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SERI ISKANDAR CAMPUS PERAK

MAINTENANCE ON CIVIL WORKS AT HOSPITAL YAN, KEDAH BY UEM EDGENTA MEDISERVE SDN BHD

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MAINTENANCE ON CIVIL WORKS AT HOSPITAL YAN, KEDAH BY

UEM EDGENTA MEDISERVE SDN BHD

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First of all, I would like to thanks to Allah s.w.t where give our group strength to complete this report completely. Alhamdulillah, I collect all the data in the better ways.

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Thank you.

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ABSTRACT

The practical training takes 4 months to complete the study taking the degree as a Building Surveyor. Honestly, within 4 months the practical training that I have faced, there are too many subject that I can learn out of the subject have been teach by our lecture in class. Almost every department I pursue and there is much knowledge I can learn. I have joined only one unit to do the maintenance, engineering and facilities works.

Student can have more knowledge the aspects of organizational management, technology, design, property, building economic and financing, law, communications, project planning and management. This course also can justify the relationship of various professionals and their practices in the building industry as well as the integration and cross subject analysis and energy.

This course as well, makes the practical student learn more about the green building concept, more detail on building services, element and material that used for the building that chose to be case study and also the also know detail about the maintenance management programme that organize in their case study. Besides, we also can know the detail about the building construction, elements and specifications.

The Hospital Yan building has an its own attractive about the building concept and design. The maintenance programme that applied at this Hospital was systematically for this building. The services of this building are well-maintained. Thoroughly, this practical training has given me more imputes about the maintenance and repairing work especially in the large building which are too different if we compare to the small building like a house.

CHAPTER 1
COMPANY BACKGROUND

1.1 Introduction

UEM Edgenta offers the healthcare sector, infrastructure and full -service estate throughout the life cycle of their assets. These include consulting, procurement and planning of construction, operation and maintenance, as well as optimization, restoration and improvement.

Figure 1.1 : UEM Edgenta logo

For the healthcare sector, UEM Edgenta provides hospital support services to more than 170 hospitals and healthcare institutions (private and public) in Malaysia, Singapore, Taiwan, and India. Services provided to the healthcare segment include biomedical engineering maintenance, waste management, porters, and linen and laundry.

Under the infrastructure sector, UEM Edgenta maintains more than 2,500 km of highways, including the North-South Expressway. In addition to maintaining road pavement, public works and highway electrical works, UEM Edgenta also provides a special response team unit that provides 24-hour patrol services to monitor and control traffic flow along the North-South Highway network. They were the first to be on location during an emergency to manage traffic and clear debris from accidents; to ensure smooth operation on the highway. Infrared service main line workers perform routine maintenance activities such as lawn mowing, landscaping, drainage and culvert cleaning, roof repair and signage replacement and cleaning. They are also responsible for the

routine maintenance of the toll plaza and periodic heavy work such as aisle fixtures.

PROPEL Traffic Safety Unit staff are responsible for establishing and managing traffic schemes during navigation and road closures. They provide traffic management for all road upgrades and rehabilitation works carried out along the highway.

Under its real estate sector, UEM Edgenta now offers an integrated services platform that covers the life cycle of assets and complete buildings. Services offered by UEM Edgenta include real estate and community consulting, project and asset management, development management - including design energy design and energy performance management systems, integrated facilities management services, municipal and community services.

1.2 Objective of Practical Training

Practical training report is an evidence that done by the students during the Practical training period. This report will be as an assessment for the student. The objective of providing practical training report are:

a) To make sure that students are really understand what they have learned during practical training.
b) To train students to prepare a comprehensive report in industry after they have graduates.
c) Apply the experience gained in the practical training for future learning in the university
d) Produce a proper technical report related to the practical training.
e) Practice good ethical values and work conducts
f) Establish university-industry collaboration.

1.3 Vision and Mission

1.3.1 Vision

Optimising Assets to Improve Lives.

1.3.2 Mission

- Our services, commitment to smarter thinking and improved solutions place us at the forefront of the industry.
- We create opportunities for clients and assets that positively influence society.

