# Section A (40 Marks)

**Question 1: From your project, explain the 4 stages of a project. Show how each of them led to the project’s success.**

In any project, the significant advantages of adopting the life cycle thinking processes are evident. By categorizing the project deliverables under the four stages of the project lifecycle (conceptualisation, planning, execution, and finalisation) contributes to the project’s success. Lifecycle thinking allows the project to be managed, controlled, and reviewed at every stage of the project, ensuring high-cost efficiency, effectively allocating resources, and maintaining stakeholder satisfaction.

**Concept Stage:** The concept phase is where the idea for the project is conceived and preliminary goals are discussed, problems raised, benefits are outlined, stakeholders are targeted, rough cost estimates are calculated, and possible risk are identified. Furthermore, an impact assessment in terms of TBL and Life Cycle is undertaken. This stage is particularly important in acting as a gateway to the approval of the project.

Shell Prelude FLNG was initially proposed to advance the way LNG is transported to relevant markets, as the LNG can be directly processed and stored within the FLNG. This is economically beneficial as resources do not have to be transferred onshore, avoiding the construction of pumping and piping systems, reducing the environmental footprint of the project. By increasing the cost efficiency of the LNG processing system, it addresses the competitiveness of the Australian LNG industry with rivalling nations.

**Planning Stage:** The planning phase is where all work is planned and schedules, objectives and budgets are finalised, resources are allocated, quality is signed off (including TBL and Life Cycle), and a Gantt chart is formulated to attain a rough timeline.

For the Prelude, the layout of the facility and the location of deployment must be carefully considered during the planning phase. Technip was responsible for the construction of the Prelude, with aid from various other companies such as Samsung heavy industries to incorporate all relevant equipment. The Prelude was involved in the Shell Crux project which targeted a reservoir that didn't comprise of much risk by having relatively stable conditions to reduce probability of the Prelude operability being compromised. This allowed for optimal functionality of the Prelude considering it is the world’s fist FLNG.

**Execution Stage:** The execution phase is the implementation of the project and emphasis is moved to tracking, monitoring and controlling the progress of the project. Where necessary, schedules are reviewed, revised, and updated as required to maintain scheduling of the project.

Throughout the project of the Prelude, Shell was successful in developing a system that can produce and offload LNG to large carrier vessels. Newly designed unmanned loading arms were fully operational in offloading the LNG under extreme weather conditions. However, fitting all the equipment on a single floating facility was a challenge and introduced various unforeseen issues which compromised the functionality of the Prelude. Due to poor procurement, risk, and quality management during the planning and execution stages, there were multiple delays. Furthermore, due to poor communication management, many stakeholders were left frustrated with the delays. Multiple complications such as engine problems further delayed the operability of the Prelude. By appreciating these issues would further improve any successive FLNG projects.

**Finalisation Stage:** The finalisation stage is where the project has been completed and the deliverables handed over to the client. Resources are reassigned or disposed, the project is evaluated, reports are written up, and the administration arm of the project is closed.

Regarding the FLNG project, the construction of it was completed during 2017 and became fully operational in 2018. In December 2018, Shell announced to it stakeholders that operability of the Prelude has begun; the project successfully delivered its first cargo in 2019. This indicates clear and coherent finalisation documentation regarding the Prelude.

**Conclusion:** The Preludes’ success can be attributed to clear and concise following of the four main stages of a project. However, due to poor procurement, risk, quality, and communication management, the project experienced some difficulties, resulting in major delays; future recommendations were to further focus on these points.

The application of PMBOK theories in each of the four stages of the lifecycle proved to be crucial in the project’s success and any faults found in the project came about as a lack of adherence to these principles.

Potential improvements include greater communication with contractors to avoid unnecessary delays during the construction of the Prelude. Furthermore, improving the offloading processes is key due to the pseudo-static behaviour of the Prelude can cause complications to transferring high volumes of product into carrier vessels.

**Question 2: Explain how a** **sustainable approach is consistent with the Triple Bottom Line. Explain how it could improve the project when applied to every stage of the project.**

‘Triple bottom line’ (TBL) is a holistic concept of sustainability where ‘environmental’, ‘social’ and ‘economic’ considerations are identified and encourage the approach of the report. The triple bottom line sustainable project management approach can lead to effective management of all resources in such a way that economic, social and environmental needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems for current and future generations.

Sustainable project management is about ensuring that environmental, social and economic objectives are each given balanced consideration in the management of a business. It is important, to recognize that short- and long-term economic benefits can be achieved through adoption of positive social and environmental measures. Essentially, this is about managing a project by emphasising on the benefits, whilst eliminating or appropriately managing any negative impacts.

Sustainability encapsulates the idea of considering the needs of today's society without compromising the conditions and opportunities of future generations. In the face of our depleting natural resources, emphasis on implementing sustainable practices is imperative. We must neglect our greed and want to have more by incorporating varying sustainable aspects at every stage of the project.

**Conceptualisation-** The initial proposal of the project deems whether it is viable within our social construct; it determines whether it upholds or impinges on the values and attitudes we uphold as a society. Weighting the economic, social, and environmental benefit is imperative when deciding if the project is a suitable idea. Important aspects to consider include, site selection, mode of construction, resource extraction, maintenance, and operation. Additionally, utilising a TBL approach strengthens the relationship between companies, stakeholders and most importantly, the people.

Main complications stem from designing a system for longevity and upholding future requirements rather than meeting momentary desires. The Prelude FLNG provides a novel solution in processing and transferring LNG to domestic markets by directly offloading to the carrier vessels of our consumers, avoiding its storage. Additionally, the Prelude consists of varying self-operatable system which avoids onshore infrastructure for maintenance and a reduced requirement of labour workers to maintain operability of the system.

**Planning-** By employing a sustainable approach throughout varying stages, the system has the capacity to reduce overall costing by 70%. Initial design decisions can have a significant impact on the number of resources needed, which mitigates waste production. A sustainable approach will reduce energy consumption which is beneficial against the rising energy cost, as well as reduce a significant amount of the labour, resources, and energy, making it economically viable in the long-term. Increasing the profitability and decreasing the waste; the social aspect such as stakeholders and the people can be satisfied.

**Execution-** By employing a TBL view, the company can avoid consequences such as any criticism and negativity towards the company that may taint the values the company upholds. This reputation can not only damage the image of the company but can affect the sales and the stock prices. Companies can also face lawsuits, as well as fork out expenses for environmental clean-up, impacting the quality of human life. Furthermore, they will improve environmental and social stewardship whilst doing so. Being in line with sustainability thinking will in turn help the company be aligned with regulatory compliance, which would avoid damaging their brand. With the rising energy cost, the company should be monitoring their day-to-day operation and deciding whether it is done in a sustainable manner.

**Finalisation-** Ensuring that the project is sustainable overtime, monitoring the project after completion, will prevent any long-term environmental impact. The Prelude did not do this well as it was estimated to be producing 2.29 million tonnes of CO2, making it the fifth biggest emitter in Western Australia. If Shell adopted a sustainable approach, extensive carbon taxing would not impinge on the profitability of the project. Additionally, failure of back-up generators caused constant shutting down of the Prelude which reduced the rate of LNG processing. By ensuring sustainable operability of the Prelude would increase rate of production of LNG and subsequently, increase the volume sold to consumers.

**Question 2: Explain how a sustainable approach to project management, consistent with the Triple Bottom Line approach, can improve each stage of a project**

The Triple Bottom Line: is an accounting framework that aims to address the social, environmental and economic factors involved in the project

* sustainable project management accounts for current and future stakeholder which takes into account the environment
* lifecycle thinking takes into consideration the monetary and environmental considerations from a sustainability perspective
* addresses TBL; society, economy, environment across the project
* TBL is a measure of long-term success
* Long term financial interests of the company are not ‘mutually exclusive’ with acting fairly in the interest of stakeholders

Project management: application of knowledge, skills, tools and techniques to project activities to meet project requirement.

Sustainability: meet the needs of people today without compromising the ability of future generations to meet their own needs. Triple Bottom Line is the company’s ability to achieve business goals and increase long term shareholder value by integrating economic, environmental and social opportunities into its business strategies. Implementing sustainable practice is becoming increasingly important as the earths resources are being more limited. Multiple areas of interest at hand: economic, social and economic sustainability. A sustainable approach to any project will consider all three aspects. There are benefits to implementing the triple bottom line to each of the four stages of any project.

Business sustainability is a goal for most enterprises. Traditionally businesses maintained a strong focus on factors that had a clear and direct effect on their economic performance. Usually assed by looking at financial measures; costs, sales, margins. As environmental and social sustainability is becoming an evolving and more pressing issue to allow future generations to enjoy the same privileges we have today, companies are beginning to broaden their horizons and consider the economic and social sustainability of their work. The impact on their business interactions by considering the broader community and environment have significant positive results. The environmental costs can go beyond clean up and disposal costs. If there are any environmental accidents it could lead to legal costs, compensation, negative marketing campaigns. As a result affect both the social and economic areas of the project, showing the importance of all of the TBL considerations.

TBL: sustainability is an evolving priory for companies, as we are challenged to make changes in in how products are made and sold, what we consume, where we source goods. Measuring the degree of sustainability can be difficult to gauge. TBL is an accounting framework that went beyond the financial sustainability of a company and incorporated the social and environmental dimension as well as the economic to ensure sustainability goals are met. TBL is the general concept of sustainability where environmental, social and economic considerations are identified and considered concurrently in decision making. It is envisaged that the triple bottom line is consistent with sustainable project management and can lead to the management of all resources in such a way that economic, social and environmental needs can be fulfilled.

Environment: iron sources depleted in 20 years, innovative solutions to resources to ensure future generations can enjoy the benefits of these resources, use more sustainable resources. Renewable energy

Concept: the idea stage of the project; when considering the project much determine whether or not the project will be worth pursuing based on the economic benefits of the project, will it be socially beneficial and environmentally viable. Initial cost benefits to company reputation whilst balancing economic growth. Site selection, mode of construction, resource extraction, maintenance and operation. TBL thinking will also act to strengthen relationships between the organisation, clients and community.

Planning: 70% of the total cost of the product can be saved during the design stage of the project. The design decision have a significant impact on the quality of resources used, waste of products. It is the part of the project where a significant amount of the labour, resources and energy can be saved. Important to consider TBL. cost of fixing problems later down the track higher. Dune example. Promises needs to go through on; no point designing

Execution: need to be sure that the environment is not being damages; back lash, bad name for the company, bad image, possibly economical cost; law suits, cleaning up the environment, accountability, impacting the environment could impact human health/ quality of life. Make sure to follow all relevant guidelines and standards.

