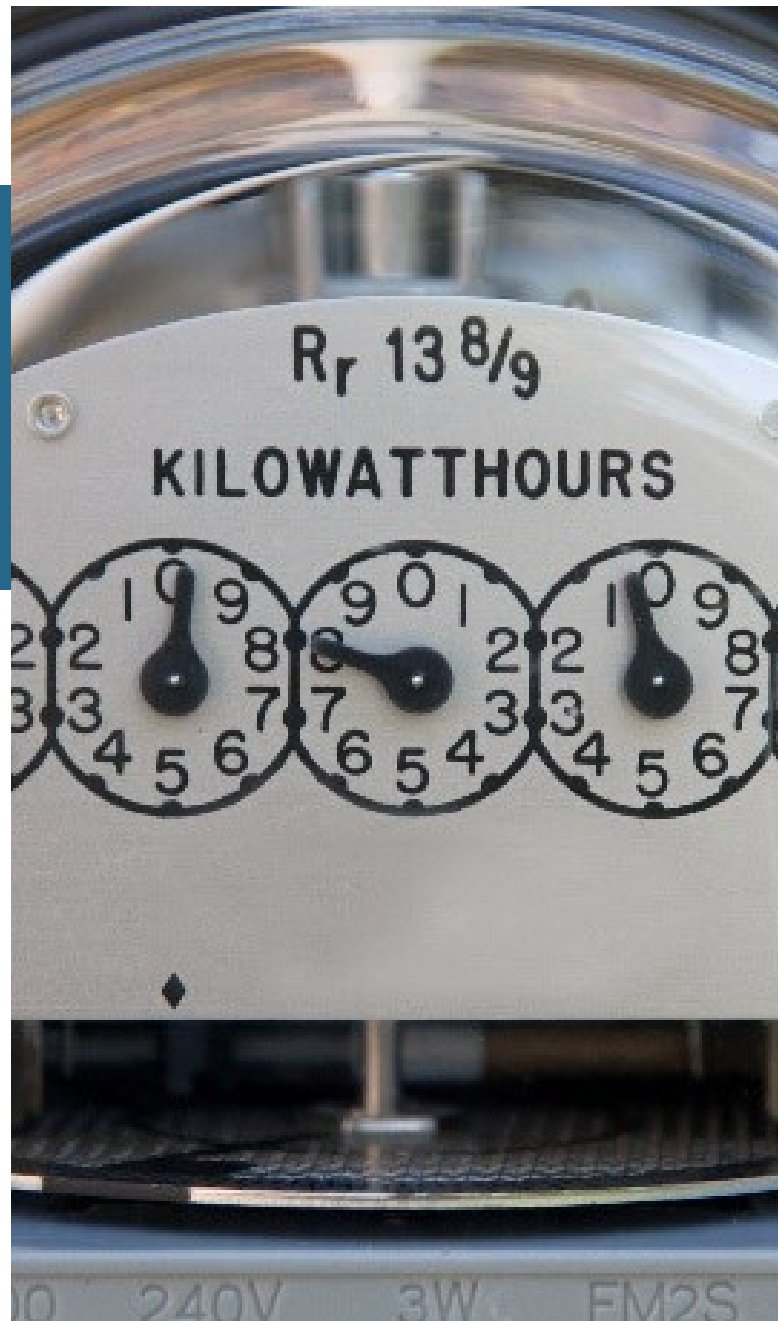
- [1] "Gas District Cooling" Accessed on: 30 October, 2019. [Online]. Available: <https://www.gdc.com.my/>
- [2] "Co-generation system" Accessed on: 30 October, 2019. [Online]. Available: <https://www.gasmalaysia.com/index.php/our-services/new-technologies/combined-heat-power/introduction>

WHAT IS ENERGY AUDIT?

BY AHMAD IZZAT BIN MOD ARIFIN

An Energy Audit also known as "Energy Assessment" or "Energy Study" is defined as an inspection, survey and analysis of energy flows, for energy conservation in a building, process or system to reduce the amount of energy input into the system without negatively affecting the outputs.

Energy audits are a powerful tool for uncovering operational and equipment improvements that will save energy, reduce energy costs, and lead to higher performance. Energy audits can be done as a stand-alone effort but may be conducted as part of a larger analysis across a group of facilities, or across an owner's entire portfolio.



