



# R. A. PODAR COLLEGE OF

COMMERCE AND ECONOMICS
(AUTONOMOUS)

MATUNGA, MUMBAI SYLLABUS

FOR UNDER GRADUATE PROGRAMME

# S. Y. B.B.A (BACHELORS OF BUSINESS ADMINISTRATION) SHIPPING AND LOGISTICS MANAGEMENT

SEMESTER III & IV

CHOICE BASED CREDIT AND GRADING SYSTEM (CBCGS)

With effect from the academic year 2023-24

www.rapodar.ac.in

# Second Year Bachelor of Business Administration (Shipping and Logistics)

# Under Choice Based Credit,

# Grading and Semester System

#### Course Structure

(To be implemented from Academic Year- 2023-2024)

2	(To be implemented from Academic Year- 2023-2024)					
3 Course Code	Semester III	Credits	Course Code	Semester IV	Credits	
	Elective Courses (EC)			<b>Elective Courses (EC)</b>		
	Discipline Specific Elective (DSE) Courses			Discipline Specific Elective (DSE) Courses		
50301	Multi-mode Transport- Air Transport	03	50401	Tracing Mechanism and Data Analysis	03	
50302	Multi-mode Transport: Road transport	03	50402	International conventions, TRA commercial laws and rules	03	
50303	Multi-mode Transport: Rail transport	03	50403	Electronic Data Interchange	03	
	Ability Enhancement Courses (AEC)			Ability Enhancement Co	ourses (AEC)	
	Ability Enhancement Compulsory Courses (AECC)			Ability Enhancement Compulsory Courses (AECC)		
50304	Documentation & Reporting	03	50404	Warehousing and Supply Chain Management	03	
	Skill Enhancement (SEC)	Courses		Skill Enhancement Courses (SEC)		
50305	Organisation and Financial aspects of Multi modal transport operator	02	50405	Project work	02	
	Core Courses (CC)			Core Courses (CC)		
50306	Packing and labelling	03	50406	Insurance in Shipping and logistics	03	
50307	Principles of Cargo Management	03	50407	Technology and Innovation in Shipping and logistics	03	
	Total Credits	20		Total Credits	20	

# Second Year Bachelor of Business Administration (Shipping and Logistics)

# Under Choice Based Credit, Grading and Semester System Course Structure

(To be implemented from Academic Year- 2023-24)

# **Semester III**

Course Code	Semester III	Credits
Code		
	Elective Courses (EC)	
	Discipline Specific Elective (DSE) Courses	
50301	Multi-mode Transport: Air transport	03
50302	Multi-mode Transport: Road transport	03
50303	Multi-mode Transport: Rail transport	03
	Ability Enhancement Courses (AEC)	
	Ability Enhancement Compulsory Courses (AECC)	
50304	Documentation & Reporting	03
	Skill Enhancement Courses (SEC)	
50305	Organisation and Financial aspects of Multi modal transport operator	02
	Core Courses (CC)	
50306	Packaging and labelling	03
50307	Principle of Cargo Management	03
	Total Credits	20

# **Semester IV**

Course Code	Semester IV	Credits
	Elective Courses (EC)	
	Discipline Specific Elective (DSE) Courses	
50401	Tracing Mechanism and Data Analysis	03
50402	International conventions, TRA commercial laws and rules	03
50403	Electronic Data Interchange	03
	Ability Enhancement Courses (AEC)	
	Ability Enhancement Compulsory Courses (AECC)	
50404	Warehousing and Supply Chain Management	03
	Skill Enhancement Courses (SEC)	
50405	Project work - I	02
	Core Courses (CC)	
50406	Insurance in Shipping and Logistics	03
50407	Technology and Innovation in Shipping and logistics	03
	Total Credits	20

# Elective Courses (EC) Discipline Specific Elective (DSE) Courses

#### **Course Credit-3**

# 50301 Multi-mode Transport: Air transport

# **Objectives:**

- To enable the learner to understand the nuances of air transport
- To ensure that the learner is able to distinguish between the different types of goods
- To understand the relevance of various documents in air transport
- To study the different rates applicable to the goods using air transport

Sr. No.	Modules	No. of Lectures
1	Introduction, Documents and rates of Air transport	15
2	Routing, Booking and chargeable rates	15
3	Special/Dangerous goods	15
4	Airway bills and its features	15
	Total	60

#### **Modules at a Glance**

#### Svllabus

Sr. No.	Modules / Units
1	Introduction, Documents and rates of Air transport
	Introduction, Air Cargo Agency, IATA Cargo Agent, Air Freight Forwarder, International air transport: organization and geography, areas of operations, Rights, duties and responsibilities of carrier/shipper, International Conventions, Liability of the Carrier  Documents used in carriage of goods by air: Airway bill and other documents Aircraft, air Transport and Air Cargo Rates, Types of Aircraft, Special Notes on air loading, Air cargo handling facilities, Special Cargos, Air cargo rates
2	Routing, Booking and chargeable rates
	Routing, Schedule tables, interline agreements, import countries routing restriction, Embargo Booking, Information required to book a shipment, Cancellation Airline booking facilities, Free sale, Sale and report, Allotments, Loading Prior Rating, Rate class, Basic charge/per kilo, Minimum charge, General cargo rates (GCR), Specific commodity rates (SCR), Chargeable weight, Actual gross weight, volume weight, lower charge at higher weight, Class rates, Construction / combination of unpublished rates, Construction, Combination example Weight charge & valuation charge, Weight charge, Valuation charge, Other charges: Insurance, disbursement.