Finalisation: must ensure the project is sustainable overtime, monitoring the project after completion, make sure that there is no long term environmental impact. Our project did this well. See if it is financially generating money, see if it is appealing to the broader community, having positive social impacts as a result.

**Environmental Impacts:** placing a solid structure in the ocean system has the potential to cause a range of negative implications to the biological and physical environment. The site was selected to develop minimal effect on coastal erosion. Was noted that the reef was likely to have a positive impact on the shoreline and enhancing deposition in an area that had previously effected by erosion.

Department of Environmental Protection (DEP); conducted an evaluation of the potential environment impacts associated with the reef. Main concern was the changes to the beach alignment. The DEP concluded that only non-toxic materials were to be used in the construction of the reed. Construction could only be carried out in a seabed area where there was no specialised marine biological species. It could also only be carried out if it didn’t lead to any long term erosion to beaches

**Social impacts:** A report was constructed by Alan Tingay and Associates. This report investigated the community attitudes towards the proposed artificial reef. Before the reef the area around the reef was based around swimming, surfing and fishing. By producing another surfable beach, overcrowding could be reduced and minimise the injuries incurred due to overcrowding.

Economic Impacts: preliminary research conducted by the ASRC considered the economic impact of the implementation. 1996 an economic analysis was carried out. Numerical measures were used to analyse potential revenue, products, services, merchandising, sponsorship

**Question 2: Explain how a sustainable approach is consistent with the TBL. Explain how it could improve the project when applied to every stage of the project**

* + Importance of sustainability in any project today
  + Definition of sustainability
  + Introduce concept of TBL – pg 3
  + Short explanation of TBL already implemented in each of the four stages
  + Improvements to the project to be gained after further sustainable thinking

Sustainability is meeting the needs of the people of today without compromising the needs of future generations. Implementing sustainable practise is becoming increasingly important as more of the Earth’s resources are consumed. It is therefore important to consider that whilst approaching the subject of sustainability, there are multiple areas of interest to reflect on. These areas are the environmental, economic and social aspects of sustainability.

By considering these three areas collectively, it can be said that one is appraising the concept of the triple bottom line. A sustainable approach to any project is therefore one which considers a combination of each of the three “bottom lines”. In other words by controlling a project to maximise the social, economic and environmental well-being of the organization, as well as any peoples affected by the project, it can be said that the project is being sustainably executed.

There are many short and long term benefits in implementing the triple bottom line into each of the four stages of any project. For example, if the triple bottom line is applied during the concept phase, initial cost and benefit analysis will also consider benefits to company reputation while also balancing economic growth. Similar benefits can be found in the planning, execution and finalization phases. Some examples might include environmentally safe methods of construction, site selection, material procurement, maintenance and operation which might also strengthen relationships between the organization, clients and the local community.

The project would not reduce the living conditions of local residents or decrease their capabilities to earn an income either now or in the future. This was as an issue during the Woodridge project as the

Planning – project is of suitable quality to ensure public image is retained? Construction methods do not adversely affect environment?

Execution – Construction, following all relevant guidelines and standards

Finalization – Maintenance, operation etc

**Question 2: Explain how a sustainable approach is consistent with the Triple Bottom Line. Explain how it could improve the project when applied to every stage of the project.**

**‘**Triple bottom line’ (TBL) is a holistic concept of sustainability where‘environmental’, ‘social’ and ‘economic’ considerations are identified and considered concurrently in decision making. It is envisaged that triple bottom line sustainable project management can lead to the management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems.

In other words, sustainable project management is about ensuring that environmental, social and economic objectives each be given balanced consideration in the management of a business. It is important, to recognize that short and long term economic benefits can be achieved through adoption of positive social and environmental measures. Essentially, this is all about managing project management so as to gain as many of the benefits, whilst eliminating or appropriately managing any negative impacts.

**Question 2: Explain how a sustainable approach is consistent with the triple bottom line. Explain how it could improve the project when applied to every stage of the project**

Sustainable project management accounts for current and future stakeholders which include the environment. The lifecycle of the project is considered and the overall costs both monetary and environmental are considered from a sustainable perspective. This addresses TBL considerations of society, economy, and environment across the project lifecycle. TBL is considered a direct measure of project long term success.

SPDOG

* + No formal environmental considerations => better consider environmental impact, long term costs may be minimised through renewable energy resources or upcycling/recycling
  + Solar panels were conceptualised and follow the above
  + Community growth and trends considered in the conceptualising of the pool scope, this considers the needs over the next few decades possibly minimising costs and considering the social (needs) aspect of the TBL
  + Economical sustainability was considered by minimising costs and operating costs through the scope of the project. The potential to stimulate local business/economy growth was identified by utilising local resources and services. This is in line with social and economic aspects of TBL
  + Life time costs were cancelled to ensure financial impact was minimised, which took innovation in solar panels and stuff to minimise these costs. Longer the product life, less replacement costs.

# Section B (40 Marks)

**12 Questions, Choose 8 to Answer (5 Marks each)**

**PROJECT SELECTION**

1. **Differentiate the 3 numerical methods of categorizing a project. Which is the most exhaustive one?**

**Payback Period:** The time it takes to earn back the money invested in a project.

If the revenues generated by the project are expected to vary from year to year, add the revenues expected for each succeeding year until you reach the total project cost.

Simple to use, but this model does not account the time value of money. Any additional cash flow after the time to earn back the money is of no use with this model.

* Highlights project with smallest payback period
* Data is readily available
* Reduces risk by supporting the project with the shortest payback period
* Assumes a constant cash flow that will last the lifetime of the project
* Fail to quantify risk
* Not suited to long term projects with changing interest and inflation rates

**Return on Investment (ROI):** The overall profit (or loss) on an investment calculated as a percentage (%) of the total amount invested.

Contrary to the Payback Period method, this takes into consideration the entire cash flow period of the project, but not the time value of money. The most popular method.

**Net Present Value (NPV):** The projected profitability of an investment, based on future (anticipated) cash-flows and discounted (from year 2) at a stated interest rate, to represent value at the specific time (most exhaustive).

Discount factor after 2 years is from annuity table

* Uses the time value of money with all future cash flows in today’s values
* Can simulate many different scenarios
* Accuracy driven by interest rate predictions and forecasted cash flows
* Can be structed to allow for inflation

1. **Name the Five Non-Numeric Project Selection Methods:**

**Sacred Cow**:

* The project is chosen and protected by senior executives
* Priority status given
* Potential lack of organisational support.

**Operative Necessity**:

* To maintain operational functionality during a crisis
* Driven by situational events
* Fast-tracked decision making
* Limited budget provision
* Reduced planning time

**Competitive Necessity**:

* Maintaining a competitive advantage in the marketplace
* Ability to match or beat competitors
* Danger of fierce competition
* Insufficient industry analysis
* Little competitor analysis.

**Comparative Benefit**:

* Applies to companies seeking multiple projects with different benefits
* No valid selection criteria used
* Highly subjective choice
* Support for high profile projects

**Product Line Extension**:

* The product/service is repositioned favourably with customers
* Taking advantage of market conditions and opportunities
* Use both data analysis and intuition in the decision making process
* Increased market penetration
* Possibility of gaining economy of scale
* No guarantee of market success
* Risk of reducing current market share and/or profit

**SCHEDULING**

1. **What scheduling tools are available to the project manager and team to plan the project activities? Discuss**

The project schedule is the time-based-sequenced description of all of the project activities.

There are 4 main tools in capturing and/or communicating the schedule to the stakeholders:

* Work Breakdown Structure (WBS)
* Program Evaluation Review Technique (PERT) or network diagram
* Critical Path Analysis (CPA)
* Gantt Chart

Work Breakdown Structure is essential as part of a project’s lifecycle and timeline. An important part of project planning, the WBS begins with a hierarchy of tasks and levels that help to identify how the project will flow within a designed timeline set by the project manager. Also, it helps to define the specifics of the project outlined in the project scope.

PERT is essentially a flowchart of the project tasks. The network is created by determining predecessor and successor relationships and connecting the tasks based upon those relationships. In a complex project with many organizations/individuals involved, this technique can provide guidance as to who is the internal customer for each task.

Critical Path Analysis is used to determine the shortest time to complete the project. It offers a visual representation of the project activities, presents the time to complete the tasks and the overall project, and tracks of critical activities.

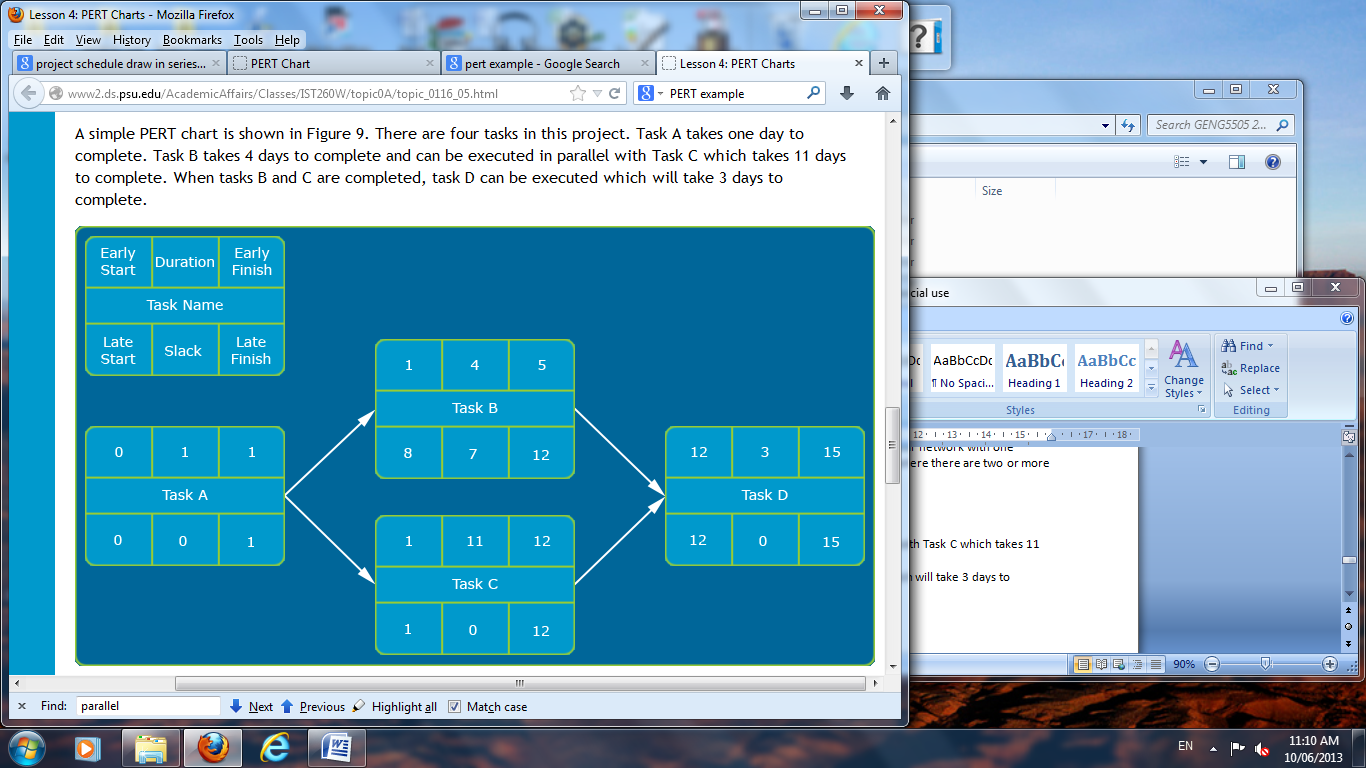
Gantt Chart is excellent for tracking progress or activity for tasks once they have been scheduled. It is used for daily/weekly tracking of project progress, and it is easy to use and maintain. It creates focus for tracking progress because it is clear to see whether a task should be completed, underway, or pending at any given time.

