Curriculum of Matric Tech Introduction to Tourism GRADE IX-X 2020



GOVERNMENT OF PAKISTAN

Ministry of Federal Education and Professional Training ISLAMABAD

In Collaboration with

National Vocational and Technical Training Commission

Contents	
Introduction	3
Rationale	3
Aims and Objectives	4
Aims	4
Objectives	5
Learning Themes and Students' Learning Outcomes Error! Bookmark not defined.	
Grade-IXError! Bookmarl	k not defined.
Grade-X	11
Assessment and Evaluation 115	
Formative (Internal) Assessment	18
Methods for Internal/Formative Assessment	18
Summative /External Assessment	19
1) Theory Assessment /Written examination:	19
2) Practical Assessment/Practical examination:	19
Guidelines for Writing a Textbook	19
Guideline for planning and writing a chapter	20
Guidelines for Writing Learner Workbook	21
Basic Requirements for Lab (Tools/Equipment)	22
Curriculum Development Committee For Hotel Management(IX-X)	24

Introduction

Pakistan is a developing country with 5th largest population in the world. More than 60% of our population is below 30 years of age which makes it second youngest country in South Asia. This "youth bulge" provides unique challenges as well as opportunities for the country's social and economic development. The only remedy is to develop youth of Pakistan through education and training. To control the increasing un-employment, promoting entrepreneurship (self-employment), alleviate poverty and provide skilled manpower for industrial/economic growth, The Govt. of Pakistan has decided to introduce Technical Scheme at SSC Level. For this a stream of technical subjects has been selected including Tourism Management as one of the elective subjects.

The curriculum of Tourism Management is designed to produce middle level human resources equipped with knowledge, skills and attitudes related to the field of culinary arts so as to meet the demand of such workforce in the country and aboard to contribute in the national streamline of poverty reduction of Pakistan.

Tourism is one of the major & fastest growing industries of the modern world and helps create business opportunities as well as jobs at the local community levels. The present federal Govt. has rightly recognized the immense potential of tourism industry in our country and is now taking steps to tap this potential to overcome the shortfall of foreign exchange. National Tourism Coordination Board has been constituted for the first-time involving industry professionals to tackle issues currently faced by the tourism industry.

Pakistan is one of the very few countries to have natural landscapes form the depth of ocean to the highest mountains. We have the three highest mountains ranges of the world and 5 summits above 8,000 meters. These mountains offer fascinating valleys and unique cultures for the visitors. We host some of the earliest civilizations of the world; from Mehr Garh to Indus valley civilization to Gandhara. This fascinating heritage is one of the many reasons, tourists visit Pakistan, but it is certainly not the only one. Exciting adventure attractions, diverse wild life, historical ruins and monuments, and the beautiful sceneries are just few of the many reasons to visit Pakistan. The mountain ranges feature alpine meadows and coniferous forests, leading down into desert plains, coastline and lands basin, also attract tourists to see all beautiful places located in different parts of Pakistan.

With consistent & sustained growth in domestic tourism over the last few years, it is imperative to train local staff with skills necessary for successfully running the local businesses. Now local tourists find it easier and faster to travel to their desired locations to spend their vacations. At popular domestic destinations we are already facing situations where tourists far outnumber the accommodation available and end up sleeping in their cars. We need to train our youth to benefit from these lost opportunities.

Tourism calls for coordination and cooperation between airlines, travel agents, tour operators, hoteliers, transporters, restaurants, theme parks, gift shops and tourists. The industry relies more heavily on services than on goods. Consequently, it creates a lot of jobs in the remote villages & valleys and also in major cities. With trained & skilled manpower from local host communities, we can offer superior services to tourists at their desired destinations.

This curriculum on Tourism Management is designed as a comprehensive program to the study of tourism for both male and female student at matric level. This program covers basics of the subject like introduction of the concept, principles, constituents, organization, etc.; entrepreneurship skills; the economic and managerial aspects of tourism; the historical and modern insights into the industry; the marketing, organizational and technological issues involved. It involves the management of multiple activities such as studying tour destination, planning the tour, making travel arrangements, and providing accommodation. It also involves marketing efforts to attract tourists to travel to destinations.

