FACULTY OF ENGINEERING AND TECHNOLOGY

Syllabus

For

BACHELOR OF VOCATION (B.VOC.) (MODERN OFFICE PRACTICE) (Semester: I – VI)

Session: 2019-20



GURU NANAK DEV UNIVERSITY AMRITSAR

Note: (i) Copy rights are reserved.

Nobody is allowed to print it in any form.

Defaulters will be prosecuted.

(ii) Subject to change in the syllabi at any time. Please visit the University website time to time.

Scheme of Syllabus

	Semester-I:	
Paper No.	Subjects	M.Marks
Paper–I	Fundamentals of Computer	75
Paper-II	Modern Office Automation Tools – I	75
Paper-III	Computer Installation and Maintenance	75
	of Computer System & Lab	
Paper–IV	Lab based on Paper – II	75
	(Typing Skills / Word Processor / Power Point)	
Paper-V	Communication Skills in English – I	50
Paper-VI	Punjabi (Compulsory) / ** ਮੁੱਢਲੀ ਪੰਜਾਬੀ /	50
	** Punjab History & Culture (From Earliest Times to C 320)	
Paper-VII	* Drug Abuse: Problem, Management and Prevention	50
	(Compulsory Paper)	
	Total:	400

	Semester-II:	
Paper No.	Subjects	M.Marks
Paper–I	Modern Office Automation Tools – II	50
Paper–II	Internet Applications & Lab (Th.50+Pr.25)	75
Paper–III	Basics of Spreadsheet & Lab (Th.50+Pr.25)	75
Paper-IV	On Job Training (8 Weeks)	100
Paper-V	Communication Skills in English – II (Th.35+Pr.15)	50
Paper –VI	Punjabi (Compulsory) / ** ਮੁੱਢਲੀ ਪੰਜਾਬੀ /	
	** Punjab History & Culture (C 320 TO 1000 B.C.)	50
Paper-VII	* Drug Abuse: Problem, Management and Prevention	
	(Compulsory Paper)	50
	Total	1: 400

Note: * Marks of this Paper will not be included in the Total Marks.

** (Special Paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)

	Semester- III:	
Paper No.	Subjects	M. Marks
Paper–I	Commercial Correspondence & LAB (Th.35+Pr.15)	50
Paper–II	Web Technologies	75
Paper-III	Database Management Systems & LAB (Th.50+Pr.25)	75
Paper-IV	Desktop Publishing	75
Paper-V	Lab based on Web Technologies	50
Paper-VI	Lab based on Photoshop & Corel Draw	75
	Total:	400

	Semester– IV:	
Paper No.	Subjects	M. Marks
Paper–I	Computer Networks	75
Paper-II	Management Information System	50
Paper-III	Operating System	75
Paper-IV	Lab Based on Operating System	50
Paper-V	Lab Based on Flash	50
Paper-VI	On Job Training & Report (8 Weeks)	100
Paper-VII	* Environmental Studies	100
(ESL-221)	Environmental Studies	100
	Total:	400

^{*} Marks of Paper EVS will not be included in Grand Total.

	Semester- V	
Paper No.	Subjects	M. Marks
Paper–I	Programming Using Python	75
Paper-II	Multimedia & Its Application	75
Paper-III	Lab Based on Python	75
Paper-IV	Personality Development & Soft Skills (Th.75+Viva.25)	100
Paper-V	Use of Social Media & Lab (Th.50+Pr.25)	75
	Total:	400

	Semester- VI	
Paper No.	Subjects	M. Marks
Paper–I	Major Project / Training	400

Paper – I: Fundamental of Computers

Time: 3 Hours Max. Marks: 75

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Note for Candidate:

The students can use only Non -Programmable & Non- Storage type calculator. Practical marks will include the appropriate weightage for proper maintenance of Lab Record

Section A

Introduction to Information Technology:

Basic concepts of IT, Data Processing: Data and Information, Number System.

Elements of a Computer System:

Block Diagram of The Computer System, Introduction to various units.

Section B

Hardware:

CPU, Memory, Input and Output devices, Auxiliary storage devices, Modern Storage Devices, Introduction to Online and offline UPS **Printers:** Various types of Printers

Section C

Software:

System and Application Software, Utility packages, Configuration of Computer System Applications of Information Technology:

Section D

Introduction to Windows OS:

Installation & Configuration of OS, Control Panel settings, Parts of window screen (Desktop, window, icons), start menu, Taskbar settings, application & document window anatomy of a window (Title bar, minimize, maximize button, control box, scroll bars, scroll buttons, scroll boxes), Window explorer (expansion, collapsing of directory tree, copying, moving, deleting files, folder, creating folders), About desktop icons (recycle bin, my computer, network neighborhood, brief case), folder, shortcut creation, setting of screen saver, color settings, wallpaper, changing window appearance. System Security, Backup & Recovery.

