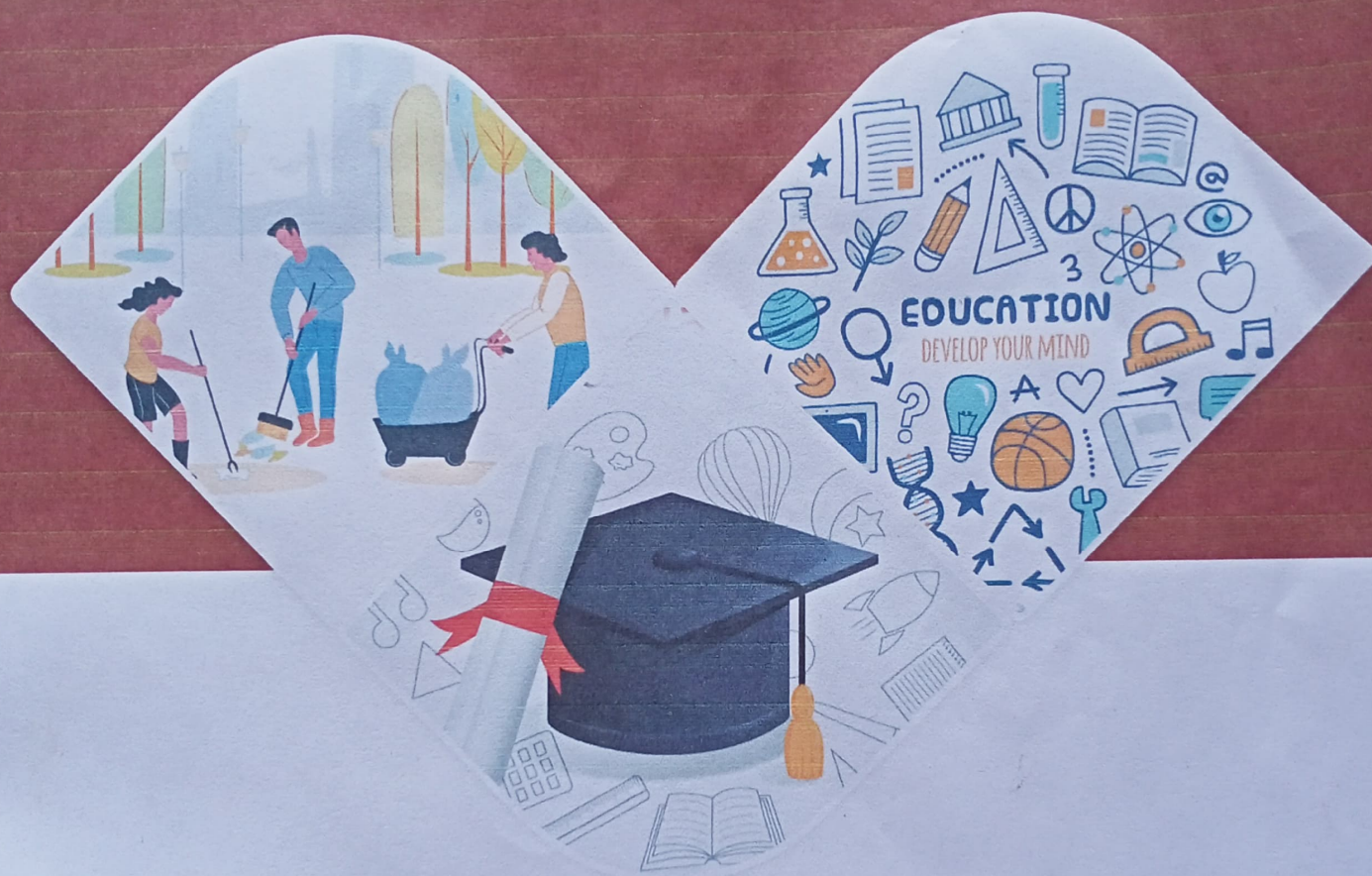


Model Program Book



SEMESTER INTERNSHIP

Designed & Developed by



**ANDHRA PRADESH
STATE COUNCIL OF HIGHER EDUCATION**

(A STATUTORY BODY OF GOVERNMENT OF ANDHRA PRADESH)

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SEMESTER INTERNSHIP PROJECT.



Name of the Student :- Kimavath Siva Naik

Name of the college :- S.V.B Govt. Degree college
Koilkuntla.

Registration Number :- 21110041009

Program :- 6th semester Long term
Internship project

Name & (Address) Address of the Internship

Organization :- EDULA SIVA REDDY COLD
STORAGE

S.No: 110 SOUDARADINNE (VI). KOILKUNTALA (MD) is
financed By

KARUR VYSYA BANK . NANDYAL

Stock Hypothecation to Karur Vysya. Bank. Mayaluru Branch

WITH THE ASSISTANCE FROM
NATIONAL HORTICULTURE BOARD GOI [NHB]

PROGRAM BOOK FOR
SEMESTER INTERNSHIP

Name of the Student: **K. Siva Naik**

Name of the College: **S.V.B Government Degree College Koilkuntla.**

Registration Number: **OAM 202101419571**

Period of Internship: From: To:

Name & Address of the Intern Organization **Edula Siva Reddy Cold Storage**
Koilkuntla (M) NDL Dist Sowaderdennie.

Raya la seema **University**
YEAR

An Internship Report on

(Title of the Semester Internship Program)

Submitted in accordance with the requirement for the degree of

Under the Faculty Guideship of

I. Nagarwar Reddy

(Name of the Faculty Guide)

Department of

S.V.B Govt. Degree college

(Name of the College)

Submitted by:

Kimavath Siva Naik

(Name of the Student)

Reg.No: 2110041009

Department of History

Srivasavi Bommidala Government Degree College
Koil Kuntla.