1.4 Organisation Chart

1.4.1 Board of Head Quarters UEM Edgenta

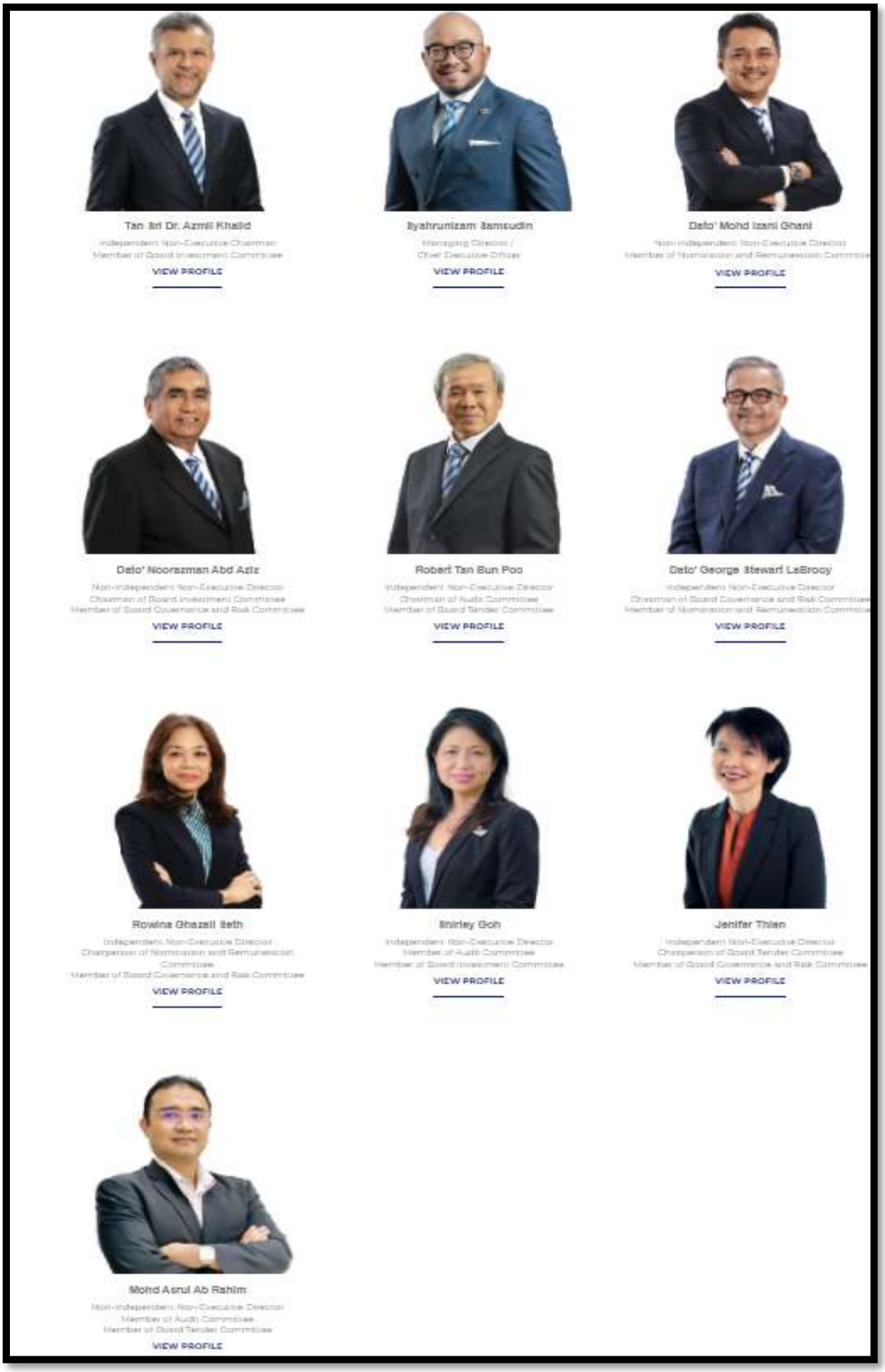

Figure 1.2 : Board of UEM Edgenta HQ

1.4.2 Organization chart Edgenta Mediserve Hospital Yan

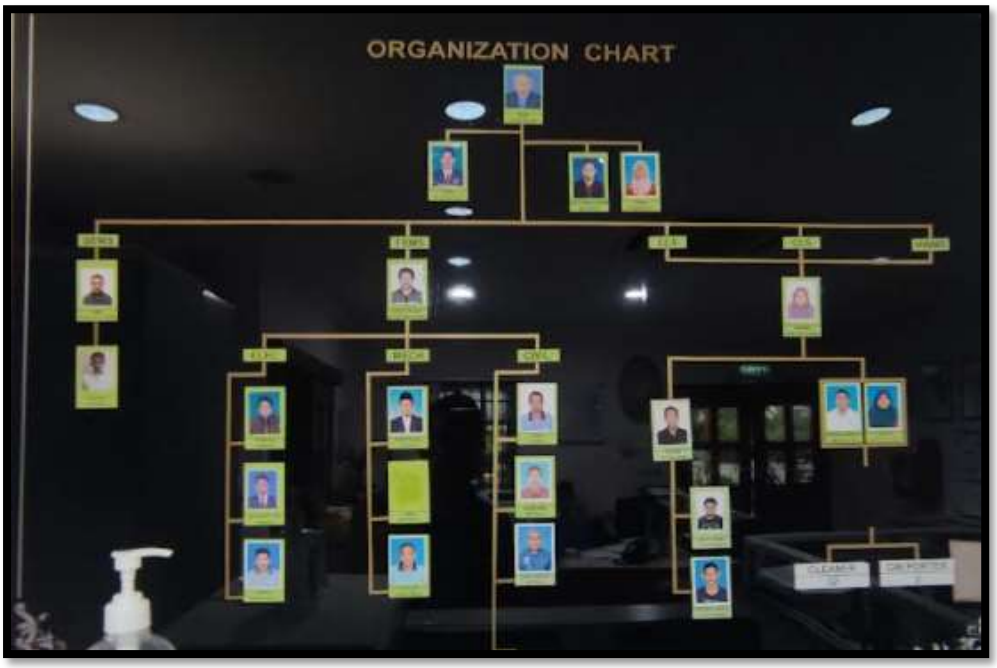

Figure 1.3 : Organization chart Edgenta Yan

1.5 Building Location

1.5.1 Key Plan

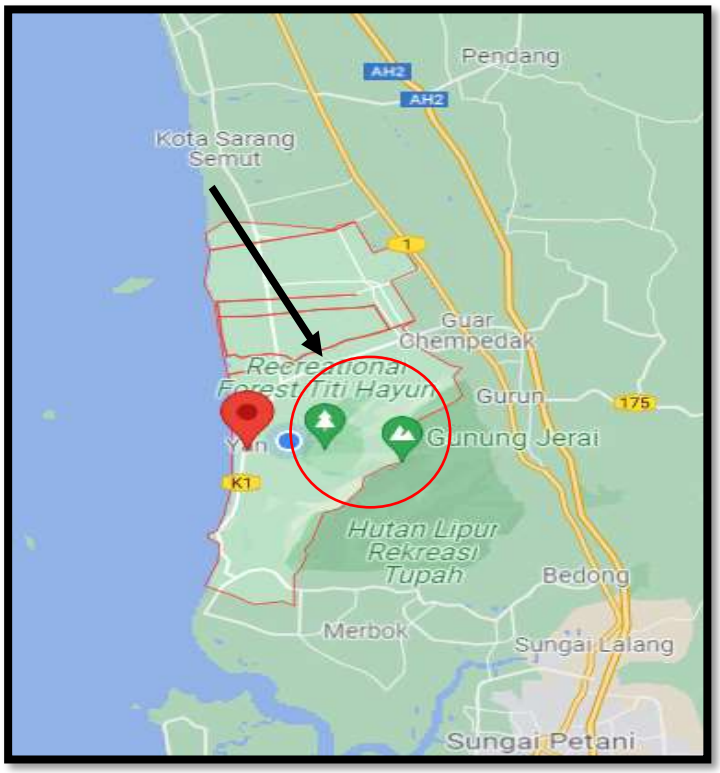

Figure 1.4 : Key Plan

1.5.2 Site Plan

Figure 1.5 : Area near the UEM Edgenta, Hospital Yan, Kedah

1.5.3 Location plan

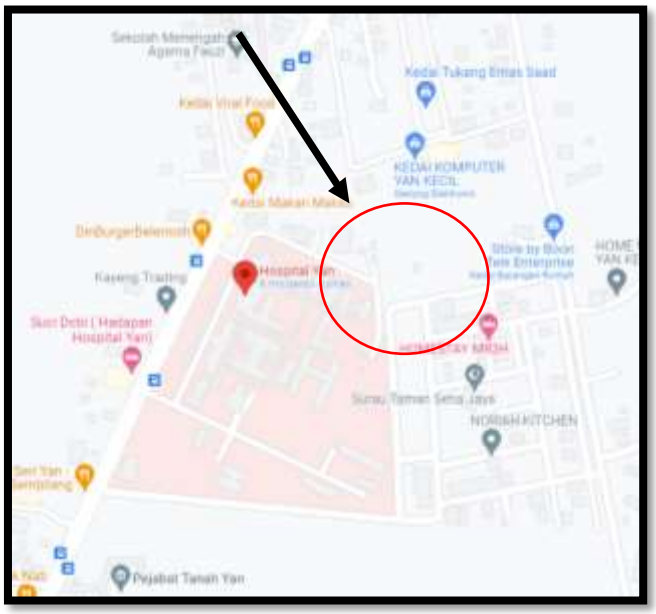

Figure 1.6 : Location Plan of UEM Edgenta, Hospital Yan, Kedah

1.6 Building Services

Without the services, the building would not comfort for the occupants. There are many services available in the building.

Pictures	Description
Sanitary Fittings 	i. Sanitary fittings are the pieces of furniture that are in a bathroom. This all components used to connect sanitary tubes or piping.
Uninterruptible Power System 	i. An uninterruptible power supply (UPS), also known as a continuous power supply (CPS) or a battery backup is a device which maintains a continuous supply of electric power to connected equipment by supplying power from a separate source when utility power is not available.

Chemical Waste Disposal System 	i. The chemical waste disposal system act as a process to damage the chemical waste from solid to liquid.
Security System 	i. Security systems work on the simple concept of securing entry points into a home with sensors that communicate with a control panel or command center installed in a convenient location somewhere. ii. The employee needs to used their identify card to access the rooms in the hospital such as control and security room.
CCTV System 	i. The CCTV is located at parking area, the main entrance, every access door at every floor and other hidden corner to ensure the secure environment of the building. ii. The signal recorded by the cameras is transmitted in a scrambled form to a

	receiver that unscrambled
Sewerage System 	i. Disposal of sewage and surface water from building is important for public health and it should be considered as important matters in the construction of a building. ii. Functioned to discharge the surface water which come from rain that falls on the roof and the surrounding buildings.
Direct Fireman Telephone 	i. The direct fireman telephone will connect directly to fireman link. If fire has occur either staff of public person can use it for making emergency call. The firemen telephone is located at every floor and the master handset in control and security system room.
Generator Set System 	i. Use for emergency breakdown where it provides to back up the electricity supply entire of Hospital Yan building.

Gas Supply System 	i. The medical gases used in a hospital are life-supporting element that gives direct influence in maintaining the life of a patient. ii. There are many types of gases such as oxygen, nitrous oxide, medical vacuum and etc.