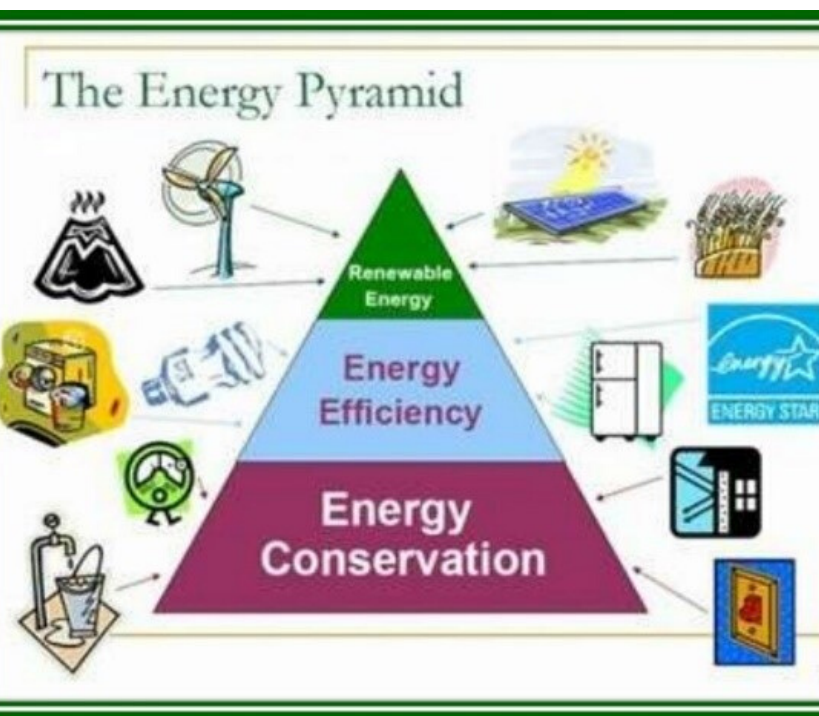
An Energy Audit consists of a detailed examination of:

- Ø How facility uses energy
- Ø What the facility pays for that energy
- Ø A recommended program for changes in operating practices or energy-consuming equipment that will cost-effectively save money on energy bills

The reasons why we need an Energy Audit is:

- v Minimizing energy wastage
- v Optimizing energy efficiency with suitable technology
- v Using the most appropriate energy resources with due regards to environmental benefits
- v Involvement, training and raising awareness of staff

Continuous monitoring to ensure that energy use remains within predetermined limits.





PENGANJURAN SUKAN SEMPENA HARI SUKAN UiTMCT BERJAYA

BY ABDUL HAFIZ BIN KASSIM, MUHD AZRI BIN ABDUL RAZAK

Dungun - Sempena dengan pelancaran Bulan Sukan Negara pada Oktober 2019, Kelab Pensyarah FKE UiTMCT telah bekerjasama dengan Kelab EESA dan HEP dalam menganjurkan program Hari Sukan UiTMCT. Program tersebut telah diadakan bermula 11 hingga 19 Oktober. Program ini terbuka kepada semua staf dan pelajar UiTMCT serta jemputan daripada wakil industri dan sekolah-sekolah berhampiran. Pihak Kementerian Belia dan Sukan Negeri Terengganu juga turut bermurah hati menaja hadiah-hadiah bagi

pemenang-pemenang daripada acara-acara yang dipertandingkan. Terdapat 11 acara yang dipertandingkan dalam program Hari Sukan UiTMCT yang melibatkan sebanyak 631 penyertaan.

Acara-acara tersebut boleh dirujuk pada Jadual 1

Bil.	Acara	Jumlah Peserta
1.	Badminton Beregu Lelaki	32
2.	Badminton Beregu Perempuan	32
3.	Futsal Lelaki	112
4.	Futsal Perempuan	36
5.	Ping Pong Beregu Lelaki	26
6.	Ping Pong Beregu Perempuan	18
7.	Bola Jaring	108
8.	Carom	20
9.	e-Sport (mobile legend)	120
10.	e-Sport (CS-GO)	60
11.	10-pin Bowling (individu)	67
	Jumlah	631