(Name of the College)

Instructions to Students

Please read the detailed Guidelines on Internship hosted on the website of AP State Council of Higher Education <https://apsche.ap.gov.in>

1. It is mandatory for all the students to complete Semester internship either in V Semester or in VI Semester.
2. Every student should identify the organization for internship in consultation with the College Principal/ the authorized person nominated by the Principal.
3. Report to the intern organization as per the schedule given by the College. You must make your own arrangements for transportation to reach the organization.
4. You should maintain punctuality in attending the internship. Daily attendance is compulsory.
5. You are expected to learn about the organization, policies, procedures, and processes by interacting with the people working in the organization and by consulting the supervisor attached to the interns.
6. While you are attending the internship, follow the rules and regulations of the intern organization.
7. While in the intern organization, always wear your College Identity Card.
8. If your College has a prescribed dress as uniform, wear the uniform daily, as you attend to your assigned duties.
9. You will be assigned a Faculty Guide from your College. He/She will be creating a WhatsApp group with your fellow interns. Post your daily activity done and/or any difficulty you encounter during the internship.
10. Identify five or more learning objectives in consultation with your Faculty Guide. These learning objectives can address:
 - a. Data and Information you are expected to collect about the organization and/or industry.
 - b. Job Skills you are expected to acquire.
 - c. Development of professional competencies that lead to future career success.
11. Practice professional communication skills with team members, co-interns, and your supervisor. This includes expressing thoughts and ideas effectively through oral, written, and non-verbal communication, and utilizing listening skills.
12. Be aware of the communication culture in your work environment. Follow up and communicate regularly with your supervisor to provide updates on your progress with work assignments.

13. Never be hesitant to ask questions to make sure you fully understand what you need to do your work and to contribute to the organization.
14. Be regular in filling up your Program Book. It shall be filled up in your own handwriting. Add additional sheets wherever necessary.
15. At the end of internship, you shall be evaluated by your Supervisor of the intern organization.
16. There shall also be evaluation at the end of the internship by the Faculty Guide and the Principal.
17. Do not meddle with the instruments/equipment you work with.
18. Ensure that you do not cause any disturbance to the regular activities of the intern organization.
19. Be cordial but not too intimate with the employees of the intern organization and your fellow interns.
20. You should understand that during the internship programme, you are the ambassador of your College, and your behavior during the internship programme is of utmost importance.
21. If you are involved in any discipline related issues, you will be withdrawn from the internship programme immediately and disciplinary action shall be initiated.
22. Do not forget to keep up your family pride and prestige of your College.

-----<<@>>-----

Student's Declaration

I, Kimavath Siva Naik a student of Internship
Program, Reg. No. 21110041009 of the Department of B.A (S.V.B Govt Degree College
College do hereby declare that I have completed the mandatory internship
from _____ to _____ in Edula Siva Reddy (Name of
the intern organization) under the Faculty Guideship of
I. Nageswar Reddy (Name of the Faculty Guide), Department of
History, S.V.B. Govt Degree College, Kollurkunta.
(Name of the College)

K. Srey
(Signature and Date)

Official Certification

This is to certify that Long term Intership (Name of the student) Reg. No. 211100011009 has completed his/her Internship in Cold Storage (Name of the Intern Organization) on Edula Siva Reddy Cold Storage (Title of the Internship) under my supervision as a part of partial fulfillment of the requirement for the Degree of History in the Department of S.V. B Govt Degree College (Name of the College).

This is accepted for evaluation.

(Signatory with Date and Seal)

Endorsements

Faculty Guide : I. Nageswar Reddy

Head of the Department : History

Principal

Certificate from Intern Organization

This is to certify that Long term Internship (Name of the intern)

Reg. No 21110041009 of S.V.B Govt. Degree College (Name of the

College) underwent internship in Edula Siva Reddy Cold Storage (Name of the

Intern Organization) from Koilkuntla to Koilkuntla

The overall performance of the intern during his/her internship is found to be

Satisfactory (Satisfactory/Not Satisfactory).

Authorized Signatory with Date and Seal

Acknowledgements

Long term Internship project Work - 2024

Title :-

Edula Siva Reddy cold storage

Local physical internship Opportunity for maintenance support position of M/s Edula Siva reddy cold storage.

Cold storage Founded by Edula Siva reddy in Andhra pradesh.

this location of Koilakuntla mandalam, Sowderdinne village.

What are they under those crops:-

- * Red cillys, and
- * Red grams
- * Moong dal
- * Chana
- * whole moong.

* Block grams are all the it is kept in this cold storage

Drage Acknowledgement high of building for a chilly kept in storage room.

Typicaly, chilly cold storage lifts of 6 floors.

Then Ground Floor (1/2) + 5 Floors.

(9 each) in export product.

The Red chilly stock loading to truck, chilly stock storage left to chillys and other product export of Andrapradesh.

Example :- Dry chillys local kurnool market in Andhra pradesh and dry chilly Red market of Guntur in Andrapradesh.

Quinta - INR

MARKET	DISTRICT	Price
Hindu puram	Andhapuram	13000/-
Kurnool	Kurnool	14000/-
Guntur	Guntur	13500/-

CHAPTER 1: EXECUTIVE SUMMARY

The internship report shall have a brief executive summary. It shall include five or more Learning Objectives and Outcomes achieved, a brief description of the sector of business and intern organization and summary of all the activities done by the intern during the period.

INTRODUCTION:- A Fundamental part of our life is Food, therefore the quality and conservation of it is of great concern. Cold storage warehouse store food after production and before foods are transported and distributed to Supermarkets or catering establishments so that consumers can get highest quality and safe to consume product.

So, humidity control as relative humidity to the store house should be kept at 80-90% for most of the perishable produce.

Cold storage is a place in buildings where product quality is maintained by providing temperature - controlled atmosphere.

They provide a way for us to store huge amount of food without it all going waste.

India is the second largest producer of fruits (88.98 million tonnes) and vegetables (162.90 million tonnes) and with this production India is contributed 11.36% and 14.04% Global fruit and vegetable production.

Description of current scenario of cold storage in India.

Current Scenario of storage in India	largest procedure.
Created Capacity in cold Storage.	31.2 Million tonnes
Average Capacity per cold Storage unit	5021 tonnes
Total unit shut down	6227
operational capacity.	1100
Required capacity	26 million tonnes
Current gap	61.13 million tonnes
	35 million tonnes.

Through India is agriculture-based country, cold stores are not only in scarcity but also unequally distributed.

about 75% of this facility is confined to only few states of India. The table given below shows the total number of cold storage unit and their capacity in some major state.

CHAPTER 2: OVERVIEW OF THE ORGANIZATION

Suggestive contents

- A. Introduction of the Organization
- B. Vision, Mission, and Values of the Organization
- C. Policy of the Organization, in relation to the intern role
- D. Organizational Structure
- E. Roles and responsibilities of the employees in which the intern is placed.
- F. Performance of the Organization in terms of turnover, profits, market reach and market value.
- G. Future Plans of the Organization.