Rationale

The tourism development is a profession that is increasingly getting attention in Pakistan, not only among the youth seeking to enter the industry but also among adults who wish to polish their skills to develop a career out of it.

On completing the curriculum, students should have acquired a set of knowledge and concepts, and have developed a range of technical, personal, interpersonal, organizational and generic skills, that can be applied in various contexts, both within and related to tourism and culinary arts domain. Furthermore, this course will stimulate the learners towards entrepreneurship in the industry. Cooking skill interventions can have a positive effect on food literacy, particularly in improving confidence on cooking and fruit and vegetable consumption, with vulnerable, low-socio economic groups gaining more benefits. Consistency across study designs, delivery, and evaluation of outcomes both at short and long terms are warranted to draw clearer conclusions on how tourism promotion programs are contributing to improve exposure and mental health.

Within this qualification relating to tourism interventions in schools, there are important interventions that integrated within school settings. The purpose of this qualification is to strengthen connections between schools and trade, and drawing on the concept of the sociotechnical network, theories the interactions between the relevant market and school contexts.

Global environmental change (GEC) threatens these very foundations of tourism through climate change, modifications of global biogeochemical cycles, land alteration, the loss of non-renewable resources, unsustainable use of renewable resources and gross reductions in

biodiversity. Elements of the global environment are always changing although change is never uniform across time and space. Nevertheless, all changes are ultimately connected with one another through physical and social processes alike. The scale and rate of change has increased dramatically because of human actions within which tourism is deeply embedded.

These programs have increased and continue to increase in popularity because they offer a valuable channel to engage with vulnerable groups via inclusive social activities, whilst positively impacting their lifestyle profiles and health outcomes.

Tourism Management, matric tech (9th &10th)

Aims and Objectives

The specific objectives of developing these qualifications are as under:

- Provide students with a smooth transition to work.
- Develops job-readiness & enhance students' trade-specific employable skills and provide opportunities for the development of new skills.
- Provide students with the opportunity to obtain from Level II -IV technical training certification or equivalent in a given trade.
- To set high profile standard professions for the industry to generate standard outputs.
- To validate an individual skill, knowledge and understanding regarding relevant occupations.
- Provide flexible pathways and progressions in training and assessment field.

Objectives

After completing this, the students will be able to:

- Explain the core elements and the historical development of the tourism value chain
- Give an account of essential tourism trends
- Demonstrate an understanding of different tourism and hospitality products
- Understand how tourism and hospitality products are marketed both historically and currently
- Point out relevant industry stakeholders & their roles in driving innovative tourism policy making and decision-making processes strategically forwards
- Discuss central challenges in tourism today, such as that of the impacts of tourism and corporate social responsibility practices for implementation
- The core elements in tourism & the historical development of the tourism industry
- Core challenges in tourism today, such as the human, economic and environmental of tourism

		Grade –IX				
Ch # 01 Introduct		33 Periods (13 =T, 20	•			
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workpla ce	
Introduction to Tourism	 The students will be able to: define tourism learn about the traits of tourism industry know about national and international tourism governing bodies know how to locate tourist attractions 	 Access National and International Tourism Websites Locate and represent various national tourist attractions in small groups Locate famous manmade and natural tourist attractions on regional/national map 	Periods (T) Periods(P)	Computer, Multimedia , High speed internet, tourist map, national/re gional maps, World map, Asia Map, South-east Asia Map (political maps) , tourism broachers	Classroom/ Lab	
Evolution of Tourism	 know evolution and development of tourism pre-historic period travel ancient time travel middle ages / dark tourism renaissance period tourism industrial period tourism modern tourism understand factors involve in evolution of tourism 	 Presentation on tourism history in groups. Discus and enlist Factors 	Period (T) Period (P)			
Types of Tourism	 learn about various types of tourism inbound tourism outbound tourism understand trends of tourism in Pakistan and around the world 	 Presentation on inbound and outbound tourism Presentation on trends of tourism 	Periods (T) Period (P)		Classroom	
National Tourism Map	 know how to read tourist map understand different symbols on a map, physical and political map of Pakistan use symbols on map as a tour guide tool 	 Interpret national tourism map Draw national tourism map focusing on famous tourist attraction 	Periods (T) Periods(P)	Map Tracing table, national and regional maps	Classroom/ Lab	
Visitor and Tourist	learn why people travelknow about motivational	Discuss personal travel experiences	Periods (T) Periods(P)		Classroom	

