

Syllabus Breakdown

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GENERAL CODE OF CONDUCTS

Students of Bridgewater Int'l College must be familiar with the following rules and regulations and abide by them:

Attendance: Students must attend college regularly and punctually. Absence from school for reasons other than illness or serious unforeseen circumstances will not be excused. Notice of absence with a reason must come through parents and if not will result in monetary fines. Tardiness is subject to detention for correction of such behaviour.

Uniform: Students must be dressed properly in college uniform in a neat, tidy, and respectful manner. The college dress code will typically specify proper haircut/hairdo, keeping of hygienic manners and personality traits.

Conduct/Behavior: Students must be respectful to teachers and staff and behave in a responsible manner at all times. This includes following the instructions of teachers and other college staff, being polite to their classmates and other members. A policy guideline of students' conduct and behaviour will be given out separately.

Electronic devices: The use of electronic devices, such as mobile phones or other gadgets is strictly prohibited in the classroom. In some cases with prior information, these devices may be allowed for educational purposes, but only with the permission of the teacher/administrator overseeing this issue.

Property: Students must take care of college property and respect the property of others. Any case of vandalism, damage or theft on college or individual property will result in fines of compensation of the loss/damage and disciplinary action.

Laboratories: The rules and regulations for the use of Science and computer laboratories must be strictly observed and followed with utmost care by students. Wearing appropriate protective clothing, knowing and avoiding poisonous/hazardous chemicals or materials, following symbols/signals and taking all necessary care and precautions is a must in all laboratories. Students must listen to and follow instructor's advice at all times. Any willful Damage or loss of property will result in a fine of compensation to replace the original.

Harassment/bullying: Harassment of any kind, including bullying, is strictly prohibited. Students who engage in harassment will be subject to disciplinary action or as per law.

Drugs/smoking and alcohol: Smoking/drugs and alcohol use by students is strictly prohibited and will be dealt with sternly. Students who are caught using or possessing drugs or alcohol will be subject to disciplinary action as administered by college authority or legal provisions.

Department of Academic Administration

Department of Library

Rules & Regulations

In order to maintain a safe and welcoming environment for reading activities, Bridgewater International College requires all the visitors to comply with following general Rules and Regulations.

Library Opening Hours:-8.00am to 4.00pm

Book Circulation:-8:00am to 2:00pm

1. The Library is used by members of the college only. Visitors should make an advance appointment with the Librarian, and report to the college Lodge on arrival.
2. Every effort must be made to minimize noise and disturbance in, and immediately outside, the Library.
3. All bags, briefcases and personal belongings should be left outside the Library.
4. The student can take two books:-one course + one extra and hold up to seven days.
5. The member is expected to return borrowed books on or before the due date stamped on the date label in the book. An overdue charge will be levied for the late return of the book as follows:
Fine: Rs 10.00 per volume per day. More than 15 days action will be taken.
6. If the due date lies during holidays or vacation period, the book should be returned to the Library on the opening day. Failure to return on the opening day is subject to overdue fines of the holidays/vacation period too.
7. Books may be renewed two times if not required by other readers.
8. Magazines, Newspapers and reference materials are to be used only in the Library.
9. In case of loss of Identity (Library) card, Duplicate card could be made with fee of Rs. 100.
10. Those who tear out the pages from the magazine or book will have to pay a fine and the fine will be decided by the Librarian.
11. In Case of the loss of the Library book, double charge will be fined.
12. Food and Drinks are not allowed in the Library.
13. Identity card is not transferable.
14. Identity card should be returned to the Library while obtaining Library clearance.
15. The Library computers must be used for finding Library resources along with academic -related purpose only.
16. Photography and recording are not allowed on the Library premises without prior permission.
17. The Library is not responsible for personal items that are lost, stolen or damaged on in Library premises.
18. Bottles of ink, correction fluid and other potentially damaging substances shall not be taken into the Library.
19. Cell phone and watch alarms should be switched to silent mode before entering the Library.
20. Overcoats, raincoats and other kinds of outdoor clothing, umbrellas, bag, cases, cameras and similar personal belongings are not allowed to bring inside the Library.

Department of Library



BRIDGEWATER INTERNATIONAL COLLEGE

Syllabus Breakdown

Faculty of Science/Management/Humanities Law				
Subject: English				Grade: XI
SN	Units/Topics	Sub Topics	LH	Remarks
1	Educatiuon	Education First	2	
	Grammar	Word Classes	1	
	Literature	The Selfish Giant by Oscar Wilde	2	
2	Communication	Freewriting	2	
	Grammar	Position of Adverbs	1	
	Literature	The Oval Portrait by Edgar Allan Poe	2	
3	Media and Society	Social Media : its Influence and control over People's Lives	2	
	Grammar	Prepositions of Direction	2	
	Literature	Corona Says by Vishnu S. Rai	1	
	Speaking		2	
4	History and Culture	Qin Dynasty	2	
	Grammar	Past Simple	1	
	Literature	A Red, Red Rose by Robert Burns	2	
5		The Looking Glass	1	
	Grammar	Will and be going to	1	
	Literature	Sharing Tradition by Frank LaPena	2	
FIRST TERMINAL EXAMINATION				
6	Health and Excercise	You May Scoff...	1	
	Grammar	Subject Verb Agreement	1	
	Literature	How to Live Before You Die by Steve Jobs	1	
7	Ecology and Development	Foresters without Diplomas	1	
	Grammar	Transitive & intransitive and linking Verbs	2	
	Literature	God Sees the Truth but Waits by Leo Tolstoy	1	
8	Humour and Satire	A Few Kind Words for Superstitions	1	
	Grammar	Present Simple/Present Continuous	1	
	Literature	What I Require From Life by J.B.S. Haldane	2	
9	Democracy and Human Rights	Nelson Mandela's 1994 Inauguration Speech	1	
	Grammar	Using Should , Had & Better	2	
	Literature	Trifles by Susan Glaspell	1	
	Home Life and Family Relationship	The Tattered Blanket	1	

SN	Units/Topics	Sub Topics	LH	Remarks
10	Grammar	Connectives	1	
	Literature	A Sunny Morning by Serafin and Foaquin Alvarez Quintero	1	
11	Arts and Creation	Why is the Renaissance Important?	1	
	Grammar	Relative Clause (Which/that/Who)	1	
	Literature	Refund by Fritz Karinthy	1	
12	Fantasy	Down the Rabbit Hole	2	
	Grammar	Wish	1	
	Literature	What is Poverty? by Jo Goodwin Parker	2	
13	Career and Entrepreneurship	Mahabir Pun: A Visionary Social Entrepreneur	1	
	Grammar	Present Perfect/ Past Simple	1	
	Literature	Scientific Research is a Token of Humankind's Survival by Vladimir Keilis-Borok	2	
SECOND TERMINAL EXAMINATION				
14	Power and Politics	Nepoleon Bonaparte	1	
	Grammar	Modal Auxiliary	2	
	Literature	The Wish by Roald Dahl	2	
15	War and Peace	Shall There Be Peace?	1	
	Grammar	Sentence Functions	2	
	Literature	Civil Peace by Chinua Achebe	2	
16	Critical Thinking	What is the Soul	1	
	Grammar	Used to	1	
	Literature	Two Little Soldiers by Guy de Maupassant	2	
17	Globalization and Diaspora	What lost Identity? The Diapora and Globalization	1	
	Grammar	Infinitive and Gerund	2	
	Literature	An Astrologer's Day by R. K. Narayan	2	
18	Immigration & Identity	Identity Crisis in immigrants (Book Review)	1	
	Grammar	reported Speech	2	
	Literature	All the World's a Stage by William Shakespeare	2	
19	Travel & Tourism	Discovering west Nepal-The Wild Frontier	1	
	Grammar	Voice	2	
	Literature	Who are you, little i? by E. E. Cummings	2	
20	Science & Technology	Taking My Son to College, Where Technology has Replaced Serendipity	1	
	Grammar	Articles	2	
	Literature	The Gift in Wartime by Tran Mong Tu	2	
PRE-BOARD				

Teacher's Name



BRIDGEWATER INTERNATIONAL COLLEGE

Syllabus Breakdown

Faculty of Science/Management/Humanities Law				
Subject: Nepali				Grade: XI
	पाठ शीर्षक	पाठ्यवस्तु	कक्षा संख्या	
१	वीर पुर्खा (कविता)	पाठ र कवि परिचय	१	
		गति, यति र विरामका, कविताको व्याख्या	१	
		शब्दार्थ र पठन बोध	१	
		समीक्षात्मक टिप्पणी	१	
		नेपाली वर्ण परिचय (कथ्य र लेख्य)	१	
		नेपाली व्यनञ्जनवर्णको वर्गीकरण	१	
		सिर्जना र परियोजना	१	
२	गाउँको माया (सामाजिक कथा)	पाठ र कथाकारको परिचय	१	
		पाठको व्याख्या र विश्लेषण	१	
		शब्दभण्डार	१	
		बोध र अभिव्यक्ति	१	
		पठनबोध	१	
		समीक्षात्मक उत्तर	१	
		सारांश	१	
		सुनाइ, बोलाइ र भाषातत्व	१	
		शब्दस्रोत	१	
		शब्दकोषको प्रयोग	१	
		सिर्जना र परियोजना	१	
३	संस्कृतिको नयाँ यात्रा (आत्मपरक निबन्ध)	निबन्धकारको परिचय र निबन्धका प्रकार	१	
		निबन्धको व्याख्या	१	
		शब्दभण्डार	१	
		बोध र अभिव्यक्ति	१	
		व्याख्या र समीक्षात्मक उत्तर	१	
		बुँदा टिपोट र एक तृतीयांश	१	
		सुनाइ र बोलाइ	१	
		पदवर्ग	१	
		सिर्जना र परियोजना	१	
FIRST TERMINAL EXAMINATION				
४	योगमाया (जीवनी)	पाठ र परिचय	१	
		शब्द भण्डार	१	
		बोध र अभिव्यक्ति	१	
		भाषा तत्व (नामयोगी र क्रियायोगी)	१	
		सिर्जना र परियोजना	१	
५	साथीलाई चिठी	पाठको व्याख्या	१	
		शब्द भण्डार	१	
		बोध	१	
		सिर्जनात्मक लेखन	१	
		चिन्ह प्रयोग	१	