Cold Storage in India:-

The first problem is that there aren't enough cold storage. The Government is offering some subsidies to try to park this - but it is still subsidies to try to park gather. Capital intensive there are also very different business models at play.

This need is towards storing grains and selling it at a better price once the harvest season is over. turmeric for example climbs as high as 3-4 times of season and is very easy to store most farmers don't do it because they don't have space to store it.

Chilly cold Storage of 5,000 MT.

Approximately one acre of land is required for a 5000 MT Cold Storage for chili.

This land required is sufficient for Cold Storage, machine room. Condenser tank and

Condenser, power house transformers, and also 20 feet free space in all direction for fire and safety guidelines.

The approximate building length width and height required for a 2,500 MT Chamber.

Generally for chilly storage of 5,000 MT, customers build two chambers of 2,500 MT each they build two the cold storage in rectangle shape, and standard size of each 2,500 MT chamber is $100 \times 40 \times 57$ ft.

(L x W x H). Depending on the customers land layout the building is built storage

Ammonia for chilly cold storage:-

Generally chilly cold storage are above 500 MT capacity in this range ammonia refrigerant is more economical than Freon.

CHAPTER 3: INTERNSHIP PART

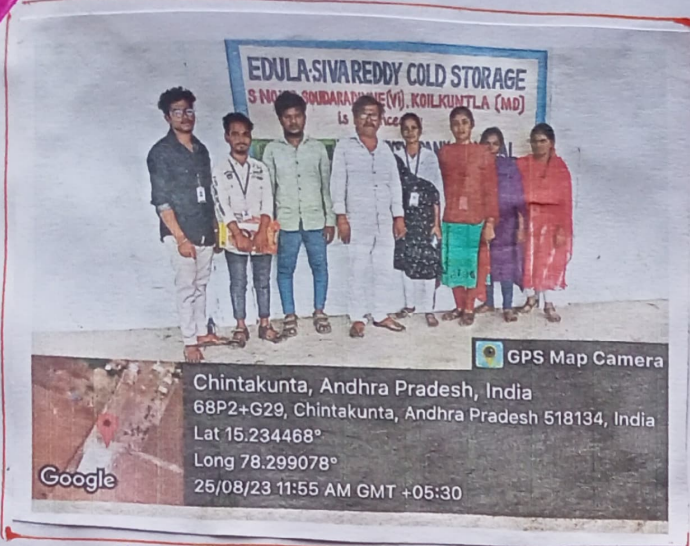
Description of the Activities/Responsibilities in the Intern Organization during Internship, which shall include - details of working conditions, weekly work schedule, equipment used, and tasks performed. This part could end by reflecting on what kind of skills the intern acquired.

Cold Storage - Downthrow product cooler in
were fins for fans for high tube test
pressure to ensure leak proof coal
downward air flow pattern for equal
distribution of air chick peas, splitting,
moongdal, chana whole moong total
Item proper cooling extend the shelf life.

Storage temperature, 5,000 MT cold 8°C
Stored temperature 2,500 MT chilli storage
(30TR)

The Internship Andhrapradesh in Edula Siva
reddy cold storage in Location of Koilakuntla.
Red chili and toordal and chana whole moong
split moongs, Red grams, Black grams also in
storage.

Acknowledgement high of buildings for chilli
cooling in room storage.



varmaji + management of storage.



ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	First day going to Edula siva Reddy Cold Storage. (Koilkuntla).	Cold Storage Drawn through product cooling	
Day - 2	Stock Saving storage in Edula siva Reddy Cold Storage.	product started in 3 years or 4 years.	
Day - 3	5th Floor in Fans and light efficiency.	$3 \times 5 = 15$ Fans	
Day - 4	Detwent stock Toordal and Chana whole moong, chillies	Stock's daily stock product cooling.	
Day - 5	Storage Temperature	$+ 10^{\circ}\text{C}$ Temperature.	
Day - 6	Cold Storage packing left price in indore.	Drychillies loading to left in cold storage.	

WEEKLY REPORT

WEEK - 1 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report:

- * However if cold storage facilities are used, the product may be stored for 4-3 years
- Cold storage loading lifts indoor within 5 floors.
- * cold storage - Downthrow product cooler
- * $3 \times 5 = 15$ Fans each any Rooms.
- * Sin were fins for fans for high E.F.
- Tube test pressure to ensure leak product cool
- Down ward airflow pattern for equal distribution fair.
- chick peas, Split mung, moongdal, split green gram moong total item proper cooling extend the shelf life
- Storage temperature, 500ml cold.
- 8°C started temperature, 21500 MT chilli Storage (30TR)
- Cold storage in a tomato, Sorghum,

ACTIVITY LOG FOR THE SECOND WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Water supply room Cooling mission Important. Important 4 stages,	water, Discharge pressure	
Day - 2	Section pressure 14.2	Ammoniya Total 160 kg.	
Day - 3	Important missions 4 Stage.	K PCK = 10+015	
Day - 4	Oil pressure 16.4	A.B supply Amoniya.	
Day - 5	powers of enrolling clives to 16.4	Ammoniya to pressure into the cooling chana and other item.	
Day - 6	Ammoniya (sinu test) tage raining supply stueking.	Houses days 7740 (20 Hours)	

WEEKLY REPORT

WEEK - 2 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: 'Controlled atmosphere stores'

- These are for specific purpose to store some commodities that require special cooling condition.
- These stores are fitted with technological that alters atmospheric condition of storage area like gaseous content, humidity in addition with temperature control.
- The items stored are apple, pears, cherries.
- Another classification of cold store is multi storage and one-story cold storage.
- Multi story cold storage is the fashion adopted at early refrigeration were house when labour cost was not a major concern.
- The building include 3-12 floor and height of each story is kept as 7-9 feet as most of multi-story in where house.

ACTIVITY LOG FOR THE THIRD WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Enriching level 70° (qTRP)	Ammonia, Chana cooling liquid	
Day - 2	Dispersant liquid	Total 5 Room	
Day - 3	Change cooling T.C.E the liquid air door	Total +10°C Temperature cooling	
Day - 4	Storage temperature	+10°C Temperature	
Day - 5	Cold Storage packing	use full loading lift	
Day - 6	The storage is used daily activity is used Indore.	Cold Storage used.	