1. **What is the difference between a schedule drawn ‘in series’ and one drawn ‘in parallel’? Discuss and provide examples to substantiate your answer.**

The network can be drawn either ‘in series’, which is a straight line or linear network with one activity following directly on after its linked predecessor, or ‘in parallel’, where there are two or more paths of linked activities through the network from start to finish.

For example, there are 4 tasks in this project.

* Task A takes 1 day to complete
* Task B takes 4 days to complete and can be executed in parallel with Task C which takes 11 days to complete
* When Tasks B and C are completed, Tasks D can be executed which will take 3 days to complete



1. **What is Program Evaluation and Review Technique (PERT) and list 5 advantages and disadvantages.**

PERT is a performance evaluation review technique. It is a graphical illustration of a project as a network diagram consisting of nodes, representing events or milestones in the project linked with others. Arrows indicate sequence of tasks. Used to schedule, organise, and coordinate tasks within the project. This illustrates:

* The project’s logic and how it is tied together
* The relationships between the tasks
* The flow of work throughout the project
* The potential bottlenecks
* Tasks required for the project to be completed

Advantages:

* + Excellent visual and interactive graphic to demonstrate the schedule
  + Participative decision making
  + Joint risk identification and response strategy
  + Negotiated concessions
  + Improved team ownership
  + Shows Critical Path
  + Shows dependent tasks
  + Shows possible bottlenecks that may arise
  + Eliminates idle time

Disadvantages:

* + Difficult to read if the project is large
  + No timeline
  + Difficult to monitor and report performance
  + Not always easy to understand- not intuitive
  + Limited amount of information that can display

1. **What is a Work Breakdown Structure (WBS) and list advantages and disadvantages**

The WBS identifies the project as a whole and decomposes each activity, breaking these down into smaller, more manageable tasks. It aims to ensure that the entire project can be identified and subdivided into more detailed components to support the future project management process. Each task should account for time, resources, and costs.

WBS:

* What work must be performed? Identifies all required activities
* How long will each activity take? Determines the duration
* What resources can perform the work? Determines who is needed
* How much investment is required? Determines what budget is needed

Advantages:

* Captures all tasks required to complete the project
* Identifies task relationships
* Easy to read in table format
* Makes possible to visualize a complex project
* Ties project together

Disadvantages

* Time consuming
* No timeline
* Potential inconsistency between table and effective schedule
* Potential discrepancy between projected and effective resources
* Some tasks may be constrained by factors other than predecessors

WBS is just a list of tasks, broken down into logical categories and sub-categories, whereas a PERT diagram does not necessarily break the tasks down and usually shows the dependencies graphically. PERT is able to show a critical path, where a WBS is unable to, as well as how tasks are performed simultaneously. WBS is better used for resource allocation.

1. **What is a Gantt Chart and list advantages and disadvantages**

* Valuable scheduling tool
* Details activities, order of completion, and establishes completion time
* Visualising actual and planned output over time
* Control tool to identify deviations
* Different task relationships are possible, which offer varying degrees of flexibility and complexity in relation to time, resources and costing

Advantages:

* Illustrates task duration
* Clarifies the 4 task relationship types
* Ideal for monitoring actual progress to date
* Identifies the critical path/s
* Easy to allocate resources
* Easy to read from top to bottom and from left to right
* Illustrates Lead/Lag times

Disadvantages

* Difficult to read if project is large
* Time consuming to update and report
* Need software to avoid excess time spent on it
* Easily out dated given frequency of scope changes and revisions

1. **Provide 4 explanations for the critical path analysis**

**-**The longest path through the network, critical to be completed on time to prevent project delays- a delay in critical task means project delays

**-** The shortest project completion time

**-**The path with no float (no delay)

**-**The task that must start and finish as scheduledfor the project to finish as scheduled

1. **What does the term ‘float’ refer to? Is it a positive aspect in schedule or should it be avoided at all costs?**

Float is sometimes referred to as ‘slack,’ is a number that indicates the amount of time a task can be delayed without impacting subsequent tasks or the projects overall completion. Its important to track when you are maintaining your project schedule. There are two types,

**Free Float-** The amount of time a task can be delayed without impacting the subsequent task

**Total Float-** Is the amount of time a task can be delayed without impacting the overall project completion time

It is a positive aspect in the schedule as it presents the amount of time your are capable of losing. However, it should be avoided as unforeseen issues can cause severe delays if the slack is not dealt with highly.

1. **What shortcomings of PERT does Gantt address?**

Gantt charts break projects into smaller tasks and highlight scheduling constraints. However, project managers use Gantt charts while a project is happening- they schedule tasks by date and show how much work has been completed. Every activity is represented with a bar that stretches from the start date of the activity. A Gantt chart: anticipates the amount of time to complete each task, clearly communicates task responsibility and increases transparency on the projects progress.

**RISK**

1. **Explain the steps in risk management. Give examples for each step.**

**Identification:** Identify all internal & external sources of risk having the potential to impact the project

* **External Risks (Uncontrollable)**
* **Internal Risks (Controllable)**
* **Tools:** 
  + PESTELG (Political, Economic, Social, Technological, Environmental, Legal Global)
  + SWOT (Strengths, Weaknesses, Opportunities, Threats)
  + Risk register
  + Historical research

**Assessment:** Determine both the probability & impact arising from the risk source to calculate the priority

* **Tools:** Risk Matrix

**Analysis:** Work through all tasks to clearly determine how each risk will impact the project’s success

* PERT Analysis
* SWOT and PESTELG Analysis
* Expert Judgement
* Stakeholder Forums
* Decision Trees
* Sensitivity Analysis
* Impact Analysis
* Scenario Scheduling
* Contingency Planning
* Financial Modelling

**Management:** Plan the appropriate response strategies to manage the risk

* Reject – modify plan to eliminate the risk
* Accept – addressed as they arise
* Mitigate – proactive action to minimise the impact
* Share – partnership with 3rd party
* Transfer – outsources to 3rd party
* Enhance – actively increase the probability and/or positive impacts of an opportunity
* Exploit – ensure that the identified opportunity is realised by eliminating the uncertainty around it altogether, so that the opportunity definitely happens

**Monitoring/Evaluation:** Review the risk process & the adequacy of the nominated strategies post project

* Documenting the risk register

1. **Define the terms risk and risk management. Why is risk so important in project management?**

**Risk-** The possibility of loss or injury. Situation, problem, enhancement of opportunity having a measured impact on an outcome. Exposure of an activity to an uncertain outcome.

**Risk management-** The iterative process of: identifying, analysing, managing and monitoring and evaluating and reviewing risk.

1. **What are some approaches to identify risk?**

**PERT analysis-** considers the critical path and other networks

**SWOT and PESTLEG-** Considers issues impacting the situation

**Expert judgment-** Considers opinions, perspectives and viewpoints

**Stakeholder forums-** considers expectations, objectives and deliverables

**Decision trees-** consider possible paths and expected values returned

**Sensitivity analysis-** considers demand, feasibility, take-up

**Impact analysis-** considers action and consequences

**Scenario scheduling-** considers alternative scheduling options

**Contingency planning-** considers possible options and recovery strategies

**Financial modelling-** considers financial implications for funding and cash flows

1. **What are the 7 principles of risk management**

**Reject-** Modify plan to eliminate the risk

**Accept-** Addressed as they arise

**Mitigate-** Proactive action to minimize the impact

**Share-** Partnership with the 3rd party

**Transfer-** Outsourced to 3rd party

**Enhance-** actively increase the probability and/or positive impacts of an opportunity

**Exploit-** Ensure that the identified opportunity is realized by eliminating the uncertainty around it altogether so that the opportunity definitely happens.

1. **What are the response strategies to risk (5)?**

**Avoidance-**

**Acceptance-**

**Monitor and prepare-** Strategy to eliminate the risk

**Mitigation-** Reduce the impact of the risk

**Transference-**

1. **What are the 3 risk profiles?**

**Risk Averse**

* Low tolerance and ability to accept and manage risk
* Conservative approach, proven techniques, distanced from change
* Caution is the principal focus

**Risk Neutral**

* Dispassionate tolerance and ability to accept and manage risk
* No defined philosophies, reaction oriented, measured indifference
* Balance is the principal focus

**Risk Taking**

* High tolerance and ability to accept and manage risk
* Challenges current thinking, innovative approach
* Experimentation is the principal focus

**PROJECT LIFECYCLE**

1. **What is** **Life Cycle Thinking? Why is it important?**

LCT is the consideration of the project from its conceptualisation to its finalization, along with its current and future consequences. Overall, it is a way to become more mindful of the complexities of consuming products and engaging in activities, and how they affect the environment and society. It is important because it takes into consideration the wellness of the future and not compromising this by current actions. It also ensures each stage of the project complies with the TBL thinking.

Since LCT is involved in the choices of individual consumers, as well as policy makers and businesses, it is very important that people are well informed about the subject and its uses. Increasing awareness of the Life Cycle Analysis technique would allow companies, as well as individuals, to consider multiple options for a new product. After consideration of all available options, LCT would encourage selection of the most sustainable option.

