

**Curriculum of Matric Tech**

**Introduction to Tourism**

**GRADE IX  
2020**



**GOVERNMENT OF PAKISTAN**

**Ministry of Federal Education and Professional Training ISLAMABAD**

**In Collaboration with**

**National Vocational and Technical Training Commission**

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## 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 abroad 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 from the depth of ocean to the highest mountains. We have the three highest mountain 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 (9<sup>th</sup> & 10<sup>th</sup>)

## 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 policymaking 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 oftourism

## Grade -IX

Ch # 01 Introduction to Tourism		33 Periods(13 =T, 20 = P)			
Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workpla ce
Introduction to Tourism	The students will be able to: <ul style="list-style-type: none"> <li>• define tourism</li> <li>• learn about the traits of tourism industry</li> <li>• know about national and international tourism governing bodies</li> <li>• know how to locate tourist attractions</li> </ul>	<ul style="list-style-type: none"> <li>• Access National and International Tourism Websites</li> <li>• Locate and represent various national tourist attractions in small groups</li> <li>• Locate famous manmade and natural tourist attractions on regional/national map</li> </ul>	Periods (T) Periods(P)	Computer, Multimedia, High speed internet, tourist map, national/re regional maps, World map, Asia Map, South-east Asia Map (political maps), tourism brochures	Classroom/ Lab
Evolution of Tourism	<ul style="list-style-type: none"> <li>• know evolution and development of tourism                             <ul style="list-style-type: none"> <li>○ pre-historic period travel</li> <li>○ ancient time travel</li> <li>○ middle ages / dark tourism</li> <li>○ renaissance period tourism</li> <li>○ industrial period tourism</li> <li>○ modern tourism</li> </ul> </li> <li>• understand factors involve in evolution of tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Presentation on tourism history in groups.</li> <li>• Discus and enlist Factors</li> </ul>	Period (T) Period (P)		
Types of Tourism	<ul style="list-style-type: none"> <li>• learn about various types of tourism                             <ul style="list-style-type: none"> <li>○ inbound tourism</li> <li>○ outbound tourism</li> </ul> </li> <li>• understand trends of tourism in Pakistan and around the world</li> </ul>	<ul style="list-style-type: none"> <li>• Presentation on inbound and outbound tourism</li> <li>• Presentation on trends of tourism</li> </ul>	Periods (T) Period (P)		Classroom
National Tourism Map	<ul style="list-style-type: none"> <li>• know how to read tourist map</li> <li>• understand different symbols on a map, physical and political map of Pakistan</li> <li>• use symbols on map as a tour guide tool</li> </ul>	<ul style="list-style-type: none"> <li>• Interpret national tourism map</li> <li>• Draw national tourism map focusing on famous tourist attraction</li> </ul>	Periods (T) Periods(P)	Map Tracing table, national and regional maps	Classroom/ Lab
Visitor and Tourist	<ul style="list-style-type: none"> <li>• learn why people travel</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss personal</li> </ul>	Periods (T)		Classroom