	पाठ शीर्षक	पाठ्यवस्तु	कक्षा संख्या	
६	त्यो फेरि फर्कला (कथा)	कथा र कथाकारको परिचय	१	
		कथा विश्लेषण	१	
		शब्द भण्डार	१	
		बोध	१	
		सुनाइ बोलाइ	१	
		भाषा तत्व (वर्ण विन्यास)	१	
७	पर्यापर्यटनका सम्भावना र आयाम	निबन्ध र निबन्धकारको परिचय	१	
		शब्द भण्डार	१	
		बोध	१	
		उपसर्ग र प्रत्यय	१	
८	लै आयो ताजा खबर	नाटक र नाटककारको परिचय	१	
		शब्द भण्डार	१	
		बोध	१	
		भाषा तत्व	१	
		सिर्जना	१	
		प्रतिवेदन	१	
SECOND TERMINAL EXAMINATION				
९	सफलताको कथा	पाठ र परिचय	१	
		शब्द भण्डार	१	
		बोध	१	
		प्रत्यय	१	
		सिर्जना र परियोजना	१	
		सुनाइ र बोलाइ	१	
१०	कृषिशाला एक दिन	शब्द भण्डार	१	
		बोध	१	
		समिक्षात्मक उत्तर	१	
११	रारा भ्रमण	पाठ र परिचय	१	
		शब्द भण्डार	१	
		बोध	१	
		द्वित्व र सन्धि	१	
12	जलस्रोत र उर्जा	पाठ र परिचय	१	
		शब्द भण्डार	१	
		बोध	१	
		सुनाइ र बोलाइ	१	
		उद्देश्य र विधेय	१	
		व्याकरणिक कोटि	१	
		उक्ति	१	
		सिर्जना	१	
		वक्तृत्वकला	१	
PRE-BOARD				

शिक्षकको नाम :



BRIDGEWATER INTERNATIONAL COLLEGE

Syllabus Breakdown

Faculty of Science

Faculty of Science				
Subject: Computer Science			Grade: XI	
SN	Units/Topics	Sub Topics	LH	Remarks
1	Computer system	1.1 Introduce computer with its characteristics and application.	20	
		1.2 Describe the evolution of computer.		
		1.3 Describe the measurement unit of processing speed and storage unit and use them.		
		1.4 Introduce Super, Mainframe, Mini and Microcomputers and compare them.		
		1.5 Introduce mobile computing and its application and use it.		
		1.6 Sketch and describe computer architecture and organization.		
		1.7 Identify and explain the components of computer system.		
		1.8 Introduce and explain microprocessor and bus system.		
		1.9 Introduce and explain primary and secondary memory.		
		1.10 Identify and use input and output devices.		
		1.11 Describe hardware interfaces and use them.		
2	Number System and Conversion Boolean Logic	2.1 Introduce the number system, Decimal-Binary-Octal[1]Hexadecimal conversion and binary calculation.	11	
		2.2 Introduce the Boolean Algebra, Boolean values and truth table, Boolean expression and Boolean function.		
		2.3 Introduce and explain Logic Gates.		
		2.4 Describe Laws of Boolean Algebra.		
FIRST TERMINAL EXAMINATION				
3	Computer Software and Operating System	3.1 Explain software with its categories.	12	
		3.2 State the concept of operating system with its functions and etymologies.		
		3.3 Describe GUI based operating system and its features.		
		3.4 Introduce desktop application and windows environment.		
		3.5 Create file and folders with file explorer.		
		3.6 Customize the start screen and desktop.		
		3.7 Install and remove the devices.		
		3.8 Manage password and privacy.		
		3.9 Use control panel, system tools and accessories		
		3.10 State the concept of open sources and mobile operating system.		
		3.11 Introduce Linux, UNIX and Linux distribution.		
		3.12 Explain the types of mobile operating system.		
		4.1 Introduce the programming language and identify its levels.		
		4.2 Introduce and compare Compiler, Interpreter and Assembler.		
		4.3 Introduce Syntax, Semantic and Runtime errors and apply them.		
		4.4 Introduce control structures and use them.		
		4.5 Identify programme design tools and use them.		
		4.6 Describe absolute binary, BCD, ASCII and Unicode.		
		4.7 State the features and structure of C language.		

SN	Units/Topics	Sub Topics	LH	Remarks
4	Programming Concepts & Logics	4.8 Introduce C preprocessor and header files and use them.	7	
		4.9 Introduce character set and apply it.		
		4.10 Explain the Identifiers, Keywords and Tokens.		
		4.11 Introduce and explain the basic data types.		
		5.12 Introduce constants, variables, operators and expressions and apply them.		
		5.13 Identify the types of specifier and apply them.		
		5.14 Identify the simple and compound statements and apply them.		
		5.15 Introduce Input/output (I/O) functions.		
		5.16 Introduce Selection Control Statement and Iteration Control Statement.		
		5.17 Describe array and string functions and apply them.		
5	Application Package	5.1 Describe the office package (Word, Processor, Spreadsheet and Presentation) and apply them.	5	
		5.2 Introduce the domain-specific tools.		
6	Web Technology	6.1 Explore web browsers and search engines.	8	
		6.2 Overview internet and web technology.		
		6.3 Explain and use Content Management System (CMS).		
		6.4 Describe with objectives and structure of HTML.		
		6.5 Differentiate between tags and attributes.		
		6.6 Describe and use the types of tags in HTML.		
		6.7 Introduce Cascading Style Sheet (CSS), describe its types and use them.		
SECOND TERMINAL EXAMINATION				
7	Multimedia	7.1 Introduce and apply multimedia.	6	
		7.2 Describe the components of multimedia.		
8	Information Security and Cyber Law	8.1 Describe digital society and computer ethics.	10	
		8.2 State the concept of information security and cybercrime.		
		8.3 Explore and apply the protective measures of cybercrime.		
		8.4 Identify key aspects intellectual property right and follow it.		
		8.5 State the concept of digital signature and use it. 8.6 Analyze cyber law and ICT policy in Nepal		
PRE-BOARD 2080				
Practical				
	Number system and conservation Boolean Logic	Use Simulator : Demonstrate Logic Gates and its expression using simulator	3	
	Use Simulator : Demonstrate Logic Gates and its expression using simulator	With Window OS or Linux platform: Working in Desktop Application and Window Environment	8	
· Manage files and folders with file explorer				
· Customize the start screen and desktop				
· Installing and removing devices				
· Manage passwords and privacy levels				
	· Use of control panel, system tools and accessories			
FIRST TERMINAL EXAMINATION				
		Application Package (Word Processor, Spreadsheet and Presentation)		
		1.Word processor		
		· Basic terms of word processing		
		· Creating document and environment		

SN	Units/Topics	Sub Topics	LH	Remarks
	Application package	· Formatting text and paragraphs	25	
		· Spelling grammar, thesaurus, comments		
		· Managing lists and tables		
		· Inserting graphic objects		
		· Controlling page appearance		
		· Performing a mail merge		
		· Preparing to publish a document		
		· Levels and table of contents		
		· Export documents: PDF		
		2. Spread Sheet		
		· Basic fundamentals of Spread Sheet		
		· Entering data, cell manage, concept of cell references		
		· Formatting a worksheet		
		· Creating and working with charts		
		· Managing workbooks		
		· General functions and formulas		
		· Data filter and sorting		
		· Pivot tables and pivot chart		
		· Working with other objects		
		· Printing worksheets		
		3. Presentation		
		· Basic fundamental of presentation		
		· Create presentation slides		
		· Design and formatting presentation		
		· Animation and custom animation		
		· Transition of presentation		
		· Working with tables, graphics and word art		
		· Working with graphs and organization charts		
		· Working with multimedia		
SECOND TERMINAL EXAMINATION				
	Programming Concepts and Logics	Input/output (I/O) Functions	14	
		· Selection Control Statement: Decisions (if, if-else, if-else-if, nested and, switch)		
		· Iteration Control Statement: Looping (while, do while, for nested)		
		· Array: definition, types (1D and 2D), matrix addition and subtraction		
		· String: definition and string function : strlen(), strcat(), strcmp(), strcmp(), strcpy(), strcmp(), strcmp(), strcmp()		
	Web Technology	· Practices on HTML 5 including audio, embed, source, track and video attributes, Graphics using canvas and svg tags	15	
		· Practice on cascading Style Sheets including Inline, Embedded, External CSS		
	Multimedia	· Graphics (Photo and image editing)	15	
		· Image capture, resize, crop, add layer, save in different format		
		· Audio recording, editing and save in different format using mobile		
		· Video recording, spilt, save in differ format		
PRE-BOARD				

Teacher's Name



BRIDGEWATER INTERNATIONAL COLLEGE

Syllabus Breakdown

Faculty of Management				
Subject: Life Skills			Grade: XI	
SN	Units/Topics	Sub Topics	LH	Remarks
1	Concept of Social and Lifeskill Education	Meaning, Nature and importyance of Social Studies and Life Skill Education	5	
		Differences & Inter-relationship among Social Studies, Social Education & Social Science		
		Social Studies Skills and Concepts of Life Skills		
2	Digital Skill & General Research Skill as Life skill	Basic Skills of Digital Literacy Useful for daily and Professional Life	12	
		Use of Communication Applications.		
		Opening and using an online Payemnt Account		
		Utilizing Digital Application in Daily Life		
		Searching and Using Information , data and study Materials through the use of Internet		
		Responsible Use of Internet and social Media		
3	Life Skill	Introduction to Life skill and its classification	21	
		Problem Solving		
		Communication		
		Stress Management		
		Interpersonal Skills and Relkationship		
4	Evolution & Development of Human Society	Origin and Evolutionary Development of Human Race	12	
		Evolutionary Dvelopment of Human Society		
		Life System during Stone Age		
		The Begining and Development of Agrarian Age		
		Age of Capitalism, Industrial Age and their Impacts/ Influence		
		Present World Context and Social Behaviour		
First Terminal Examination				
5	Geography and Social Life	Geographical Introduction of the World and Nepal in World Arena	16	
		Relationship between Human Environment: Introduction, identity and Presentation		
		Geographical Diversity and Lifestyle around the world.		
		Effects of Geographick Diversity on Society		
		Characteristics of three Geographical /Ecological Regions of Nepal		
6	History of the World	Introduction/Beginning	15	
		Medieval Asia: The Economic Rise and Economic Shrinking		
		Industrial revolution : Cause & Influence/Impacts		
		Rise and Growth of Loktantra		
7	Social Identity & Diversity	Multi-ethnicity, Multiculturalism and Caste System	18	
		Caste, Ethnicity: Identityand issues Population, Human Rightsand inclusion.		
		Dalit issues: Pipulation , Human Rights and Inclusion		