Table 1.1 : Building service that provided by Hospital Yan for Patient and Visitor

1.7 Scope and Responsibilities

Edgenta Healthcare Support Serving over 300 hospitals across Malaysia, Singapore, Taiwan and India, Edgenta Healthcare Support is an internationally certified market leader in non-clinical healthcare support services. In Malaysia, we serve more than 60 public and private hospitals, as well as various healthcare institutions.

As part of UEM Edgenta, our diverse knowledge and experience from multiple industries is an advantage which enables us to deliver optimal solutions in improving the nonclinical support services demanded by today's healthcare providers and other commercial industries.

From asset consultancy and management, facilities and biomedical engineering maintenance, waste management, linen & laundry, to housekeeping and portering services, edgenta understand the demands and needs of the healthcare industry.

In Edgenta role as a strategic partner to healthcare institutions, Edgenta are highly dedicated and committed, ensuring their clients' hospital assets and facilities are operating at optimum levels of efficiency.

Edgenta innovative solutions are a result of their ambition to modernise and improve our business' needs. Edgenta embrace the digital frontier by developing and utilising innovative technologies such as UETrack™ and QuickMed, our new digital healthcare platform which allows healthcare providers to manage their daily clinic operations via a hasslefree online platform, offering optimal solutions in improving both the clinical and non-clinical support services.

1.8 Summary

UEM Edgenta is a Malaysia-based company that is primarily engaged in four segments. The asset consultancy segment provides constancy services regarding roads infrastructure, civil works, and building-related works. The infrastructure services segment maintains and repairs civil, mechanical, and electrical works on roads, along with infrastructure and expressway works. The integrated facilities management segment provides hospital support, facilities management and infrastructure facility services. The property development segment develops residential projects. UEM Edgenta has a global presence, with around half of revenue stemming from Malaysian domestic market, and the rest coming from New Zealand, North America, the United Kingdom, Australia, and so on.

CHAPTER 2

LITERATURE REVIEW

2.1 Definition of Maintenance

According to British standard maintenance is "The combination if all technical and administrative actions taken out to retain an item in order or to restore it to a state in which it can perform its particular function properly."

Various people defined maintenance according to their own words, their ideas towards maintenance etc. The committee in Maintenance under Government of India defined meaning of maintenance as "Building maintenance is work undertaken to keep, restore or improve the facility (every facility) i.e. every part of a building, its services and surroundings to a currently acceptable standard and to sustain the utility and value of the facility."

Well the meaning of maintenance in simple words is that "Maintenance is the work done to keep the structure or building in a healthy condition so that it can perform all the objectives of its construction smoothly." In maintenance increasing the facility is optional. (En.Goal, 2019)

Maintenance is the process of ensuring that buildings and other assets retain a good appearance and operate at optimum efficiency. Inadequate maintenance can result in decay, degradation and reduced performance and can affect heath and threaten the safety of users, occupants and others in the vicinity.

Depending on its design, quality of materials and workmanship, function and location, buildings deteriorate at different rates and require different levels of attention. No building will ever be maintenance-free, but the quality of the design and workmanship can minimise the level required.

2.2 Objective of Maintenance

Maintenance can help:

- Prevent the process of decay and degradation.
- Maintain structural stability and safety.

- Prevent unnecessary damage from the weather or from general usage.
- Optimise performance.
- Help inform plans for renovation, refurbishment, retrofitting or new buildings.
- Determine the causes of defects and so help prevent re-occurrence or repetition.
- Ensure continued compliance with statutory requirements.

For maintenance to be most effective, it should be organised through a programme of cyclical maintenance. At the most basic level this includes daily routines, and works upwards to periodic programmes of weekly, monthly, semi-annual, annual, quinquennial and so on routines.

At the quinquennial point and beyond, architects, engineers and surveyors may become involved to inspect for structural and other serious defects (in particular for historic buildings), and the long-term maintenance plan may be revised and updated. (D.Buildings, 2021)

2.3 Definition of Building Maintenance

"The keeping, holding, supporting, or conserving of a structure and its services at an acceptable quality to permit their function" is what building maintenance entails. (Brett, 1997). When a project is completed in real life, some knowledge and expertise are lost. Lessons learnt in prior projects cannot be utilised, and as a result, "problems and errors may be repeated" as a result of "actions and decisions that produced issues and errors" (Disterer, 2002).

According to Mat Nah (2016), there are several main purposes of building maintenance which are to ensure the building is safe and suitable for use, meet the legal requirements, ensure the building is usable, and ensure the building is conducive and also to extend the physical life of the building and building quality value.

2.4 Importance of Building Maintenance

The main purpose of building maintenance is to keep a building in effective condition from its inception (Al-Zubaidi 1997). Zavadskas et al. (1998)

said that building maintenance management should assist in keeping properties in good condition through effective resource management as well as getting high profits from the construction investments that have been made. Douglas (1996) adds that occupants and property owners want their buildings to be attractive, durable as well as provide a peaceful and efficient indoor environment. All communities want the condition of a building and the facilities in it to always be efficient and reliable to be used, comfortable to use and remain with the value of the asset. Defects or failures of a building, system and equipment can cause financial loss, occupant dissatisfaction and endanger safety and health.