Cl. #02	factors that influence traveling Differentiate between tourist and visitor	21	D : 1 7 T	14 D	
Themes	Adventure Tourism I Students' Learning	Activities	Periods 7 = T Duration	Tools	Workplace
Adventure Tourism	Outcomes the students will be able to: • understand the adventure tourism • know about advantages and	 Presentation on adventure tourism Discuss and enlist advantage and 	Period (T) Period (P)		
Hiking / Trekking	disadvantages of adventure tourism • learn essential steps of hiking • know about hiking skills • know threats and challenges	disadvantage on adventure tourism • Arrange the hiking trip	Period (T) Period (P)		Classroom
Selection of Location.	 Learn how to identify location for camping Ensure safety and security for camping 	 Group discussion Prepare checklist for safety and security instructions 	Periods (T) Period (P)		
Ch.3. Travel Serv	vices for Tourism	17 Period 06= (T) 11=			
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Travel Services Sector	 the students will be able to: know about travel services in tourism areas learn about characteristics of travel services 	Presentation on characteristics on travel sector	Periods (T) Period (P)		Classroom
Reservation Systems and Booking Channels	 learn about reservation system and booking channels for tourist know about how booking channels works in tourism and hotel industry 	 Group Presentation on reservation systems and booking channels Enlist international booking channels working in Pakistan 	Periods (T) Period (P)	•	Classroom/ open area
Role of Online Travel Agents	 know about the role of travel agent understand advantage and disadvantage of online travel booking agents 	Group discussion on Advantage and disadvantage of online booking channels	Periods (T) Period (P)	•	
Ch.4. Hospitality and Lodging				od 06=(T),	10= (P)
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Basics Of Hospitality	the students will be able to: • know about meanings and background of hospitality industry • know about hospitality	Group discussion on hospitality values and traditions in Pakistan	04 Periods (T) 07 Periods(P)	Multime dia	Classroom/ Labs

Lodging Operations (Commercial & Non-Commercial)	 industry (scope, values, and traditions) understand the difference among hotel, restaurant, motel guest house, rest house know about types of hotels and lodging properties commercial & non-commercial classify hotels by type and location 	 Group Presentation on History hospitality industry Group Presentation on Star and the Diamond rating system 	03 Periods (T) 4 Periods (P)	Multime dia	Classroom/
Ch.5. Heritage (• learn hotel rating systems Cultural Tourism Management		26 Perio	od $06 = (T)$,	20=(P)
Themes	Students' Learning	Activities	Duration	Tools	Workplace
2220	Outcomes	2200212020	= 0 -2 0 -0-2 0 -2	20028	,, ozz. p zo
Introduction to Culture and Heritage of Pakistan Impact of Culture and Heritage on Tourism Industry	the students will be able to: • know cultural and heritage tourism • understand the importance of cultural heritage tourism • learn cultures and heritage sites of Pakistan • know about impact of cultural and heritage sites on tourism industry • understand the role of different organization working on cultural and heritage tourism (national and	 Study visit to nearest cultural/heritage site Identify the visited site on national/regional map Submit a report to teacher encompassing key learning points Group Presentation on cultural heritage sites in Pakistan) Enlist famous cultural and heritage sites of Pakistan Explore your school 	Periods (T) Periods (T) Periods (T) Period (P)	Multime dia	Classroom/ Tour site Classroom/ Labs
	 international organization working cultural heritage i.e. UNSECO, WWF) understand needs of tourists for cultural and heritage tourism 	building with your classmates and demonstrate your findings as a Tour guide to your class	128		
Ch. 6 Tourist Tra	1	A ativities		od 04=(T) S	` ′
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Modes of Transportation	the students will be able to: • know about different modes of transportation • land based • water based • air travel • understand management of transport facilities and	Group presentation on different websites providing tourism transportation services	Periods (T) Periods(P)	Multime dia, Compute r	Classroom/ Lab