WEEKLY REPORT

WEEK - 3 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: "Fundamental of cold storage design":-

The design and planning are the crucial step while setup of any system. cold storage demands lot of work prior to the implementation phase as we have to take into account all the problems which can be supposed to face. we have to think in view of environment, economic and maintenance aspect before the actual working condition.

All the cost associated with instial setup, working and maintenance and depreciation have to be studied.

- Process layout :- it is the phase where we plan the Floor layout for efficient working and handling.
- planning drawing and application :- This phase come only after the process layout.

ACTIVITY LOG FOR THE FORTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Storage (Broyar)	Total brayar	
Day - 2	Explanance of cold storage in fans.	$3 \times 5 = 15$	
Day - 3	Change that cooling Rette	Storage all cooling	
Day - 4	Gas lixed	Storage are almon cooling.	
Day - 5	Chana and Chillys Change	room cooling	
Day - 6	Stocks	Supply.	

WEEKLY REPORT

WEEK - 4 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: Design consideration regarding construction detail of Cold Storage.

Apart from the above-mentioned consideration there are some other point that are the requirement of any project.

- Contractual Formalities
- building Specifications.
- Refrigeration System Specifications.
- Insulation
- Electrical requirement.
- Mechanical requirement.

In Cold Store rooms the inner temperature is maintained at much lower temperature than the outer surrounding temperature.

It is the property of heat to travel from higher temperature to lower.

ACTIVITY LOG FOR THE FIFTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Market pre exercised lights, speed to motors.	Motors work	
Day - 2	(LPBY pass) compass crossing	100° Duble 3 1/2 level at 6° TDV	
Day - 3	Temperature in cold storage	15.1 and 16.2	
Day - 4	Storage cooling	temperature cooled to everyday	
Day - 5	Chana change	Room cooling	
Day - 6	Storage cooling	Total all rooms supply to cooling in temperature	

WEEKLY REPORT

WEEK - 5 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: "Economic consideration"

Cost is the first thing while considering any aspect, hence amount of the insulation and cost of the insulating material.

- Conductivity
- Heat gain
- Solar radiation.

S. NO	MATERIAL	R-VALUE (1-inch thickness)
1	Glasswool, mineral.	3.50
2	Cellulose	3.50
3	wood Shaving or saw dust	2.22
4	Plain expanded extruded polystyrene	5
5	Expanded rubber	4.55
6	Expanded polystyrene modelled bead	3.51
7	Aged expanded polyurethane	6.25
8	Glass fibre	4
9	polyisocyanurate	8
10	wood or cane fibre board	2.5.

ACTIVITY LOG FOR THE SIXTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Unit stocks to in cold storage	Total item	
Day - 2	check to sp ling	(program) any items cooling	
Day - 3	Motor process out	Exchang stock	
Day - 4	Spilgreen gram moonsdal and boor dal, Chana	Total items exchange the sheet lift	
Day - 5	Present Study develops coding	Cooling application .	
Day - 6	Reel- cellulose pad	water cooling in Operator room .	

WEEKLY REPORT

WEEK - 6 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: Heat load in cold storage.

- In cold storage optimum temperature is required to be maintained in order to get the refrigerated product.
 - For this continuous heat removal process is needed which extract the heat from the cooling space.
 - Before we install the refrigeration unit it is required to know the desired refrigeration capacity of given space at given temperature.
 - **Conduction heat** :- Heat conducted through walls, roof and floor of the building.
 - **Field heat** :- amount of heat that is needed to be removed from the product to cool it and store at a specific.
- heat removal is only needed for maintaining the storage temperature.

ACTIVITY LOG FOR THE SEVEN WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	multi commodity items	Goods outward	
Day - 2	Instant Lot No. wise current stock	customer wise stock detail	
Day - 3	Location	Specific factor, Altitude Elevation above sea level.	
Day - 4	Environment	water, atmosphere - corrosive and scaling property.	
Day - 5	Factors	Ease of transport cost, Storage availability.	
Day - 6	Labour	Availability, Skill, and money.	

WEEKLY REPORT

WEEK - 7 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: "Heat transfer through wall building"

For steady flow condition the equation for heat load calculation is.

$$Q = U \times A \times (T_o - T_i)$$

where,

U = Overall heat transfer coefficient
($\text{Kcal/m}^2\text{hr}^\circ\text{C}$)

A = Surface area through which
heat transfer taking place
(m^2)

T_o = Temperature of outside air

T_i = Temperature of inside air.

The overall heat transfer coefficient is given by

$$U = 1 / \left(\frac{1}{h_i} + \frac{x_1}{k_1} + \frac{x_2}{k_2} + \frac{1}{h_o} \right)$$

h_i = heat transfer coefficient on inner wall

h_o = heat transfer coefficient on outer wall.

ACTIVITY LOG FOR THE EIGHTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Column, Beam Joint	Size, depth, position	
Day - 2	Wall, Roof, Floor Insulation	Type of the insulation, thickness, resistivity.	
Day - 3	Surrounding condition.	Outside Adjacent space.	
Day - 4	Access	DOORS and stairway and lifts	
Day - 5	Access to door	location, type size and use space access. to environment	
Day - 6	Type of construction	Location and movement of the joint.	

WEEKLY REPORT

WEEK - 8 (From Dt..... to Dt: Dt.....)

Objective of the Activity Done:

Detailed Report: **Thermodynamic and thermophysical properties.**

- **Suction pressure:-** The suction pressure is required to be higher than the atmospheric pressure to avoid the leakage of the atmospheric gases into the refrigerants so that.
- **Discharge pressure:-** at a required condenser temperature the pressure should be low to reduce the compress.
- **pressure ratio:-** as low as possible to reduce the volumetric losses.
- **Latent heat of vaporisation:-** It should be as possible to reduce the requirement of mass flow.
- **Liquid Specific cooling:-** LSC should be small as to lower the amount.

ACTIVITY LOG FOR THE NINETH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Controlled, atmosphere.	Specific purpose to store some commodities.	
Day - 2	Atmosphere condition.	humidity in addition with temperature controlled.	
Day - 3	Cost and development of mechanical equipment	Store palletised and non-palletised warehouse.	
Day - 4	Cold storage	warehouse products available at lower cost.	
Day - 5	mini units or walk-in stores.	There are for distribution purpose.	
Day - 6	Polystyrene	0.24	

WEEKLY REPORT

WEEK - 9 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: Global warming potential (Gwp):-

Gwp is the measure of amount of heat trapped by a gas in the atmosphere in a specific time duration relative to the carbon dioxide.