2.5 Types of Building Maintenance

There are three types of Building Maintenance

Figure 2.1 Types of Maintenance

2.5.1 Planned Maintenance

On the other hand is a type of preventive maintenance that takes place at predetermined interval of time whereas corrective maintenance is the simplest type of maintenance strategy, where an element in a building is used until it breaks down or defects. It covers all activities, including replacement or repair of an element that has failed to a point at which it cannot perform its required function (David & Arthur, 1989).

2.5.2 Preventive Maintenance

Also referred to as time-based maintenance or cyclic maintenance are performed in accordance with a predetermined plan at regular, intervals, which may be based on operating time. Such a

strategy is frequently applied to external or internal paint work (Smith, 2003).

2.5.3 Emergency Maintenance

This is a type of maintenance carried out in order to avoid serious consequences. This is sometimes referred to as day-to-day maintenance. situation whereby normal living and working conditions of people in the building, on a certain territory or aquatory are disrupted, people's lives and health threatened, their property damaged and environment threatened (Menshikov and Shvirajev, 2003).

2.6 Classification Facilities Engineering Maintenance

Facilities Maintenance Engineering usually refers to the application of techniques, engineering skills, professionalism and effort which are being organized to ensure that the design and development of and equipment provide efficient and effective economical maintenance. There are three type of work in Facilities Engineering Maintenance.

Facilites Engineering Maintenance Services (FEMS) keep systems and equipment operating smoothly, as well as taking care of buildings and properties management.

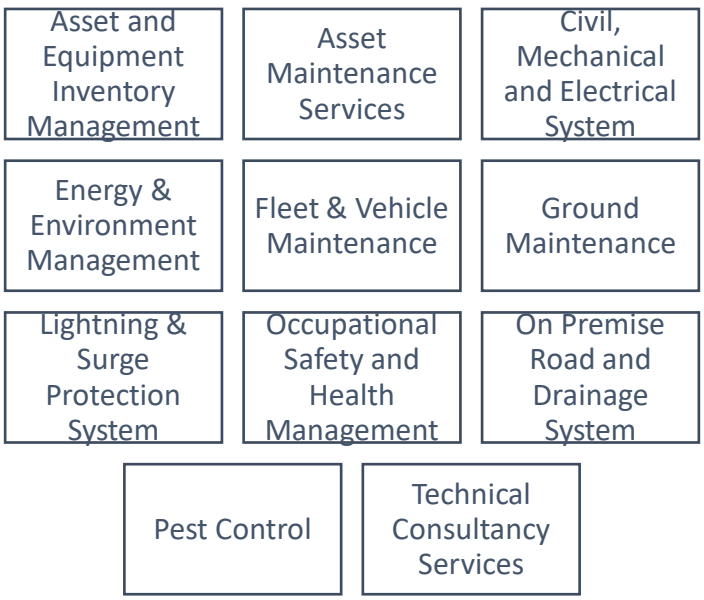

Figure 2.2 : Scope of work (FEMS)

2.6.1 Mechanical

Mechanical engineers invent machines and structures that exploit those elements in order to serve a useful purpose and solve a problem. Original design and the practical issue of making something that works are the themes behind any engineering endeavor. An engineer creates a machine or product to help someone solve a technical problem. The engineer might start from a blank sheet of paper, conceive something new, develop and refi ne it so that it works reliably, and — all the while—satisfy the constraints of safety, cost, and manufacturability. Mechanical engineering has been defined as the profession in which power-producing and power-consuming machines are researched, design. (Chen-Wishart, 2014)

Mechanical engineers are known for their broad scope of expertise and for working on a wide range of machines. Just a few examples include the microelectromechanical acceleration sensors used in automobile air bags; heating, ventilation, and air-conditioning systems in office buildings; heavy off-road construction equipment; hybrid gas-electric vehicles; gears, bearings, and other machine components. (Chen-Wishart, 2014)

2.6.2 Electrical

Design, manufacture, testing, supply & commissioning of all equipment for substation and transmission lines, as detailed in the specifications and schedule of quantities and in subsequent clauses except supply of Auto and Power Transformer and PLCC indoor equipment, which shall be supplied by the Employer. The contractor shall load, unload, transport, erect, connect to the system, test and commission the Auto Transformer, Power transformer & the PLCC equipment. Installation of PLCC equipment at remote (existing) end and

proposed end of the sub-station or any modification shall be under the scope of the contractor. (Basis et al., 2013)

2.6.3 Civil

The job of a civil engineer is to design, supervise, operate, build and maintain infrastructure projects and systems in the public and private sectors, including roads, buildings, airports, tunnels, dams, bridges, and systems for water supply and sewage treatment. Responsible for assisting companies in the implementation, reporting and monitoring of government or private projects. Assist the company in managing, coordinating and monitoring project management and contract administration for each project. Assist the company in reviewing and coordinating the preparation of physical and financial progress reports. Assist the company in monitoring and updating the Project Progress Report (CPM). Assist the company in coordinating and monitoring the implementation of MS ISO 9001: 2008 and other ISOs for each project. Attend site meetings to ensure the implementation and progress of the project according to the implementation schedule that has been set. Assist the company to prepare progress reports and identify current problems for boss reference. Ensure that each work performed by each sub -contractor according to drawings and specifications. Ensure that the material on site is always sufficient so that the work runs smoothly. Update records such as site diary, progress pictures, number of employees, current level of progress and others.