	services for tourists				
Introduction to Safety Standards	 ensure safety and maintenance of the vehicles understand assumed risks and hazards during travel in hilly areas brake fails land sliding snow falling flooding 	Prepare maintenance check list as per Safety Standards	Periods (T) Periods(P)	Checklist Papers	Classroom/ Labs
Ch.7. Sustainable			22 Per	iod 9= (T)	13 (P)
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Sustainable Tourism	The students will be able to: • define sustainable tourism • understand difference between sustainable and eco-tourism • understand environmental, economic, and socio-cultural aspects of tourism development	 Gather and present data at local level of tourist flow, impact on local businesses and business opportunities 	Periods (T) Periods (P)		Classroom/ Labs
Culture and Heritage	 understand importance of preserving heritage sites in Pakistan know different local/regional cultural heritage sites 	Draw a regional/national map showing famous cultural and heritage points	Periods (T) Periods(P)	Drawing boards and Maps	Classroom/ Labs
Ecotourism	 define ecotourism identify suitable camping site in your locality understand the nature of ecotourism know about financial benefits and empowerment for local community 	 Implement a Green tourism activity, (plantation of trees) Set-up a camp in school campus 	Periods (T) Periods (P)	Camping kit, tree saplings for plantatio n	Classroom/ Labs/Ground
Ch.8 Communica			21 Per	iod 7= (T)	14 (P)
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Communication and its Types	 The students will be able to: know about communication process understand types of communication (verbal/ nonverbal) understand effective communication skills identify obstacles in communication communicate effectively in a team environment 	 Role play on communication process of sender and receiver Role play on communication process of sender and receiver with interruption 	Periods (T) Period (P)	Multime dia	Classroom/c ooking lab
Types of	 know about barrier of 	Group Presentation	Periods (T)	Multime	Classroom/c

Communication and Communication Barrier	communication (cultural barriers, language barriers, gender barriers) • know about verbal, nonverbal, visual	•	on communication barrier Roleplay how to receive guests in hospitality sector Role paly on types of communication	Period (P)	dia	ooking lab
Ch.9. Digital (Communication and Social med	ia			iod 04 (T)	09 (P)
Themes	Students' Learning		Activities	Duration	Tools	Workplace
Effective email writing Introduction to	Outcomes The students will be able to: Create, access and manage email account Learn how to write and respond official email Role of social media in	•	Create email account Write an official email to school principal on subject of any importance Create social media	03 Periods (T) 04 Periods(P) 02 Periods (T)	Multime dia System, Internet connectio n System,	Classroom/ Labs
Introduction to Social Media Platforms	 Role of social media in marketing and business development Merits and de-merits of social media 		Create social media page for your self	05 Periods (1) 05 Period (P)	System, Internet connectio n	Classroom/ Labs

Grade –X						
Ch. 1 Introduction	on to Tourism-ll		21 Period 06 (T) 15 (P)			
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace	
National and International Tourism	 the students will be able to know about national and international tourism understand scope of national level tourism 	Group Discussion on national and international tourism	Periods (T) Period (P)		Classroom	
Tourism & its Benefits	 learn about tourism benefits (cross cultural exposure economy, infrastructure) know about how tourism sector help in developing local economy 	Enlist tourism benefitsGroup discussion	Period (T) Period (P)			
Importance of Tourism Services	 learn about tourism services understand importance of tourism services for national economy 	 Group presentation Group discussion	period (T) Period (P)			
Ch. 2 Adventure	Tourism II		27 Period 09	(T) 18 (P)		
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace	
Adventure Tourism and Life Cycle	The Student will be able to: • Define adventure tourism • Understand tourism life cycle (Butler model)	Group Presentation on tourism life cycle	period (T) Period (P)			
Camping	 learn basic techniques, skills & requirements for camping identify location for camping learn basic techniques how to setup a camp know threats and challenges ensure safety & security measures during camping 	 enlist tool and equipment's for camping Arrange camping tools and backpack Perform setting up a camp 	Period (T) Period (P)		Classroom	
Site Seeing	 understand why do tourists come to visit places identify the factors that attract tourists 	 Group discussion & list down the factors that attract tourists Group discussion on How do tourists know about places. 	period (T) Period (P)			
Ch. 3. Travel Services for Tourism			09 Period 03	(T) 06 (P)		
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace	
Travel Services for Tourism	the students will be able to: • identify key travel services and organizations nationally and internationally	Group discussion and Enlist the national and international travel service provider	periods(T) Period (P)			