	Effect of War on trade & trade routes;
	Piracy & its effects
- 2	
3	Special/Dangerous goods
	Special Cargo, Dangerous goods (HAZMAT), Heavy & Over dimensioned cargo, Perishables, refrigerated/frozen cargo in reefer containers, Human remains, Live animals in livestock carriers, Magnetized material, Undeveloped film, Fragile, Seafood and casings, Dry ice Valuable cargo handling fee general restrictions due to nature of goods, due to value restrictions by carrier, concealed dangerous goods, restriction and prohibitions by country Harmonised System of Nomenclature HSN code, the international language of commodity coding – a unique consignment numbering by WCO (6 digit or 8 digit)
4	Airway bills and its features
	AWB fee, Clearance/handling, documents accompanying the AW B: commercial invoice, proforma invoice, shippers' declaration for dangerous goods, shippers' certificate for live animals, certificate for baggage ship as cargo

#### **Learning Outcomes:**

- Ensures the understanding of different documents required in Air transport
- Enhances the ability of the student in differentiating between different types of goods
- Learner acquires knowledge of the different rates applicable in Air transport
- The learner acquires knowledge about the role of agencies in Air transport

#### **Reference books:**

- Introduction To The Air Transport System (Hb 2022) by Kalic M, Crc Press
- Air Transport Management : An International Perspective by Dr Lucy Budd and Etephen Ison, Taylor and Francis
- Introduction to Air Transport Economics
- (Paperback) | Released: 08 Feb 2018
- By: Ken Fleming (Author), Thomas Tacker (Author), Bijan Vasigh (Author)

# **Teaching Pedagogy**

Lectures/tutorials/field work/outreach activities/ project work/ vocational training/ viva / seminars / term papers/ assignments / presentations / self-study/case studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.

#### Allocation of 40 Marks---Internal evaluation

Method of evaluation	Total marks
Written Test	15
Power Point Presentation-Pre-set criteria/ Report on guest lecture/ activity	20
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

Question No	Particulars	Total marks
	Question based on theory/concept taught. (Any Two out of	
Q.1	Three)	10
	OR	
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Questi on No.	Particulars		Marks per Question	Total marks
	A	Theory/ Concept based question	6	
	В	Theory/ Concept based question	6	
Q.1		OR		12
	C	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.2	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.3	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q. 4	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
Q. 5	A	Application based question	12	
		OR		12
	В	Application based question	12	
		TOTAL		60

# Elective Courses (EC) Discipline Specific Elective (DSE) Courses Course Credit-3

# **50302 Multimode transport: Road transport**

#### **Objectives:**

- To create awareness about the duties and responsibilities of a shipper
- To introduce the structure of tariffs to the learner
- To apprise the learner with the issues faced in road transport
- To understand the magnitude of the future trends

Sr. No.	Modules	No. of Lectures
1	Rights, duties and responsibilities of carrier/shipper	15
2	Freight rate structure	15
3	Problems related to road transportation	15
4	Future trends	15
	Total	60

#### **Modules at a Glance**

#### Svllabus

Sr.	Modules / Units	
No.		
1	Rights, duties and responsibilities of carrier/shipper	
	The International Convention and national law	
	Features of CMR convention	
	Carrier rights, duties and responsibilities under CMR	
	National Law- common carrier and private carrier infrastructural	
	Geography of land transport – Golden Quadrilateral	
	local and international aspects of road transport	
	Documentation	
2	Freight rate structure	
	Settlement of claims	
	transportation of dangerous and hazardous goods	
	Indian national highways	
	ICDs and roads	
3	Problems with road transportation	
	• Customs	
	want of a uniform taxation policy	
	• octroi	

	National zonal permits
	• promotion of multi-axle vehicles
	maintenance of roads, bridges
	specific problems in container movement
	private sector participation
	Road rail vehicle system
	• Carriers Act, 1865
4	Future trends
	New Logistics policy

### **Learning Outcomes:**

- Ensures easy understanding of the duties and responsibilities of a shipper
- The learner acquires knowledge of the freight structure
- Enhances the learner's ability of dealing with the issues related to Road transport
- Learner is abreast with the trends in road transport

#### **Reference Books:**

- Economics of the road transportauthor: <u>ravinder n batta</u>
- Management of road freight transport by nick poree
- <u>Himachal road transport corporation ( hrtc ) multipurpose .</u> Vvk subburaj

# **Teaching Pedagogy**

Use of technology, Chalk and Talk method, Role Play, Group discussions, Play learn method, case study analysis, Flip class, Quiz, management games.

# Allocation of 40 Marks---Internal evaluation

Method of evaluation	Marks
Written Test	15
Power Point Presentation-Pre-set criteria/ Report on guest lecture/ activity	20
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

Question No	Particulars	Marks
	Question based on theory/concept taught. (Any Two out of	
Q.1	Three)	10
	OR	
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Questi on No.	Par	ticulars	Marks per Question	Total marks
	A	Theory/ Concept based question	6	
	В	Theory/ Concept based question	6	
Q.1		OR		12
	C	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.2	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.3	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q. 4	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
Q. 5	A	Application based question	12	
_		OR		12
	В	Application based question	12	1
	•	TOTAL		60

# Elective Courses (EC) Discipline Specific Elective (DSE) Courses Course Credit-3 50303 Rail Transport

# **Objectives:**

- To understand the role of the shipper
- To understand the concept of rate structure
- To understand the means of transportation by rail
- To create awareness about the railway's legal framework

Sr. No.	Modules	No. of Lectures
1	Rights, duties and responsibilities of carrier/shipper	15
2	Freight rate structure	15
3	Transportation of container by rail in India	15
4	The Railway Act, 1989	15
	Total	60

#### Modules at a Glance

UNI T NOS.	MODULES/UNIT
1	Rights, duties and responsibilities of carrier/shipper
	<ul><li>Infrastructure</li><li>Documents</li><li>USA intermodal transport system</li></ul>
2	Freight rate structure
	<ul> <li>Groupage or consolidation services</li> <li>Unit loads by rail</li> <li>Complimentary role of rail and road transport</li> <li>Settlement of claims</li> <li>Transportation of dangerous goods</li> </ul>
3	Transportation of containers by rail in India