Carbon dioxide (R744). ammonia (R717) and R32. But these alternatives are either mildly or highly flammable except carbon dioxide.

Total equivalent warming index:- direct and indirect emission contribution to global warming potential combinedly represented this index.

Toxicity:- If we talk about ideal refrigerant, the toxicity, the toxicity should be zero. But all the fluids except air are more or less toxic depending upon their concentration.

ACTIVITY LOG FOR THE TENTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Black dal cooling	Room in all storey	
Day - 2	The cooling air speed across the rooms	Cooling	
Day - 3	The Compressor consumes	Compressor	
Day - 4	almost all the power in cold storage room	only device	
Day - 5	heat dissipation at used	Blowers cooling	
Day - 6	Water at the right to lift	3-8 and vouchers.	

WEEKLY REPORT

WEEK - 10 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: Cold storage in flammability.

Flammability:- The refrigerant should be flammable and non-explosive.

But some refrigerant is used even after their explosive nature because of other required properties and usage hence special care should be taken while handling such refrigerant.

Chemical Stability:- The refrigerants are required to be chemically stable while their use in the system because property of the refrigerant is very important factor deciding the system performance.

Compatibility:- The refrigerant selected should not react with the material of the system.

ACTIVITY LOG FOR THE ELEVENTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Howeve is cold storage	facilities	
Day - 2	product supply	Stocks.	
Day - 3	Cold Storage	Downthrow product cooler	
Day - 4	pressure insurance	product downthrow	
Day - 5	8°C stored temperature	2,500 MT chilly store	
Day - 6	Chickpeas, split mung, moondal, green dal	2 in kept to cold storage.	

WEEKLY REPORT

WEEK - 11 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: Survey And Data Collection.

In every project initial phase is Survey and data collection as information of any system is must to know prior start working upon any system. After thorough inspection and gathered information we study and conclude whether there is any recommendation for change or substitution of given setup. Further work is also done to improve the efficiency and cost cutting is also done by some changes.

In my Project I have selected Farook had cold storage as a base from which insight of cold storage.

- * Cold storage building details
- * Cold storage system details.

ACTIVITY LOG FOR THE TWELVETH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Blowers :- The cooling air is speed across the room	Rooms are all cooling	
Day - 2	The compressor consumes almost all the power in a cold room	compressor only device	
Day - 3	Heat dissipation of water at night	3.8 and * various linerly with the Evaporation.	
Day - 4	Possible for data centre cooling	Overall crop can reach 9.4 for room temperature.	
Day - 5	Temperature difference +10c	Cooling System.	
Day - 6	liquid 45° run	Oil grounded one in the short.	

WEEKLY REPORT

WEEK - 12 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: Importance of maintaining relative humidity in cold storage.

Relative humidity is the term used to measure the moisture content in atmosphere at a particular temperature relative to moisture at saturated condition at same temperature by the same amount of the air. Relative humidity of the environment is necessary to maintain in the cold space as to avoid the water loss from the food and to retain the freshness and quality of the food.

When we gradually decrease the temperature of the space at a particular pressure, air gets cool and after some point air will reach to temperature, where the moisture content or water vapour present in the air will start condensing or precipitation.

ACTIVITY LOG FOR THE THIRTEENTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	A cold storage facility works as a perfect refrigeration system which helps	maintain	
Day - 2	cellulose pad cooling which is cooled at night by cool-to-sep ^d cooling power	(CWCT)	
Day - 3	Termaric for Example Climbs as right by high as 3-4 times	Stock 3-4 years.	
Day - 4	this item, when needed can be taken from the cold storage.	store item stock.	
Day - 5	Cold Storage issued to pressure	Storage item stock	
Day - 6	Business part	Business Report.	

WEEKLY REPORT

WEEK - 13 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: 13th week reported in cold storage.

The 13th week Internship project data collection information conducted to the in Andhra Pradesh state storage location of Kailakuntla (M) Sowderdanne (V) at edula Siva Reddy Cold Storage so many items coming to this storage.

then Red Chillys and whole moong orange Acknowled visit as building for this chilly along this room.

In cold storage dry chillys are shipped to loading Lorry truck goes to the Kurnool market in Andhra Pradesh dry chilly going on the Gunbur market.

- Hindupuram (M)
- Kurnool (M)
- Guntur

where shipped to this stock.

ACTIVITY LOG FOR THE FOURTEENTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Storage (Broyar) that on explain	Total (Broyar) of 15 each room 5	
Day - 2	white Stock Chick pease, Split moong moongdal, Green Gram	Total Item / commodities proper cooling	
Day - 3	Temperature at the storage	15.1 cooling in every room.	
Day - 4	Moter pressure and high speed (LP bypassed)	100° Dubble → 3 1/2 level LO 1-6 TDV.	
Day - 5	Chana chause (ching)	Room cooling	
Day - 6	Gas lized chaus them about to operator to cold storage.	Storage is always so very cooling.	

WEEKLY REPORT

WEEK - 14 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: Requirement of air circulation in the cold storage.

The air inside the cold room gets heated after receiving heat from the product and loads transmitted through the buildings. Such

condition causes the requirement of air circulation in the cold space.

This can be either forced air circulation or natural convection air circulation.

In forced air circulation fan or blower is used to use the air to flow from the cooling space to the cooling coils.

Rapid circulation by blower or fan causes moisture loss from the product.

hence proper balance between the cooling surface and the rate of air flow.

ACTIVITY LOG FOR THE FIFTEENTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Transport - Activity	Edula Siva reddy avoibinary transport- activities of level	
Day - 2	Building inches	Length 120° Breadth 20	
Day - 3	Workers	one Operator one parking place Pourcee	
Day - 4	Department	Department of A/c Operator name was Gopalamma.	
Day - 5	Cold Storage stock liftings	Cold Storage Stock lifting the 5th floor	
Day - 6	Technological developments.	developments of area place edula siva reddy cold storage.	

WEEKLY REPORT

WEEK - 15 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report: Classification of cold storage.

Cold storage requirement of the world in order to provide food and other medical and industrial requirements. Cold store is a room in a building that provide suitable condition to store the commodities by maintaining altered atmospheric condition which is demanded by classification of cold storage.