Trends and Issues in Travel Services Worldwide	 know about current trends in travel services understand the problems of tourists facing in travel services (travel restrictions reservations, vehicle availability) 	Group Discussion	periods(T) Period (P)		
Ch. 4 Hospitality	and Lodging		15 Period 06	(T) 9 (P)	
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Hotel Structure	 the student will be able to: learn about hotel structure independent ownership understand franchise agreements, and management contracts 	Group Discussion and enlist agreement types and contract types	Period (T) Period (P)	Multime dia, speaker	
Accommodation Trends	 know accommodation trends as per hotel category understand accommodation facility in a hotel 	Group Presentation and visualization of accommodation facility video	period (T) Period (P)	Multime dia, speaker	
Structure of Hotel Operations	define hotel functionsknow about departments in a hotel	Group Presentation on function of a hotel department	Period (T) Period (P)		
Ch. 5. Heritage	Cultural Tourism Management		16 Period 04	(T) 12 (P)	
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Heritage and Cultural Tourism Management	 the student will be able to: define heritage and cultural tourism management understand growth and development of the heritage and cultural industry within travel and tourism 	 Group Presentation/Discuss ion Enlist cultural and heritage sites world wide 	periods (T) Period (P)		
Scope of Heritage and Cultural Industry	 define role and responsibilities of the heritage and cultural organizations understand heritage and cultural organization structure 	 Group Presentation/ Discussion Enlist name of organizations working on heritage and cultural sites in Pakistan 	periods (T) Period (P)		
Ch. 6. Tourist Tr	ransport Services		11 Period 04	(T) 07 (P)	
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace

Travel Services	The Students will be able to: • define travel agencies • understand receptive tour operators (RTOs) • know about destination marketing organizations (DMOs)	 Group Presentation/ Discussion Roleplay on receptive tour operators Roleplay on destination marketing organizations 	Period(T) Period(P)		
Ch.7. Sustainable	e Tourism II		20 Period 05	(T) 15 (P)	
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Ecotourism	 the student will be able to: understand components of eco-tourism know about role of eco-tourism in sustainable development 	 Group Presentation/Discus sion Enlist eco-tourism components 	Periods (T) Period (P)		
Sustainable Development	identify key factors in sustainable tourism	Group Discussion/ Presentation	Period (T) Period (P)		
Strategies for Sustainable Tourism	 define strategies for sustainable tourism know about indicators for sustainable tourism 	 Presentation on key factors of sustainable tourism Enlist key indicators of sustainable tourism 	Period (T) Period (P)		
Ch.8. Interperso	onal Skills		22 Period 07	(T) 15 (P)	
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Effective Communication	 the student will be able to: define effective communication know about characteristics of effective communication 	Roleplay on effective communication skills in hospitality sector	Period (T) Period (P)		
Process of Communication	 define process of communication learn effective communication skills 	Group Presentation on communication process	Period (T) Period (P)		
Listening skills	 listen to the given instructions effectively understand the importance of effective listening know types of listening skills 	 Paraphrasing Visualization of a video communication barrier A session with guest (motivational) speaker 	Period (T) Period (P)		Classroom/ Labs