	<ul> <li>Beginning and development – Role of IRCTC</li> <li>Inland container depots (ICDs): roles and functions</li> <li>Inland container depots in India</li> <li>Container Corporation of India Limited and its progress</li> <li>Export and import procedure at ICDs and procedures for transhipment and transfer of containers</li> </ul>	
4	The Railway Act, 1989	
	<ul><li>Introduction</li><li>Features and highlights</li></ul>	

# **Learning Outcomes:**

- Learners are able to able to appreciate the role of a carrier/shipper
- Learners has clarity about the rate structure
- Learner has acquired knowledge about the rail transportation
- Ease in understanding of the legal framework that governs railways

#### **Reference Books:**

- Changing Tracks Reinventing the Spirit of Indian Railways by Author: V. Nilakant
- The Penguin Book of Indian Railway Stories by Author: Ruskin Bond
- Indian Railways The Weaving of a National Tapestry by Bibek Debroy, Sanjay Chadha, Vidya Krishnamurthi

# **Teaching Pedagogy**

Lectures/tutorials/field work/outreach activities/ project work/ vocational training/ viva / seminars / term papers/ assignments / presentations / self-study/case studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.

#### Allocation of 40 Marks---Internal evaluation

Method of evaluation	Total marks
Written Test	15
Power Point Presentation-Pre-set criteria/ Report on guest lecture/	20
activity	
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

Question No	Particulars	Total marks
	Question based on theory/concept taught. (Any Two out of	
Q.1	Three)	10
	OR	
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Question No.	Particulars	Marks per Question	Total marks
	A Theory/ Concept based question	6	
	B Theory/ Concept based question	6	
Q.1	OR		12
	C Theory/ Concept based question	12	
	A Theory/ Concept based question	6	
Q.2	B Theory/ Concept based question	6	12
	OR		
	C Theory/ Concept based question	12	
	A Theory/ Concept based question	6	
Q.3	B Theory/ Concept based question	6	12
	OR		
	C Theory/ Concept based question	12	
	A Theory/ Concept based question	6	
Q. 4	B Theory/ Concept based question	6	12
	OR		
	C Theory/ Concept based question	12	
Q. 5	A Application based question	12	
	OR		12
	B Application based question	12	
	TOTAL		60

# **Ability Enhancement Courses (AEC) Ability Enhancement Compulsory Courses (AECC)**

# 50304 Documentation and Reporting Course Credit-3

#### **Objectives:**

- To acquaint the learner to the types of documents in shipping and logistics
- To encourage the application of the documents in business
- To encourage the learner to take up alternate career opportunities
- To ensure the understanding of processes in activities related to shipping and logistics

#### **Process:**

- Documents for transport of goods by Air such as:
  - \* Commercial Invoice.
  - \* Packing List.
  - \* Export/Import Customs Declaration.
  - \* Dangerous Goods Form
  - \* Air Waybill.
  - \* Arrival Notice.
  - \* Certificate of Origin

#### • Documents for transport of goods by Road such as:

Under GST, these are the documents that the truck driver/owner need to carry

when on a goods transport by road:

\* Invoice for the goods (this usually contains details like description of the goods,

their value, the quantity, etc.)

- \* Bill of supply (if you are transporting goods that are exempted from GST)
- \* Delivery challan in triplicate
- \* E-way bill or a copy of the E-way bill
- \* CMR ("Convention relative au contrat de transport international de marchandises par route") the standard contract of carriage for goods being transported internationally by road.

#### • Documents for transport of goods by Rail such as:

Rail Transport Document / Rail Consignment Note is covered under article 24 of

**UCP 600** 

Documents sent by service providers such as:

- Government of India Speed post
- Private operators DHL, Blue Dart and others

Would be discussed and examined.

The application of such documents would be understood with the help of case studies.

The learner would be given an opportunity to present his/ her findings/understanding

on the topic

#### **Outcomes:**

- The learner has acquired knowledge of all documents
- The learner is able to apply the acquired knowledge in practice
- The learner can independently fill the forms and serve as a liaison officer
- It is now easy for the learner to understand the processes involved

# **Evaluation process:**

Type of evaluation	Pr	rocess		Marks
Continuous evaluation		e learner would be required		40
	ass	signment based on each docu	ument	
Semester End Examination	•	A project would be sub	mitted by the	60
	1	earner based on the case stu	dy shared with	
	ŀ	nim/her		
	• I	Power point presentation wo	uld be shared	
	f	for clarity on submission		
	• 1	Marking scheme:		
		Examiner	Marks	
		Internal Guide	10	
		External examiner	50	
	TO	OTAL	I	100

# **Skill Enhancement Courses (SEC)**

# 50305 Organisation and Financial Aspects of a Multimodal Transport Operator

# **Course Credit-3**

# **Objectives:**

- To enable the learner to get an insight into the structure followed by an organisation
- To ensure in-depth learning of the aspects of finance and administration
- To understand the process and procedures related to the evaluation of performance of all investments
- To nurture leaders so as to enhance their management skills

Sr. No.	Modules	No. of Lectures
1	Organisational Structure	15
2	Finance and Administration	15
3	Financial Performance ROI	15
4	Evaluation of Performance	15
	Total	60

#### **Modules at a Glance**

Syllabus			
Sr. No.	Modules / Units		
1	Organisational Structure		
	<ul> <li>Establishment of MTO Operations</li> </ul>		
	<ul><li>Contracting</li></ul>		
	<ul> <li>Delegation of Responsibility</li> </ul>		
	<ul><li>Decision Making</li></ul>		
2	Finance and Administration		
	<ul><li>Quoting</li></ul>		
	<ul> <li>Management and Leadership</li> </ul>		
	<ul> <li>Quality Service</li> </ul>		
	<ul><li>Customer Service</li></ul>		
3	Financial Performance ROI		