- 1. Computer Fundamentals P.K. Sinha.
- 2. Introduction to Computers N. Subramanian.
- 3. Introduction to Computers Peter Norton Mcgraw Hill.

Paper – II: Modern Office Automation Tools – I

Time: 3 Hrs. Max. Marks: 75

Note for Paper Setter:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Note for Candidate:

The students can use only Non -Programmable & Non- Storage type calculator. Practical marks will include the appropriate weightage for proper maintenance of Lab Record

Section A: Getting Started with Word Processor

Word Processor Introduction to Free and Open Source (FOSS) Word Processors

Starting Word
Opening a saved Word document
The Word Window
Entering text in a document
Previewing a document
Saving a document
Creating a folder
Printing a document
Closing a document and exiting Word

Editing a Document

Navigate through a document
Scroll through text
Insert and delete text in a document
Select text
Undo and redo commands
Use drag and drop to move text
Copy, cut and paste
Use the clipboard
Clear formatting

Section B Formatting A Document

Format and align text
Line and paragraph spacing
Add bulleted and numbered lists
Add borders and shading
New formatting methods in Word 2010

Using Editing and Proofing Tools

Document views
Spell and grammar check
Shortcut Menus
Find and replace text
Use the Research Task pane

Section C Changing the Layout of a Document

Adjust page margins
Change page orientation
Create headers and footers.
Set and change indentations
Insert and clear tabs
Insert and delete a page break
Insert page numbers
Insert the date and time
Insert special characters (symbols)
Insert a picture from a file
Resize and reposition a picture.
Using Words new picture tools

Working with Tables

Insert a table
Convert a table to text
Navigate and select text in a table
Resize parts of a table
Align text in a table
Format a table
Insert and delete columns and rows
Borders and shading
Repeat table headings on subsequent
pages Merge table cells

Section D Power Point

Presentation Software: Presentation overview, entering information, Presentation creation, opening and saving presentation, inserting audio and video, Slide Animation and Transitions, Slide show and its settings.

- 1. MS-Office BPB Publications.
- 2. Windows Based Computer Courses Gurvinder Singh & Rachpal Singh, Kalyani Pub.

Paper -III Computer Installation and Maintenance of Computer System & LAB

Time: 3 Hrs. Max. Marks: 75

Theory: 50 Practical: 25

Note for Paper Setter:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Note for Candidate:

The students can use only Non -Programmable & Non- Storage type calculator.

Practical marks will include the appropriate weightage for proper maintenance of Lab Record

Section A

Introduction to PC Hardware: Study of basic I/O systems, Types of Memories- Static RAM and Dynamic RAM, ROM, PROM, EPROM, EPROM, CPU (Central Processing Unit)- ALU and control unit.

Motherboard and Processor: Study of different types of Motherboards, Motherboard Configuration, Identifying Internal and External connectors, Types of data cables, Types of Processor.

Section B

BIOS Configuration: Study of BIOS Set-up- Advance set-up, Boot configuration, Boot Menu.

Installation of OS (Operating Software): Installation of OS (Windows & Linux).

Section C

Hard Disk: Formatting of Hard disk, Partitioning of Hard disk in different logical drives, Disk defragmentation, Disk clean up, Scan disk etc,.

Installation of Device Drivers: Different types of Motherboard drivers, LAN, Audio, and Video.

Section D

Configuration of External devices: Physical set-up of Printers- Performing test print out, Printing of document etc, Scanner set-up, Webcam, Bluetooth device, Memory card reader etc.

Diagnostic and troubleshooting of PC: POST (Power on Self Test), identifying problems by Beep codes errors, checking power supply using Multi-meter, Replacement of components etc. Maintenance of PC

Reference Books:

- 1. K, L James COMPUTER HARDWARE: Installation, Interfacing, Troubleshooting and Maintenance. PHI.
- 2. A+ Guide to Managing and Maintaining your PC, Jean Andrews
- 3. PC Hardware: Beginner's Guide

Paper–IV: Practical

Time: 3 Hrs.

Marks: 75

Lab Based on Typing Skills/ Basics of Word Processor/ Power Point

PAPER-V: COMMUNICATION SKILLS IN ENGLISH - I

Time: 3 Hours Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

The syllabus is divided in four sections as mentioned below:

Section-A

Reading Skills: Reading Tactics and strategies; Reading purposes–kinds of purposes and associated comprehension; Reading for direct meanings.

