**NAMES: MARTINS IMIKAN**

**MATRIC NUMBER: 18/ENG04/044**

**DEPARTMENT: ELECT/ELECT ENGINEERING**

**COURSE: ENGINEER IN SOCIETY**

**COURSE CODE: ENG 284**

**SCOPE OF WORK**

* The project is first conceived by the school management and the possibilities discussed.
* The renovations company is enlisted to bring the project to reality.
* The management comes to an agreement with the company on the duration of the project, payment and workforce mobilization plans.
* A list of the project requirements is drafted.
* A team of professionals are brought to do a brief survey on the site to determine the project milestones and deliver deadline.
* Clearance of valuables within the structure premises commences, starting with the removal of unfixed items, e.g. furniture, printers, audio systems etc.
* The fixed equipment in the structure are the removed.
* The premises is then secured by a perimeter setup of aluminum sheets to restrict movement and to avoid any accidents.
* The roofing sheets are taken off and stacked to be examined and the reusable ones separated from the permanently damaged.
* Work commences with the civil engineers and the laborers at where additional constructions and renovations are required. While the electrical engineers examine the structure for where more wiring is required and also for the plumbers to find the plumbing and pipe layout specifications.
* The painters and tilers simultaneously work together.
* The debris around the site is cleared and properly disposed.
* The initially removed equipment are reinstalled with the new additional equipment at their appropriate locations.
* The structure is then cleaned and cleared of dust.
* The barricades are removed and the building is set.

**GANTT CHART**

A Gantt chart is a chart a chart in which a series of horizontal lines shows the amount of work done or production completed in certain periods of time in relation to the amount planned for those periods.

1. Site clearing and fencing of site Thu 07-May-20 Fri 01-May-20
2. Mobilization of equipment, materials and personnel’s Mon 11-May-20 Fri-08-May-20
3. Decommissioning of all electric works and plumbing works Fri 22-May-20 Mon 11-May20

**WBS**

**Task Name**

**Priority**

**End date**

**Start**

NORMAL

NORMAL

M

NORMAL

NORMAL

NORMAL

NORMAL

NORMAL

NORMAL

1. Setting up of pillars, rebar’s and decking wood Sat 13-June-20 Fri 15-May-20
2. Setting up of block woods Fri 22-June-20 Mon 08-Jun-20
3. Roof work, electrical work and plastering Mon 15-June-20 Fri 12-Jun-20
4. Finishing touches Tue 14-July-20 Wed 01-Jul-20
5. Decommissioning and clearing of site Mon 20-July-20 Tue 14-Jul-20
6. Testing, commissioning and hand over Fri 31-July-20 Tue 21-Jul-20

23 24 25 26 27 28 29 30 1 2 3 4 5 6 7 8 9 10



|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| T |  | F |  | S |  | S |  | M |  | T |  | W |  | T |  | F |  | S |  | S |  | M |  | T |  | W |  | T |



**HUMAN RESOURCES NEEDED**

1. Civil supervisor {Lead consultant}
2. Electrical supervisor
3. Mechanical supervisor
4. Surveyor
5. Architect
6. Carpenter
7. Iron bender
8. Painter
9. Plumber
10. **A surveyor** is a property specialist who can value a property, and assess it for any defects, future issues or problems.
11. **An architect** is a person who plans, designs, and reviews the construction of buildings. To practice architecture means to provide services in connection with the design of buildings and the space within the site surrounding the buildings, which have as their principal purpose human occupancy or use.
12. **A carpenter** is a person who works with wood. They can make cabinets, build houses, or do other things with wood.
13. **A plumber** is a tradesperson who specializes in installing and maintaining systems used for potable water, sewage and drainage in plumbing systems.
14. **An electrical supervisor** is someone who supervises the electrical aspect of the work
15. **Civil supervisor** is someone who supervises the construction of the building
16. **Mechanical supervisor** supervises the plumbing aspect
17. **Iron Bender** one who is an expert on bending metals, one who works in forging **iron.**
18. **Painter** is someone who paints walls, doors, and some other parts of buildings as their job. The site is being secured to prevent object from flying around or getting people or students from been injured

**BILL OF ENGINEERING MEASURMENT AND EVALUATION**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ssss | TASK | MODULES | PECENTAGE | AMOUNT |
| 1 | Miscellaneous | . Bonus time  . Feeding  . Extra materials | 10% | 8,000,000 |
| 2 | Consultancy  Fee | . Doctors  . Architect  . Consultant | 15% | 12,000,000 |
| 3 | Site Preparation | . Clearing of rubes  . Barricading | 5% | 4,000,000 |
| 4 | Transport cost | . Bringing of items to the site . Mobilization and  Demobilization  . Importation of materials | 12% | 9,600,000 |
| 5 | Profit |  | 20% | 16,000,000 |
| 6 | Other expenses | . Final inspection . Final testing . Cost of material and equipment | 38% | 30,400,000 |
|  |  |  |  | 80,000,000 |

**PAYMENT SCHDULE**

|  |  |  |  |
| --- | --- | --- | --- |
| S/N | ACTIVE DESCRIPTION | PERCENTAGE  {%} | AMOUNT |
| 1 | Mobilization:  Personnel/ Equipment   * Civil supervisor * Elect supervisor * Architecture | 30% | 24,000,000 |
| 2 | 30% of 50% completion:   * Decommissioning of electric system * Decommissioning of security provisions   e.g. Doors, Windows | 20% | 16,000,000 |
| 3 | Complete/ Commissioning:   * Finishing of civil work * Finishing of electrical work * Finishing and commissioning * Final commissioning | 40% | 32,000,000 |
| 4 | Retain 10% for 6 months:   * All electric connection working   perfectly well   * Plumbing and other facilities working well   This is to ensure that after 6 months everything is working well. | 10% | 8,000,000 |
|  |  |  | 80,000,000 |

**BEME**

{Bill of engineering measurement and evaluation}

This is a description and evaluation of evidence pertinent to a clearly formulated topic/ question that uses explicit scientific methodologies and methods to systematically identify information relevant OR it’s a tool used before, during and after construction to assess and value the cost of construction work. This includes the cost of materials, labor, equipment, and all/any other resource(s) required for the success of any construction endeavor based on pre-determined scope and specification.

**DEFECT LIABILITY PERIOD**

This is a period of time following practical completion during which a contractor remains liable under the building contract for dealing with any defects, which becomes apparent. This period is between six months to twelve months varying depending on the contracts used. Any defects or faults which arise during this period must be put right by the contractor at its own expense.

**LEAD CONSULTANT**

A lead consultant is a consultant that directs the work of a consultant team and is the main point of contact for communication between the client and the consultant team, except for on significant design issues where the lead designer may become the main point of contact.

**PROJECT LIFE CYCLE**

A project life cycle is a sequence of phases that a project goes through from initiation, planning, implementation down to the closure. The phases have a definite start, end, and a control point and are constrained by time. A project life cycle can range from predictive or plan-driven approaches to adaptive or change-driven approaches. The life cycle provides foundation of the actions that has to be performed in the project irrespective of the specific work involved.

**ENVIRONMENT IMPACT ASSESSMENT {EIA}**

This is an assessment of the environmental consequences of a plan, policy, program, or actual project prior to the decision to move forward with the proposed action OR This is a process of evaluating the likely environmental impact of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.