JADUAL 1

Objektif utama penganjuran ini adalah untuk mengeratkan silaturrahim antara semua staf dan pelajar UiTMCT. Selain daripada itu pertandingan ini juga diharap dapat memupuk semangat kesukanan yang tinggi dan membentuk peribadi dan sahsiah diri yang baik. Dari penganjuran ini juga, bakat baru dapat dicungkil dari kalangan staf dan pelajar. Ini memberi banyak pilihan kepada jurulatih untuk memilih pemain-pemain bagi mewakili staf dan pelajar, masing-masing dalam pertandingan Karista dan Karisma. Pencarian bakat-bakat baru ini sangat penting sebagai pelapis kepada pemain-pemain yang sedia ada dan secara langsung dapat menaikkan nama UiTMCT di peringkat yang lebih tinggi.

Malay Wood Carving with Floral Element Motive

BY DR MOHD ZAMRI JUSOH

There are various types of motive embedded to Malay wood carving. However, the original idea came from the development of Islamic civilization in the Middle East of Asia. This explains why the motive of arts which are basically growth up from such beautiful and meaningful calligraphic writing, then to be expressed in the architectural monuments and buildings to generate the highest level of Islamic art terminology [1]. Furthermore, at the early age of the arts and design for wood carving, the wood carvers used the Islamic technology approach to improvise the art to higher level, including the geometrical motive with spectacular shapes and designs. In Malaysia, one of the most beautiful and popular pattern in wood carving is the floral motive. The floral motive is the expression by the wood carver based on nature of floral elements that can be founded in their living areas. Any competent wood carver can interpret and generate such intricate floral elements in their product based on his own inspiration [2]. The interesting part is, a good wood carver can redraw the floral element and even makes it more attractive by adding their own styles and techniques to the wood carving product so that the wood carving product is beautiful and has many striking features compared to the actual floral elements. The wood carver in Malaysia has an enormous contribution to the wood carving with floral pattern. Usually, they use a small part of any actual floral element and then modify the whole picture by using their own imagination [3].

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Basically the floral motive is based on every part of the floral element can be easily observed in the nature of floral element in surrounding environments[4].The basic elements in wood carving with floral pattern are listed as follows: [5]

- i. Sources
- ii. Stems
- iii. Leaves
- iv. Flowers
- v. Fruits

The sources are the most important element in any wood carving with floral pattern. The sources can be determined as the starting point or the first element of the whole floral element. Based on observations, the floral can be growth in natural substances such as soil, vase, water, seed and main flower. Another element that is so important for the floral pattern is the stem. The stem is related to the branches, sticks and twigs of trees. The size and diameter of the stem in any wood carving with floral pattern is not a matter, but the variation of shape and direction of the stem can shows the physical character of the whole floral element used in the wood carving product. In many ways, the leaves can be one of physical complement that can be used by wood carver to decorate and design any species of floral existence. The leaves can be drawn and carved at anywhere in the wood carving panel as it can be used to cover any empty place in the wood carving panel. The flower element is the main character in any wood carving with floral pattern. This is because the flowers are the most beautiful part of the wood carving product. The wood carving with floral pattern still includes some numbers of flower element located whether at the middle of the wood carving panel or usually located symmetrically with each other. The fruits element in wood carving with floral pattern is another element that is important to complete the floral motive for a single plant. The shape and characteristic of the fruit element usually based on the actual shape of the fruit for such plant species.



A CARVED WOOD PANEL WITH MAIN FLOWER WITH THE MOTIVE OF 'BUNGA MAS'