Subject: Life Skills				Grade: XI	
		Multicxulturalism and Social unity			
Second Terminal Examination					
8	Constitution & Civic Conclousness	Constitution of Nepal: Past & Present		12	
		Political , Legal. Economic and Cultural Features of Constitution of Nepal			
		Constitution of Nepal and Electoral System			
		Nation, Nationalism and concept of National Security			
9	Settelment, Population & Development	Human Settelement Development		18	
		Linkage between Nature of Settelement and Social Service			
		Settelement Growth and Ecological Region			
		Development of Settlement and Ecological Region			
		Population and Development			
		Transition of Age Structure and Utility of Demographic Dividend			
		Population Management			
10	Economy and Development	Bases of Nepalese Economy and its Characteristics: Agriculture, tourism, Industryand Trade		16	
		Importances of Three Pillar Policy of Public, Private and cooperative sector in Nepalese Economy			
		Remittance & Nepalese Economy			
		Existing Economic Activities and Formal and Informal Economic Transactions in Nepalese Society			
		Effects of Agriculture, Industry, Construction and Social Sectors on Nepalese Economy			
		Labour, Employment and Enterpreneurship			
		Government Finance: Resources, Distribution and Social Development			
11	Health Service and Social Development	Health Service in Nepal		15	
		Traditional & Modern Health Service System Practised in Nepalese Society			
		Healthy Lifestyle and Social Life			
		Physical, Mental and Spiritual Health			
		Alertness on Drug Abuse, Addiction and Drugs			
		Adolescence and Healthy Life Style			
		Yoga & Meditation			
		Leisure Utility: Game , Recreation, Relaxation and sleep			
		\Community Participation: Community Work and Scout			
		Frugal Lifestyle & Economic Activities			
PRE-BOARD EXAMINATION					

Teacher's Name



BRIDGEWATER INTERNATIONAL COLLEGE

Syllabus Breakdown

Faculty of Management				
Subject: Hotel Management				Grade: XI
SN	Units/Topics	Sub Topics	LH	Remarks
1	Introduction to Hotel	1.1 Explain the concept and meaning of hotel and catering industry.	10	
		1.2 Describe the history of the development of hotel and catering industry		
		1.3 Recognize the various types of catering establishments and hotels.		
		1.4 Explain the nature and benefits of independent, chain, franchise, contract and referral hotel.		
2	Hotel Management and Organization	2.1 Express the meaning and concept of organization and management.	12	
		2.2 Explain the basic concept of hotel management.		
		2.3 Draw organization chart of small, medium and large hotel.		
		2.4 Describe the importance of organization chart in hotel.		
		2.5 Distinguish the functional and operational departments of hotel.		
3	Introduction to Hospitality & Tourism	3.1 Define hospitality	12	
		3.2 Point out the service characteristics of hospitality.		
		3.3 Describe the various sectors of hospitality.		
		3.4 Explain the general concept of tourism and its classification.		
		3.5 Define tourist and classify its types.		
		3.6 Explain the history of modern tourism.		
		3.7 Narrate the growth and development of modern tourism in Nepal.		
		3.8 Describe the basic components of tourism and its interrelationships		
		3.9 Explain the positive and negative impacts of tourism on society, economy and environment.		
FIRST TERMINAL EXAMINATION				
4	Front Office Department	4.1 Define front office and describe its functions.	12	
		4.2 Draw organization chart of front office department.		
		4.3 State the attributes of front office staffs.		
		4.4 Describe the job description of front office staffs.		
		4.5 List out the front office sections and their functions.		
		4.6 Explain the guest room and its types.		
		4.7 Explain Hotel tariff and its types and identify the bases of charging room rate.		
		4.8 List out the telephone etiquettes.		
		4.9 Define reservation and explain its types and procedures.		
		4.10 Point out the modes and sources of reservation.		
		4.11 Identify the factors affecting reservation.		
		4.12 List out the different sundry services and explain their effective operating procedures.		
		4.13 Explain the relationships of front office department with other departments.		

SN	Units/Topics	Sub Topics	LH	Remarks
		4.1 Point out the techniques of handling guest complaints.		
5	Housekeeping Department	5.1 Define housekeeping and explain its functions	10	
		5.2 Draw organization chart of housekeeping department.		
		5.3 Describe the layout of housekeeping sections and explain their functions.		
		5.4 Illustrate the job descriptions of housekeeping staffs.		
		5.5 List out the personal attributes of housekeeping staffs.		
		5.6 Define guest room and explain its contents and supplies.		
		5.7 List out the room symbols.		
		5.8 Identify Maid's cart and point out the requirements for its preparation.		
		5.9 Define Linens/Uniforms and explain its types.		
		5.10 Explain I the storage, inventory, control and Par stock.		
		5.11 Define key and explain the types and control of keys.		
		5.12 List out the forms and formats used by housekeeping department.		
		5.13 Discuss on the different handling situation of housekeeping department.		
		5.14 List out the coordinating departments of housekeeping department.		
6	Food Production Department (KitchenJ	6.1 Draw organization chart of kitchen and explain the types of kitchen.	12	
		6.1 Recognize and listing the kitchen equipments.		
		6.3 Describe the kitchen layout.		
		6.4 Explain the job descriptions of kitchen staffs.		
		6.5 List out the coordinating departments of Kitchen.		
		6.6 State the meaning of hygiene and grooming and its importance in kitchen.		
		6.7 Point out the personal hygiene and grooming rules. .		
		6.8 Describe the different food commodities and their uses.		
SECOND TERMINAL EXAMINATION				
7	Food and Beverage (F & B) Service Department	7.1 Describe F & B service departments and its functions.	12	
		7.2 Draw organization chart of F & B service descriptions of F &B service department and point out the job description of F & B service department.		
		7.3 Identify the service equipments and other service appointments		
		7.4 List out the F & B outlets and their functions.		
		7.5 Point out the knowledge, skill and attributes required to the F 6r B service staffs.		
		7.6 List out the coordinating departmentsof F & B service department.		
PRE-BOARD EXAMINATION				

Teacher's Name



BRIDGEWATER INTERNATIONAL COLLEGE

Syllabus Breakdown

Faculty of Management

Subject: BUSINESS STUDIES			Grade: XI	
SN	Units/Topics	Sub Topics	LH	Remarks
1	Introduction to Business	Business:an important human activity	10	
		Dimensions of business : service and commerce		
		Objectives of business		
		Function of business		
		busiiness environment :meaning and components		
2	Business idea	introduction to creativity and innovation	8	
		basics of creative behaviour		
		sources of business idea		
3	Resource Mobilization	major resources: financial, physical, human and informational	15	
		financial resources		
		physical resources		
		human resources		
		informational resources		
4	Business ethics and responsibility	introduction of business ethics	9	
		ethical principles for business		
		introduction to social responsiobility		
		areas of social responsibility		
FIRST TERMINAL EXAMINATION				
5	Forms of Business Ownership	introduction to common forms of business	48	
		forms of business ownership		
		SOLE TRADING CONCERN		
		*Introduction to sole trading concern		
		features of sole trading concern		
		reasons of strating sole trading concern		
		procdural of registration and renewal of sole trading concern		
		PATNERSHIP FIRM		
		*introduction to partnership firm		
		features of patnership firm		
		diffrence between sole trading and partneship		
		reasons of starting partnership business		
		challenges of partnership business		
		partnership deeds and its contents		
		rights and duties of partnership business		
		procedure of registration and renewal of partnership		
		mode of dissolution of partnership form in nepal		
		COMPANY		
		introduction of private company and public company		
		features of company business		
		reasons for starting company business		
		challenges of company business		
		registration process of company in nepal		
		main docum4ents of company in nepal		
		company meetings		

SN	Units/Topics	Sub Topics	LH	Remarks
		procedure of winding up of a company		
		COOPERATIVES		
		introduction to cooperatives organizations		
		features of cooperative organizations		
		common forms of cooperative organizations		
		procedure of registration and renewal of cooperatives in nepal		
		role in cooperatives in economic development in nepal		
		public enterprise : concept features and role		
		multinational companies: concept, features and role		
SECOND TERMINAL EXAMINATION				
6	Risk and insurance	introduction to business risk	10	
		role of insuranre in business		
		general principles of insurance		
		differrnent types of insurance		
		essentials of insurance contract		
7	Taxation	introduction to tax in business	8	
		types of tax		
		PAN : Concept,. Registration, process in nepal		
8	Office management	office:meaning function and importance	12	
		information management:meaning and importance		
		principles of infromation management		
		role of computer applications in record management		
		filing : meaning, purposes, types , management ofelectronic file		
		indexing: meaning, purpose, types, managementof electronic index		
PRE-BOARD EXAMINATION				