1. **Provide definitions, inputs and outputs of each stage of the project lifecycle**

**Concept-** Idea stage where the project is conceived. Discussion of preliminary goals, deliverables and strategic vision alignment, problems raised, impact assessment in terms of TBL and life cycle, potential benefits identifies, alternative approaches researched and provisional costing determined

* **Inputs-** Project selection, opportunity trigger, alternative solutions discussed, consistent with organizational goals, benefits identified, critical success factors, risks identified, expectations agreed, sponsors located, stakeholders confirmed
* **Outputs-** Client brief, business case, feasibility study, risk assessment, stakeholder analysis, budget forecasts, procedures and policies

**Planning-** All work required is planned and scheduled. Objectives are finalized, resources are assigned, quality is signed off on, final costs are approved, the timing agreed and all others administrative matters are determined

* **Inputs-** Project variables reviewed and redefined, break down projects into activities, schedule developed, estimate contingency factors, critical path identifies, source and assign resources, quality measures in place, procurement specifications finalized
* **Outputs-** ‘Stage, task and milestone details including duration, sequencing and resources,’ revised timelines, revised cash flows and budgets, resource matrix, baseline project schedule

**Execution-** The project has commenced during this stage and the emphasis is moved to tracking actual progress using the schedules developed in stage 2 as the comparison point of reference. All work is monitored, controlled, and corrected where necessary with schedules being reviewed, revised and updated as required.

* **Inputs-** Ongoing progress review and controls, progress status and forecast reports, manage cgabe requests, manage contracts, deal with team issues, corrective actions, escalation issues, manage meetings, control and report progress
* **Outputs-** Performance standards, inspection and monitoring plan, purchase orders, performance reports, change of scope request, progress claims, corrective action, contracts, revised schedules, TBL and life cycle thinking

**Finalization-** Project has been completed and the deliverable handed over to the client. Resources are disposed or reassigned, the project is evaluated, reports are written and presented and the administration arm od the project is closed.

* **Inputs-** Document client acceptance, document project outcome, conduct project evaluation and audit, contact closeout, team and stakeholder debrief, communicate lesson learnt, resources reassigned, retentions certificates and warranties, archiving and recording celebrate teams success
* **Outputs-** Handover, acceptance testing, project audit, completion checklist, feedback and evaluation

1. **What are the benefits of the project lifecycle?**

-Communicates graphical framework of the total project  
-Details responsibility  
-Prescribes manageable portions  
-Identifies control gates  
-Flags key decisions  
-Nominates milestones and deliverables

1. **What are key activities (SMART) and inputs from the concept stage?**

**Strategically managed projects-** ie: project vision and mission to be aligned with company goals, mission and vision

**Alignment-** stakeholders aligned with project objectives, project team aligned with project plan, project priorities aligned with management metrics

**Regenerative-** a regenerative team has- open communication, job ownership, risk taking propensity, trust, fun/motivation in understaking the project, creativity

**Transitional-** appropriately managing change and stakeholder relationships, while dealing with environmental complexity, uncertainty and risk

* **Concept Inputs-** Project selection, opportunity trigger, alternative solutions discussed, consisten with organizational goals, benefits identified, critical success factors, risks identified, ecpectations agreed, sponsors located, stakeholders confirmed

1. **In many projects, the concepts stage is poorly completed, why does this happen and how can it be rectified?**

Concept stage: Identify stakeholder, assign project manager, create project charte, develop preliminary project scope statement.

Creates the foundation of the project; all aspects regarding the project must be considered. This is mainly because many do not have a great understanding of the project as it is in its initial phases. To rectify this must follow proper heuristics and formulat a project charter that includes: project title, project start date, project finish date, key stakeholders, business case supporting the project, deliverables, budget information, foreseeable risks, TBL and lifecycle thinking

**CONFLICTS**

1. **Explain how conflicts can be resolved. If the conflict is rapidly evolving, which strategy would you choose and why?**

**Avoiding (Lose-Lose)**

The strategy is neither assertive nor cooperative. No attempt is made to address the conflict at all. May be effective when:

* You cannot possibly win
* The issue is relatively minor
* Confronting the other party may result in more damage than resolution
* A time-out is needed to allow everyone to disengage
* There is an inequitable balance of power

**Competing (Win-Lose)**

The strategy is assertive & uncooperative. Power and dominance are used to gain compliance to your own perspective. May be effective when:

* You know you are right
* The stakes are too high if you lose
* Quick and decisive action is required
* Unpopular decisions have to be made
* A show of force is required

**Accommodating (Lose-Win)**

The strategy is unassertive & cooperative. The others person’s point of view is considered more important to your own. May be effective when:

* The other person’s evidence is more compelling
* Peace, goodwill and harmony are more important to the valued relationship
* You want to create a tactical advantage by offering a concession
* You acknowledge the weakness in your own position
* You wish to avoid further damaging the relationship

**Collaborating (Win-Win)**The strategy is assertive and cooperative. Mutual and optimal outcomes are sought by both parties. May be effective when:

* You want to build an alliance and relationship
* You need the enduring commitment from the other party
* You want to encourage, investigate, and consolidate different perspectives
* Your decision is largely governed by the other party getting theirs too
* You need an optimal outcome without sacrificing your own

**Compromising**

The strategy combines moderate assertiveness & cooperation. A mutually acceptable outcomes is reached. May be effective when:

* The outcomes are only moderately important to each party
* No other option is working
* The balance of power is even
* A gesture of ‘moving forward’ is required
* A decision is required

**Example**  
Since the conflict is evolving, the Avoidance strategy is not possible. Furthermore, since it is rapidly evolving, there is not much time to work with. Therefore, Collaborating and Compromising are not possible either. Therefore, Competing or Accommodating are the preferred options since they are quick solutions. Which one is chosen will depend on who has the most investment power, how much the relationship is valued, and if the imparts are worth damaging a relationship or losing power over.

1. **Explain how team conflict can have both positive and negative outcomes in a project. Provide examples to support your answer.**

Positive:

* Exploration of new ideas- more sustainable approach however may be more cost extensive, what do we as engineers and company prioritise more?
* Consideration of other people’s perspectives
* Adjustments/modifications made
* Clarification of different positions/interests
* Postponed decisions
* Time to reconsider, clarify, and communicate to proposal
* Can stimulate debate
* Challenging ideas can lead to a more effective result

Negative:

* Breakdown in communication- conflict with contractor, miscommunication and can be detrimental to project as a whole
* Increased hostility
* Stunt productivity
* Negative work environment
* Legal action taken for contract breaches
* Project personnel being replaced
* Loss of stakeholders

**COMMUNICATION**

1. **What are the important considerations for good communication? Choose two stakeholders and discuss some of the barriers to communication**

Information should be provided in the right format, at the right time, to the right audience with the right impact. Good communication should be clear, accurate, timely, targeted, appropriate, and complete. This will ensure no ambiguity throughout the project and reduce errors from miscommunication and misunderstandings.

Drawing from the communication process model, say between contractor and project team, we can see some of the potential barriers to communication. For example, if the project team does not “encode” their instructions in the right format to the contractors, the work required may be misunderstood by the contractors. Ineffective communication method may also produce unwanted “noise”.

Further barriers may arise from lack of meetings, lack of agreed scope changes, poor and incomplete documentation, project personnel changes, ambiguous terminology, and frequent scope changes.

1. **What are known barriers to good communication?**

**-**Lack of client involvement  
-Poorly informed stakeholders  
-lack of meetings and/or too many meeting leading to little action  
-lack of reporting requirements  
-Poor and incomplete documentation  
-Frequent scope change  
-changing project personnel  
-Lack of auditing the project to identify the lessons learned

1. **At each stage of the project lifecycle record the appropriate communication tools used**

**Concept: Stakeholder identification-** Sets the vision of the project

**Planning: Strategy development-** How are we going to successfully complete the project

**Execution: Project performance reports-** How the project profitability is doing

**Finalisation: Project finalization reports-** Overall return of investment

**HIGH PERFORMING TEAM**

1. **What are some of the key characteristics of a highly performing project team? Discuss and provide examples to support your answer.**

**Shared Vision –** when each team member understands where the team is headed and how their specific role contribute to the goals and vision of the team; productivity skyrockets.

* Put the vision onto paper
* Develop a vision communication strategy to connect the vision to the team
* Allow the team to build on the vision and take ownership of it

**Healthy Team Culture –** allows the team to make decisions, not waste time on office politics, and accomplish more in less time.

* Set expectations for a team culture based on trust and healthy conflict
* Recognize individuals and the team for achievements and living out core values
* Create opportunities to connect outside of work

**Clear Defined Roles and Expectation for Performance –** team members know what they are supposed to do, how their work supports the team, and how they contribute to the overall success of the team.

* Identify the roles for the team based on market demands, leadership needs, and the vision
* Lay out job descriptions with performance expectations and success indicators
* Perform team assessment using strengths finder to identify the right person for each role
* Set up a communication strategy to introduce the new roles to the team

**Everyone is Held Accountable –** in a culture of accountability, the focus is on the personal development of your team and results

* Establish one-on-one coaching sessions with each team member
* Hold regular formal performance reviews
* Require team members to verbally report on specific projects, goals, and the action plans

**The Leader is an Example**

* Work from leader’s strengths-zone and trust others to do the same
* Provide High Impact team building opportunities
* Get into the trenches with the team and show them the leader cares

**PROCUREMENT MANAGEMENT**

1. **What are they key stages of project procurement (6)?**

**Procurement process-** Includes initiating a request, development of requirements, requests approval purchasing authority

**Roles and responsibilities-** the various roles on the project that have some connection to procurement

**Identified procurement needs-** Details the material, products or services for outside procurement

**Timing-** Describes the timeframe that resources are needed

**Review and approval process-** Ensures changes are valid, understood and approved by the appropriate people

**Vendor Process-** Processes that the vendors should use for timesheet approval, invoice processing, contract renegotiations, status reporting, and scope change requests.

1. **Explain the two different types of decisions that need to be made during procurement planning**

**Make decisions (in-house)-** Currency of skills, known availability, cost effective resource allocation, excess capacity, unknown supplier base, existing management protocols, limited access to the market, poor history of procuring, time available to develop solutions, opportunity to up skill in-house resources

**Buy decisions (out-house)-** Insufficient capability, conflicting operational and project priorities, enhance project scope, access to existing solutions, statutory and compliance requirement, partnering opportunities, mitigate risk exposure, enhance existing relationships, access to independent advice, need for a contractual arrangement

1. **What is procurement management planning and what benefits does it bring to any project? Discuss and provide examples to support your answer**

**Procurement management and its key stages**

Procurement management includes:

* The processes necessary to purchase or acquire products, services, or results needed from outside the project team
* Making the best possible use of supplier’s products and/or services while supporting the changing scope, goals, and objectives of the product itself (if/when necessary)
* TBL and Lifecycle thinking is the core of procurement

The 8 R’s of procurement are:

* Right Material
* Right Price
* Right Quantity
* Right Quality
* Right Source
* Right Reasons
* Right Time
* Right Return

**PROJECT SCOPE**

1. **What key information should be included in the project scope and why? Discuss**

Unambiguous and specific and should outline the following: deliverables, performance, quality standards, TBL, etc.