	The Magic Formula
	<ul> <li>Working Capital or Net Current Assists</li> </ul>
	<ul> <li>Accounting Conventions</li> </ul>
	<ul> <li>Management of Working Capital</li> </ul>
4	Evaluation of Performance
	<ul> <li>Financial Performance ROI/ROCE</li> </ul>
	Financial Control
	New Projects
	<ul> <li>Evaluation of Performance</li> </ul>

### **Learning Outcomes:**

- Ensures the understanding of different business derivatives of a MTO.
- Enhances a possibility of acquiring in-depth knowledge of start up as a MTO.
- Learner acquires knowledge on deeper aspects of Freight Forwarding and Non-Vessel
- Common Carrier.
- Learner evolves as a leader with better understanding of all aspects of motivation and leadership

#### **Reference books:**

- Elements of Financial Management by Dr R P Rustagi
- Financial Analysis For Beginners by Dr Shivashankaran
- Financial Administration In India 2Nd Edition by Mahajan Sanjeev Kumar Mahajan Anupama Puri, Phi Learning

# **Teaching Pedagogy**

Lectures/tutorials/field work/outreach activities/ project work/ vocational training/ viva / seminars / term papers/ assignments / presentations / self-study/case studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.

#### Allocation of 40 Marks---Internal evaluation

Method of evaluation	Total marks
Written Test	15
Power Point Presentation-Pre-set criteria/ Report on guest lecture/ activity	20
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

Question No	Particulars	Total marks
	Question based on theory/concept taught. (Any Two out of Three)	
Q.1	OR	10
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Question No.	Pa	rticulars	Marks per Question	Total marks
	A	Theory/ Concept based question	6	
Q.1	В	Theory/ Concept based question	6	
		OR		12
	C	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.2	В	Theory/ Concept based question	6	12
		OR		
	C	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.3	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
Q. 4	A	Theory/ Concept based question	6	12
	В	Theory/ Concept based question	6	
		OR		
	С	Theory/ Concept based question	12	
Q. 5	A	Application based question	12	
		OR		12
	В	Application based question	12	
		TOTAL		60

# Core Course (CC) 50306 Packaging, Marking and Labelling of Hazardous/Dangerous Cargo Course Credit-3

# **Objectives:**

- To learn basic concepts of product identification by packaging the
- To educate the learner about the importance of product description on the package
- To understand and segregate dangerous goods
- To acknowledge the role of International conventions in laying down rules

Sr. No.	Modules	No. of Lecture
		S
1	Introduction to packaging	15
2	Marking and labelling	15
3	Dangerous goods	15
4	International Convention and standing of dangerous goods by road	15
	tanker vehicle	
	TOTAL	60

#### Modules at a Glance

Introduction to packaging		

	Convention for transport of dangerous goods
	The Solas Convention
	IMO/IMCO
	IMDG-CODE
	Guidelines for land transport of dangerous goods
	Land transportation of dangerous goods
_	
4	International Convention and standing of dangerous goods by road tanker vehicle
4	
4	vehicle
4	vehicle Specifications for 'caution labelling' of hazardous substances
4	vehicle Specifications for 'caution labelling' of hazardous substances Guidelines for a transport of dangerous goods documentation, packaging and
4	vehicle Specifications for 'caution labelling' of hazardous substances Guidelines for a transport of dangerous goods documentation, packaging and hazards of dangerous goods
4	vehicle  Specifications for 'caution labelling' of hazardous substances Guidelines for a transport of dangerous goods documentation, packaging and hazards of dangerous goods Guidelines for the transport of dangerous goods through combined freight

#### **Learning Outcome:**

- The learner has understanding of the concepts related to the types of packaging used by the industry
- The learner is able to comprehend the importance of labelling
- The learner is aware of the classification of dangerous goods
- The learner knows about the role of the statutory bodies related to shipping and logistics and

awareness is created in the minds of the learner about the contributions of the Indian Institute of Packaging

#### **Reference Books/ Links:**

Emergency response guidebook

https://www.google.co.in/books/edition/First Responder s Field Guide to Hazmat/j9DgDwA AQBAJ?hl=en&gbpv=1&dq=books+on+PACKAGING,+MARKING+AND+LABELING+OF+CARGO&pg =PT119&printsec=frontcover

# **Teaching Pedagogy**

Lectures/tutorials/field work/outreach activities/ project work/ vocational training/ viva / seminars / term papers/ assignments / presentations / self-study/case studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.

#### Allocation of 40 Marks---Internal evaluation

Method of evaluation	Total marks
Written Test	15
Power Point Presentation-Pre-set criteria/ Report on guest lecture/ activity	20
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

Question No	Particulars	Total marks
	Question based on theory/concept taught. (Any Two out of	
Q.1	Three)	10
	OR	
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Questi on No.	Par	ticulars	Marks per Question	Total marks
	A	Theory/ Concept based question	6	
	В	Theory/ Concept based question	6	
Q.1		OR		12
	C	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.2	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.3	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q. 4	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
Q. 5	A	Application based question	12	
		OR		12
	В	Application based question	12	
		TOTAL		60

# Core Courses (CC) 50307 Course Credit-3 Principles of Cargo Management

# **Objectives:**

- To enable the learner to get an insight of the concept of cargo operations
- To ensure in-depth learning of all aspects of cargo management
- To understand the process and procedures related to cargo management
- To enable the students to understand the role of MTO

Sr. No.		No. of Lectures
1	Cargo Operations	15
2	Cargo Management	15
3	Export documentation and shipping instructions	15
4	Role of a MTO	15
	Total	60