HEALTHCARE ACOUSTICS

BY DR MOHD ZAMRI JUSOH

Unhealthy acoustic environment in hospital can affect patient's recovery. Any excessive sound sources that come from the surroundings might affect patient's sleep pattern, increasing stress and less tolerance to pain and healing process. Hospital should be the most quiet public place and so peaceful. Since it is a place for healing process, it is important to be perfect acoustically to provide good healing environment. One important area, which is, Healthcare Acoustics can help the hospital to be the perfect place for healing and help the patients enjoy the treatment until they are cured completely. The sources of sound energy in hospital are from the occupants, hospital's equipment and also come from other environment such as the nearby roadway, noisy air ventilation, generator and even the renovation and construction job. Generally, the building design can affect the noise level (Stichler J.F et al., 2001). In several studies (Hodge B et al., 2008, Tsiou C. et al., 2008, Healy A.N. et al., 2007, Christensen M. et al., 2004, Shankar N et al., 2001), some noise sources in the operating room were identified caused by the trolleys movement, doors opening and closing and also the metal tools handling by the medical staff. Any exposure to excessive unhealthy acoustic environment might affect patient's memory, high level agitation and less tolerance to pain (Alison E. et al., 2001). At noisy places also can produce less effectiveness to the medical staff. An ideal place for the patient to relax, that not exceeds the sound level of 35dBA (Alison E. S. et al., 2001) which is the noise level recommended by World Health Organization (WHO). Any operating room with more medical equipment can produce sound level up to 50-75dB (Hod ge B. et al., 1990). To assure the patients satisfaction and help the recovery and healing process, it is important to improve the noise level in every place in the hospital. However, each place contains different function and requires specific acoustic solutions. Common important places in the hospital are the Intensive Care Unit (ICU), consulting room, ward room, operating room, reception and admission area and also the corridor.

Intensive Care Unit (ICU)-This is the most sensitive area since patients will have extra care and monitoring by medical staff. Speech intelligibility is important to assure effective two-way communication between the medical staff to avoid any error. The quietness can help the medical staff to support and detect any calls from the patients and handle the patient needs.

Hospital Consulting Room-Speech intelligibility is the main focus in this room for both patient and the medical staff. Confidentiality is important during the consultation process.

Ward Room-This place should offer quiet and peaceful place to patients to endure their healing and recovery process. Since the recovery process may take a long period, the area should provide the patient's privacy and proper rest at the highest level. However the selection of the sound insulation material in this place is critical to avoid the building component to house germs and viruses and cause more problems to the patient.

Operating Room-Two way communications is vital in this room to avoid miss-communication that can guide to fatality. The quietness of the area can give a relaxation to the patients thus eliminate the stress level so that the patient and the medical staff can go through the operation process accordingly.

Reception and Admission Area-This is the busiest place in the hospital. This area is heavily crowded by patients, medical staffs and also visitors. To reduce the stress is important in this place since this area need to support good guidance and communication to the occupants.

Corridor-The sound generated by the occupants along the corridor may interrupt and disturb other areas in the hospital.



Image source: <https://dissolve.com/stock-photo/Acoustic-stethoscope-results-various-tests-done-royalty-free-image/101-D943-25-930>

As shown on Table 1, most of the areas in the hospital are recommended to be as low as 40 dB except in ward area for 35 dB since this place require good aural environment to support good rest and sleep for the patient (Yang T.K. , 2011). The recommended reverberation time is between 0.4s to 0.7s for most areas in the hospital.

A good hospital acoustic can assure the effectiveness of the hospital and can offer such an ideal place for patient to heal and recover their injuries or diseases. However the selection of the material of the building component is also important to provide best HealthCare Acoustic for each type of facilities in the hospital. This can be achieved through proper design and specification during the planning and designing process.

Type of facility/ occupancy	Recommended design sound level (dB)		Recommended reverberation time
	Satisfactory	Maximum	T (s)
Intensive care wards	40	45	0.4-0.6
Consulting Rooms	40	45	0.4-0.6
Wards	35	40	0.4-0.7
Operating theatres	40	45	Based on specialist advise
Reception and waiting areas	40	50	0.4-0.7
Corridors	40	50	0.4-0.6

Table 1: Recommended Design Sound Levels for several areas in Hospital Buildings

(Australian/New Zealand Standard™ AZ/NZS 2107:2000)

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JOM BERFIKIR

A lily pad grows so that each day it doubles its size.

On the 20th day of its life, it completely covers a pond.

On what day the pond half covered?