Teacher's Name



BRIDGEWATER INTERNATIONAL COLLEGE

Syllabus Breakdown

Faculty of Management				
Subject: Economics				Grade: XI
SN	Units/Topics	Sub Topics	LH	Remarks
1	Basic Concept of Economics and Distribution of Resources	1.1 Definition of Economics: Adam Smith, Alfred Marshall, Lionel Robbins	8	
		1.2. Concepts of positive and normative economics		
		1.3 Concepts of micro and macro Economics and difference		
		4. Types of goods and services: normal, Giffen, inferior, substitutes, complements, private, public, economic and free goods		
		1.5 Introduction and characteristics of factors of production: Land, Labour, Capital and organization		
2	Macroeconomics	3.1 Meaning of macroeconomics	38	
		3.1.1 Macro-economic variables		
		3.1.2Concept of closed and open economy		
		3.2 National Income Accounting		
		3.2.1 Concepts of National Income: Gross Domestic product (GDP), Gross National Product (GNP), National Income (NI), Personal Income (PI), Disposable Income (DI), and Per Capita Income (PCI)		
		3.2.2 Nominal and real GDP: difference and calculations; GDP deflator		
		3.2.3 Measurement of national income: product, income and expenditure methods		
		3.2.4 Difficulties in measuring national income		
		3.2.5 Numerical Examples		
		3.3 Money and Inflation		
		3.3.1 Meaning, importance, functions and types of money		
		3.3.2 Concept of money supply, contraction and expansion of money		
		3.3.3 Quantity theory of money (Fisher's equation)		
		3.3.4 Inflation and deflation: meaning, causes and consequences		
		3.3.5 Numerical Examples		
FIRST TERMINAL EXAMINATION				
		2.1 Demand, Supply and Market Equilibrium		
		2.1.1 Demand: meaning of demand, demand function, law of demand; determinants of demand; movement along and shift in demand curves, factors causing shifts of demand curves		
		2.1.2 Supply: meaning of supply, supply function, law of supply; determinants of supply; movement along and shift in supply curves, factors causing shifts of supply curves		
		2.1.3 Interaction between demand and supply (equilibrium position)		
		2.1.4 Numerical examples		

SN	Units/Topics	Sub Topics	LH	Remarks
3	Micro Economics	2.2 Elasticity of demand and supply	25	
		2.2.1 Concept of elasticity of demand and its types: Price, income and cross elasticity		
		2.2.2 Types of Price, Income and Cross Elasticity of demand		
		2.2.3 Determining factors of price elasticity of demands		
		2.2.4 Concept and types of Elasticity of supply		
		2.2.5 Numerical Examples		
		2.3 Consumer Behaviour		
		2.3.1 Concept of cardinal utility: total utility and marginal utility		
		2.3.2 Law of diminishing marginal utility		
		2.3.3 Law of substitution		
		2.3.4 Consumer's surplus and concept of consumer's surplus		
		2.3.5 Numerical Examples		
		2.4 Theory of Production		
		2.4.1 Production and concept of Production Function (Short and long run)		
		2.4.2. Concept of total, average and marginal products and their derivation		
		2.4.3 Law of variable proportions		
		2.4.4. Laws of returns to scale		
		2.4.5 Numerical Examples		
4	Development Economics	4. Economic Development, Growth and Capital Formation	8	
		4.1 Concept of economic development and growth		
		4.2 Indicators of economic development		
		4.3 Features of developing countries		
		4.4 Capital formation process		
5	Nepalese Economics	5.1 Overview of Nepalese economy	28	
		5.1.1 Features of Nepalese economy		
		5.1.2 Macroeconomic indicators of central government and provincial government of Nepal		
		5.2 Natural Resources of Nepal		
		5.2.1 Water Resources: Importance, Potentiality, current situation and problems		
		5.2.2 Forest Resources: Importance, current situation, causes and consequences of deforestation		
		5.2.3 Mineral Resources: Importance and problems		
		5.2.4 Natural Resource Management, climate change and its impact in economy		
		SECOND TERMINAL EXAMINATION		
		5.3 Agriculture		
		5.3.1 Characteristics of Nepalese agriculture		
		5.3.2 Ways of Modernization and commercialization of Nepalese agriculture		
		5.3.3 Source of Agricultural Finance in Nepal		
		5.3.4 Nature and Problem of Agricultural Marketing and its remedial measures		
		5.4 Manufacturing and tourism industries in Nepal		
		5.4.1 Concept of Industry and its types		
		5.4.2 Brief history of industrial development in Nepal		
		5.4.3 Importance and Problems of Industrial sector in Nepal		

SN	Units/Topics	Sub Topics	LH	Remarks
		5.4.4 Tourism Industry: Importance, Current situation, prospects, problems and remedial measures		
		5.5 Transportation and Communication		
		5.5.1 Role of Transportation and Communication in Economic Development		
		5.5.2 Means of Transportation and Communication; Current status		
6	Quantitative Techniques for Economics	6 Basic Mathematics	13	
		6.1 Important and use of Mathematics in Economics		
		6.2 Equation of straight line		
		6.3 Differential calculus: General and partial derivative		
PRE-BOARD EXAMINATION				

Teacher's Name
Contact Number



BRIDGEWATER INTERNATIONAL COLLEGE

Syllabus Breakdown

Faculty of Management				
Sub: Accounting				Grade: XI
SN	Units/Topics	Sub Topics	LH	Remarks
1	Book-keeping and accounting concept	Book- Keeping: Meaning and Definition	8	
		Objective and Functions of Book-Keeping		
		Evolution of Book-keeping		
		Accounting: Meaning and Definition		
		Objective of Accounting		
		Functions of Accounting		
		Scope of Accounting		
		Limitation of Accounting		
		Accounting Process or Cycle		
		Difference between Book-keeping and Accounting		
		Branches of Accounting		
		Basis Accounting Concepts or Assumptions		
		Double entry Book-keeping System: Meaning and Definition		
		Features of Double entry Book-keeping System		
		Importance and Advantages of Double entry Book-keeping System		
		Generally Accepted Accounting Principles		
		Basis of Accounting		
		Accounting Convention :		
		Nepal Accounting Standards (NAS)		
		Objectives of Nepal Accounting Standards		
		Benefits of Accounting Standards		
		Objectives of (NFRS)		
		Importance of (NFRS)		
		Basic Terminologies on Accountancy		
2	Accounting Equation	Meaning and Definition	4	
		Steps Involve for Developing Accounting Equation		
		Effects of Financial Transaction on Accounting Equations		
3	Journal Entry	Meaning and Definition	5	
		Objectives of Journal Entry		
		Rules of Debit and Credit		
		Steps to be Followed in Journalizing		
		Sources of Accounting Information		
		Journal Entries for Different types of Transaction		
		Commencement of Business		
		Banking Transaction		
		Purchase and Purchase Return		
		Sales and Sales return		
		Purchase and Sales of Assets		
		Expenses and Incomes		
		Partial Payment and Partial Receipt		
		Discount		
		Drawing		

SN	Units/Topics	Sub Topics	LH	Remarks
		Bad debts and Bad Debts Recovered		
		Deprecation and Appreciation		
		Loss of Goods and Insurance Claim		
		Goods Given as Charity or Distributed as free Sample		
		Interest on Capital and Intrest on Drawing		
		Outstanding Expenses and Pre-paid Expenses		
		Bill of Exchange		
		Essentials of Bills of Exchnage		
		Parties to a Bill of Exchange		
		Journal Entries for the Bill of Exchange		
		Drawing or Acceptance and Payment of Bill		
		Discounting the Bills of Exchange		
		Endorsement of Bill of Exchange		
		Dishonour of Bill of Exchnage		
4	Ledger Account	Meaning and Definition	5	
		Objectives of Ledger Accounts		
		Difference between Jornal Entry and Ledger Account		
		Format of Ledger Account		
		T-shape' Form of Ledger Account		
		Self Balancing Form of Ledger Account		
		Rules for Posting the Transcation into Ledger Account		
		Balancing and Closing of Ledger Account		
		Meaning for Debit and Credit Balance		
5	Subsidiary Book	Meaning and Definition	3	
		Objective of Subsidiary Books		
		Advantage or Importance of Subsidiary Book		
		Limitation of Subsidiary Books		
		Types of Subsidiary Books		
		Purchase Book		
		Sales Book		
		Purchase Return Book		
		Debit note		
		Sales Return Book		
		Credit note		
		Difference between Debit note and credit note		
		Bills Receivable Book		
		Bills Payable Book		
6	Cash Book	Cash book: Meaning and Definition	5	
		Types of cash Book		
		Simple Cash Book		
		Double Column Cash Book		
		Triple Column Cash Book		
		Petty Cash Book		
		System of Petty Cash Book		
7	Modern Banking System and Bank Reconciliation Statement	Modern Banking Transaction : Meaning and Definition	5	
		Types of Accounts		
		Cheque : Meaning and Definition		
		Parties involved in Cheque		
		Types of Cheques		
		Dishonour of Cheques		
		Endorsement of the Cheque		
		Bank Statements (pass book)		
		Modern Banking tools		
		Bank reconciliation Statements		

SN	Units/Topics	Sub Topics	LH	Remarks
		Objectives of Bank Reconciliation Statements		
		Causes of difference and preparation of bank reconciliation statements		
		Need and importance of bank reconciliation statements		
		Meaning of bank overdraft		
8	Accounting For Fixed Assets	Meaning & Definition of Fixed Assets	7	
		Meaning and Definition of Depreciation		
		Advantage/ Importance/ Objectives for Causes of Providing Depreciation		
		Causes of Depreciation		
		Factors affecting the amount of depreciation		
		Provision for depreciation as per income tax of Nepal		
		Accounting Treatment for depreciation		
		Straight line Method		
		Advantage of Straight line Method		
		Disadvantage of Straight line Method		
		Reducing balance method/ diminishing balance method		
		9		Trial Balance
Disadvantages of diminishing balance method				
Accounting treatment per addition and sales of Assets				
Accounting treatment for change in method of depreciation				
Prospective effects				
Retrospective effects				
Meaning and definition				
Objective of trial balance				
Importance of Trial Balance				
Types of Trial Balance				
Preparation of Unadjusted trial balance				
Preparation of trial balance when only ledger balances are given				
Disagreements of a trial balance				
Methods of locating errors				
FIRST TERMINAL EXAMINATION				
10	Accounting Errors and its Rectification	Meaning and Definition	6	
		Types of Accounting Errors		
		Types of errors on the basis of nature of error		
		Types of errors on the basis of disclosure by Trial Balance		
		Types of errors on the basis of rectification		
		Rectification of Errors		
		Rectification of errors located before preparing the Trial balance		
		Rectification of errors located after preparing the Trial balance		
		Meaning of Suspense Account		
11	Capital and Revenue Concept	Meaning and Definition	3	
		Capital Receipts		
		Revenue Receipts		
		Differences between capital receipts and revenue receipts		
		Capital Receipts		
		Revenue Expenditure		
		Differences between capital and revenue receipts expenditure		
		Capital Profit		
		Revenue Profit		
		Differences between capital profit and revenue profit		
		Capital Losses		