2.7 Scope of work Civil Works Maintenance

Execution of all civil works (leveling, excavation, foundations, roads, cable trench, drainage system, culverts, rain water harvesting, Control room building, quarters etc) as per schedule for erection of all substation equipment,

structures and transformer, earth mat, Fencing & development of sub-station area etc. (Basis et al., 2013)

Conducting technical studies at construction sites. Using a network of computer software to develop detailed designs. Perform complex calculations. Liaising with clients and other professionals including architects and subcontractors. Compile job specifications and provide tender procedures. Solve design and development problems. Manage project budgets and resources. Scheduling of materials and equipment as well as delivery. Ensure the project complies with legal requirements, particularly health and safety. Assess the environmental impact at the project site. Ensure the project runs smoothly and the structure is completed on time.

2.8 Type of defect Building Maintenance by Civil works

This section provides only an overview of building defects and does not fully detail building defect theory because the current study merely emphasizes the common building defects encountered in Malaysia as derived from among an exhaustive list of defects. In principle, building defects are defined as capacity failures or malfunctions with respect to the building guidelines or requirements set by tenants. These requirements may concern structure, frame or fabric, services, and other building facilities. (In, 2015)

There are 14 types of building defects:

i. Leaks- mainly caused by rain, the water supply in the building, or waste water leakage.

ii. Distortion- observed in most materials composed of wood and metal and in frames constructed from both materials.

iii. Rust – found on building materials made of metal, especially steel. Active corrosion is induced by highly oxidized and humid atmospheres. It is also caused by sodiumexposed material, such as soapy water.

iv. Exfoliation- typically plagues materials or building elements that are insulated or painted.

v. Rot and mold – found on components or materials composed of wood and brick, as well as rusted steel or cast iron. This decay can be generated in both dry and wet conditions. Rotting components are often moldy as well.

vi. Moisture/dampness- often the result of high water content in building components, especially walls and floors.

vii. Bending/sagging- frequently occurs in construction materials made of wood.
viii. Sedimentation - usually occurs in building bases. It involves the lower floor and the building apron or perimeter.

ix. Condensation - often caused by hot weather and humid conditions. It also occurs in cold, cramped areas with limited air flow and sunlight.

x. Stretching and tearing- common in both external and internal building fittings.

xi. Crack – observed in many building components. Cracks are classified into various types, which range from capillary to large cracks. External cracks do not affect the building structure or the wall; however, serious cracks can harm consumers.

xii. Installation errors - typical in various types of fittings and equipment or in services, including piping, wiring, and machinery.

xiii. Pest attacks- commonly plague building materials and wood-based building components.

xiv. Clogging- occurs in many piping systems that are either tap or wastewater channels.

2.9 Maintenance needs

2.9.1 Residential Facilities:

Residential facilities need maintenance for both indoor and outdoor areas. Inspections, maintenance, and repairs are regularly conducted to ensure everything is in good working condition.

2.9.2 Business Premises:

Every building premise requires maintenance services. Most smaller premises outsource maintenance services while larger

businesses have an in-house maintenance department to oversee maintenance.

2.9.3 Government Facilities:

Government buildings such as post offices, city buildings, and libraries require maintenance to stay in good condition for public use and safety.

2.10 Summary

The process of ensuring that buildings and other assets have a decent look and perform at peak efficiency is known as maintenance. Inadequate maintenance can lead to deterioration, degradation, and decreased performance, affecting the health and safety of users, tenants, and others in the area.

Maintenance should be organised through a cyclical maintenance cycle to be most effective. Daily routines are at the most basic level, and go higher to weekly, monthly, semi-annual, yearly, quinquennial, and other periodic programmes.

All communities want a building's and its amenities to be efficient and dependable to use, comfortable to use, and maintain the asset's worth. Building, system, and equipment defects or breakdowns can result in financial loss, tenant unhappiness, and safety and health risks.

CHAPTER 3
CASE STUDY

3.1 Introduction

Industrial training is referred to as a program that offers good practical training in the specified time frame. It is offered by private companies as well as by the government organizations.

Industrial training provides students with significant skills and practical knowledge and motivates them to become a professional and successful engineer. The students will gain both theoretical and practical knowledge during the training period. There are different courses taught under industrial training. The minimum training period is 12 to 14 weeks. Once the students successfully complete the training, they should go through the training assessment. The students qualified will be given a degree according to the training they have obtained.

Industrial training offers the obligation for real-time work and job offers. The students can select their career in different work environments. It is important to update your existing skills with industrial training courses so that it helps you in landing better job opportunities. During the training period, the students get aware of latest technologies and the ways they are presently used in relevant and important industries.

It is mostly open for graduates so that they can easily face the professional work scenario. The training program is associated with several and relevant concepts such as company internship, mobile app development, marketing and sales, PHP, recruitment and human resources.