Includes:

* Project title
* Project start and finish date
* Project justification
* Key stakeholders
* Project deliverables, results, and benefits
* Inclusions and exclusions
* All objectives, characteristics, and requirements
* Milestones
* Risks
* Assumptions
* Project success criteria
* TBL and Life Cycle Thinking
* Time, costs, and resources required for the project
* Scope change process
* Communication channels between the stakeholders

The Scope:

* Established a scope baseline for comparisons and updates
* Forms the foundation of the project plan
* Builds commitment and conveys capability
* Identifies direction and requirement
* Pre-empts scope changes

All goals should follow the SMART framework (Specific, Measurable, Achievable, Realistic, Timeframe).

1. **Why is scope management important? What should be included in a scope management plan?**

A scope management plan documents how the scope will be defined, validated, and controlled. Establishes the direction and guidance parameters on how the scope itself will be managed. Provides a formal mechanism to limit, assess, and authorise changes on a consistent and transparent. It includes,

* **Initial justification-** Must justify the purpose of the project. The more alternatives and expectations that are examined, the greater the probability of the project’s success.
* **Objectives-** The project is framed around a strategic initiative or an operational priority, it requires one or more unambiguous statements that serve as the projects continual over-arching frame of reference.
* **Acceptance criteria-** The pre-set conditions that must be met for the client or asset owner to accept the deliverables
* **Resource capability-** Does the organisation have the resource capacity, maturity and other capabilities to take on the project
* **Constraints-** Limiting factors that may affect the project, ie: predefined budget, imposed dates, contractual clauses and resource working hours
* **Priority-** What must be focussed on and what aspects can have some leniency
* **Schedule-** Timeline of the project to determine give a rough estimate on how the project should proceed
* **Performance measurement-** How the project is expected to perform and what it would provide
* **Reporting requirements-** The type of information that stakeholders which to have throughout the project

1. **Distinguish between the types of scope creep (3), what are causes and cures?**

Scope creep is the changing of the scope over the project lifetime as things become more complex. Scope control requires a written process with formal approval. Proposed changes should be assessed against all other project variables

**Types:** Management edict- manager will demand a piece of work that is outside the scope of the project  
Client- Honoring direct client requests

Business- How the scope may impinge on the brand of the company

**Causes-** Poor initial definitions of requirements, unanswered questions on deliverables, lack of stakeholder involvement, evolving expectations and mentality of exceeding expectations, discovery of new solutions, environmental factors

**Cures-** meticulous planning, through understanding of topic

1. **What initiatives would be appropriate to help manage scope creep (4)?**

**Back up plan-** changes are expected, ensure you have contingencies put in place throughout the project that consist of a lot of risk

**Kick off meetings-** All project stakeholders are brought together for one last review before the project begins

**Prioritise communication-** IF a change comes up, take the lead and meet with your client to discuss how the change fits into the overall project and how it will impact timelines

**Say no when necessary-** Sometime a change request may come up that does not add value to the project; in these cases its okay to say no

**Keep an open mind-** When clients approach you with additional requests, start by reminding them what your original scope of your work entails.

**PROJECT CHARTER**

1. **What key information should be included in the project charter and why? Discuss**

**A project charter should include:**

* Project title
* Project start date
* Project finish date
* Key stakeholders
* Business case supporting the project
* Project goals
* Budget information
* Foreseeable risks
* TBL and life cycle thinking

**The project charter provides the following benefits:**

* Formally establishes the project (a project does not exist without a project charter)
* Designates the parameters within which the project manager has the authority to operate
* Gives the project manager authority to spend money and commit resources
* Provides the high-level requirements for the project
* Links the project to the ongoing work of the organization

**The project charter is needed because:**

* Ensures the project manager understands the sponsor’s needs
* Provides key information needed to get started
* Provides a reference document to make sure everyone is on the same page later in the project
* Provides the basis to plan the project
* Empowers and protects the project manager by describing what he or she is being asked to accomplish

**PERFORMANCE**

1. **Discuss Balanced Scorecard (BSC) for projects**

Performance measurement framework which includes strategic performance metrics to give project managers and other key stakeholders a more ‘balanced’ view of project performance.

* **Customer perspective** – i.e. customer satisfaction, economic value added, intended objectives
* **Financial perspective** – i.e. within budget, variance between original and final budget, project costs compared to industry standards
* **Product/ internal perspective** – i.e. team satisfaction, resource management
* **Growth and innovation perspective** – i.e. best practices identified, ongoing improvement, innovation ideas rate, TBL, Lifecycle

BSC can be used as health checks throughout the project lifecycle:

* **Concept**: Initial measurement to establish baseline for project planning
* **Planning**: BSC benchmarks are included in overall project plan
* **Execution**: BSC measurements are implemented, and initial benchmarks are used to compare and improve the BSC outcomes
* **Finalization**: BSC measurements are reviewed and documented in the final report to support best practices and for lessons learnt.

1. **What are traditional steps to effective control (performance)?**

**-**Establishing the standards which will become the measurement benchmark  
**-**Monitoring the standards through regular inspections and related activities

**-**Measuring performance against the standard  
-Taking corrective action to correct deviation and/or reinforce compliance

**Tools:** Milestone charts, budget charts, control charts, earned value reports, action plans, change request register contingency plans, risk management register

1. **How do you measure performance throughout the project?**

To measure your performance objectively, you must first have clear objectives to measure against

**Schedule-** Whether you are keeping up with the original timeline

**Quality-** Quality reviews to determine if you are meeting standards set out in your quality plans

**Cost-** Comparison between your actual spending and what you had budgeted up to that point

**Stakeholder satisfaction-** How the stakeholders are feeling about the progress of the project

**Performance-** How is project shaping up? Is the system operating up to planned standards

1. **Distinguish between progress, status and forecast completion reports. There are 4 aims of reports**

**Progress report (time zero to present)-** Reports information after it has happened; achievements, budget and cash flow progress, issues addressed, milestones reached, risk managed, changes adopted, approvals received, delivery accepted

**Status report (present)-** Reports the current position of the project against the plan- on time, on budget, as specified

**Forecast report (completion oriented)-** Reports against the original completion date, anticipated scope changes, pending risks, approvals pending, escalating issues, expected delays, projected cost over runs

**PMBOK**

1. **What are the 10 key competencies for running a team based on PMBOK**

**Project stakeholder management –** Ensures stakeholders are identified, and well informed and engaged with throughout the project.

**Project scope management –** Processes ensuring that all the work required by the project, & only this work is included

**Project time management –** Processes ensuring that the project is completed in a timely manner

**Project cost management** – Processes ensuring that the project is completed within the approved budget

**Project quality management –** Processes ensuring that the project will satisfy the needs (standards, definitions, specifications, uses, etc.) for which it was undertaken

**Project human resource management –** Processes ensuring that effective use can be made of all people involved in the project

**Project communications management** – Processes ensuring that all communication is complete, timely, appropriate & targeted

**Project risk management –** Processes ensuring that all project risks are clearly identified, comprehensively analysed & responded to proactively

**Project procurement management** – Processes required to acquire all external goods & services for the project

**Project integration management –** Processes ensuring that all aspects of the project are effectively coordinated & managed

1. **Explain PMBOK(project management competencies) and PRINCE2**

**PMBOK-**Project management body of knowledge (PMBOK) is the entire collection of processes, best practices, terminologies and guidelines that are accepted as standard within a specified industry. It is valuable as it standardizes practices across various departments, tailors processes to suit specific needs, and prevents project failures.

**Prince2-** Is a flexible method that guides you through the essentials for managing successful projects, regardless of type or scale. It is built upon eight principles:

* **Starting Up:** A project mandate is created and is assessed by the company to see if they are capable of taking on the project
* **Directing:** Project board reviews and evaluates project briefs based on business justification and viability
* **Planning:** A comprehensive project plan and baseline for 6 performance targets: time, cost, quality, scope, risk and benefits is created
* **Initiating:** An initiation documentation is sent to the project board and if they are confident in the project plan they are given approval for the work to begin
* **Controlling:** Project manager breaks down project into smaller sub-sections and passes them off to smaller teams and managers to complete
* **Managing Product Delivery:** Project manager checks progress against the project brief and make sure deliverables meet PRINCE2 quality expectations
* **Managing Stage Boundaries:** Project manager and project board review each stage to make sure the project is progressing according to plant and meeting project assurance requirements
* **Closing:** Once project is completed, project manager wraps up loose threads, including PRINCE2 documentation, outcomes, and reporting.

**STAKEHOLDER MANAGEMENT**

1. **Why is stakeholder management important. Discuss 4 stakeholder management strategies**

Stakeholder management is important because:

* Stakeholders may not be the driver for the project, but they can be very important agents for change
* Stakeholders cannot be ignored
* Stakeholders will either support or hinder the project
* Stakeholders will impact the ultimate success of the project
* Some stakeholders have the power to stop the project or draw negative media attention
* Meeting the stakeholder’s interests will make them happy, meet the goals of the project, and reduce the chance of negative influence on the project

Stakeholder Management includes:

**Identifying the Stakeholders**

Obviously it is important to identify everyone who is impacted by the project or has direct impact on the project as these are the people that must be satisfied

**Analysing Stakeholder Expectations**

An idea of what stakeholders expectations and what sort of impact they have on the project will no doubt change how the project is done. And create stakeholder satisfaction.

**Stakeholder Identification/Analysation Strategies:**

* Power-Interest Matrix
* PARIS
* RACI Matrix
* Stakeholder Management Matrix
* Communication Plan

**Developing appropriate management strategies for effectively engaging stakeholder in project decisions execution**

* **Adaption Strategy** – Obey demands and rules presented by the stakeholders
* **Compromising Strategy** – Negotiating with stakeholders, listening to their request and offering compensation when appropriate
* **Avoidance Strategy** – Losing attachment to stakeholders and their claims. Transferring the responsibility of dealing with their claims onto others in project network
* **Dismissal Strategy** – Ignoring stakeholders’ demands. Not considering their requirements and implementing the project in stages
* **Influence Strategy** – Dealing proactively with the demand from stakeholders. Taking into account stakeholders ideas and request

1. **Define what is meant by the term ‘stakeholder’**

Is a terms used to describe individuals, groups, or organisations that have an interest in the project and can mobilise resources to affect its outcome in some way. They are individuals who are actively involved in the project or whose interest may be positively or negatively affected as a result of project execution or successful project completion. Project stakeholders usually include the project manager, customer, team members of the project and the project sponsor.