### **Modules at a Glance**

Sr. No.	Modules / Units
1	Cargo Operations
	Outgoing or export forwarding process
	Cargo booking procedures
	Cargo scanning
	Document automation
	Claims and complaint handling
	Air Cargo law
	Insurance
2	Cargo Management
	Typical Analysis
	Balancing of Traffic
	Cargo Routing
	Import and Export Cargo Shipping Instructions
3	Export documentation and shipping instructions
	Shipping note/Export receival Advice
	Hazardous/Dangerous goods
	Custom requirements

	Notification arrival of goods Customs clearance Freight Invoice Cargo Release
	clearances
4	Role of a MTO
	MTO Attitude towards the Client
	Use of EDI as a tool
	Practical Multi-Mode Transport Operations
	Controlling the Multi-Mode Transport Package

## **Learning Outcomes:**

- Ensures the understanding of cargo booking procedures
- Enhances a possibility of acquiring in-depth knowledge of MTO, Operations with respect to Credit, Customers, their needs and control.
- Learner acquires knowledge on Cargo routing
- Learner appreciates the role of procedures to be followed for custom clearance

#### **Reference books:**

- Friday forward by Robert Glazzer
- Fix This Next by Mike Michalowicz

# **Teaching Pedagogy**

Lectures/tutorials/field work/outreach activities/ project work/ vocational training/ viva / seminars / term papers/ assignments / presentations / self-study/case studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.

# Allocation of 40 Marks---Internal evaluation

Method of evaluation	Total marks
Written Test	15
Power Point Presentation-Pre-set criteria/ Report on guest lecture/	20
activity	
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

Question No	Particulars	Total marks
	Question based on theory/concept taught. (Any Two out of	
Q.1	Three)	10
	OR	
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Questi on No.	Par	Particulars Particulars Particulars		Total marks
	A	Theory/ Concept based question	6	
	В	Theory/ Concept based question	6	
Q.1		OR		12
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.2	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.3	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q. 4	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
Q. 5	A	Application based question	12	
		OR		12
	В	Application based question	12	
	-	TOTAL		60

# Elective Courses (EC) Discipline Specific elective (DSE)

# **50401 Tracing Mechanism and Data Analysis**

#### **Course Credit-3**

# **Objectives:**

- To provide insight about the procedures involved in tracing the shipment
- To ensure that the learner understands the nuances of the tracking mechanism
- To enable the learner to relate to the concept of real time data
- To create awareness about the reporting processes

Sr.	Modules	
No.		Lectures
1	Tracking the Shipment	15
2	Tracing the Shipment	15
3	Data Analysis	15
4	Data Reporting	15
	TOTAL	60

# Modules at a Glance

Бупасс	Syllabus		
SrNo	Modules/ Units		
1	Tracking the shipment		
	Event tracking:		
	Visibility:		
	Mobile and web access:		
	Document management:		
	Carrier performance monitoring:		
2	Tracing the shipment		
	Automatic notifications:		
	Carrier and shipping label management:		
	Integration with other systems		
	Reporting and analytics:		
	Barcode scanning and RFID		
3	Data Analysis		
	Business Intelligence or Real-time data:		
	Customizable reports:		
	Data visualization:		

	Dashboard:
	Advanced analytics:
4	Data Reporting
	<ul> <li>Predictive analytics</li> <li>Integration with other systems</li> <li>Data export</li> <li>Data security</li> <li>Automated reporting</li> <li>Multi-level reporting</li> <li>Data archiving</li> <li>Data warehousing</li> </ul>

#### **Learning outcomes:**

- The learner has acquired knowledge of Mobile and web access and is able to monitor the performance of the carrier
- The learner is able to relate to the concept of integration approach
- It ensures adequate information flow with respect to real time data
- There is awareness created with respect to the reporting of data and ensures clear understanding of the importance of achieving data

#### **Teaching Pedagogy**

Lectures/tutorials/field work/outreach activities/ project work/ vocational training/ viva / seminars / term papers/ assignments / presentations / self-study/case studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.

# Allocation of 40 Marks---Internal evaluation

Method of evaluation	Total marks
Written Test	15
Power Point Presentation-Pre-set criteria/ Report on guest lecture/ activity	20
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

QuestionNo	Particulars	Total marks
	Question based on theory/concept taught. (Any Two out of	
Q.1	Three)	10
	OR	
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Question No.	Pa	rticulars	Marks per Question	Total marks
	Α	Theory/ Concept based question	6	
	В	Theory/ Concept based question	6	
Q.1		OR		12
	С	Theory/ Concept based question	12	
	Α	Theory/ Concept based question	6	
Q.2	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	Α	Theory/ Concept based question	6	
Q.3	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	Α	Theory/ Concept based question	6	
Q. 4	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
Q. 5	Α	Application based question	12	
		OR		12
	В	Application based question	12	
		TOTAL		60

# Elective Courses (EC) Discipline Specific Elective (DSE) Courses

#### 50402 INTERNATIONAL CONVENTIONS AND COMMERCIAL LAWS

#### **Course Credit-3**

# **Objectives:**

- To enable the learner to understand the role of conventions in Shipping and Logistics
- To educate the learner on the rules that govern the sector
- To acquaint the learner with the commercial laws that are applicable
- To ensure that the student is aware of the international terms

Sr. No.	Modules	No. of Lectures
1	International Convention	15
2	International Maritime Rules	15
3	Commercial Laws	15
4	INCOTERMS 2020 and UCP 600	15
	Total	60