Ch.9. Personal and professional development			19 Period 07 ((T) 12 (P)		
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace	
CV & Resume Writing	 learn the importance of cv in job application create and format CV/resume 	Create a CV with the help of teacher	Periods (T) Periods (P)	Compute r system with MS office	Classroom/ Labs	
Job Portals	 access and register email account on various online job portals search job as per job description and title 	Register on online job portals, follow job hunting procedure and steps to apply for an advertised job	Periods (T) Periods(P)	Compute r system with internet connectio n	Classroom/ Labs	
Introduction to e- commerce	 familiarize oneself with online travel e-commerce websites learn about hotel websites learn about freelancing websites 	 Create a travel booking on any online travel website Create an account on any freelancing website 	Periods (T) Periods (P)	Compute r system with internet connectio n		
Ch.10. Entrepre	eneurship		13 Period 04	13 Period 04 (T) 09 (P)		
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace	
Introduction to Entrepreneurship	 the students will be able to: define entrepreneurship know key concepts of entrepreneurship 	Group Presentation on entrepreneurship A session with guest speaker (entrepreneur)	Period (T) Period (P)			
Introduction with Tour Guide Business.	 learn about tour guide role in tourism business learn how to start your own business at local level 	Group Discussion Mockup activity on "how to start a business"	Periods (T) Period (P)			

Assessment and Evaluation

Assessment is the practice of collecting evidence of student learning. It aims at improving learning and teaching as well as recognizing the achievement of students. It determines students 'progression through their learning experiences and enables them to demonstrate that they have achieved the intended learning outcomes. The assessment is aligned with curriculum aims, design and learning processes.

Evaluation is an integral part of teaching-learning process. It involves gathering information through various assessment techniques, making valuable judgment and sound decisions. Assessment provides information and teaching about students' achievement in relation to learning objectives. With this information, the teacher makes informed decisions about what should be done to enhance the learning of students or to improve teaching methods. Assessment must be:

- mainly open-ended, allowing for discussion and revision of new understanding.
- tolerant of divergent thinking of students and promote the notion of no 'one right answer'.
- presented in alternative mode, not just paper-and-pencil responses to limiting questions.
- designed to foster analysis, comparison, generalization, prediction, and modification according to the grade and development level.
- capable of promoting collaboration and team effort in demonstration of competence.
- ongoing and cumulative, showing growth over time.

Formative (Internal) Assessment

Internal assessment refers to the assessment practices employed as part of the learning and teaching process. It is an ongoing process throughout the session and uses Test — Feedback — Adjust cycle repeatedly to improve students' performance and efficiency in learning and teaching. In designing internal assessment for the subject, teachers should maintain a proper balance between the formative and summative functions of assessment. It should be comprehensive to cover all the objectives as per curriculum. A diversity of assessment modes should be adopted so that students are given opportunities to develop and demonstrate the full range of learning outcomes of the curriculum, including those of knowledge, skills and values and attitudes.

Methods for Internal/Formative Assessment

Following tasks can help in formative assessment.

- Assignments
- Ouizzes
- Tests
- Group discussions
- Oral/multimedia presentations
- Worksheets
- Online interactive activities
- Role play
- Demonstration
- Practical exercises

Feedback on students' work in all the above tasks must be prompt, effective, and efficient assessment should have questions setting that specifically help in finding out knowledge, understanding and skills.

Summative /External Assessment

Summative assessment will be managed by concerned Board of Intermediate and Secondary Education. It will be composed of two parts.

- 1) Theory Assessment /Written examination: The theory examination is suggested to consist of a wide variety of questions. Its overall weight age should be 40 %. It should be based on the curriculum rather than textbook. The assessment should be designed to examine the candidate's understanding of the whole syllabus and should test the range of abilities according to Bloom Taxonomy.
- 2) **Practical Assessment/Practical examination:** This is designed to test Practical skills of students. Its overall weight age should be 60%. It will comprise of written exam (10%), practical (70 %) and viva/oral exam (20%).

A standards-referenced approach will be adopted for grading and reporting student performance. The purpose of this approach is to recognize what each student can do the in the subject at the end of the 2-year secondary school level education. The performance of each student will be matched against a set of performance standards, rather than comparing to the performance of other students. It makes the implicit standards explicit by providing specific indication of individual student performance. Descriptions will be provided for the set of standards.