SN	Units/Topics	Sub Topics	LH	Remarks
		Revenue Losses		
		Differences between capital losses and revenue losses		
		Revenue reserve		
		Capital reserve		
		Differences between capital reserve and revenue reserve		
12	Preparation of Financial statement (Traditional Approach)	Meaning and Definition	15	
		Preparation of Final Accounts		
		Importance and Advantages of Trading Account		
		Importance and Advantages of Profit and Loss Account		
		Importance and Advantages of Balance Sheet		
		Marshalling of Assets and Liabilities in balance sheet		
		Adjustments in the Final Accounts		
13	Financial Statement (Modern Approach)	Meaning and Definition	15	
		Characteristics of Financial Statements		
		Objectives and Importance of Financial Statements		
		Limitations of Financial Statements		
		Component /Parts of Financial Statements		
		Financial Statement under Nepal Financial Reporting Standards (NFRS)		
		Income statement		
		Elements of an Income Statements		
		Types of Income statement		
		Single Step Income Statement		
		Multiple step Income Statement		
		Statement of Financial Position or Balance Sheet		
		Marshalling of Assets and Liabilities		
14	Accounting for Non-profit Organizations	Meaning and Definition	9	
		Receipt and Payment Account		
		Limitations of Receipt and Payment Account		
		Income and Expenditue Account		
		Essential Features of Income and Expenditure Account		
		Difference between Receipt and payment Account and Income and Expenditure Account Balance Sheet		
		Some Relevant Items of Receipt and Payment Account		
		Opening Balance Sheet		
		Closing Balance Sheet		
SECOND TERMINAL EXAMINATION				
15	Reserve and Provision	RESERVE : Meaning and Definition	3	
		Features of Reserve		
		Objectives / Importance of Reserve		
		Types of Reserve		
		Provision : Meaning and Definition		
		Objectives of Creating Provision		
		Differences between Reserve and Provision		
		Provision for bad and doubtful debts and its Accounting treatment		
		Disclosure of Provision bad and doubtful debts as per NAS		
		Provision for Taxation		
16	Accounting for Incomplete Records	Meaning and Definition	6	
		Features of Single Entry System		
		Advantages of Single Entry System		
		Disadvantage of Single Entry System		
		Differences between Single entry system and double entry system		

SN	Units/Topics	Sub Topics	LH	Remarks
		Differences between statements of affairs and balance sheet		
		Treatment of Adjustments in Single Entry System		
17	Journal Proper	Meaning and Definition	6	
		Opening Entries		
		Closing Entries		
		Transfer Entries		
		Rectifying Entries		
		Entry for Credit Purchase and Credit sale of Fixed Assets		
		Adjustment Entries		
		Adjusted Trial Balance		
18	Introduction of Government Accounting	Meaning and Definition	4	
		Objectives and Importance of Government Accounting		
		Features /Characteristics of Government Accounting		
		Difference between Government Accounting & Commercial Accounting		
		Historical Background of Government Accounting in Nepal		
		Types of Accounting System used in Nepal		
		Wasil Banki Sresta pranali		
		Syaha Sresta Pranali		
		Faram Sresta Pranali		
		Bhukani Sresta Pranali		
		New Accounting system of Government of Nepal		
		Objectives of New Accounting System		
		Importance of New Accounting System		
		Features of New Accounting System		
		Limitations of New Accounting System		
		Level of New Accounting System		
		Central Level Accounting		
		Operating Level Accounting		
		Classified of Budget Head Expenditure		
		Forms Used in New Accounting System		
19	Treasury Single Account (TSA) System	Concept of Treasury Single Account	2	
		Meaning and Definition of Treasury Single Account		
		Features of Treasury Single Account		
		Objectives and benefits of Treasury Single Account		
		Application of Treasury Single Account System		
		Payment Order Statement		
20	Journal Voucher	Meaning, definition & Specimen of Journal Voucher	6	
		Rules of Debit and Credit		
		Type of Journal Voucher		
		Petty cash fund		
		Salary Distribution and deduction made		
		Transfer of budget		
		Loan		
		Rectification of Errors		
		Annual closing		
		Annual Closing of Budget Release and budget expenditure		
21	Bank Cash Book	Meaning & Definition	6	
		Importance of bank cash book		
		Specimen of Bank cash book		
		Considerable points for preparation of bank cash book		
		Posting of transaction into bank cash book		
		Posting of general journal voucher		
		Preparation of Trial balance		

SN	Units/Topics	Sub Topics	LH	Remarks
		Closing of Bank Cash Book		
22	Budget Sheet	Meaning & Definition of ledger	6	
		Meaning and definition of budget sheet		
		Importance of Budget sheet		
		Parts of budget sheet		
		Posting the Transactiuon into budget sheet		
23	Statement of Expenditures	Meaning & Definition	6	
		Statement of Expenditure		
		Statement of clearance of Advance (AGF No. 211)		
PRE-BOARD EXAMINATION				

Teacher's Name



BRIDGEWATER INTERNATIONAL COLLEGE

Syllabus Breakdown

Faculty of Management				
Subject: Travel & Mountaneering Studies				Grade: XI
SN	Units/Topics	Sub Topics	LH	Remarks
PART I - TRAVEL AND TOURISM				
1	Concept of Tourism	Concept and meaning of tourism Definition of tourism: Technical and conceptual definition Nature and characteristic of tourism Features and types of tourism Tourism industry Definition tourist: Tourist and Excursionist Classification of tourism	5	
2	Dimension of Tourism	Five As of tourism: Attraction, Accessibility, Accommodation, Amenities And Activities Motivational Factors: definition motivation and types of tourism motivation: Internal, external motivation, push and pull motivation, sun lust and wanderlust motivation, escapism and invention motivation, and depended ant independent motivation.	8	
3	Origin and Development of Tourism	Four phases of evolution and development of tourism Primitive age (ancient period: Objective and modes of travel Middle age: Effective factors of tourism industrial revolution and birth of mass tourism Origin development of modern travel and tourism Origin and development of modern accommodation and tourism Present trend of modern world tourism	8	
4	Tourism Organizations	Introduction and importance of tourism organizations Major international tourism organizations, their role and function: United Nation World, Tourism Organization (UNWTO), International Civil Aviation Organization (ICAO), International Air Transport Association (IATA), Pacific Asia Travel Association (PATA), Pacific Asia Travel Association (PATA) Chapters Major national tourism organization, their roles and functions: Ministry of Tourism & Civil Aviation, Trekking Agencies' Association of Nepal, Nepal Airlines Corporation (NAC), Hotel Association of Nepal, Nepal Association of Tour & Travel Agents, Nepal Association of Rafting Agents	8	
FIRST TERMINAL EXAMINATION				
5	Tourism Market	Marketing and general concept of tourism marketing Special features of tourism marketing management Tourism marketing mix: 7 Ps model (Products, Price, Place, Promotion, Physical Evidence, Process and People)	5	

SN	Units/Topics	Sub Topics	LH	Remarks
5	and Management	Tourism marketing promotion: Communication and Advertisement, public relation, sales promotion and publicity.	5	
		Segmentation of tourism market		
		Distribution channel of tourism products		
6	Tourism in Nepal	Origin and development of tourism in Nepal	8	
		Tourism infrastructures and products of Nepal		
		Major tourism activities in Nepal		
		World heritage sites of Nepal, national parks, reserves and conservation areas		
7	Impacts of Tourism	Economic impacts	11	
		Social and cultural impacts		
		Environmental impacts		
		Sustainable tourism concepts and principle		
		Concept of responsible tourism		
PART II - MOUNTAINEERING TOURISM				
8	Introduction to Adventure Tourism	Definition of adventure tourism	4	
		Characteristics and importance of adventure tourism		
		Classification of adventure tourism: Himalaya and glaciers/ice based, river and lakes based, sea and ocean based, nature based, sky based adventure tourism		
		Types of adventure tourism and activities: Hard adventure and soft adventure		
9	Introduction to Mountain Tourisms	Definition of Himalaya and its characteristics (special features): Geographical division, climatic diversity, biological diversity, ethnic diversity.	4	
		Interrelation between Himalaya and tourism		
		The history of mountaineering in the world		
		Major mountains of the world		
		Motivation of mountaineering		
		Advantage and disadvantage of mountaineering		
SECOND TERMINAL EXAMINATION				
10	Mountaineering Tourism in Nepal	The highest Himalayas of Nepal	12	
		Natural and cultural resources of Himalayas of Nepal		
		History of mountaineering and trekking in Nepal		
		Activities of mountain tourism in Nepal		
		Rules of mountaineering expedition in Nepal (Nepal gazette in 2059 and amendment in 2002 and 2007)		
		Nepal Mountaineering Association (NMA), its role and functions		
		Health problem during mountaineering expedition		
		Himalayan Rescue Association (HRA), its role and functions		
11	Basics of Mountaineering	Introduction to Himalaya expedition and mountaineering equipment	4	
		Mountaineering process & royalty in Nepal		
		Himalayas opened for mountaineering in Nepal		
PRE-BOARD EXAMINATION				

Teacher's Name



BRIDGEWATER INTERNATIONAL COLLEGE

Syllabus Breakdown

Faculty of Science			
Subject: Mathematics			Grade: XI
SN	Sub Topics	LP	Remarks
1	Limits and continuity	15	
2	Derivatives	14	
3	Anti-derivatives	10	
4	Logic and Set	10	
5	Sequence and series	9	
6	Matrices	7	
7	Determinants	7	
FIRST TERMINAL EXAMINATION			
SN	Sub Topics	LP	Remarks
1	Integration	24	
2	Inverse Circular Function	8	
3	General Values	7	
4	Real number	8	
5	Function	15	
6	Quadratic Equation	12	
SECOND TERMINAL EXAMINATION			
SN	Sub Topics	LP	Remarks
1	Straight Line	8	
2	Pair of Straight Line	6	
3	Coordinate in Space	9	
4	Vectors	8	
5	Curve Sketching	9	
6	Trapezoidal Rule and Simpson's Rule	7	
7	Complex Number	8	
8	Measure of Dispersion	5	
9	Skewness	5	
10	Probability	6	
11	Bisection Method	4	
12	Newton Raphson's Formula	4	
PRE-BOARD EXAMINATION			