	<ul style="list-style-type: none"> <li>know about motivational factors that influence traveling</li> <li>Differentiate between tourist and visitor</li> </ul>	travel experiences	Periods(P)		
<b>Ch # 02 Adventure Tourism I</b>		<b>21 Periods 7 =T 14=P</b>			
<b>Themes</b>	<b>Students' Learning Outcomes</b>	<b>Activities</b>	<b>Duration</b>	<b>Tools</b>	<b>Workplace</b>
Adventure Tourism	the students will be able to: <ul style="list-style-type: none"> <li>understand the adventure tourism</li> <li>know about advantages and disadvantages of adventure tourism</li> </ul>	<ul style="list-style-type: none"> <li>Presentation on adventure tourism</li> <li>Discuss and enlist advantage and disadvantage on adventure tourism</li> </ul>	Period (T) Period (P)		
Hiking / Trekking	<ul style="list-style-type: none"> <li>learn essential steps of hiking</li> <li>know about hiking skills</li> <li>know threats and challenges</li> </ul>	<ul style="list-style-type: none"> <li>Arrange the hiking trip</li> </ul>	Period (T) Period (P)		Classroom
Selection of Location.	<ul style="list-style-type: none"> <li>Learn how to identify location for camping</li> <li>Ensure safety and security for camping</li> </ul>	<ul style="list-style-type: none"> <li>Group discussion</li> <li>Prepare checklist for safety and security instructions</li> </ul>	Periods (T) Period (P)		
<b>Ch.3. Travel Services for Tourism</b>		<b>17 Period 06= (T) 11= (P)</b>			
<b>Themes</b>	<b>Students' Learning Outcomes</b>	<b>Activities</b>	<b>Duration</b>	<b>Tools</b>	<b>Workplace</b>
Travel Services Sector	the students will be able to: <ul style="list-style-type: none"> <li>know about travel services in tourism areas</li> <li>learn about characteristics of travel services</li> </ul>	Presentation on characteristics on travel sector	Periods (T) Period (P)		Classroom
Reservation Systems and Booking Channels	<ul style="list-style-type: none"> <li>learn about reservation system and booking channels for tourist</li> <li>know about how booking channels works in tourism and hotel industry</li> </ul>	<ul style="list-style-type: none"> <li>Group Presentation on reservation systems and booking channels</li> <li>Enlist international booking channels working in Pakistan</li> </ul>	Periods (T) Period (P)	•	Classroom/ open area
Role of Online Travel Agents	<ul style="list-style-type: none"> <li>know about the role of travel agent</li> <li>understand advantage and disadvantage of online travel booking agents</li> </ul>	<ul style="list-style-type: none"> <li>Group discussion on Advantage and disadvantage of online booking channels</li> </ul>	Periods (T) Period (P)	•	
<b>Ch.4. Hospitality and Lodging</b>		<b>16 Period 06=(T), 10= (P)</b>			
<b>Themes</b>	<b>Students' Learning Outcomes</b>	<b>Activities</b>	<b>Duration</b>	<b>Tools</b>	<b>Workplace</b>
Basics Of Hospitality	the students will be able to: <ul style="list-style-type: none"> <li>know about meanings and background of hospitality industry</li> </ul>	<ul style="list-style-type: none"> <li>Group discussion on hospitality values and traditions in</li> </ul>	04 Periods (T) 07 Periods(P)	Multimedia	Classroom/ Labs

	<ul style="list-style-type: none"> <li>know about hospitality industry (scope, values, and traditions)</li> <li>understand the difference among hotel, restaurant, motel guest house, rest house</li> </ul>	Pakistan <ul style="list-style-type: none"> <li>Group Presentation on History hospitality industry</li> </ul>			
Lodging Operations (Commercial & Non-Commercial)	<ul style="list-style-type: none"> <li>know about types of hotels and lodging properties commercial &amp; non-commercial</li> <li>classify hotels by type and location</li> <li>learn hotel rating systems</li> </ul>	<ul style="list-style-type: none"> <li>Group Presentation on Star and the Diamond rating system</li> </ul>	03 Periods (T) 4 Periods(P)	Multimedia	Classroom/

### Ch.5. Heritage Cultural Tourism Management

26 Period 06= (T), 20=(P)

Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Introduction to Culture and Heritage of Pakistan	the students will be able to: <ul style="list-style-type: none"> <li>know cultural and heritage tourism</li> <li>understand the importance of cultural heritage tourism</li> <li>learn cultures and heritage sites of Pakistan</li> </ul>	<ul style="list-style-type: none"> <li>Study visit to nearest cultural/ heritage site</li> <li>Identify the visited site on national/regional map</li> <li>Submit a report to teacher encompassing key learning points</li> </ul>	Periods (T) Periods(P)	Multimedia	Classroom/ Tour site
Impact of Culture and Heritage on Tourism Industry	<ul style="list-style-type: none"> <li>know about impact of cultural and heritage sites on tourism industry</li> <li>understand the role of different organization working on cultural and heritage tourism (national and international organization working cultural heritage i.e. UNSECO, WWF)</li> <li>understand needs of tourists for cultural and heritage tourism</li> </ul>	<ul style="list-style-type: none"> <li>Group Presentation on cultural heritage sites in Pakistan)</li> <li>Enlist famous cultural and heritage sites of Pakistan</li> <li>Explore your school building with your classmates and demonstrate your findings as a Tour guide to your class</li> </ul>	Periods (T) Period (P)		Classroom/ Labs