Guidelines for Writing a Textbook

A textbook is an important teaching and learning resource and one of the most extensively used resources in classrooms. To reflect national needs and aspirations the needs and aspirations, the textbooks should be written in accordance with this curriculum. This curriculum meets not only the general aims and objectives but also fulfills the specific requirements of the individual subject. As the textbook serves as a framework for teaching, the author/authors should consider the following features:

- A textbook must include an introduction to the textbook, explaining how to use the textbook
- The textbook must be in line with the National Curriculum, covering all SLOs of each theme or concept.
- Content and illustrations must be culturally, contextually and age appropriate.
- All text and material must be accurate, up-to-date and error-free.
- The continuity of the concepts, their integration and logical development should be ensured.
- Horizontal and vertical overlapping of the concepts should be avoided.
- The textbook should be informative and interactive with questions to be put at suitable intervals to provoke the students to think.
- The language used should be simple, clear, straight forward, unambiguous, and easily comprehensible by the students of the level.

- Simple questions may be asked within the chapter, which requires students to recall, think, and apply what they have just learnt as well as to reinforce the learning of the concepts and principle.
- The examples and applications should be from everyday life and be supportive of our cultural values
- Photographs and illustrations should be clear, labeled, and supportive of the text. Tables, flow charts and graph may be given wherever needed.
- Key points at the end of each chapter should provide a summary of the important concepts and principles discussed in the chapter.
- End-of-the-Chapter exercises must include a variety of assessment styles based on levels of Bloom's Taxonomy. These should encourage students to think, develop skills, and use information for a variety of purposes.
- Textbooks should be free from all kinds of biases including, gender, religion, occupation, social background etc.
- To make the students self-learner use of IT based resources may be encouraged. Relevant internet links and other online resources may be included.
- Glossary of the new vocabulary must be included.

Guideline for planning and writing a chapter

The textbook author may decide the titles of each chapter and can choose to cover students' learning outcomes (SLOs) from any themes in developing the content of the chapter. The textbook author must also keep in mind that a number of SLOs cannot be addressed in the text (as if this is done it would lead students to simply memorize the text and not serve the realization of the curriculum). These SLOs could be realized through questions and practical activities within and at the end of the chapter exercises.

- Learning outcomes must be given at beginning of each chapter.
- Decide on key ideas, facts, concepts, skills, and values that can be developed.
- Illustrations must clearly convey the desired concept.
- Activities must demand from students to do inquiry and problem solving according to grade level.
- Ensure that the content is up to date, accurate and developmentally appropriate.
- Contents must be in line with chapter outcomes.
- Language must be consistent, culturally appropriate, and grammatically correct (as if talking to a group).
- Language must engage and hold reader's attention.
- Recall previous learning, where possible.
- Structure the writing so that the sentence is simple, paragraphs deal with single ideas etc.
- Interesting information in the form of tidbits, fact file, point to ponder etc. must be given.
- Write a summary/concept map at end of each chapter, reviewing key knowledge and skills.
- End-of-chapter exercises
- Recall and integrate previous learning
- Engage students and develop their creativity
- Move from lower to higher order thinking

- Focus on multiple intelligences
- Keep the text contextually relevant in line with local teaching and learning.
- Provide website links for further research

Guidelines for Writing Learner Workbook

Workbooks are books that contain writing activities and exercises that build upon each chapter in the textbook. Workbook exercises help students to develop conceptual understanding of the concepts dealt with in the text, to develop skills and to apply knowledge to new situations. Basic features of a workbook A workbook should have:

- Various exercises and activities for each chapter, topic, subtopic.
- Exercises and activities that will enable student to develop and practice the content knowledge, skills and higher order thinking.
- Accurate and variety of exercises.
- Clear illustrations/ examples/ explanations to show what students are supposed to do, and/or what product looks like.
- Exercises and activities with a variety of purposeful, stimulating, challenging and innovative items to encourage students to review and practice the knowledge and skills they have learnt.
- Exercises that include both constructed and restricted response items.
- Activities, which requires readily available, acceptable, and affordable materials and resources.

Basic Requirements for Lab (Tools/Equipment)