Teacher's Name :



BRIDGEWATER INTERNATIONAL COLLEGE

Syllabus Breakdown

Faculty of Science

Sub: Physics				Grade:XI
SN	Units/Topics	Sub Topics	LP	Remarks
	Content Area: Mechanics			
1	Physical Quantities	1.1. Precision and significant figures. Dimensions and uses of dimensional analysis.	4	
2	Vectors	2.1. Triangle, parallelogram and polygon laws of vectors	6	
		2.2. Resolution of vectors; Unit vectors		
		2.3. Scalar and vector products.		
3	Kinematics	3.1 Instantaneous velocity and acceleration	8	
		3.2 Relative velocity		
		3.3 Equation of motion (graphical treatment)		
		3.4 Motion of a freely falling body		
		3.5 Projectile motion and its applications.		
4	Dynamics	4.1 Linear momentum, Impulse	10	
		4.2 Conservation of linear momentum		
		4.3 Application of Newton’s laws		
		4.4 Moment, torque and equilibrium		
		4.5 Solid friction: Laws of solid friction and their verifications.		
	Content Area: Heat and Thermodynamics			
5	Heat and Temperature	5.1 Molecular concept of thermal energy, heat and temperature, and cause and direction of heat flow	6	
		5.2 Meaning of thermal equilibrium and Zeroth law of thermodynamics.		
		5.3 Thermal equilibrium as a working principle of mercury thermometer.		
6	Thermal Expansion	6.1 Linear expansion and its measurement	6	
		6.2 Cubical expansion, superficial expansion and its relation with linear expansion		
		6.3 Liquid Expansion: Absolute and apparent		
		6.4 Dulong and Petit method of determining expansivity of liquid		
	Content Area: Waves & Optics			
7	Reflection at curved mirror	7.1 Real and Virtual images.	5	
		7.2 Mirror formula		
8	Refraction at plane surfaces	8.1 Laws of refraction: Refractive index	6	
		8.2 Relation between refractive indices		
		8.3 Lateral shift		
		8.4 Total internal reflection.		
	Content Area: Electricity & Magnetism			
9	Electric Charges	9.1 Electric charges	5	
		9.2 Charging by induction		
		9.3 Coulomb’s law- Force between two point charges		
		9.4 Force between multiple electric charges.		
10	Electric field	10.1 Electric field due to point charges; Field lines	7	
		10.2 Gauss Law: Electric Flux		
		10.3 Application of Gauss law: Field of a charge sphere, line charge, charged plane conductor		

SN	Units/Topics	Sub Topics	LP	Remarks
11	Potential, potential difference and potential energy	11.1 Potential difference, Potential due to a point, Charge, potential energy, electron volt	6	
		11.2 Equipotential lines and surfaces		
		11.3 Potential gradient		
FIRST TERMINAL EXAMINATION				
SN	Units/Topics	Sub Topics	LP	Remarks
	Content Area: Mechanics			
1	Work, energy and power	1.1 Work done by a constant force and a variable force	9	
		1.2 Power		
		1.3 Work-energy theorem; Kinetic and potential energy		
		1.4 Conservation of Energy		
		1.5 Conservative and non-conservative forces		
		1.6 Elastic and inelastic collisions.		
2	Circular Motion	2.1 Angular displacement, velocity and acceleration	9	
		2.2 Relation between angular and linear velocity and acceleration		
		2.3 Centripetal acceleration		
		2.4 Centripetal force		
		2.7 Conical pendulum		
		2.8 Motion in a vertical circle		
		2.9 Applications of banking.		
	Content Area: Heat and Thermodynamics			
3	Quantity of Heat	3.1 Newton’s law of cooling	10	
		3.2 Measurement of specific heat capacity of solids and liquids		
		3.3 Change of phases: Latent heat		
		3.4 Specific latent heat of fusion and vaporization		
		3.5 Measurement of specific latent heat of fusion and vaporization		
		3.6 Triple point		
4	Rate of heat flow	4.1 Conduction: Thermal conductivity and measurement	8	
		4.2 Convection		
		4.3 Radiation: Ideal radiator		
		4.4 Black- body radiation		
		4.5 Stefan – Boltzmann law.		
	Content Area: Waves & Optics			
5	Refraction through prisms	5.1 Minimum deviation condition	5	
		5.2 Relation between Angle of prism, minimum deviation and refractive index		
		5.3 Deviation in small angle prism.		
6	Lenses	6.1 Spherical lenses, angular magnification	6	
		6.2 Lens maker’s formula		
		6.3 Power of a lens		
	Content Area: Electricity & Magnetism			
7	Capacitor	7.1 Capacitance and capacitor	12	
		7.2 Parallel plate capacitor		
		7.3 Combination of capacitors		
		7.4 Energy of charged capacitor		
		7.5 Effect of a dielectric Polarization and displacement.		
	Content Area : Modern Physics			
8	Nuclear physics	8.1 Nucleus: Discovery of nucleus	9	
		8.2 Nuclear density; Mass number; Atomic number		
		8.3 Atomic mass; Isotopes		
		8.4 Einstein’s mass-energy relation		
		8.5 Mass Defect, packing fraction, BE per nucleon		
		8.6 Creation and annihilation		
		8.7 Nuclear fission and fusion, energy released		

SN	Units/Topics	Sub Topics	LP	Remarks
SECOND TERMINAL EXAMINATION				
SN	Units/Topics	Sub Topics	LP	Remarks
	Content Area: Mechanics			
1	Gravitation	1.1 Newton’s law of gravitation	16	
		1.2 Gravitational field strength		
		1.3 Gravitational potential; Gravitational potential energy		
		1.4 Variation in value of ‘g’ due to altitude and depth		
		1.5 Centre of mass and center of gravity		
		1.6 Motion of a satellite: Orbital velocity and time period of the satellite		
		1.7 Escape velocity		
		1.8 Potential and kinetic energy of the satellite		
		1.9 Geostationary satellite		
		1.10 GPS		
2	Elasticity	2.1 Hooke’s law: Force constant	9	
		2.2 Stress; Strain; Elasticity and plasticity		
		2.3 Elastic modulus: Young modulus, bulk modulus, shear modulus		
		2.4 Poisson’s ratio 8.5 Elastic potential energy.		
	Content Area: Heat and Thermodynamics			
3	Ideal gas	3.1 Ideal gas equation	12	
		3.2 Molecular properties of matter		
		3.3 Kinetic-molecular model of an ideal gas		
		3.4 Derivation of pressure exerted by gas,		
		3.5 Average translational kinetic energy of gas molecule		
		3.6 Boltzmann constant, root mean square speed		
		3.7 Heat capacities: gases and solids.		
	Content Area: Waves & Optics			
4	Dispersion	4.1 Pure spectrum and dispersive power	7	
		4.2 Chromatic and spherical aberration		
		4.3 Achromatism and its applications		
	Content Area: Electricity & Magnetism			
5	DC Circuits	5.1 Electric Currents; Drift velocity and its relation with current	16	
		5.2 Ohm’s law; Electrical Resistance; Resistivity; Conductivity		
		5.3 Current-voltage relations; Ohmic and Non-Ohmic resistance		
		5.4 Resistances in series and parallel,		
		5.5 Potential divider		
		5.6 Electromotive force of a source, internal resistance		
		5.7 Work and power in electrical circuits		
	Content Area : Modern Physics			
6	Solids	6.1 Energy bands in solids (qualitative ideas)	6	
		6.2 Difference between metals, insulators and semi-conductors using band theory		
		6.3 Intrinsic and extrinsic semi[1]conductor		
7	Recent Trends in physics	7.1 Particle physics: Particles and antiparticles, Quarks (baryons and meson) and leptons (neutrinos)	8	
		7.2 Universe: Big Bang and Hubble law: expansion of the Universe, Dark matter, Black Hole and gravitational wave		
PRE-BOARD EXAMINATION				

Teacher's Name :



Syllabus Breakdown

Faculty of Science

Faculty of Science				
Sub: Chemistry			Grade: XI	
SN	Units/Topics	Sub Topics	LP	Remarks
		Content Area: General and Physical Chemistry		
1	Foundation and Fundamentals	1.1 General introduction of chemistry 1.2 Importance and scope of chemistry 1.3 Basic concepts of chemistry (atoms, molecules, relative masses of atoms and molecules, atomic mass unit (amu), radicals, molecular formula, empirical formula) 1.4 Percentage composition from molecular formula	3	
2	Stoichiometry	2.1 Dalton's atomic theory and its postulates 2.2 Laws of stoichiometry 2.3 Avogadro's law and some deductions 2.3.1 Molecular mass and vapour density 2.3.2 Molecular mass and volume of gas 2.3.3 Molecular mass and no. of particles 2.4 Mole and its relation with mass, volume and number of particles 2.5 Calculations based on mole concept 2.6 Limiting reactant and excess reactant 2.7 Theoretical yield, experimental yield and % yield 2.8 Calculation of empirical and molecular formula from % composition (Solving related numerical problems)	12	
3	Classification of elements and Periodic Table	3.1 Modern periodic law and modern periodic table 3.1.1 Classification of elements into different groups, periods and blocks 3.2 IUPAC classification of elements 3.3 Nuclear charge and effective nuclear charge 3.4 Periodic trend and periodicity 3.4.1 Atomic radii 3.4.2 Ionic radii 3.4.3 Ionization energy 3.4.4 Electron affinity 3.4.5 Electronegativity 3.4.6 Metallic characters (General trend and explanation only)	8	
		Content Area: Inorganic Chemistry		
		4.1 Hydrogen 4.1.1 Chemistry of atomic and nascent hydrogen 4.1.2 Isotopes of hydrogen and their uses 4.1.3 Application of hydrogen as fuel 4.1.4 Heavy water and its applications 4.2 Allotropes of Oxygen 4.2.1 Definition of allotropy and examples 4.2.2 Oxygen: Types of oxides (acidic, basic, neutral, amphoteric, peroxide and mixed oxides) 4.2.3 Applications of hydrogen peroxide 4.2.4 Medical and industrial application of oxygen 4.3 Ozone 4.3.1 Occurrence		