# Modules at a Glance Syllabus

Sr. No.	Modules / Units
1	International Convention
	Kyoto Convention
	Warshaw convention 1949
	Montreal Protocol No.4
2	International Maritime Rules
	Hauge Visby Rules
	Hamburg Rules
	UN Convention on the carriage of Goods by sea 1978
	ATA Carnet
3	Commercial Laws
	Indian Bill of Lading Act, 1856
	Indian Carriage of Goods by Sea Act, 1925
	Multimodal Transportation of Goods Act, 1993 (Amended)
	Carriers Act, 1865

4	INCOTERMS 2020 and UCP 600
	International Commercial Terms
	The Uniform Customs & Practice for Documentary Credits

#### **Learning Outcomes**

- The learner understands the role of international conventions and appreciates the value addition done
- The learner appreciates the need for compliance in shipping and Logistics
- the learner is able to apply the laws and is able to understand and analyse the situation
- The learner is acquainted with INCOTERMS 2020 and UCP 600

#### **Reference books:**

- •International law by Dr Gurdip Singh
- Mercantile and commercial laws by Rohini Aggarawal
- Advanced introduction to international trade law 2<sup>nd</sup> edition
- Martial law and procedure for finding of appeals by Ram Dutta Sharma

# **Teaching Pedagogy**

Lectures/tutorials/field work/outreach activities/ project work/ vocational training/ viva / seminars / term papers/ assignments / presentations / self-study/case studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.

# Allocation of 40 Marks---Internal evaluation

Method of evaluation	Total marks
Written Test	15
Power Point Presentation-Pre-set criteria/ Report on guest lecture/	20
activity	
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

Question No	Particulars	Total marks
	Question based on theory/concept taught. (Any Two out of	
Q.1	Three)	10
	OR	
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Questi on No.	Par	ticulars	Marks per Question	Total marks
	A	Theory/ Concept based question	6	
	В	Theory/ Concept based question	6	
Q.1		OR		12
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.2	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.3	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q. 4	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
Q. 5	A	Application based question	12	
		OR		12
	В	Application based question	12	
	-	TOTAL		60

# **Elective courses (EC)**

# Discipline Specific Elective (DSE) courses

# **50403 Electronic Data Interchange**

#### **Course credits 3**

# **Objectives:**

- To empower the learner so as to enable them reduce interaction with government agencies
- To provide a learning tool to ensure understanding of the communication protocols
- To aim at a single point collection of data which would be useful for industry
- To enable the learner to understand how EDI works

Sr. No.	Modules	No. of Lectures
1	EDI Standards and their evolution	15
2	Communication protocols	15
3	Indian Laws	15
4	E Shipping and emerging trends for shippers	15
	Total	60

Modules at a glance

Sr.	Modules / Units
No.	
1	EDI Standards and their evolution
	Meaning and Key Elements of EDI
	Evolution of EDIFACT – Electronic Data Interchange For Administration
	Commerce and Transport
2	Communication protocols
	1 XML
	Barcoding
	European Article Number-Uniform Code Council
	Multi Industry Transport Labels
	Message Security
3	Indian Laws
	The Information Technology Act, 2000 highlights
	Legal aspects of documents and messages transmitted through EDI
	Role of RBI in EDI

4	E Shipping and emerging trends for shippers
	Role of technology in transportation and shipping Online exchange
	ICEGATE - Indian Custom Electronic Gateway

#### **Learning Outcomes:**

- The learner has acquired knowledge about EDIFACT and is able to contribute and improve the planning process
- The learner has acquired knowledge on communication protocols such as 1 XML and Barcoding
- The learner appreciates the role of EDI as a central pool of data which is used by the organization in all its activities and functions
- The learner is made aware of the processes involved in EDI and the manner in which the data is utilised for the benefit of all departments

#### **Reference books:**

- Electronic Data Interchange: An introduction: 1 (EDI Education) by Christopher Cancilla
- EDI electronic data interchange A Clear and Concise Reference Paperback 29 January 2019 by <u>Gerardus Blokdyk</u>
- The Loudest Duck: Moving Beyond Diversity while Embracing Differences to Achieve Success at Work by Laura A. Liswood

#### **Teaching Pedagogy**

Lectures/tutorials/field work/outreach activities/ project work/ vocational training/ viva / seminars / term papers/ assignments / presentations / self-study/case studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.

# Allocation of 40 Marks---Internal evaluation

Method of evaluation	Total marks
Written Test	15
Power Point Presentation-Pre-set criteria/ Report on guest lecture/	20
activity	
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

Question No	Particulars	Total marks
	Question based on theory/concept taught. (Any Two out of	
Q.1	Three)	10
	OR	
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Questi on No.	Par	ticulars	Marks per Question	Total marks
	A	Theory/ Concept based question	6	
	В	Theory/ Concept based question	6	
Q.1		OR		12
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.2	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q.3	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	A	Theory/ Concept based question	6	
Q. 4	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
Q. 5	A	Application based question	12	
		OR		12
	В	Application based question	12	
	-	TOTAL		60

# Elective Courses (EC) Discipline Specific Elective (DSE) Courses

#### **Course Credit-3**

# 50404 Warehousing and Supply Chain Management

# **Objectives:**

- To enable the learner to comprehend the nuances of warehousing
- To enable the understanding of the impact of righteousness in discharge of duties by a warehouse operator
- To create an interest in a career in logistics

• To comprehend the trends in E logistics

Sr.	Module	No. of
No.		Lectures
1	Introduction to warehousing	15
2	Rights, duties of the warehouse operator and the customer	15
3	Concept of Logistics and Supply chain Management	15
4	Trend in e-commerce and E logistics	15
	Total	60