Based on their thermal incompatibility.

product being stored together should not show thermal incompatibility hence they are categorised according to their common environmental condition requirement.

Small cold stores: - These are designed mainly for procuring facility of vegetables and fruits.

CHAPTER 5: OUTCOMES DESCRIPTION

Describe the work environment you have experienced (in terms of people interactions, facilities available and maintenance, clarity of job roles, protocols, procedures, processes, discipline, time management, harmonious relationships, socialization, mutual support and teamwork, motivation, space and ventilation, etc.)

Environmental career:- As part of research associated with education for Sustain ability at RM university Sent on invitation to environment professional seeking information about their back grounds E.F. work.

Benefits of a cold storage:-

The main advantages of using cold storage are:-

- Food product and crops, product can be stored when their supply is plentiful and can be used during the period of short supply.
- Transportation of food stuff from one place to another place is possible.
- Due to reduce of food spoiled by the use of cold storages, great saving in cost can be achieved.

Cold Storage Practices

In a Cold Store the following practices should be adopted.

- Temperature control
- Relative humidity control
- Condensation of water vapour
- Condensation of sanitation
- Air movement.
- Stacking and material handling

Classification based on Activities:-

Based on the Activities, cold storage can be classified as

- Multipurpose cold house.

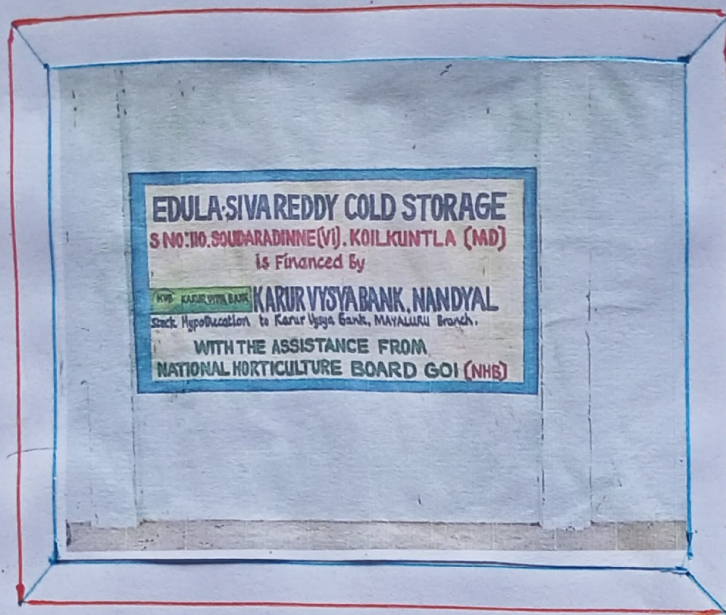
Describe the real time technical skills you have acquired (in terms of the job-related skills and hands on experience)

TECHNOLOGICAL SKILLS:-

- Develop and maintain local networks in ways that optimize performance.
- Provide Orientation and Guidance to users on how to operate new software and computer equipment.
- Check computer hardware (HDD, Mouses, key boards) to ensure functionality.
- Install and configure appropriate software and functions according to specifications.

Information technology (IT):- is the uses of Computers to create, process, store retrieve, and exchange all kinds of data and information.

- (ICT) information & communication system technology
- Technology skills in future useful in communication development required the student future jobs in technological skills.



Red chillies Exported to Hindupuram market

Describe the managerial skills you have acquired (in terms of planning, leadership, team work, behaviour, workmanship, productive use of time, weekly improvement in competencies, goal setting, decision making, performance analysis, etc).

The managerial Skills

- Red Chillies Cold Storage private limited supporting and Eduk Siva Reddy auxiliary transport, activities, activities of travel agencies.
- storage in that 3 or 5 years stock 300 killose bading 450 rupees in stock at edula siva reddy Cold Storage.
- Building = 180 inches
Length = 120
Bredth = 120
- workers (2) and one Coperature one packing place Fourse numbers in that Edula siva reddy Cold Storage.
Ex:- Farmers cold storage stack are useful
3 or 4 years stock in chillies one person
Ramula Nageswarow 300 and 500 stocks
store.
Department A/c operator name was Gopalavarma.

Controlled atmosphere store



I. Nagwarreddy sir Department of History.
sir Introducing cold storage.

Describe how you could improve your communication skills (in terms of improvement in oral communication, written communication, conversational abilities, confidence levels while communicating, anxiety management, understanding others, getting understood by others, extempore speech, ability to articulate the key points, closing the conversation, maintaining niceties and protocols, greeting, thanking and appreciating others, etc.,)

Market potential

Cold storages are essential for extending the shelf life. period of marketing, avoiding glut, reducing transport bottlenecks during peak period of producing and maintenance of quality of produce.

The development of cold storage industry has therefore an important role to play in reducing the wastages of the perishable commodities and thus providing remunerative prices to the growers.

Basic and presumptions:-

The project is based on an average 90% percent capacity utilisation, three shifts working per day and 300 working days per annum.

For economic viability an ICE Block manufacturing unit has also been included in the Project.

CASCADE REFRIGERATION.

The traditional single-stage compression refrigeration system (SCRS) and single-stage absorption refrigeration system are two basic form of the refrigeration technology.

CRS has a wide range of applications, for example in the field of hypothermal medicine, cryopreservation for instruments.

In vapour compression and vapour compression cascading, low temperature cycle is for food items, which require low temperature and high temperature cycle for food items.

After modification in the system design of the cold storage, the effect of both types of cascading i.e., CACRS and CCRS are observed by thermal analysis.

Describe how could you could enhance your abilities in group discussions, participation in teams, contribution as a team member, leading a team/activity.

Edula Siva Reddy cold storage abilities we are
My class friends divided into 2 Groups.

(1) Nageswerreddy & sir group (2) S. Raju sir group.

(A) Group we are all discussion for about
the cold storage.

My Group students then:- K. Siva Naik, K. Sreenivasulu
Naik, K. Dhavani, A. Nagalakshmi, Husioni,
D. Suni. we are all discussion to cold storage

My name Kimavath Siva Naik iam write to
long term internship project work about the
edula siva reddy cold storage.

we are all participation of team and individual goes to
cold storage.

then AIC Department- Operator was name Gopalavarma
he was explained to cold storage and guidance
& more information.

me and my friends consult leasing about
cold storage.