SN	Units/Topics	Sub Topics	LP	Remarks
4	Chemistry of non metals	4.3.2 Preparation of ozone from oxygen	24	
		4.3.3 Structure of ozone		
		4.3.4 Test for ozone		
		4.3.5 Ozone layer depletion (causes, effects and control measures)		
		4.3.6 Uses of ozone		
		4.4 Nitrogen		
		4.4.1 Reason for inertness of nitrogen and active nitrogen		
		4.4.2 Chemical properties of ammonia [Action with CuSO4 solution, water, FeCl3 solution, Conc. HCl, Mercurous nitrate paper, O2]		
		4.4.3 Applications of ammonia		
		4.4.4 Harmful effects of ammonia		
		4.4.5 Oxy-acids of nitrogen (name and formula)		
		4.4.6 Chemical properties of nitric acid [HNO3 as an acid and oxidizing agent (action with zinc, magnesium, iron, copper, sulphur, carbon, SO2 and H2S)		
		4.4.7 Ring test for nitrate ion		
		4.5 Halogens		
		4.5.1 General characteristics of halogens		
		4.5.2 Comparative study on preparation (no diagram and description is required),		
		4.5.2.1 Chemical properties [with water, alkali, ammonia, oxidizing character, bleaching action] and uses of halogens (Cl2, Br2 and I2)		
		4.5.3 Test for Cl2, Br2 and I2		
		4.5.4 Comparative study on preparation (no diagram and description is required), properties (reducing strength, acidic nature and solubility) and uses of haloacids (HCl, HBr and HI)		
Content Area: Applied Chemistry				
5	Modern Chemical Manufactures	5.1 Modern Chemical Manufactures (principle and flow sheet diagram only)	5	
		5.1.1 Manufacture of ammonia by Haber's process,		
		5.1.2 Manufacture of nitric acid by Ostwald's process,		
Content Area: Organic Chemistry				
5	Basic Concept of Organic Chemistry	5.1 Introduction to organic chemistry and organic compounds	9	
		5.2 Reasons for the separate study of organic compounds from inorganic compounds		
		5.3 Tetra-covalency and catenation properties of carbon		
		5.4 Classification of organic compounds		
		5.5 Alkyl groups, functional groups and homologous series		
		5.6 Idea of structural formula, contracted formula and bond line structural formula		
		5.7 Preliminary idea of cracking and reforming, quality of gasoline, octane number, cetane number and gasoline additive		
6	Fundamental Principles of Organic Chemistry	6.1 IUPAC Nomenclature of Organic Compounds (upto chain having 6-carbon atoms)	8	
		6.2 Qualitative analysis of organic compounds (detection of N, S and halogens by Lassaigne's test)		
FIRST TERMINAL EXAMINATION				
Content Area: General and Physical Chemistry				
		1.1 Rutherford's atomic model		
		1.2 Limitations of Rutherford's atomic model		
		1.3 Postulates of Bohr’s atomic model and its application		
		1.4 Spectrum of hydrogen atom		
		1.5 Defects of Bohr’s theory		

SN	Units/Topics	Sub Topics	LP	Remarks
1	Atomic Structure	1.6 Elementary idea of quantum mechanical model: de Broglie's wave equation	14	
		1.7 Heisenberg's Uncertainty Principle		
		1.8 Concept of probability		
		1.9 Quantum Numbers		
		1.10 Orbitals and shape of s and p orbitals only		
		1.11 Aufbau Principle		
		1.12 Pauli's exclusion principle		
		1.13 Hund's rule and electronic configurations of atoms and ions (up to atomic no. 30)		
2	Chemical Bonding and Shapes of Molecules	2.1 Valence shell, valence electron and octet theory	12	
		2.2 Ionic bond and its properties		
		2.3 Covalent bond and coordinate covalent bond		
		2.4 Properties of covalent compounds		
		2.5 Lewis dot structure of some common compounds of s and p block elements		
		2.6 Resonance		
		2.7 VSEPR theory and shapes of some simple molecules (BeF2, BF3, CH4, CH3Cl, PCl5, SF6, H2O, NH3, CO2, H2S, PH3)		
		2.8 Elementary idea of Valence Bond Theory		
		2.9 Hybridization involving s and p orbitals only		
		2.10 Bond characteristics:		
		2.10.1 Bond length		
		2.10.2 Ionic character		
		2.10.3 Dipole moment		
		2.11 Vander Waal's force and molecular solids		
		2.12 Hydrogen bonding and its application		
		2.13 Metallic bonding and properties of metallic solids		
Content Area: Inorganic Chemistry				
3	Chemistry of non metals	3.2 Carbon	14	
		3.2.1 Allotropes of carbon (crystalline and amorphous) including fullerenes (structure, general properties and uses only)		
		3.2.2 Properties (reducing action, reaction with metals and nonmetals) and uses of carbon monoxide		
		9.7 Phosphorus		
		3.2.1 Allotropes of phosphorus (name only)		
		3.2.2 Preparation (no diagram and description is required), properties (basic nature, reducing nature, action with halogens and oxygen) and uses of phosphine		
		3.3 Sulphur		
		3.3.1 Allotropes of sulphur (name only) and uses of sulphur		
		3.3.2 Hydrogen sulphide (preparation from Kipp's apparatus with diagram,) properties (Acidic nature, reducing nature, analytical reagent) and uses		
		3.3.3 Sulphur dioxide its properties (acidic nature, reducing nature, oxidising nature and bleaching action) and uses		
		3.3.4 Sulphuric acid and its properties (acidic nature, oxidising nature, dehydrating nature) and uses		
		3.3.5 Sodium thiosulphate (formula and uses)		
4	Bio-inorganic Chemistry	4. Introduction to Bio-inorganic Chemistry	4	
		4.1 Introduction		
		4.2 Micro and macro nutrients		
		4.3 Importance of metal ions in biological systems (ions of Na, K, Mg, Ca, Fe, Cu, Zn, Ni, Co, Cr)		
		4.4 Ion pumps (sodium-potassium and sodium-glucose pump)		

SN	Units/Topics	Sub Topics	LP	Remarks
		4.5 Metal toxicity (toxicity due to iron, arsenic, mercury, lead and cadmium)		
5	Fundamentals of Applied Chemistry	5.1 Fundamentals of Applied Chemistry	6	
		5.1.2 Chemical industry and its importance		
		5.1.3 Stages in producing a new product		
		5.1.4 Economics of production		
		5.1.5 Cash flow in the production cycle		
		5.1.6 Running a chemical plant		
		5.1.7 Designing a chemical plant		
		5.1.7 Continuous and batch processing		
		5.1.8 Environmental impact of the chemical industry		
Content Area: Organic Chemistry				
6	Fundamental Principles of Organic Chemistry	6.1 Isomerism in Organic Compounds	10	
		6.2 Definition and classification of isomerism		
		6.3 Structural isomerism and its types: chain isomerism, position isomerism, functional isomerism, metamerism and tautomerism		
		6.4 Concept of geometrical isomerism (cis & trans) & optical isomerism (d & l form)		
		6.4.1 Preliminary Idea of Reaction Mechanism		
		6.4.2 Homolytic and heterolytic fission		
		6.4.3 Electrophiles, nucleophiles and free- radicals		
		6.4.4 Inductive effect: +I and –I effect		
		6.4.5 Resonance effect: +R and –R effect		
7	Hydrocarbons	7.1 Saturated Hydrocarbons (Alkanes)	6	
		7.1.1 Alkanes: Preparation from haloalkanes (Reduction and Wurtz reaction), Decarboxylation, Catalytic hydrogenation of alkene and alkyne		
		7.1.2 Chemical properties: Substitution reactions (halogenation, nitration & sulphonation only), oxidation of ethane		
SECOND TERMINAL EXAMINATION				
	Content Area: General and Physical Chemistry			
1	Oxidation and Reduction	1.1 General and electronic concept of oxidation and reduction	8	
		1.2 Oxidation number and rules for assigning oxidation number		
		1.3 Balancing redox reactions by oxidation number and ion-electron (half reaction) method		
		1.4 Electrolysis		
		1.4.1 Qualitative aspect		
		1.4.2 Quantitative aspect(Faradays laws of electrolysis)		
2	States of Matter	2.1 Gaseous state	15	
		2.1.1 Kinetic theory of gas and its postulates		
		2.1.2 Gas laws		
		2.1.2.1 Boyle’s law and Charles' law		
		2.1.2.2 Avogadro's law		
		2.1.2.3 Combined gas equation		
		2.1.2.4 Dalton's law of partial pressure		
		2.1.2.5 Graham's law of diffusion		
		2.1.3 Ideal gas and ideal gas equation		
		2.1.4 Universal gas constant and its significance		
		2.1.5 Deviation of real gas from ideality (Solving related numerical problems based on gas laws)		
		2.2 Liquid state		
		2.2.1 Physical properties of liquids		