3.2 Building Location

3.2.1 Key plan

Figure 3.1 : Key plan

3.2.2 Site Plan

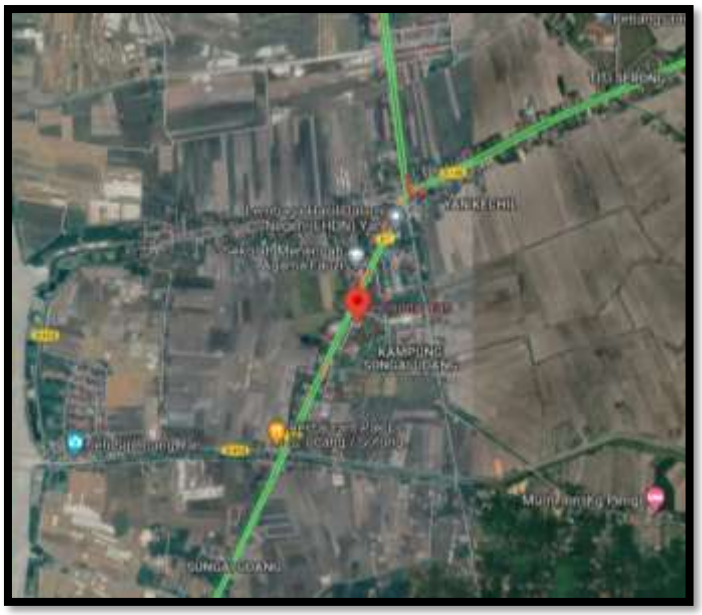

Figure 3.2 : Site plan Hospital Yan, Kedah

3.2.3 Location plan

Figure 3.3 : Location Hospital Yan

3.3 Civil work at UEM Edgenta Hospital Yan

	Civil works	Description
	Painting signboard	Takes the old or currently signboard, then paint it for people clearly see it.
	Painting wall	Paint the wall because of wood rotten cause by termites attack.
	Replace new celing	This is cause by leaking roof. So the roof need to fix and paint the watermark on ceiling.

	Remove the bird nest	Bird making nest Close the hole from being entered by birds.
	Remove the ingrown plant.	Ingrown plant. This happened because there is damp areas. So the thing to do is remove the ingrown plant and checking for leaking roof
	Cleared obstacles	Remove all the rotten tree twigs on the top of gazebo roof.
	Installing new netting	Torn netting. Due to dusty nets. over time it becomes rotten and needs to be replaced new

	Fixing pipe	Pipe at sink leaking There are several problem causing sink pipe leaking. Such as rubber washer in the stopper water pipe cannot be use. Need to replace it
	Cleaning the drain	Cleaning the drains to ensure they are not clogged due to debris or dry leaves
	Making store civil	Mixed the concrete to build a store civil.

Table 3.1 : Shows Civil Works at Hospital Yan

3.4 Building Maintenance Civil Works

Maintenance can be defined as any work that needs to be done to preserve or restore each part of a building to an acceptable standard. Building maintenance should be given serious focus before (design stage), during and after a building is completed. But the overall involvement of building maintenance is at the stage after the building is completed and while the building is in operation. The main purpose of building maintenance is to keep a building in effective condition from its inception. The civil engineer is

responsible for planning and designing the project, for building it to the required scale and for ensuring its maintenance. It requires not only high engineering knowledge, but also administrative and supervisory skills.

Civil engineers also contribute to preserving the environment by helping to clean up existing pollution and plan ways to reduce future air, soil and water pollution.

The main function of building maintenance is not only to ensure that the building, system or equipment operates at maximum efficiency but also to ensure that the building always meets the needs of the occupants and legislation as follows:-

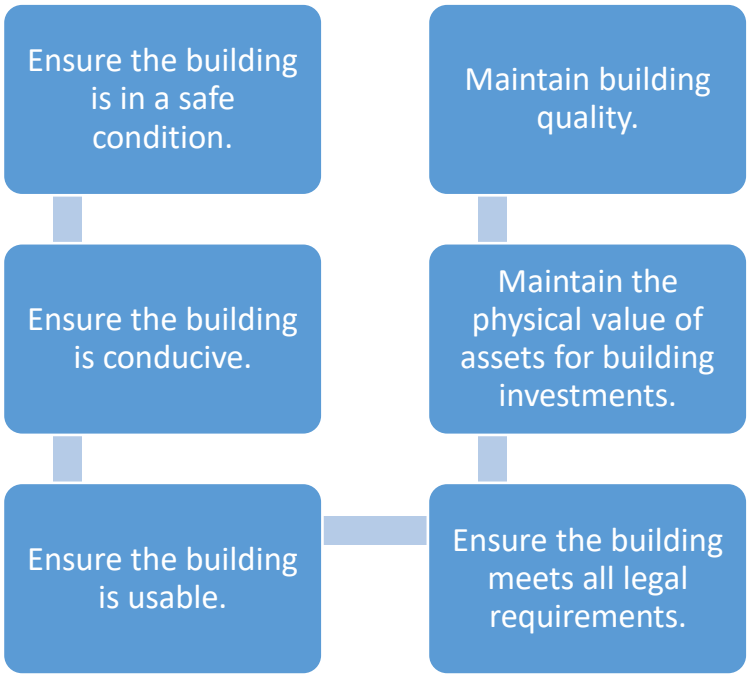

Figure 3.4 : Main function of Building Maintenance

3.5 Types of Building Repair and Maintenance Services Civil Works

The types of building repair and maintenance service works are:

Figure 3.5 : types of maintenance services

In addition to above, additions and alterations Works in the buildings, Supply & maintenance of furniture & furnishing articles should also be done.