1. **Identify the most common types of stakeholders present on most projects (9)**

**Investors-** Owners of business, have the right of accurate and timeless information

**Creditors-** creditors of businesses

**Communities-** The people that are impacted

**Trade unions-** may be informed and consulted about things like work safety

**Employees-** individual contributors to your organization

**Governments-** regulatory bodies and taxation authorities

**Partners-** suppliers and distributors

**Customers-** those that depend on your products and services

**Internal stakeholders-** Your board of directors, executive managers, auditors, business units and internal customers

1. **Explain the notion that project stakeholders need to be managed**

Given their interest in the project, clear, actionable plan is required to now reach and interact with these stakeholders in support to the projects interest. Individual expectations and project objectives will need to be managed throughout the project lifecycle. Proactive in capturing relevant information from each stakeholder based on who they are and their different responsibilities. Documented in a suitable format that can be readily disseminated, tracked and updates, as the project progresses.

**RACI Framework:**

**Responsible-** Nominate the stakeholder charged with doing the required activities

**Approve-** nominate the stakeholder who need to approve all decisions

**Consult-** nominate the stakeholder who need to be consulted prior, during or after an action

**Inform-** nominate the stakeholder who needs to be kept informed of progressive actions

**PARIS Framework:**

**Participate**

**Approve**

**Responsible**

**Inform**

**Signoff-** nominate the stakeholder who provides official signoff

1. **Identify strategies to manage stakeholders**

**Adaptation-** Obeying the demands and rules that are presented by stakeholders, that is, adjust to stakeholder pressures to be able to achieve the planned objectives

**Compromising-** Negotiating with stakeholders; opening the dialog and listen to their requests and offer compensations when appropriate

**Avoidance-** Losing attachment to stakeholder and their claims. Transferring the responsiblity of dealing with the claims to others in the project network.

**Dismissal strategy-** Ignoring stakeholder demands. That is, not considering stakeholders requirements in implementing the project stages

**Influence-** Dealing proactively with the demands from stakeholders. Creating and communicating value to stakeholders while building relationships with them

**CONTRACTS**

1. **What is required in a contract for it to be legally binding? What are the three types of contracts we leant in this course?**

A contract is a legally binding agreement between 2 or more parties to act, or refrain from acting, in a particular way.

With the intent of protecting the interests the parties involved, the contract should contain (as a minimum) the following elements:

* An offer (capable of being accepted)
* Acceptance (capable of being communicated)
* Intention/Consent of each party to be legally bound (freely given)
* Consideration (Something is given back for the promise)
* Mutuality (neither party is disadvantaged)
* Capacity (both parties have capacity to fulfil the contract)
* Legality (it is not an illegal activity)

**Three Types of Contracts:**

**Fixed Price** – The delivery of a well defined product for a fixed price

* **Customer Risk**
  + At the mercy of a sole source contractor
  + Incomplete specifications leading to potential contract changes
  + Tendency of the contractor using cheaper materials
* **Contractor Risk**
  + Requires careful cost and schedule estimation
  + Cost growth may lead to unprofitable projects

**Cost Reimbursable** – The seller is paid for the actual costs incurred plus a fee representing the seller’s profit

* **Customer Risk**
  + Final cost unknown
  + Sole source contractor
  + Poor specifications lead to more costs and contract changes
* **Contractor Risk** 
  + Fee percentage declines as costs rise
  + Rising costs can damage the relationship with the customer

**Time and Materials Contract** – This type of contract contains features of both fixed fee and cost plus contracts

* **Customer Risk**
  + No specifications
  + Open ended
  + Sole source contractor
* **Contractor Risk**
  + Fixed rates
  + No defined tasks

**BUDGETING**

1. **What are the main budgeting techniques learnt in the course?**

The budget is a formal written financial statement of management’s plans for the future expressed in financial terms.

The main budgeting techniques are:

* **Traditional**
  + Previous year’s level of performance is the foundation for next year’s figures
* **Zero Based** 
  + Ignores previous results as each activity and outlay is justified. Each activity is recorded with zero spending to begin with
* **Program**
  + Activities are grouped together for projected costs generated by each program
* **Top Down**
  + Based on pooling knowledge of senior executives and past results. Project costs are estimated and then passed to lower level managers who continue the breakdown into further estimates
* **Bottom Up**
  + Individual task budgets are estimated in detail by the people directly responsible for doing or managing the work. Estimates are aggregated to give the total project cost

1. **What are some advantages and disadvantages of the budgeting process?**

**Advantages-** Increased ability to improve decision making process, effective means of cost control, more reliable profits can be determined, assess operational financial requirements, ideal for areas needing control measures, identify and diagnose problems, act to improve management image

**Disadvantages-** Top to bottom support is difficult to get, time spent planning can delay action, often locked and inflexible, restrictive in terms of innovation and change, can ignore cyclical fluctuations, communicate unrealistic targets, based on guessed and unreliable estimates, involved a high degrees of uncertainty, ca be expensive to prepare

**QUALITY**

1. **Quality Steps and Discuss**

**Quality Planning:** All the mandated quality standards, operational definitions, and business requirements relevant to the project are clearly identified and agreed**.** It aims to ensure that those same standards can in fact be achieved and measured throughout the project

**Examples:**

**-**Reviewing scope document, detailed product descriptions and technical specification

-Examining all operational procedure relating to best practice and operational efficiencies

**Quality Assurance:** A declaration or guarantee that the overall project performance is evaluated on a regular basis to give all stakeholders the confidence that the relevant quality standards will be satisfied.

**Examples:**

-Quality management plan

-Business rules and operational definitions

-Appropritate internal systems

-Process to eliminate waste and excess

**Quality Control:** Monitors specific task and project results to identify, measure, and eliminate the causes of unsatisfactory performance while ensuring that quality compliance is always demonstrated and achieved.

**Quality Improvement:** A culture, a commitment, and an ownership of what the project is delivering and, ultimately, how well it is being delivered. Where innovation is encouraged, continuous improvement will flourish. Where efficiencies, economies of scale, and capacity can be enhanced, continuous improvement will flourish.

1. **Define the term quality and its various representations within your project (4 constraints)**

There are four representations of quality: planning, assurance, control and continuous improvement

Quality is a personal dimension, framed by individual experiences and expectations. IT implies reliability, satisfied customers, and complies with specifications. It dictates measurement and is defined as a characteristic. Every project is created and managed to be successful as measured against some defining benchmark, most notably time achievement, deliverable compliance, cost control and TBL and lifecycle. Projuct success is also measured against the clients identified agreed need; not just their wants.

1. **What are the management principles as cited in the ISOseries?**

**Quality management (ISO 9000)-** Customer focus, leadership, people involvement, factual approach to decision making, mutually beneficial supplier relationships, system approach to management, continual improvement

**Environmental management (ISO 14000)-** Environmental performance, lifecycle management, emissions

**Social responsibility (ISO 26000)-** Human rights, community involvement,, labour practices

1. **What steps are required to ensure quality is designed into project delivery?**

**Building in quality:** budget cost, clear specification,, defined standards, historical experience, qualified resources, impartial reviews, effective change control, organizational wide commitment, integrate processes, documented planning

1. **What is the reason for implementing quality control activities throughout the project?**

Monitors specific task and project results to identify, measure and eliminate the causes of unsatisfactory performance, while also ensuring the quality compliance is always demonstrated and achieved. It is used though the implementation and finalization stages of the project to formally demonstrated, with reliable data that the acceptance criteria have been met. Some benefits include- elimination of rework, completion of work-in-progress, confirmation of acceptance, documented quality improvement, completed checklists, process adjustments

1. **What tools exist to support conducting quality control and continuous improvement measures?**

**Quality control Tools:** Peer reviews, physical inspection, control charts, scatter diagrams, checklists, pareto diagrams, statistical sampling flowcharts, caused and effect diagram, trend analysis

**Quality continuous improvement tools:** Regular performance reporting, meetings and debriefs, decision gates and approval processes, walkthroughs and peer reviews, scenario analysis, evaluation reports, suggestion boxes, user feedback

**GOOD LEADER**

1. **What are the four functions of project management and what are good traits of a manager?**

**Functions:**

**Scope-** Forms foundation of project plan

**Time-** Rough timeline of the project

**Cost-** The budget of the project

**Quality-** The standard that is required to be met

Good traits of a manager include:

Being a good role model (tell the truth, admit failure, shared ethical values to employees, etc), lead by example, establish codes of ethics and decision rule, discipline those who break the code of ethics, provide training, is involved.

**PROJECT MANAGEMENT**

1. **Provide an explanation of ‘project’ ‘management’ and ‘project management’**

**Project-** A collection of activities and tasks designed to achieve a specific but temporary goal of the organization, with specific performance of quality requirements, all the while subject to time and cost constraints

**Project management-** Refers to the management of project activities that lead to the successful completion and output of a project. This is done by applying key management principles- planning, organizing, leading and controlling

1. **Describe 5 ways to** **terminate a project**

**Extinction:**

* Project has successfully completed scope and the client has accepted it
* It has been superseded by the external developments like technological advancement or market crisis
* It has failed to achieve its goal
* It has no longer support from the senior management

**Murder:** Same as extinction but it is a silent decision

**Inclusion:** Successful project institutionalised

**Integration:** Elements of successful project redistributed

**Starvation:** Budget cutbacks; Resource reallocation; Changing priorities

1. **Explain the stages of forming a team.**

**Forming –** Members join and begin the process of defining the group's purpose, structure, and leadership.

**Storming –** Intragroup conflict occurs as individual resist control by the group and disagree over leadership.

**Norming –** Close relationships develop as the group becomes cohesive and establishes its norms for acceptable behaviour.

**Performing –** A fully functional group structure allows the group to focus on performing the task at hand.

**Adjourning –** The group prepares to disband and is no longer concerned with high levels of performance.

1. **What are the characteristics of projects that separate them from everyday activities (10 characteristics)**

* Timeframe
* Stakeholders including clients/sponsors
* Sequence and deliverables
* Team effort
* Quality
* Schedule
* Budget
* Complexity
* Risk
* contracts

1. **What are some common causes of project failure and success?**

**Success:**

* Projects are aligned strategically to business operations and organization vision
* On time, on budget, on quality specification
* Demonstrated visibility, authority and accountability
* Client/stakeholder satisfaction
* Transparent approvals and decision making
* Skills inventory of all qualified project management personnel
* Endorsed, communicated and consistently applied methodology

**Failure:**

* Functional conflicts between operational and project priorities
* Lack of honest, transparent accountability
* Resistance to modify
* Over-reliance and poor management of external parties
* Lack of momentum
* Reliance on reactive and remedial corrective action
* Un-authorized scope changes

1. **What are common constraints of any project and why are they called constraints. Explain how the common project constraints are interrelated**

The relationship between constraints is that they limit the optimized project output

**Time-** Provisional timeframe including start, finish and deadline dates

**Cost-** Provisional budget and associated funding requirement and approvals

**Scope-** Unambguous and specifs (deliverables, performance, etc), initial description of output as to enable measurement

**Resources-** Nominated assignment and commitment of people, materials, equipment and finance

**TBL and Lifecycle-** Maintaining sustainability

Are interrelated as they may impact estimates

1. **Define ‘strategic management’ and describe its relationship to project management**

Strategic management involves long term planning to assist a business in reaching goals. These goals define the direction of the company and may include worker productivity, marketing strategy, and improving production operations. Often times strategic goals are not limited and can be a long-term commitment. Project management involves the initiation, planning and control of a range of tasks required to deliver the end product. Its goal focus just on the currents product or future success and often have a finite timeline, while strategic goals involve the entire business striving for future success.

