

INFORMATION COMMUNICATION TECHNOLOGY

STUDENT TEXTBOOK

Grade 11

Authors

Dixit J.B.

Saurabh Gupta

Evaluators

Gelan Tulu

Genene Tadesse

Zekarias Kebede



**Federal Democratic Republic of Ethiopia
Ministry of Education**



Laxmi Publications

Acknowledgements

The development, printing and distribution of this student textbook has been funded through the General Education Quality Improvement Project (GEQIP), which aims to improve the quality of education for Grades 1-12 students in government schools throughout Ethiopia.

The Federal Democratic Republic of Ethiopia received funding for GEQIP through credit/financing from the International Development Associations (IDA), the Fast Track Initiative Catalytic Fund (FTICF) and other development partners—Finland, Italian Development Cooperation, the Netherlands and UK aid from the Department for International Development (DFID).

The Ministry of Education wishes to thank the many individuals, groups and other bodies involved—directly and indirectly—in publishing the textbook and accompanying teacher guide.

© Federal Democratic Republic of Ethiopia, Ministry of Education

First edition, 2002 (E.C.)

ISBN: 978-99944-2-249-4

Developed, printed and distributed for the Federal Democratic Republic of Ethiopia, Ministry of Education by Laxmi Publications Pvt. Ltd., India under GEQIP Contract No. ET-MoE/GEQIP/IDA/ICB/G-02/09-D

Second edition, 2007 (E.C.)

By Tan Prints India Pvt. Ltd.

All rights reserved; no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior written permission of the copyright owner or a licence permitting restricted copying in Ethiopia by the *Federal Democratic Republic of Ethiopia, Federal Negarit Gazeta, Proclamation No. 410/2004 Copyright and Neighboring Rights Protection Proclamation, 10th year, No. 55, Addis Ababa, 19 July 2004.*

Disclaimer

Every effort has been made to trace the copyright owners of material used in this document. We apologise in advance for any unintentional omissions. We would be pleased to insert the appropriate acknowledgement in any future edition.

Printed in India.

CONTENTS

Unit 1: Information Systems	1
1.1 General Concepts of Information Systems	1
1.2 Types of Information System in the Organization.....	7
1.3 Impact of ICT in Everyday Life.....	18
<i>Review Questions</i>	24
Unit 2: Enhancing the Use of Software	26
2.1 Using Application Software.....	26
<i>Review Questions</i>	51
Unit 3: Basic Troubleshooting	53
3.1 Basics of Preventive Maintenance	53
3.2 Basic Safety Issues.....	59
3.3 Hardware Maintenance Basics.....	63
3.4 Installing and Uninstalling Application Software.....	66
<i>Review Questions</i>	71
Unit 4: Exploiting the Internet	73
4.1 Advanced Searching	73
4.2 Using Wikis, Blogs and Podcasts	77
4.3 Social Networking.....	82
4.4 Producing a Webpage Using Simple Web Design Software	84
4.5 Publishing to a Web Server (or Free Web Server or a Wikipedia Web Server)	86
<i>Review Questions</i>	91
Unit 5: Image Processing and Multimedia Systems	93
5.1 Overview of Image Processing	93
5.2 Basics of Image Processing.....	96
5.3 Basic Image Editing (Cropping, Resizing, Correcting, Sharpening/Softening)	104
<i>Review Questions</i>	111
Glossary	113

PREFACE

Information and Communication Technology (ICT) is so important in the world today that it makes it imperative for every person to be competent in the use of ICT for the many tasks that one will have to accomplish. This book is written to provide excellent ICT skills for Grade 11 students of Federal Democratic Republic of Ethiopia. It is expected that the knowledge and skills gained through this book will help the students to use ICT in almost all their courses at school. The book covers selected topics in ICT which offer hands-on activities to help students in acquiring the advanced ICT skills.

The key features of this book will help the students to:

- acquire advanced ICT literacy.
- understand the basic concepts of Information Systems.
- enhance the knowledge gained during the studies in earlier grades for application of ICT in word processing, presentation software, spreadsheets, desktop publishing and database management.
- develop interest and use ICT for learning in other subjects.
- understand basic troubleshooting *i.e.*, preventive maintenance, safety issues, hardware maintenance, installing and uninstalling applications software.
- exploit the Internet.
- do advance searching using the Internet and use wikis, blogs and podcasts.
- understand social networking and design a simple webpage and implement the webpage to a server.
- follow basic ethics in the use of ICT.
- understand the basic concepts of image processing and multimedia systems.
- have excellent ICT skills which will serve them well in their future studies.

The text has been designed in a simple and user friendly way. It focuses on the applications of ICT, which change slowly. This book also illustrates the latest developments in the rapidly changing world of ICT. Review questions have also been given at the end of each unit.

In future years, the knowledge gained through this book will be very useful to students, in case they elect to follow a more-specialist course in Computer Science covering such areas as Computer Architecture, Systems Analysis and Design, Data Communications and Fundamentals of Programming.

Suggestions for the improvement of this book will be gratefully acknowledged.

Authors