PELAKSANAAN MODUL CELIK FIKIR SESI 1 2019/2020 (MINGGU INTERIM)



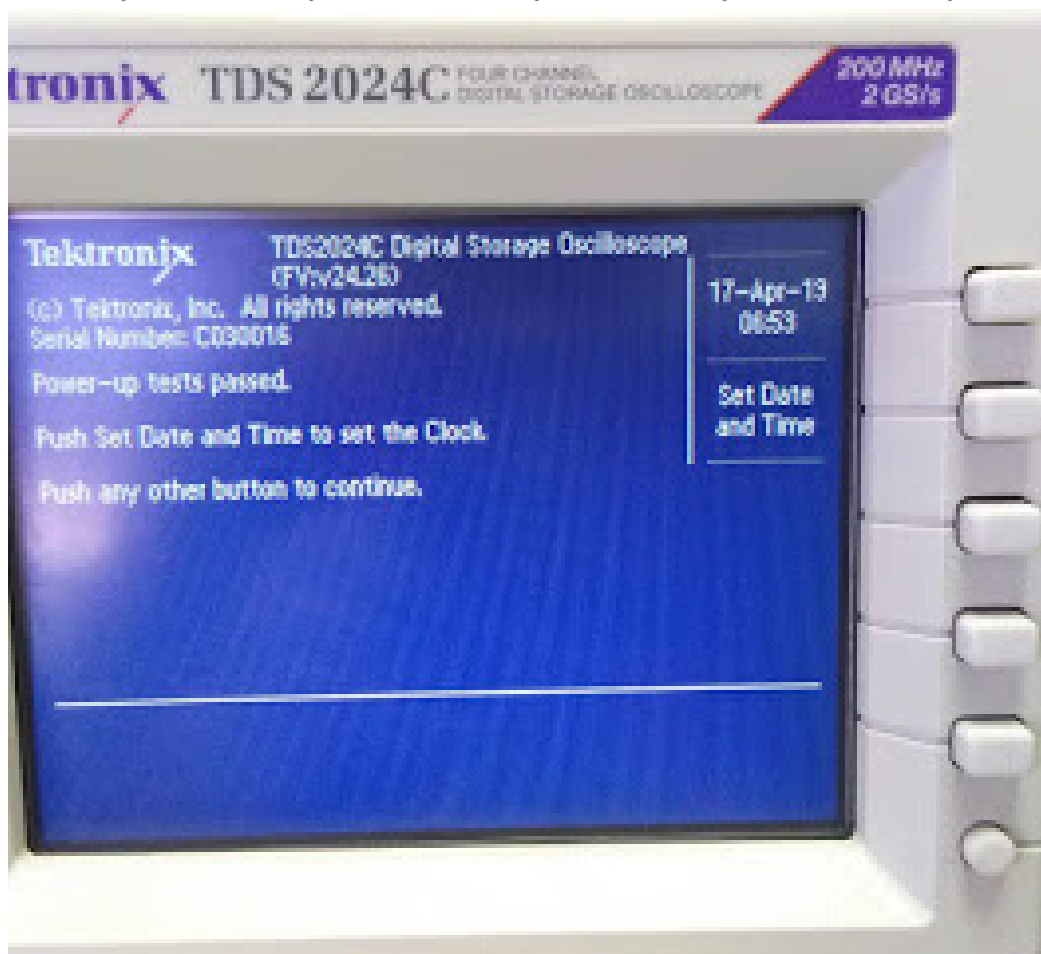
DITULIS OLEH: KU SITI SYAHIDAH KU MOHD NOH, NOORADZIANIE MUHAMMAD ZIN & NAJWA NASUHA MAHZAN

Pada 25 Julai 2019 bertempat di Dewan Kuliah Anggerik, UiTM Kampus Dungun telah berlangsung sesi perkongsian mengenai "Mengapa Perlu Berfikir?" dan "Asas Berfikir Kreatif". Seramai tiga orang Fasilitator dan 90 orang pelajar baru terlibat bagi slot ini. Modul ini diperkenalkan bagi menghasilkan pemikiran yang kreatif dan inovatif dalam kalangan pelajar. Selain itu, melatih pelajar untuk berfikir secara kritis sesuai dengan pendekatan universiti bagi menjadikan graduan diploma UiTM ini terus bersedia untuk memasuki dunia pekerjaan dan bukan hanya menjadi 'feeder' kepada program ijazah untuk universiti semata-mata.