1. **Give examples of possible strategic alignment criteria in selecting projects**

Strategic alignmentmeans that all elements of a business including the market strategy and the way the company itself is organized and arranged to best support the fulfilment of its long term purpose.

* Understand the business mission, vision, strategy and goals
* Determine where and how learning will impact the achievement of business goals
* Document the learning and development plan
* Validate the alignment of the learning and development plan with business plan

1. **Explain the link between the function areas of an organization and the project selection process**

**Sales-** Deal with customer and generate orders

**Purchase-** Responsible for monitoring how many products or stock is required at any one time

**Manufacturing-** advertise and promote the products or service of the organization

**Finance-** Ensures that there is financial stability within an organization and a steady cash flow

**Human Resource-** Provide support to the employees of an organization

**Administration-** Works in all departments within organisations

Every project must consider all these aspects if they wish to be successful in being competitive within industry

1. **What is project governance?**

Defines the roles and responsibilities of all project stakeholders and to determine the decision-making structure for the project. Plans and manages the project throughout its lifecycle by ensuring accountability, transparency, participation, predictability, traceability, validation and integrated change controls. There is an internal audit capacity and accountability to provide regular, timely, unambiguous and result driven reports on performance, deliverables and outcomes.

1. **What are the 5 levels of project maturity and how can each be demonstrated?**

**Initial-** Ad hoc, chaotic approach to product development and work practices. Few processes are defined, and success depends on individual effort and heroics

**Structured process/standards-** Basic project management processes are established to track cost, schedule, and functionality. The necessary process discipline is in effect to repeat earlier successes on projects with similar applications

**Organisational standards-** Processes for both management and engineering activities are documented, standardized, and integrated into a standard management process for the organization. All projects use an approved, tailored version of the organisations standard management process for project and maintenance work

**Managed process-** Detailed measures of the organization processes and product quality are collected. Both the processes and products are quantitively understood and controlled

**Optimising-** Continuous process improvement is enabled by quantitative feeback from the standard management process and from piloting innovatie ideas and technologies.

1. **Provide examples of suitable evaluation criteria used during source selection**

Source selection criteria is a set of attributes desired by the buyer which a seller is required to meet or exceed to be selected for a contract. Selection criteria can be identified and documented to support an assessment for more complex products, services, or results. Some suitable evaluation criteria:

**Understanding of need-** How well does the sellers proposal address the procurement statement of works

**Overall cost-** Will the selected seller produce the lowest total cost of ownership

**Risk-** How much risk is embedded in the statement of work, how much risk will be assigned to be selected seller and how does the seller mitigate risk

**Management approach-** Does the seller haver, or can the seller be reasonable expected to develop, management processes and procedure to ensure a successful project.

**Technical approach-** Do the sellers proposed technical methodologies, techniques, solutions, and serices meet the procurement documents requirements or are they likely to provide more or less that the expected results.

1. **Provide examples of the different types of resources often assigned to projects**

**Resource name-** Individual name or generic label

**Resource type-** Labour, material

**Resource group-** the group to whom the resource belongs to

**Resource capability-** skills, expertise, prior expertise

**Resource rate-** what is their normal rate, or other fixed/variable costs

**Resource location-** the physical location

**Resource quantity-** how many will be required

**Resource availability-** the actual ‘free’ time they have to allocate

**Resource calendar-** what dates are excluded throughout the project

**Resource report-** Who does the resource currently report to

**Resource development-** will any additional training be required

**Resource evaluation-** performance evaluations from past projects

1. **What are common estimating techniques**

**Analagous estimating-** Easy to use but appropriate assumptions needed

**Resource unit rates-** The lower the unit rates the more resources you get with your money

**Bottoms up-** Each task is broken down into smaller components. The estimates for the smaller individual components are then aggregated to develop a larger estimate for the entire task as a whole.

**Educated guess-** Opinions or a judgment based on expertise/specialized knowledge

**Vendor bid analysis-** obtaining written bids from vendors

**Three point estimate-** involves team discussions, correct one another in a way that heps avoid errors and poor estimations

**Parametric estimating-** Statistical/ mathematical modelling

1. **What is the difference between ‘lag time’ and ‘lead time’? Discuss and provide examples to support your answer**

**Lead Time** – the amount the successor task can be advanced (intentional accelerated)

ie: Time duration of first activity is 20 days and 15 days for the second activity, the first activity is on its 15th day and you have started the second activity

**Lag Time** – the amount of time the successor task can be delayed (intentional delay)

ie: Duration of first activity is 3 days and two days for the second activity. After completing the first activity you wait one day and then you start the second

Both could impact the critical path of the project and how the project scheduling plays out

1. **What information should be found in the project ‘close-out report’ and why? Discuss**

The project has to be formally accepted, with reference to the project plan. The client or project owner must verify in writing that all work is completed to the expected standards. A review of the project is needed such that detrimental practices can be learnt from and prevented in the future. Furthermore, to ensure smooth transitions and the reallocation of resources

* Completion checklist
* Satisfaction levels and surveys
* Defects Warranty
* Written acceptance
* Specification conformation
* Testing
* Final Payment
* Hand over, written confirmation that everything has been accounted for

All this information is imperative for a smooth handover and finalisation of the project.

1. **What are 8 key processes for running a team, based on PRINCE2?**

* **Starting Up:** A project mandate is created and is assessed by the company to see if they are capable of taking on the project
* **Directing:** Project board reviews and evaluates project briefs based on business justification and viability
* **Planning:** A comprehensive project plan and baseline for 6 performance targets: time, cost, quality, scope, risk and benefits is created
* **Initiating:** An initiation documentation is sent to the project board and if they are confident in the project plan they are given approval for the work to begin
* **Controlling:** Project manager breaks down project into smaller sub-sections and passes them off to smaller teams and managers to complete
* **Managing Product Delivery:** Project manager checks progress against the project brief and make sure deliverables meet PRINCE2 quality expectations
* **Managing Stage Boundaries:** Project manager and project board review each stage to make sure the project is progressing according to plant and meeting project assurance requirements
* **Closing:** Once project is completed, project manager wraps up loose threads, including PRINCE2 documentation, outcomes, and reporting.

# Section C (20 Marks)

**6 Questions, Choose 4 to Answer (5 Marks each)**

1. **Why is ethics important**

Demonstrated successes, new sustainable business engineering and project management models. New paradigms (competition=cooperation) ie: cooperative competition and focus on relationship building throughout the value chain. Success involves the long-term view, strong internal values driving behaviour, careful selection of compatible business partners, changes to technology, systems and processes consistent with above. Sustainable development: meets the needs of the present without compormoising the ability of future generations to meet their own needs.

Ethics and sustainable development are strongly related with respect to:

**Financial bottom line-** Make a profit while balancing the need for social, environmental, and natural resource balance.   
**Social Bottom line-** focus on society as a whole, not just shareholders  
**Environmental bottom line-** controlling pollution and toxic emissions, preserve biological diversity.   
**Natural resources-** Conservation to the extent possible and search for substitutes for non-renewable resources.

1. **Describe the utilitarianism, deontology, and virtue-based approaches to Ethics.**

**Utilitarian / Consequences Based Theory**

* An action is judged as ethical or unethical based on the outcome
* The end justifies the means
* Forward Looking
* Choose action based on greatest net benefit
  + Maximise benefits
  + Minimise costs
* Disadvantages
  + Subjective – who decides what is good?
  + Minorities are at risk
  + Favouritism in nature
  + Assumes the end justifies the means
* Example: Pharmaceutical company releasing a drug with some side effects. The drug helps the majority of people combat a disease, though there is a minority of people who are troubled by a minor side effect

This can be seen as an example of utilitarian ethics since the numbers of people who were able to own a cheap vehicle which did not have a catastrophic accident outweighed the relatively small number of people who did have a catastrophic accident. Hence, the ‘greatest good for the most number of people’. However, if a human life is considered invaluable, then this argument is thrown into the dark.

**Deontological / Duty Based**

* An action is judged as ethical or unethical without regard to the outcome
* Focuses on the means rather than end
* Duty Based
* Morally obliged to follow rules and principles regardless of consequences
* Backward looking
* 3 Maxims theory
  + Act as if your actions are making universal law for all to follow
  + Always treat any human as an end
  + Act if as you are a member of a moral community

**Virtue Based Theory**

* Focuses is on the individual, not the action.
* Particularly, focuses on character traits and character development
* Individuals should seek to live a virtuous life
* The possession and development of a good character of the moral virtues will lead people to do the right thing
* Egoism
  + Individualistic, self-centred
  + All activities direct to self-satisfaction
* Humanism
  + Recognition of the equal dignity of everyone
  + Altruism (elevation of others)
  + Preferences for freedom of action
  + “My freedom cannot be enjoyed at the expense of your freedom”
* Relativism
  + Moral values are relative to a particular environment (Not universal nor absolute)
* Eastern Philosophy
  + Confucianism
  + Buddhism
  + Islam
* Disadvantage
  + Relies on everyone having a moral compass

1. **What are the key responsibilities in the ethics code for engineers?**

Engineers have a direct impact on the quality of life of others. It is important for engineers to maintain:

* Honesty
* Integrity
* Impartiality
* Fairness and equity
* Dedicated to the protection of the public health, safety and welfare

Engineers must perform under a standard of professional behaviour and adhere to the highest principles of ethical conduct. Hence, the code of ethics for engineers. The ethics code for engineers is a guide to ethical practices for engineers, stating the moral responsibilities of engineers as seen by the profession and represented by a professional society. It outlines the moral responsibilities of engineers and is a framework used when exercising judgement in the practice of engineering.