Otherwise many information (if) write on the project work record.

In cold storage room $+10^{\circ}\text{C}$ temperature all stocks cooling in cold storage stock.

we are viewed to many stocks lift to upper floor and 5th floor stocks are also lift in Ground floor room.

so many stocks left into the loading to truck, so many item export to some, some markets.

cold storage stock lifting in door loading the 5th floor kept to chillies, toor dal, chana, whole moong chick peas, split moong, moong dal temperature $+10^{\circ}\text{C}$ storage temperature ammonia used to total brayer $3 \times 5 = 15$ and 16.0 cooling celuse- pad water not spoiled many products this cold storage.

Describe the technological developments you have observed and relevant to the subject area of training (focus on digital technologies relevant to your job role)

Technological developments may be observed and

relevant:-

Technological developments area place Edula

Siva reddy cold storage.

me observed many activities services.

Awerence of some items kept in cold storage.

There at the cold storage importance of
Crops coming to edula siva reddy cold storage
were house.

me view to many crops impotes.

Example:- Moongdal, Red grams, Dry chillies, chana
Black grams, wholemoons e.t.c.

Chilling injury:- chilling injury is caused by low
temperature and generally affects chillies and crops
causing improper ripening discoloration, texture
chance e.t.c.

with a higher recommendation storage temperature
Symptoms of this disorder are decayed.

The chilli injury is dependent on storage temperature and storage time. Chilling injury is particularly troublesome because symptoms are not visible immediately on the product. Products that 100 heater in the store might have develop symptoms during transportation or marketing.

- Watermelon - 4.4°C
- Potatoes - 3.3°C
- Chillies - 7.2°C .

Thermal insulation of cold storage:-

Since heat flows from high temperature areas to lower temperature regions, there is a continuous flow of heat from the surroundings to the refrigerated or conditions space, thereby increasing the temperature of condition space (heat gain).

Any material that retards or offers resistance to the flow of heat through it is called an insulator.

Student Self Evaluation of the Short-Term Internship

Student Name: **Kimavath Siva Nik**

Registration No:

Term of Internship:

From:

To :

Date of Evaluation:

Organization Name & Address: **Edula Siva Reddy cold storage**
Gopalvarma .

Please rate your performance in the following areas:

Rating Scale:

Letter grade of CGPA calculation to be provided

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
3	Proactiveness	1	2	3	4	5
4	Interaction ability with community	1	2	3	4	5
5	Positive Attitude	1	2	3	4	5
6	Self-confidence	1	2	3	4	5
7	Ability to learn	1	2	3	4	5
8	Work Plan and organization	1	2	3	4	5
9	Professionalism	1	2	3	4	5
10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	OVERALL PERFORMANCE	1	2	3	4	5

Date:

Signature of the Student

Evaluation by the Supervisor of the Intern Organization

Student Name: **Kimavath Siva Naik**

Registration No: **21110001009**

Term of Internship:

From:

To:

Date of Evaluation:

Organization Name & Address: **Edula Siva Reddy Cold Storage SNO:110**

Soudara Dinne(Vij). Kollakuntla(M).

Name & Address of the Supervisor :- **Gopala Varma**

with Mobile Number

:- **9490402714.**

Please rate the student's performance in the following areas:

Please note that your evaluation shall be done independent of the Student's self-evaluation

Rating Scale: 1 is lowest and 5 is highest rank

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
3	Proactiveness	1	2	3	4	5
4	Interaction ability with community	1	2	3	4	5
5	Positive Attitude	1	2	3	4	5
6	Self-confidence	1	2	3	4	5
7	Ability to learn	1	2	3	4	5
8	Work Plan and organization	1	2	3	4	5
9	Professionalism	1	2	3	4	5
10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	OVERALL PERFORMANCE	1	2	3	4	5

Date:

Signature of the Supervisor

Vapour Barriers

Properties of insulation materials

MATERIAL	Density (kg/m ³)	Thermal conductance	Temperature (°C)
Polyurethane	30-32	0.015	110-200
Thermoced	15-30 kg	0.025 to 0.028	75-200
Cork	120-160	0.036	90-150
phenotherm	30-34	0.016	130-196.

Vapour Barriers :-

The water vapour in air tends to move from warmer region to colder region due to vapour pressure difference. As the temperature difference between the surrounding and conditioned area.

(Cold storage, refrigerated area) increase, the vapour pressure difference also increases.

The insulation materials can be porous to some extent, due to which moisture from outside can migrate into cold storage area.

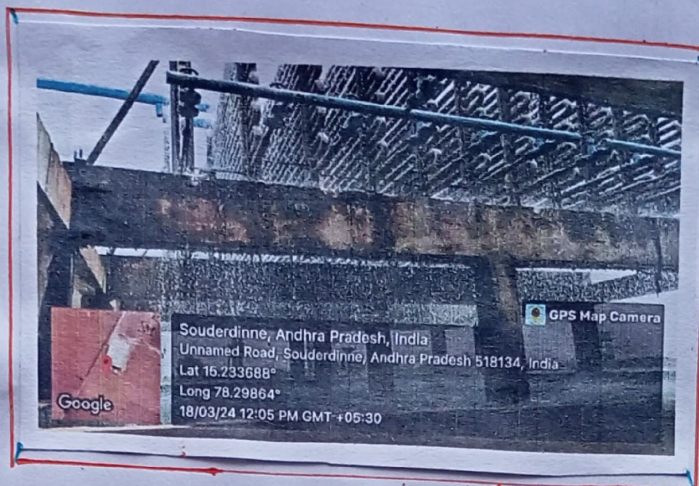
PHOTOS & VIDEO LINKS



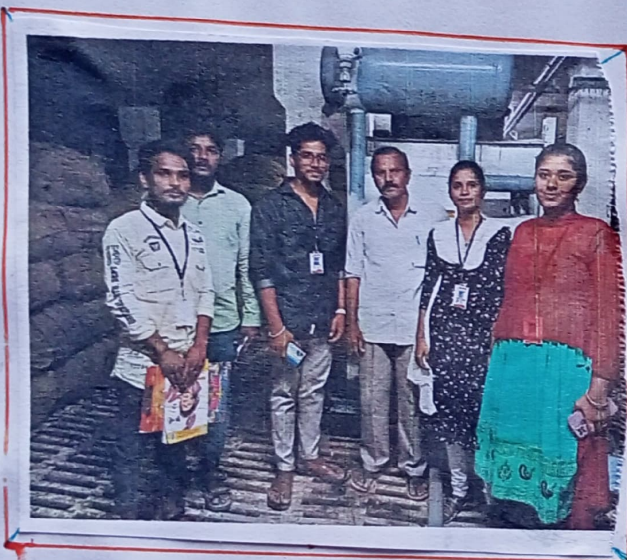
Pump mission



Cold storage insight



Cooling Tower for cold storage.