#### Modules at a glance

Syllabus Sr.		
No.	Modules / Units	
	Introduction to workhousing	
1	Introduction to warehousing	
	Need, importance, development of warehousing	
	• Warehousing logistics operations (duties of warehouse operator,	
	customer)	
	• Warehouse layout and design (Types, Number and size of warehouses)	
	Warehouse documentation	
2	Forecasting, Inventory management and Costing	
	• Forecasting- objectives, approaches, techniques (Numericals on simple	
	moving average, Weighted moving average)	
	• Inventory- Types, functions, Replenishment systems, Selective inventory	
	control techniques, EOQ model	
	Costing- Total cost approach Activity based and Mission based costing and	
	its relevance to Logistical operations	
3	Concepts of Supply chain management	
	Objectives, drivers and strategies, challenges and key issues in Supply	
	chain management, Bullwhip effect	
	• Role of IT, framework( Bar coding, SAP/RFID)	
	• Risk management (Supplier financial risk, performance risk, compliance	
	risk, Country specific risk, Cyber security)	
	Green Supply chain management	
4	Trends in logistics and supply chain management	
	Trends in logistics and supply chain management – E logistics	
	Golden Quadrilateral, Logistical Parks, Container Freight stations, Deep	
	water ports, Dedicated Freight corridor	
	Global logistical trends	
	• Startup options	

# **Learning outcomes:**

- The learner appreciates the importance of Time zones and International date line.
- The learner is acquainted with patterns such as Free Trade Associations and other trading blocks.
- There is keen interest in exploring a career in shipping and logistics
- There is a thrust towards promoting entrepreneurship

#### **Reference Books:**

- Excellence in Warehouse Management: How to Minimise Costs and Maximise Value
- World-Class Warehousing and Material Handling By Edward Frazelle
- The Warehouse Management Handbook By James A. Tompkins & Jerry D. Smith

#### **Teaching Pedagogy**

Lectures/tutorials/field work/outreach activities/ project work/ vocational training/ viva / seminars / term papers/ assignments / presentations / self-study/case studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.

# Allocation of 40 Marks---Internal evaluation

Method of evaluation	Total marks
Written Test	15
Power Point Presentation-Pre-set criteria/ Report on guest lecture/ activity	20
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

Question No	Particulars	Total marks
	Question based on theory/concept taught. (Any Two out of	
Q.1	Three)	10
	OR	
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Question No.	Pa	rticulars	Marks per Question	Total marks
	Α	Theory/ Concept based question	6	
	В	Theory/ Concept based question	6	
Q.1		OR		12
	С	Theory/ Concept based question	12	
	Α	Theory/ Concept based question	6	
Q.2	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	Α	Theory/ Concept based question	6	
Q.3	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	Α	Theory/ Concept based question	6	
Q. 4	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	Α	Application based question	12	
Q. 5		OR		12
	В	Application based question	12	
		TOTAL		60

# Elective Courses (EC) Skill Enhancement (SEC) Courses

# 50405 Project Work – I Course Credit-3

#### **Objectives:**

- To enable the learner to understand the specialisation of goods for each sector and the cost analysis of selecting a particular mode of transport
- To ensure that the learner is able to identify and classify various documents related to use of a mode of transport
- To be able to collate information and data for ease of analysis of different initiatives taken by the GOI
- To study the application of documents in shipping and logistics and analyse the freight cost for each mode of transport

#### **Process:**

A guide list would be prepared and shared to assist the students to present a project and appear for Viva Voce

The learner would present a project report at the end of the semester on the suggested topics \*:

- 1. Describe in detail India's Gati Shakti Plan.
- 2. Describe in detail India's National Logistics Policy.
- 3. Describe in detail India's Sagarmala Project.
- 4. How and why have container freight rates changed since the Covid-19 pandemic? What is the future outlook of freight rates? Carry out an analysis of how the freight rates have affected the revenue and profitability of any three container lines since the pandemic.
- 5. What are alliances amongst container lines? What are the advantages and disadvantages? Carry out an analysis of any 3 container alliances. Why is the M2 alliance set to come to an end, how will it affect the alliance members, and what is the future outlook for them?
- 6. Make a comparison between the cost analyses when transporting the following goods by road, rail and air:
  - Perishable goods (Medicines & Food)
  - Dangerous goods (Lithium batteries, Dry ice)
  - Textiles
  - White goods
  - Animals
- 7. Make a comparison between the risk analyses when transporting the following goods by road, rail and air:
  - Perishable goods (Medicines & Food)
  - Dangerous goods (Lithium batteries, Dry ice)
  - Textiles
  - White goods
  - Animals

- 8. Describe the procedures and documentation involved when transporting the following goods by road, rail and air:
  - Perishable goods (Medicines & Food)
  - Dangerous goods (Lithium batteries, Dry ice)
  - Textiles
  - White goods
  - Animals
- 9. Carry out a detailed analysis of the road transportation industry in India. Discuss the future prospects of the Industry in India.
- 10. Carry out a detailed analysis of the rail transportation industry in India. Enumerate the future prospects of the Industry in India.
- 11. Carry out a detailed analysis of the air transportation industry in India. Examine the growth and the potential future prospects of the Industry in India.
- 12. Describe the proposed dedicated freight corridors, their advantages and disadvantages. How will they affect the logistics industry in India.

Note: The power point presentation illustrating the details regarding the compilation of the report would be shared with the learners

• More topics could be added by the faculty

#### **Outcomes:**

- The learner is able to present a report based on a study of the sectors
- The learner has been able to apply all theory into practice
- The learner has acquired knowledge of the types of goods and the use of various modes of transport
- An elaborate presentation of knowledge acquired is demonstrated in the project

#### **Evaluation process:**

Type of evaluation	Process		Marks
Continuous evaluation	The learner would be required assignment based on each docu		40
Semester End Examination	<ul> <li>A project would be sub- learner based on the case stuc- him/her</li> <li>Power point presentation won for clarity on submission</li> <li>Marking scheme:</li> </ul>	dy shared with	60
	Examiner	Marks	
	Internal Guide	10	
	External examiner	50	
	TOTAL		100

# **Ability Enhancement Compulsory Courses (AECC)**

# **50406 Insurance in Shipping and Logistics**

#### **Course Credit-3**

# **Objectives:**

- To provide a basic understanding of the principles of cargo insurance.
- To enable the learner to identify the magnitude of risk and thereby ascertain the insurance cover.
- To get acquainted with the basic concepts related to insurance claims.
- To know more about the application and settlement of claims.