### Ch. 6 Tourist Transport Services

12 Period 04=(T) 8 = (P)

Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Modes of Transportation <ul style="list-style-type: none"> <li>Surface Transport</li> <li>Aviation</li> </ul>	the students will be able to: <ul style="list-style-type: none"> <li>know about different modes of transportation               <ul style="list-style-type: none"> <li>land based</li> <li>water based</li> <li>air travel</li> </ul> </li> <li>understand management of</li> </ul>	<ul style="list-style-type: none"> <li>Group presentation on different websites providing tourism transportation services</li> </ul>	Periods (T) Periods(P)	Multimedia, Computer	Classroom/ Lab

	transport facilities and services for tourists				
Introduction to Safety Standards	<ul style="list-style-type: none"> <li>ensure safety and maintenance of the vehicles</li> <li>understand assumed risks and hazards during travel in hilly areas <ul style="list-style-type: none"> <li>brake fails</li> <li>land sliding</li> <li>snow falling</li> <li>flooding</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Prepare maintenance check list as per Safety Standards</li> </ul>	Periods (T) Periods(P)	Checklist Papers	Classroom/ Labs

### Ch.7. Sustainable Tourism I

22 Period 9= (T) 13 (P)

Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Sustainable Tourism	The students will be able to: <ul style="list-style-type: none"> <li>define sustainable tourism</li> <li>understand difference between sustainable and eco-tourism</li> <li>understand environmental, economic, and socio-cultural aspects of tourism development</li> </ul>	<ul style="list-style-type: none"> <li>Gather and present data at local level of <ul style="list-style-type: none"> <li>tourist flow,</li> <li>impact on local businesses and business opportunities</li> </ul> </li> </ul>	Periods (T) Periods (P)		Classroom/ Labs
Culture and Heritage	<ul style="list-style-type: none"> <li>understand importance of preserving heritage sites in Pakistan</li> <li>know different local/regional cultural heritage sites</li> </ul>	<ul style="list-style-type: none"> <li>Draw a regional/national map showing famous cultural and heritage points</li> </ul>	Periods (T) Periods(P)	Drawing boards and Maps	Classroom/ Labs
Ecotourism	<ul style="list-style-type: none"> <li>define ecotourism</li> <li>identify suitable camping site in your locality</li> <li>understand the nature of ecotourism</li> <li>know about financial benefits and empowerment for local community</li> </ul>	<ul style="list-style-type: none"> <li>Implement a Green tourism activity, (plantation of trees)</li> <li>Set-up acamp in school campus</li> </ul>	Periods (T) Periods(P)	Camping kit, tree saplings for plantation	Classroom/ Labs/Ground

### Ch.8 Communication Skills

21 Period 7= (T) 14 (P)

Themes	Students' Learning Outcomes	Activities	Duration	Tools	Workplace
Communication and its Types	The students will be able to: <ul style="list-style-type: none"> <li>know about communication process</li> <li>understand types of communication (verbal/ non-verbal)</li> <li>understand effective communication skills</li> <li>identify obstacles in communication</li> <li>communicate effectively in a team environment</li> </ul>	<ul style="list-style-type: none"> <li>Role play on communication process of sender and receiver</li> <li>Role play on communication process of sender and receiver with interruption</li> </ul>	Periods (T) Period (P)	Multimedia	Classroom/ cooking lab

Types of Communication and Communication Barrier	<ul style="list-style-type: none"> <li>know about barrier of communication (cultural barriers, language barriers, gender barriers)</li> <li>know about verbal, non-verbal, visual</li> </ul>	<ul style="list-style-type: none"> <li>Group Presentation on communication barrier</li> <li>Roleplay how to receive guests in hospitality sector</li> <li>Role paly on types of communication</li> </ul>	Periods (T) Period (P)	Multimedia	Classroom/looking lab
<b>Ch.9. Digital Communication and Social media</b>			<b>13 Period 04 (T) 09 (P)</b>		
<b>Themes</b>	<b>Students' Learning Outcomes</b>	<b>Activities</b>	<b>Duration</b>	<b>Tools</b>	<b>Workplace</b>
Effective email writing	<p>The students will be able to:</p> <ul style="list-style-type: none"> <li>Create, access and manage email account</li> <li>Learn how to write and respond official email</li> </ul>	<ul style="list-style-type: none"> <li>Create email account</li> <li>Write an official email to school principal on subject of any importance</li> </ul>	03 Periods (T) 04 Periods(P)	Multimedia System, Internet connection	Classroom/Labs
<p>Introduction to Social Media Platforms</p> <ul style="list-style-type: none"> <li>Facebook,</li> <li>Instagram</li> <li>Twitter,</li> <li>YouTube,</li> </ul>	<ul style="list-style-type: none"> <li>Role of social media in marketing and business development</li> <li>Merits and de-merits of social media</li> </ul>	<ul style="list-style-type: none"> <li>Create social media page for your self</li> </ul>	02 Periods (T) 05 Period (P)	System, Internet connection	Classroom/Labs

## 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
- Quizzes
- 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)