Di dalam sesi perkongsian ini, beberapa aktiviti telah diadakan seperti Jom Berfikir, Kahoot! dan Si Hitam & Si Putih. Namun, pelajar telah diberi tugas yang lebih mencabar untuk disempurnakan iaitu samada mencipta lirik lagu, logo, poster atau video pendek. Objektif tugas adalah untuk memupuk semangat bekerja dalam kumpulan serta menggalakkan pelajar untuk meneroka daya imaginasi, kreativiti dan seterusnya meluahkan idea-idea mereka. Setiap tugas pelajar akan dinilai oleh Fasilitator untuk melihat sejauh mana keberkesanan Modul Celik Fikir ini dilaksanakan.

FUNCTIONAL CHECK OSCILLOSCOPE

BY SITI KHADIJAH HASAN



Perform this quick functional check to verify that your instrument is operating correctly.

1) Turn on the instrument. Wait until the display shows that all self tests passed. Push the SAVE/RECALL button, select Setups in the top menu box and push the Recall Factory menu box. The default Probe menu attenuation setting is 10X.

2) Set the switch to 10X on the probe and connect the probe to channel 1 on the oscilloscope.

To do this, align the slot in probe connector with the key on the CH 1 BNC, push to connect and twist to right to lock the probe in place. Attach the probe tip and reference lead to the PROBE COMP connectors.

3) Push the Autoset button. Within a few seconds, you should see a square wave in the display (approximately 5V at 1 kHz peak-to-peak). Push the CH 1 MENU button twice to turn off channel 1, push the CH 2 MENU button to turn on channel 2, repeat steps 2 and 3.

KMB 5 MWP SOLAR FARM

BY AHMAD IZZAT BIN MOD ARIFIN, MOHAMAD YUSOF MAT ZIN

The National Energy Policies and Development Plan were created in 1979 by the Malaysian Government. In 2001, government officially announced that Renewable energy (RE) as a fifth fuel in energy supply mix. Thus followed by National Green Technology Policy in 2009 that Green Technology as the driver to accelerate the national economy and promote sustainable development. As the renewable energy industry is rapidly growing with incentives from the government, so Kumpulan Melaka Berhad (KMB) has emerge as main player in solar energy project in Malaysia. 5 MWp Solar Farm with the total cost investment of RM46 Million is located at Alor Gajah, Malacca Malaysia. A group of EE112 students from semester 5 who's taken EPO358 subject had an opportunity to visit KMB 5 MWP Solar Farm. The main objective of this trip is to give an exposure to the real situation of solar farm and gain some practical knowledge from the qualified engineer.



This project was commissioned and started to export the energy generated to TNB at:

o **Phase 1 (1.30 MWp)**

- Initial operation date (IOD) :11 April 2013
- Feed-In-Tariff commencement date (FITCD) : 20 April 2013

o **Phase 2 (1.22 MWp)**

- Initial operation date (IOD) :16 Mei 2013
- Feed-In-Tariff commencement date (FITCD) : 24 Mei 2013

o **Phase 3 (2.48 MWp)**

- Initial operation date (IOD) :2 August 2013
- Feed-In-Tariff commencement date (FITCD) : 9 August 2013

Total Cost Investment as shown as below:

Solar PV System :RM38 Million

Infrastructure :RM 2 Million

Land Cost :RM 6 Million

Year of Return Investment : 12 Years



CLINIC DAY 1 FOR LINEAR (ESE241)

BY NAJWA NASUHA MAHZAN, SUZIYANI ROHAFAUZI, NIK NUR SHAADAH DZULKEFLI

On 29th March 2019, Clinic Day 1 for Linear subject (ESE241) was held at Dewan Jasmin, UiTM Terengganu Branch, Dungun Campus. All students in part 4 for both courses (EE111 & EE112) attended the clinic day. The program was made compulsory to the students by referring to the previous semesters, Linear subject has been one of the hardest subject for students to attain pass during their final examination. Attendance recorded was surprisingly good where 80% of the students joined. This program was led by Miss Suziyani Rohaufuzi and assisted by two lecturers who were Madam Najwa Nasuha Mahzan and Madam Nik Nur Shaadah Dzulkefli. The main purpose of the program is to prepare the students for their Test 1. Lecturers who were assigned as facilitators in the program were quickly briefed Chapter 1 to Chapter 2 (covered in Test 1) to the students. All tips and tricks for each sub-topic in both chapters were explained to the students as well. Furthermore, right techniques to answer questions in the test were discussed in the program. Students were provided related module which involved both chapters. The module is basically a list of revised questions from past final examinations. Students were asked to answer and finish all the questions during the program session with the help from facilitators. At the end of the program, all students were required to submit the answer sheets to the facilitators. The program would be continued to the next series which was scheduled to be held on May 2019 before Test 2. It is hoped that this program would give significant impact to the students especially in answering Test 1 successfully. Upon completing this program, few improvements were highlighted and would be implemented in the next series.