3.5.1 Day to Day Repairs

Day to day repairs include service repairs which arises from time to time in the services of the buildings such as in plumbing works, water supply, etc. Examples for such repairs are removing chokage of drainage pipes, manholes, restoration of water supply, replacement of blown fuses, repairs to faulty switches, watering of plants, lawn mowing, hedge cutting, sweeping of leaf falls etc. The purpose of this maintenance service is to ensure satisfactory continuous functioning of various services in the buildings.

3.5.2 Annual Repairs

This maintenance service is carried out to maintain the aesthetics of buildings and services as well as to preserve their life, some works like white washing, distempering, painting, cleaning of

lines, tanks etc. are carried out periodically. These works are planned on year to year basis.

3.5.3 Special Repairs

Special repairs of building are undertaken to replace the existing parts of buildings and services which get deteriorated on ageing of buildings. It is necessary to prevent the structure & services from deterioration and restore it back to its original conditions to the extent possible.

3.5.4 Additions and Alterations

The works of additions/alterations are carried out in buildings to suit the special requirements of occupants for functional efficiency. The facilities in buildings are updated by carrying out such works.

3.5.5 Preventive Maintenance

Preventive maintenance is carried out to avoid breakdown of machinery and occurrence of maintenance problems in buildings and services at Hospital Yan. Works of preventive maintenance are carried out on the basis of regular inspection survey. Preventive maintenance includes works to prevent deterioration of building parts (which depends on climatic conditions), pollution, fungi, the insect attack, subsidence, flooding, intensity of usage, and careless usage.

3.6 Summary

The purpose of this case study is to identify the moisture problems that occurred at the hospital building which leads to building defects in tropical countries such as Malaysia. This study has identified many building defects occurred due to moisture problems. From the result of this study, we can conclude that moisture problem is one of the serious causes of building defects. Hospital Yan can be categorised as a old hospital which has been in operation for more than twenty (20) years. These findings would provide an interesting view of moisture problems that affect the hospital functional performance. Based on the finding, it is suggested that these problems should be highlighted during early project development. All relevant parties should work together from design until building completion and putting an effort to minimise the moisture problems throughout the building life. Besides that, it will be critical for hospital building to control the moisture effect for a good indoor air quality. For hospital building, the issue of safety especially in terms of providing environment that is free from unnecessary viruses and bacteria should be the main concerns of stakeholders. Therefore, this paper suggests the stakeholders to seriously look into work coordination among project team to ensure the quality of the constructed building. Consideration of the identified causes at the early construction stage would help to minimise the moisture problems and increase the indoor quality environment. This study is a part of a larger study on identification of building design defect on two hospital buildings in Northern part of Peninsular Malaysia.

CHAPTER 4

PROBLEMS AND RECOMMENDATION

At Hospital Yan some of work will be delayed because have covid patient at that place. Workers doing maintenance work need to wear full PPE suit to do their maintenance work.

4.1 Problems

There are several problems facing by workers in Edgenta Mediserve.

4.1.1. Lack of structure and schedule

In many cases, routine tasks are just entries on a to-do list of work that needs to be performed with nothing within the work pack to drive compliance. In particular, a list of tasks beginning with “Check” which have no guidance of an acceptable limit can have limited value. The result can be a “tick and flick” style routine maintenance program that fails to identify impending failure warning conditions.

4.1.2 Operational focus

Operations might be reluctant to take equipment out of service for maintenance, so they delay or even cancel the appropriate scheduled maintenance. At times this decision is driven by the thought that the repair activity is the same in a planned or reactive manner. But experience tells us that without maintenance, the risk is even longer downtime and more expensive repairs when something fails.

4.1.3 Emergency call

Emergency call as stated is when the civil workers doing their works on site. Then suddenly, client (Hospital Yan) called for cases like pipes leaking, changing oxygen medical gas and water abundants. They must leave their work to settle down the emergency call

4.2 Recommendation

For the recommendation, any steps must be fulfil to gain the quality of works and finishing their work following to the date client requesting works.

4.2.1 Hire more workers

Hospital Yan is an old hospital operating since 1992. So there are many works to do because the material uses are woods. So the problems they are mostly facing are termites attack and rotten wood. Hire more workers will be the best way to run the works smoothly. They can focusing and manage time daily to doing some repairing works and maintenance.

4.2.2 Manage toolbox

The workers always asking for the tool for their works. The tools that have done works and have been used sometimes left everywhere. This is important because company will using company capital to purchase lost items.

CHAPTER 5
CONCLUSION

As a conclusion, maintenance and repair is very crucial part in every life of the building. The building maintenance practice is needed in every development. It is because the building needs to be well maintained in order to retain the value of the property itself. Furthermore, the building also will continues fulfil its function and will give the convenience to the tenant and occupant in the building

Maintaining the building prevents the deterioration and makes it more durable over the time of the building. Proper maintenance of buildings includes regular inspection of your property which helps to identify deteriorated elements so they can be addressed in a timely manner.

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APPENDICES