Roles of the Code:

* **Serving and protecting the public-** advanced expertise that professionals have that the public lacks
* **Guidance**-Codes provide helpful guidance by articulating the main obligation of engineers
* **Inspiration-** provide a positive stimulus for ethical conduct
* **Shared standards-** diversity of moral viewpoints among individual engineers makes it essential that professions establish explicit standards
* **Support for responsible professionals-** Codes give positive support professionals seeking to act ethically
* **Education and mutual understanding-** encourage a shared understanding among professionals
* **Deterrence and discipline-** Server as a formal basis for investigating unethical conduct
* **Contributing to the profession’s image-** Present positive image to the public of an ethically committed profession

Limitations:

* No substitute for individual responsibilities in dealing with real world ethical dilemmas
* Can be vague and ambiguous
* Are not always the complete and final word
* Guidelines rather than a strict law

1. **List the 5 key stakeholder groups and their ethical values**

* **Client** – initiator, the person who wants the project to take place. The project cannot be immoral or have a negative outcome on the public.
* **Sponsor** – the party paying for the project. They have significant power over the project. They must decide whether or not the project is ethical and should be carried out. Must also make sure the project is ethical in practise as well as the goals of the operation
* **Project Steering Group** – encourages everyone’s voice to be heard, makes sure the minorities are heard
* **Manager** – ensures the team is performing in an ethical manner in all of their task
* **Team** – completes their tasks ethically to required standards

1. **What are the 7 stages of the Ethical Cycle?**

* **Case** – the case is presented and reviewed
* **Moral Problem Statement** – the problem is formulated and stated
* **Problem Analysis** – relevant elements of the moral problems are described
* **Options for Actions** – possible solutions are generated for the developed moral problem. Creativity is very important in this stage
* **Ethical Judgement** – the moral acceptability of the various options is judged. This can be done on both formal and informal frame networks
* **Reflection** – different frameworks may lead to different conclusions so a further reflection on the outcomes of the previous step is required
* **Morally acceptable action/statement** – the actions decided upon is presented and implemented

1. **What is a code of ethics? Discuss the limitations of a code of ethics and provide examples to substantiate your answer**

A code of ethics is a group of values and principles that shape the decisions we make in engineering practice. It functions as a commitment by the profession as a whole, that engineers will serve the public health, safety, and welfare.

**They can:**

* + Help to find answers
  + Protect against pressure to compromise privacy
  + Tell what the professional standards of behavior are

**They cannot:**

* + Force ethical behavior
  + Give the answers

**Limitations:**

* + General and vague
  + Are not the complete or final word, guidelines rather than rules
  + Without proper guidance, different parts of the organization may interpret the code differently, ultimately devaluing it
  + Introducing and implementing the code effectively will be demanding of senior management time
  + The code may raise public and employee expectations to a level that the organization is unable to live up to

1. **What are the benefits of managing a project ethically? Discuss and provide examples to support your answer.**
   * **Cultivate Strong Teamwork and Productivity** – Ongoing attention and dialogue regarding values in a project builds openness and integrity. The team feels strong alignment between their values and other organization, with strong motivation and performance.
   * **Promotes a Positive Work Environment** – Supports team growth and meaning. Team members feel confident and can discuss anything with the team.
   * **Promotes Quality and Strategic Planning**– Help manage values associated with quality management, trust among stakeholders, performance reliability, measurement, feedback and strategic values.
   * **Promotes Diversity** – Acknowledges different values and perspectives
   * **Promotes LCT** – Aligns values with TBL and the accompanying social, economic, and environmental benefits
   * **Promote a strong public** **image** - an organization regularly gives attention to its ethics can represent a strong positive to the public.
2. **What are the characteristics of an ethical manager?**

* Lead by example
* Ethical and honest at all times
* Truthful
* Admit failure
* Communicate shared ethical values to employees
* Reward employees who behave ethically and punish those who do not
* Protect whistle blowers
* Establish code of ethics and decision rules
* Hire individuals with high ethical standards
* Have all levels of management continually re-affirm the importance of the code of ethics and the organisations commitment to the code
* Publicly reprimand and discipline those who break the code
* Provide ethical training
* Conduct independent social audits
* Provide support for individuals facing ethical dilemmas

1. **What is the role of ethical engineers to the public?**

* Protect public health, safety, and welfare
* Serving and protecting the public
* Shared understanding about the moral responsibilities of engineers
* Maintain trust
* Priorities the interest of the people and society
* Upholds the value of providing the same opportunity for future generations

1. **What is the Line Drawing Approach to ethics?**

Used when moral principles are clear, but there is a ‘grey area’ that exist. Must be used objectively and honestly. Two paradigms are considered:

* **Positive Paradigm** – something that is unambiguously morally acceptable
* **Negative Paradigm** – something that is unambiguously morally unacceptable

The problem under consideration is placed somewhere between these two extremes, alongside other similar examples.

Continuously keep developing hypotheticals until it is clear what the best solution is.

Although this approach seems ethically acceptable, other consideration should include:

* Subjective aspects of this approach
* Legal aspects
* Political aspects
* Wider community perception of the matter

Can help to solve the ethical aspect of a problem, but it must be remembered that a choice which may appear morally acceptable may not be the best choice. Must be used objectively and honestly.

1. **What tests can a project manager perform to determine if a task is ethical?**

* Legal test – Does it violate the law?
* Duties test – Does it contradict widely accepted moral obligations?
* Consequences test – Will it result in major damages to people or organisations?
* Utilitarian test – Is there an alternative action that produces equal or greater benefits?
* Special obligation test – Does it violate any special duties?
* Motives test – Is the intent harmful?
* Rights test – Does it infringe upon the rights of stakeholders in any way?
* Justice test – Does it leave another person less well off?
* Sustainability test – Does it impact negatively on future generations?

1. **What are the two dimension foundation of ethics**

**Moral dimension-** Moral philosophy is a branch of philosophy studies that studies principles of right and wrong in human conduct. There is a set of guidelines- models/frameworks constructed by society that direct/prescribe appropriate values and subsequent behaviours. Often culturally determined

**Normative Dimension-** Asks the question, what is the right thing to do? Moral correctiveness based on personal values shaped by: family, religion, experience. Personal feelings of how we should treat people and the environment as a whole.

1. **Managing Cross cultural business ethics**

Many structural differences between the Australian systems and other countries. Main difference is the scarcity of the international level of backgrounds institutions which include laws and accepted practices, moral norms, and social demands to control international business and ethical project implementations. This may result in many great abuses (ie: child labour, unfair wages, unacceptable working conditions).

**When norms are in conflict:**

1. Follow the norms of the home country because it is the patriotic thing to do
2. Follow the norms of the host country to show proper respect for the host countrys culture
3. Follow whichever norm is most profitable
4. Follow whichever norm is morally best

To reduce likelihood of many abuses occurring, a number of norms should be implemented

1. Implementing the moral minimum, is the norm to do no intentional direct harm
2. If morally justified, host country should benefit
3. The third norm is to respect human rights of the workers, consumers and all others in the host country
4. Promote the development of just background institutions within the country as well as on the international level
5. Respect the laws of a host country, as well as its culture and local values, providing these do not violate human rights
6. **Universal moral values for corporate code of ethics**

Based on convergence of three sources; corporate codes of ethics, global codes of ethics and the business ethics literature

1. Trustworthiness- Integrity, honesty, loyalty, transparency
2. Respect- respect for human rights
3. Responsibility- accountability, self-restraints
4. Fairness- equity, impartiality
5. Caring- no harm
6. Citizenship- TBL, Life cycle thinking, obeying the law
7. **What is executive integrity**

It is more tan the presence or morality or the appropriation of values, it involves the process of seeing or creating values. In this sense, organisations is not view as a closed, determined structure but it is seen as a perpetual state of becoming. Dialogue is the transformation of mere interaction into participation, communication and mutual empathy. Executive integrity, is therefore a breaking out of narrow individualism and is based on a fearlss trust in what true dialogue and understanding might bring, both new responsibilities and new forms of responsiveness to the other.

1. **What is loyalty and integrity and how can it conflict**

Managers are expected to maintain the highest levels of honesty and integrity, both inside and outside working hours.

**Loyalty-** being faithful to: yourself and family, groups and associations one has chosen to join. The employing organisation and society at large.

**Integrity-** Thinking honestly and soundly, and acting accordingly in: the personal and private arena, the public arena, the organisation, society at large

Loyalty to people or institutions is a fine quality, which arouses admiration and respect, but it is part and not the whole of morality. In order to understand and exercise it we have to set our loyalties to our persons and organisations within the framework of a much larger framework of ethics. It is te adherence to this framework which both expresses and creates integrity. Loyalty and integrity both demand sacrficie. Integrity demands the sacrifice of things- money, status, power- for its maintenance. Loyalty is the sacrificing of integrity to obtain things- money, status, power- for oneself or for some other body such as an orgnaisation.

**Example:**

**Integrity-** A person will tell the manager of the wrongdoing and try to convince them to put things right

**Loyalty-** A person will offer to cover up for the orgnaisation

1. **Discuss the differences between ‘transactional’ and ‘transformational’ project leadership. Provide examples to support your answer**

**Transactional Leadership**

Transactional leaders work within existing system, creating step by step plans to accomplish a goal. They are looking for uniformity, conformity, simplicity. These leaders focus on their task and on a rigid structure.

Ie; leaders motivate their followers by promoting the reward of good performance

* Lead primarily by using social exchanges
* Guides or motivates their followers to work towards established goals by exchanging rewards for their productivity
* Link job performance to rewards
* Strive for structural efficiency
* Ensure resources allocation to get the job done
* More about ‘managing’
* Works within a set of established goals and organisational boundaries
* Emphasises organisation, performance evaluation, and rewards
* Task and outcome oriented
* Rewards and punishments to motivate followers
* Reactive

**Transformational Leadership**

These leaders motivate their team by being a role model. They challenge the team to execute, by empowering them to shine and do their best. A transformational leader aligns team members and their tasks to create optimal success conditions.

Ie: Leaders that are willing to challenge assumptions and inspire their team and followers to do the same to achieve the best possible outcome.

* Stimulates and inspires followers to transcend their own self-interest for the good of the organisation
* More about ‘leading’
* Create a strategic vision
* Communicate the vision
* Model the vision
* Inspire and bound employees to their vision
* Give employees a “can do” attitude that makes the vision achievable
* Transform the vision into reality
* More future oriented
* Motivating and engaging followers with vision of the future
* Challenges the status quo
* Works with the team to ascertain the desire to change the organisation
* They are a part of the team
* High level of trust in the team
* Leader employs charisma and enthusiasm to inspire followers
* Lays emphasis on the values, ideals, morals, and needs of the followers
* Leads by example
* Performance is based on innovation
* Proactive