Cold Storage inside

Air Movement :- In cold storages, it is very

important to provide good air circulation between the boxes and around the product.

Adverse air distribution system is required to maintain a uniform temperature, throughout the cold storages. Ventilation should be kept at minimum in order to maintain optimum temperature and relative humidity.

Stacking and material handling :-

Stacking is one of the important factors in all types of storage and transport. It is particularly affected by the packing of chili products whether it is by carton, tray, wooden, net bag etc.

In cold storages according to product the stacking density of products and chana, moongdal in storage 50 kg and 100 kg for this season stacking must be proper and stable to avoid damage handling storage and Transportation.

RESULT AND DISCUSSION

Firstly, the survey and data collection were done and building details and refrigeration system details were obtained. After this survey energy consumption of the cold storage, refrigeration capacity of the system and load calculations were done using Equest Software and calculation.

The cooling load was coming out to be 150 tons. In order to reduce the cooling load and energy consumption.

Cascaded refrigeration system is also used to increase the COP. In this project we have done analysis on two types of cascading i.e., VA-VC and VC-VE.

sensible heat loss through walls.

	with green wall (W/m ²)	without green wall (W/m ²)
South	21.87	43.75
East W	13.07	28.30
West	22.45	30.56

RESULTS AND DISCUSSION

From the study of the literature, it was found that the most common method for the determination of the concentration of the solution is by using a standard solution of known concentration. The standard solution is prepared by weighing a precise amount of the substance and dissolving it in a known volume of solvent. The concentration of the standard solution is then determined by using a standard curve. The standard curve is a graph of the absorbance of the solution versus its concentration. The absorbance of the solution is measured by using a spectrophotometer. The concentration of the solution is then determined by using the standard curve.

EVALUATION

The results of the study show that the proposed method is a simple and accurate method for the determination of the concentration of the solution. The method is based on the use of a standard solution of known concentration. The standard solution is prepared by weighing a precise amount of the substance and dissolving it in a known volume of solvent. The concentration of the standard solution is then determined by using a standard curve. The standard curve is a graph of the absorbance of the solution versus its concentration. The absorbance of the solution is measured by using a spectrophotometer. The concentration of the solution is then determined by using the standard curve.

Internal & External Evaluation for Semester Internship

Objectives:

- Explore career alternatives prior to graduation.
- To assess interests and abilities in the field of study.
- To develop communication, interpersonal and other critical skills in the future job.
- To acquire additional skills required for the world of work.
- To acquire employment contacts leading directly to a full-time job following graduation from college.

Assessment Model:

- There shall be both internal evaluation and external evaluation
- The Faculty Guide assigned is in-charge of the learning activities of the students and for the comprehensive and continuous assessment of the students.
- The assessment is to be conducted for 200 marks. Internal Evaluation for 50 marks and External Evaluation for 150 marks
- The number of credits assigned is 12. Later the marks shall be converted into grades and grade points to include finally in the SGPA and CGPA.
- The weightings for Internal Evaluation shall be:
 - Activity Log 10 marks
 - Internship Evaluation 30 marks
 - Oral Presentation 10 marks
- The weightings for External Evaluation shall be:
 - Internship Evaluation 100 marks
 - Viva-Voce 50 marks
- The External Evaluation shall be conducted by an Evaluation Committee comprising of the Principal, Faculty Guide, Internal Expert and External Expert nominated by the affiliating University. The Evaluation Committee shall also consider the grading given by the Supervisor of the Intern Organization.
- Activity Log is the record of the day-to-day activities. The Activity Log is assessed on an individual basis, thus allowing for individual members within groups to be assessed this way. The assessment will take into consideration

the individual student's involvement in the assigned work.

- While evaluating the student's Activity Log, the following shall be considered -
 - a. The individual student's effort and commitment.
 - b. The originality and quality of the work produced by the individual student.
 - c. The student's integration and co-operation with the work assigned.
 - d. The completeness of the Activity Log.
- The Internship Evaluation shall include the following components and based on Weekly Reports and Outcomes Description
 - a. Description of the Work Environment.
 - b. Real Time Technical Skills acquired.
 - c. Managerial Skills acquired.
 - d. Improvement of Communication Skills.
 - e. Team Dynamics
 - f. Technological Developments recorded.

MARKS STATEMENT
(To be used by the Examiners)

INTERNAL ASSESSMENT STATEMENT

Name Of the Student: Kimavath Siva Naik

Programme of Study:

Year of Study: 2021-2024

Group: B.A [H.E.P]

Register No/H.T. No: 21110041009

Name of the College: S.V.B Govt. Degree college- Koilkuntla.

University: Rayalaseema university kurnool.

Sl.No	Evaluation Criterion	Maximum Marks	Marks Awarded
1.	Activity Log	10	
2.	Internship Evaluation	30	
3.	Oral Presentation	10	
	GRAND TOTAL	50	

Date:

Signature of the Faculty Guide

EXTERNAL ASSESSMENT STATEMENT

Name Of the Student: Kimavath Siva Naik
Programme of Study: Long term Internship Project.
Year of Study: 2021-2024
Group: B.A [H.E.P]
Register No/H.T. No: 21110041009
Name of the College: S.V.B Govt. Degree college Koilkuntha.
University: Rayalaseema University Kurnool.

Sl.No	Evaluation Criterion	Maximum Marks	Marks Awarded
1.	Internship Evaluation	80	
2.	For the grading giving by the Supervisor of the Intern Organization	20	
3.	Viva-Voce	50	
	TOTAL	150	
GRAND TOTAL (EXT. 50 M + INT. 100M)		200	

Signature of the Faculty Guide

Signature of the Internal Expert

Signature of the External Expert

Signature of the Principal with Seal



**ANDHRA PRADESH
STATE COUNCIL OF HIGHER EDUCATION**

(A Statutory Body of the Government of Andhra Pradesh)

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