CLINIC DAY 2 FOR LINEAR (ESE241)

BY NAJWA NASUHA MAHZAN & SUZIYANI ROHAFAUZI

As scheduled and continued from 1st series of Clinic Day for Linear subject (ESE241), Clinic Day 2 Linear subject was held on 17th May 2019 at Dewan Jasmin, UiTM Terengganu Branch, Dungun Campus. For this time as well, students in part 4 were obligated to attend the program. Based on Test 1 performance, almost 75% students were able to get pass mark. Hence, for this series, mentor-mentee concept was introduced where mentor was chosen amongst outstanding students. This program was facilitated by two lecturers who were Miss Suziyani Rohafauzi and Madam Najwa Nasuha Mahzan. They were assigned as facilitators who helped the students when mentor could not answer questions asked by the mentees. The main purpose of this Clinic Day 2 is to prepare the students for their coming Test 2. In the Test 2, Chapter 3 & Chapter 4 will be covered. Similar like previous clinic day, a module had been set to the students to answer during the clinic day session. In the end of the program, students were asked to submit the answer sheets to the facilitators. By having this program, hopefully students could answer well in their Test 2 as well as in their final examination. Although in the last two chapters (Chapter 3 & Chapter 4) have a lot of mathematical work to do, all the tips to understand and solve the questions properly had been taught by the facilitators in the session.





Senarai Jurnal dan Konferens Berindeks

	Jurnal/Konferens	Indeks
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Autism



the world from a different perspective

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WHAT IS AUTISM?

BY SITI SARA RAIS

Autism or 'Autism Spectrum Disorder' (ASD) is a neurological disorder of the brain that affects development in shaping communication skills, social interaction and behaviour. Autism causes different developments in comparison with those of the same ages. This will disrupt the learning process and their way of life among those who are normal. Autism features are categorized into two (2) aspects; communication and social interaction, and behaviour. From the aspect of communication, autism individuals find it difficult to understand non-verbal communication such as body movements and facial expressions, for example, face expressions of angry parents, while social interaction involves the interaction of autism individuals with their environment such as disruption in maintaining eye contact with the person being talked with, having difficulty building relationships such as

friendship, sharing emotions, interests and activities and they may be difficult to understand the individual emotions around them. For behavioural aspects, autism individuals may exhibit rigid behaviour characteristics to daily routine or may indicate the movement of limbs and the use of stereotyped and repetitive objects, for example, using the same cup. In the event of sudden change, they are easily depressed and distressed. Additionally, autism individuals may show repetitive conversations or more commonly known as echolalia, the condition in which children repeat what they hear spontaneously. Moreover, behavioural aspects also include the limited interest in objects and topics, for example, autism individuals may only love dinosaur games or even interest in the same book. Besides, autism individuals may play their toys and arrange them in verticals or horizontals.

In addition to the stated aspects, there are also autism individuals who face sensory issues. Sensory issues are situations where autism children react with sensory stimuli received from the environment. Sensory stimulation includes the sounds heard, the smell, the taste of food, the light and the texture felt by the skin. They may be too sensitive or less sensitive. For example, they might be too sensitive to be so disturbed when they hear a little loud noise. Every child with autism is different. Therefore, every aspect that is explained to a child with autism is different from other autistic children. Parents can identify the features of autism by observing the development of children and completing M-CHAT as early as 18 months in the Book of Infant and Children Health Record (0-6 Years). M-CHAT is an early screening test for the development of a child's behaviour and it can also be accessed at the following URL <http://fh.moh.gov.my/v3/index.php/pages/orang-awam/kesihatan-kanak-kanak>. This initial screening allows the children to be diagnosed by a specialist doctor and subsequently carry out an early intervention. If a diagnosis process takes a long time, parents can initiate intervention.

References:

- 1) <https://www.openlearning.com/courses/ikurnia-asas-autisme>
- 2) <https://iautism.my/ms/about-autism/>

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