Sr.	Modules	No. of
No.		Lectures
1	Introduction to Cargo Insurance	15
2	Transport Insurance	15
3	Settlement of Claims	15
4	Insurance Facilities in India Multimodal Transport	15
	TOTAL	60

#### Modules at a Glance

SrNo	Modules/ Units
1	Introduction to Cargo Insurance
	Cargo Insurance
	Marine Insurance
2	Transport Insurance
	Types of Coverage – Particular, Average, General Average – Concept and application
3	Settlement of Claims
	Liability Insurance
	Types of Liability Insurance
	Insurance and Trading Conditions
4	Insurance related issues and remedies

Liability Insurance Policy
Maritime Frauds and Container Crimes

## **Learning outcomes:**

- This learner is aware of the procedure to claim insurance.
- The student is acquainted about the maritime frauds and the remedies available.
- It ensures focus on understanding the ways to reduce the risk of container crimes.
- It ensures contribution of the learner in the field of shipping and logistics as there is practical exposure.

# **Teaching Pedagogy**

Lectures/tutorials/field work/outreach activities/ project work/ vocational training/ viva / seminars / term papers/ assignments / presentations / self-study/case studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.

# Allocation of 40 Marks---Internal evaluation

Method of evaluation	Total marks
Written Test	15
Power Point Presentation-Pre-set criteria/ Report on guest lecture/ activity	20
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

Question No	Particulars	Total marks
	Question based on theory/concept taught. (Any Two out of	
Q.1	Three)	10
	OR	
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Question No.	Pa	rticulars	Marks per Question	Total marks
	Α	Theory/ Concept based question	6	
	В	Theory/ Concept based question	6	
Q.1		OR		12
	С	Theory/ Concept based question	12	
	Α	Theory/ Concept based question	6	
Q.2	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	Α	Theory/ Concept based question	6	
Q.3	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
	Α	Theory/ Concept based question	6	
Q. 4	В	Theory/ Concept based question	6	12
		OR		
	С	Theory/ Concept based question	12	
Q. 5	Α	Application based question	12	
		OR		12
	В	Application based question	12	
		TOTAL		60

# Core Course Course Credit-3

# 50407 Technology and Innovation in Shipping and logistics

# **Objectives:**

- To enable the learner to appreciate the role of technology
- To make the learner aware about the trends in the area of shipping and logistics
- To acquaint the learner to the nuances of technology
- To equip the learner with the concepts related to the recent trends in shipping

Sr No	Modules	No of lectures
1	Artificial intelligence	15
2	Robotics and 3 D Printing	15
3	Big Data and IOT	15
4	Green Ships	15
	Total	60

#### **Modules at a Glance**

Syllabus	
Sr.	Modules / Units
No.	
1	Artificial Intelligence in shipping and logistics
1	7 it in clair interingence in simpping and logistics
	Route optimization, safety, decision-making and automation
	Sensor technology, wireless technology
	Autonomous control, Smart technology
	Augmented Reality
2	Robotics and 3 D Printing
	Functions, downtime
	Digitization and Automation
	Warehouse simulation
	Robotics process automation
	Drones and logistics
3	Big data and IOT
	Historic container trends, cloud-based data base
	Ship Propulsion system
	Block chain
	Predictive analysis Cyber security
	· · · · · · · · · · · · · · · · · · ·
4	Data Mining  Croon Shing
4	Green Ships

Impact on environment
Use of alternate form of fuel
Reduction of carbon emission
Electric Ships
Impact of sustainability of the carrier
Sustainable packaging

#### **Learning Outcomes**

- Ensures the understanding of Big Data and AI
- The learner has understood the concept of Green ship
- The learner appreciates the role of drones in logistics
- The benefits of route optimisation is understood and appreciated by the learner

# **Teaching Pedagogy**

Lectures/tutorials/field work/outreach activities/ project work/ vocational training/ viva /seminars / term papers/ assignments / presentations / self-study/case studies etc. or a combination of some of these. Sessions shall be interactive in nature to enable peer group learning.

# Allocation of 40 Marks---Internal evaluation

Method of evaluation	Marks
Written Test	15
Power Point Presentation-Pre-set criteria	20
Class Participation & attendance	5
TOTAL	40

Paper pattern for written test of 15 Marks

Questi on No	Particulars	Marks
	Question based on theory/concept taught. (Any Two out of Three)	
Q.1	OR	10
	Application based question	
Q.2	Write short note (Any One out of Two)	5
	TOTAL	15

Question No.	Pa	rticulars	Marks per Question	Total marks	
	Α	Theory/ Concept based question	6		
	В	Theory/ Concept based question	6		
Q.1	OR			12	
	С	Theory/ Concept based question	12		
Q.2	Α	Theory/ Concept based question	6		
	В	Theory/ Concept based question	6	12	
		OR			
	С	Theory/ Concept based question	12		
	Α	Theory/ Concept based question	6		
Q.3	В	Theory/ Concept based question	6	12	
		OR			
	С	Theory/ Concept based question	12		
Q. 4	Α	Theory/ Concept based question	6		
	В	Theory/ Concept based question	6	12	
		OR			
	С	Theory/ Concept based question	12		
Q. 5	Α	Application based question	12		
		OR		12	
	В	Application based question	12		
		TOTAL		60	