SN	Units/Topics	Sub Topics	LP	Remarks
		2.2.1.1 Evaporation and condensation		
		2.2.1.2 Vapour pressure and boiling point		
		2.2.1.3 Surface tension and viscosity (qualitative idea only)		
		2.2.2 Liquid crystals and their applications		
		2.3 Solid state		
		2.3.1 Types of solids		
		2.3.2 Amorphous and crystalline solids		
		2.3.3 Efflorescent, Deliquescent and Hygroscopic solids		
		2.3.4 Crystallization and crystal growth		
		2.3.5 Water of crystallization		
		2.3.6 Introduction to unit crystal lattice and unit cell		
		3		Chemical equilibrium
3.2 Dynamic nature of chemical equilibrium				
3.3 Law of mass action				
3.4 Expression for equilibrium constant and its importance				
3.5 Relationship between Kp and Kc				
3.6 Le Chatelier’s Principle (Numericals not required)				
	Content Area: Inorganic Chemistry			
4	Chemistry of Metals	4.1 Metals and Metallurgical Principles	16	
		4.1.1 Definition of metallurgy and its types (hydrometallurgy, pyrometallurgy, electrometallurgy)		
		4.1.2 Introduction of ores		
		4.1.3 Gangue or matrix, flux and slag, alloy and amalgam		
		4.1.4 General principles of extraction of metals (different processes involved in metallurgy) – concentration, calcination and roasting, smelting, carbon reduction, thermite and electrochemical reduction		
		4.1.5 Refining of metals (poling and electro-refinement)		
		4.2 Alkali Metals		
		4.2.1 General characteristics of alkali metals		
		4.2.2 Sodium [extraction from Down's process, properties (action with Oxygen, water, acids nonmetals and ammonia) and uses]		
		4.2.3 Properties (precipitation reaction and action with carbon monooxide) and uses of sodium hydroxide		
		4.2.4 Properties (action with CO2, SO2, water, precipitation reactions) and uses of sodium carbonate		
		4.3 Alkaline Earth Metals		
		4.3.1 General characteristics of alkaline earth metals		
		4.3.2 Molecular formula and uses of (quick lime, bleaching powder, magnesia, plaster of paris and epsom salt)		
		4.3.3 Solubility of hydroxides, carbonates and sulphates of alkaline earth metals (general trend with explanation)		
		4.3.4 Stability of carbonate and nitrate of alkaline earth metals (general trend with explanation)		
	Content Area: Applied Chemistry			
5	Modern Chemical Manufactures	5.1.3 Manufacture of sulphuric acid by contact process,	11	
		5.1.4 Manufacture of sodium hydroxide by Diaphragm Cell		
		5.1.5 Manufacture of sodium carbonate by ammonia soda or Solvay process		
		5.2 Fertilizers (Chemical fertilizers, types of chemical fertilizers, production of urea with flow-sheet diagram)		
	Content Area: Organic Chemistry			

SN	Units/Topics	Sub Topics	LP	Remarks
6	Hydrocarbons	6.1 Unsaturated hydrocarbons (Alkenes & Alkynes)	9	
		6.1.1 Alkenes: Preparation by Dehydration of alcohol, Dehydrohalogenation, Catalytic hydrogenation of alkyne		
		14.2.1.1 Chemical properties: Addition reaction with HX (Markovnikov’s addition and peroxide effect), H2O, O3, H2SO4 only		
		6.2 Alkynes: Preparation from carbon and hydrogen, 1,2 dibromoethane, chloroform/iodoform only		
		6.2.1 Chemical properties: Addition reaction with (H2, HX, H2O), Acidic nature (action with Sodium, ammoniacal AgNO3 and ammoniacal Cu2Cl2)		
		6.3 Test of unsaturation (ethene & ethyne): bromine water test and Baeyer's test		
		6.4 Comparative studies of physical properties of alkane, alkene and alkyne		
		6.5 Kolbe's electrolysis methods for the preparation of alkane, alkene and alkynes		
7	Aromatic Hydrocarbons	7.1 Introduction and characteristics of aromatic compounds	9	
		7.2 Huckel's rule of aromaticity		
		7.3 Kekule structure of benzene		
		7.4 Resonance and isomerism		
		7.5 Preparation of benzene from decarboxylation of sodium benzoate, phenol, and ethyne only		
		7.6 Physical properties of benzene		
		7.7 Chemical properties of benzene: Addition reaction: hydrogen, halogen, Electrophilic substitution reactions: orientation of benzene derivatives (o, m & p), nitration, sulphonation, halogenations, Friedal-Craft's reaction (alkylation and acylation), combustion of benzene (free combustion only) and uses		
PRE-BOARD EXAMINATION				

Teacher's Name :



Syllabus Breakdown

Faculty of Science				
Sub: Botany			Grade:XI	
SN	Units/Topics	Sub Topics	LH	Remarks
	Part A: Botany			
1	Cell Biology	1.1 Cell: Introduction of cell, concepts of prokaryotic and eukaryotic cells, detail structure of eukaryotic cells (composition, structure and functions of cell wall, cell membrane, mitochondria, plastids, endoplasmic reticulum, golgi bodies, lysosomes, ribosomes, nucleus, chromosomes, cilia, flagella and cell inclusions.	11	
		1.2 Cell division : Concept of cell cycle, types of cell division (amitosis, mitosis and meiosis) and significances		
2	Ecology	2.1 Ecosystem ecology: Concept of ecology, biotic and abiotic factors, species interactions; concept of ecosystem, structural and functional aspects of pond and forest ecosystem, food chain, food web, trophic level, ecological pyramids, productivity, biogeochemical cycle - carbon and nitrogen cycles, concept of succession.	11	
		2.2 Ecological Adaptation: Concept of adaptation, hydrophytes and xerophytes.		
		2.3 Ecological Imbalances: Green house effects and climate change, depletion of ozone layer, acid rain and biological invasion.		
FIRST TERMINAL EXAMINATION				
1	Floral Diversity	1.1 Introduction: Three domains of life, binomial nomenclature, five kingdom classification system (Monera, Protista, Fungi, Plantae and Animalia); status of flora in Nepal and world representation	24	
		1.2 Fungi: General introduction and characteristic features of phycomycetes, ascomycetes, basidiomycetes and deuteromycetes; structure and Reproduction of Mucor and Yeast, introduction of Mushrooms, poisonous and non-poisonous mushrooms, economic importance of fungi.		
		1.3 Lichen: General introduction, characteristic features and economic importance of lichen		
		1.4 Algae: General introduction and characteristic feature of green, brown and red algae; structure and reproduction of Spirogyra. Economic importance of algae		
		1.5 Bryophyta: General introduction and characteristic features of liverworts, hornworts and moss; morphological structure and reproduction of Marchantia. Economic importance of bryophytes		
		1.6 Pteridophyta: General introduction and characteristic features of pteridophytes; morphological structure and reproduction of Dryopteris. Economic importance of pteridophytes		

SN	Units/Topics	Sub Topics	LH	Remarks
		1.7 Gymnosperm: General introduction and characteristic features of Gymnosperms; morphology and reproduction of Pinus. Economic importance of gymnosperm		
		1.8 Angiosperm: Morphology (root, stem, leaves, inflorescences, flowers and fruit); Taxonomic study: Definition, taxonomic hierarchy, classification systems (artificial, natural and phylogenetic) of angiosperms		
SECOND TERMINAL EXAMINATION				
1	Biomolecules	1.1 Biomolecules: Introduction and functions of: carbohydrates, proteins, lipids, nucleic acids, minerals, enzymes and water.	4	
2	Floral Diversity	2.1 Angiosperm: Taxonomic description of the families – Brassicaceae, Fabaceae, Solanaceae, and Liliaceae with economic importance	6	
3	Introductory Microbiology	3.1 Monera: General introduction, structure of bacterial cell, mode of nutrition, bacterial growth; cyanobacteria (blue green algae).	5	
		3.2 Virus: General introduction, structure and importance of virus, bacteriophage		
		3.3 Impacts of biotechnology in the field of microbiology.		
4	Vegetation	4.1 Vegetation: Introduction, types of vegetation in Nepal, concept of In-situ (protected areas) and Ex-situ (botanical garden, seed bank) conservation. Natural environment-vegetation and human activities	3	
PRE-BOARD EXAMINATION				

Teacher's Name:



Syllabus Breakdown

Faculty of Science				
Sub: Zoology			Grade: XI	
SN	Units/Topics	Sub Topics	LH	Remarks
Part B: Zoology				
1	Introduction to Biology	1.1 Introduction to Biology: Scope and fields of biology. Relation with other science.	1	
2	Evolutionary Biology	2.1 Life and its Origin: Oparin-Haldane theory, Miller and Urey's experiment. 2.2 Evidences of evolution: Morphological, Anatomical, Paleontological, Embryological and Biochemical. 7.3 Theories of evolution: Lamarckism, Darwinism & concept of Neo Darwinism. 2.3 Human evolution: Position of man in animal kingdom. Differences between new world monkeys & old world monkeys, apes & man. Evolution of modern man starting from anthropoid ancestor.	15	
3	Faunal Diversity	3.1 Protista: Outline classification. Protozoa: diagnostic features and classification up to class with examples; Paramecium caudatum, Plasmodium vivax - habits and habitat, structure, reproduction, life-cycle and economic importance of P. falciparum.	4	
4	Biota and Environment	4.1 Animal adaptation: Aquatic (Primary & Secondary), Terrestrial (Cursorial, Fossorial & Arboreal) and Volant adaptation.	3	
FIRST TERMINAL EXAMINATION 2080				
1	Faunal Diversity	1.1 Earthworm (Pheretima posthuma): Habit and habitat, External features; Digestive system (alimentary canal & physiology of digestion), Excretory system (types of nephridia, structure and arrangement of septal nephridia), Nervous system (central & peripheral nervous system, working mechanism) & Reproductive systems (male & female reproductive organs), Copulation, Cocoon formation and Economic importance. 1.2 Frog (Rana tigrina): Habit and habitat, External features, Digestive system (alimentary canal, digestive glands & physiology of digestion), Blood vascular system (structure & working mechanism of heart), Respiratory system (respiratory organs & physiology of respiration) and Reproductive system (male & female reproductive organs).	8	
SECOND TERMINAL EXAMINATION 2080				
1	Faunal Diversity	1.1 Animalia: Level of organization, body plan, body symmetry, body cavity and segmentation in animals. Diagnostic features and classification of the following phyla (up to class) with examples: Porifera, Coelenterata (Cnidaria), Platyhelminthes, Aschelminthes (Nemathelminthes), Annelida, Arthropoda, Mollusca, Echinodermata and Chordata.	2	
2	Biota and Environment	2.1 Animal behavior: Reflex action, taxes, dominance and leadership. Fish and bird Migration.	7	

SN	Units/Topics	Sub Topics	LH	Remarks
2	Environment	2.2 Environmental Pollution: Sources, effects and control measures of air, water and soil pollution. Pesticides & their effects.	7	
3	Conservation Biology	3.1 Conservation Biology: Concept of biodiversity, biodiversity conservation, national parks, wildlife reserves, conservation areas, biodiversity hotspots, wetland & Ramsar sites. Wildlife-Importance, causes of extinction and conservation strategies. IUCN categories of threatened species- meaning of extinct, endangered, vulnerable, rare, and threatened species. Endangered species in Nepal.	4	
PRE-BOARD EXAMINATION				

Teacher's Name :