Section-B

Reading for understanding concepts, details, coherence, logical progression and meanings of phrases/ expressions.

Activities:

- Comprehension questions in multiple choice format
- Short comprehension questions based on content and development of ideas

Section-C

Writing Skills: Guidelines for effective writing; writing styles for application, personal letter, official/business letter.

Activities:

- Formatting personal and business letters.
- Organising the details in a sequential order

Section-D

Resume, memo, notices etc.; outline and revision.

Activities:

- Converting a biographical note into a sequenced resume or vice-versa
- Ordering and sub-dividing the contents while making notes.
- Writing notices for circulation/ boards

Recommended Books:

- Oxford Guide to Effective Writing and Speaking by John Seely.
- English Grammar in Use (Fourth Edition) by Raymond Murphy, CUP

PAPER–VI: ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

ਸਮਾਂ : 3 ਘੰਟੇ ਕੁਲ ਅੰਕ : 50

ਪਾਠ-ਕ੍ਰਮ ਅਤੇ ਪਾਠ-ਪੁਸਤਕਾਂ

ਸੈਕਸ਼ਨ-ਏ

ਆਤਮ ਅਨਾਤਮ (ਕਵਿਤਾ ਭਾਗ), (ਸੰਪ. ਸੁਹਿੰਦਰ ਬੀਰ ਅਤੇ ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ) ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ। (ਪਸਗ ਸਾਹਤ ਵਿਆਖਿਆ, ਸਾਰ)

ਸੈਕਸ਼ਨ-ਬੀ

ਇਤਿਹਾਸਕ ਯਾਦਾਂ (ਇਤਿਹਾਸਕ ਲੇਖ–ਸੰਗ੍ਰਹਿ) ਸੰਪਾ. ਸ.ਸ.ਅਮੋਲ, ਪੰਜਾਬੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ। (ਲੇਖ 1 ਤੋਂ 6) (ਨਿਬੰਧ ਦਾ ਸਾਰ, ਲਿਖਣ-ਸ਼ੈਲੀ)

ਸੈਕਸ਼ਨ-ਸੀ

- (ੳ) ਪੈਰ੍ਹਾ ਰਚਨਾ
- (ਅ) ਪੈਰ੍ਹਾ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ।

ਸੈਕਸ਼ਨ-ਡੀ

- (ੳ) ਪੰਜਾਬੀ ਧੁਨੀ ਵਿਉਂਤ : ਉਚਾਰਨ ਅੰਗ, ਉਚਾਰਨ ਸਥਾਨ ਤੇ ਵਿਧੀਆਂ, ਸਵਰ, ਵਿਅੰਜਨ, ਸੁਰ-ਯ੍ਰਥਪ।
- (ਅ) ਭਾਸ਼ਾ ਵੰਨਗੀਆਂ : ਭਾਸ਼ਾ ਦਾ ਟਕਸਾਲੀ ਰੂਪ, ਭਾਸ਼ਾ ਅਤੇ ਉਪ-ਭਾਸ਼ਾ ਦਾ ਅੰਤਰ, ਪੰਜਾਬੀ ਉਪਭਾਸ਼ਾਵਾਂ ਦੇ ਪਛਾਣ-ਚਿੰਨ੍ਹ।

ਅੰਕ-ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

- 1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਭਾਗ ਹੋਣਗੇ। ਹਰ ਭਾਗ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
- 2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਭਾਗ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
- 3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ ਅੰਕ ਹਨ।
- 4. ਪੇਪਰ ਸੈੰਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ-ਪ੍ਰਸ਼ਨਾਂ ਵਿਚ ਕਰ ਸਕਦਾ ਹੈ।

PAPER-VI: ਮੁੱਢਲੀ ਪੰਜਾਬੀ (In lieu of Compulsory Punjabi)

ਸਮਾਂ : 3 ਘੰਟੇ ਕੁਲ ਅੰਕ: 50

ਪਾਠ–ਕ੍ਰਮ

ਸੈਕਸ਼ਨ-ਏ

ਪੈਂਤੀ ਅੱਖਰੀ, ਅੱਖਰ ਕ੍ਰਮ, ਪੈਰ ਬਿੰਦੀ ਵਾਲੇ ਵਰਣ ਅਤੇ ਪੈਰ ਵਿਚ ਪੈਣ ਵਾਲੇ ਵਰਣ ਅਤੇ ਮਾਤ੍ਰਵਾਂ (ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ) ਲਗਾਖਰ (ਬਿੰਦੀ, ਟਿੱਪੀ, ਅੱਧਕ) : ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ

ਸੈਕਸ਼ਨ-ਬੀ

ਪੰਜਾਬੀ ਸ਼ਬਦ-ਬਣਤਰ : ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ (ਸਾਧਾਰਨ ਸ਼ਬਦ, ਸੰਯੁਕਤ ਸ਼ਬਦ, ਮਿਸ਼ਰਤ ਸ਼ਬਦ, ਮੂਲ ਸ਼ਬਦ, ਅਗੇਤਰ ਅਤੇ ਪਿਛੇਤਰ)

ਸੈਕਸ਼ਨ-ਸੀ

ਨਿੱਤ ਵਰਤੋਂ ਦੀ ਪੰਜਾਬੀ ਸ਼ਬਦਾਵਲੀ : ਬਾਜ਼ਾਰ, ਵਪਾਰ, ਰਿਸ਼ਤੇ-ਨਾਤੇ, ਖੇਤੀ ਅਤੇ ਹੋਰ ਧੰਦਿਆਂ ਆਦਿ ਨਾਲ ਸੰਬੰਧਤ।

ਸੈਕਸ਼ਨ-ਡੀ

ਹਫ਼ਤੇ ਦੇ ਸੱਤ ਦਿਨਾਂ ਦੇ ਨਾਂ, ਬਾਰ੍ਹਾਂ ਮਹੀਨਿਆਂ ਦੇ ਨਾਂ, ਰੁੱਤਾਂ ਦੇ ਨਾਂ, ਇਕ ਤੋਂ ਸੋਂ ਤਕ ਗਿਣਤੀ ਸ਼ਬਦਾਂ ਵਿਚ

ਅੰਕ-ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

- 1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਭਾਗ ਹੋਣਗੇ। ਹਰ ਭਾਗ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
- 2. ਵਿੰਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਭਾਗ ਵਿਚੌਂ ਇਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
- 3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ ਅੰਕ ਹਨ।
- 4. ਪੇਪਰ ਸੈੰਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ-ਪ੍ਰਸ਼ਨਾਂ ਵਿਚ ਕਰ ਸਕਦਾ ਹੈ।

PAPER-VI: Punjab History & Culture (From Earliest Times to C 320)

(Special Paper in lieu of Punjabi Compulsory) (For those students who are not domicile of Punjab)

Time: 3 Hours Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section-A

- 1. Physical features of the Punjab and its impact on history.
- 2. Sources of the ancient history of Punjab

Section-B

- 3. Harappan Civilization: Town planning; social, economic and religious life of the Indus Valley People.
- 4. The Indo-Aryans: Original home and settlements in Punjab.

Section-C

- 5. Social, Religious and Economic life during *Rig* Vedic Age.
- 6. Social, Religious and Economic life during Later Vedic Age.

Section-D

- 7. Teachings and impact of Buddhism
- 8. Jainism in the Punjab

Suggested Readings:

- 1. L. M Joshi (Ed.), *History and Culture of the Punjab*, Art-I, Patiala, 1989 (3rd Edition)
- 2. L.M. Joshi and Fauja Singh (Ed.), *History of Punjab*, Vol.I, Patiala 1977.
- 3. Budha Parkash, *Glimpses of Ancient Punjab*, Patiala, 1983.
- 4. B.N. Sharma, *Life in Northern India*, Delhi. 1966.
- 5. Chopra, P.N., Puri, B.N., & Das, M.N. (1974). A Social, Cultural & Economic History of India, Vol. I, New Delhi: Macmillan India.

PAPER – VII: DRUG ABUSE: PROBLEM, MANAGEMENT AND PREVENTION (COMPULSORY PAPER)

PROBLEM OF DRUG ABUSE

Time: 3 Hours Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section – A

Meaning of Drug Abuse:

Meaning, Nature and Extent of Drug Abuse in India and Punjab.

Section – B

Consequences of Drug Abuse for:

Individual : Education, Employment, Income.

Family : Violence. Society : Crime.

Nation : Law and Order problem.

Section - C

Management of Drug Abuse:

Medical Management: Medication for treatment and to reduce withdrawal effects.

Section – D

Psychiatric Management: Counselling, Behavioural and Cognitive therapy. Social Management: Family, Group therapy and Environmental Intervention.

- 1. Ahuja, Ram (2003), Social Problems in India, Rawat Publication, Jaipur.
- 2. Extent, Pattern and Trend of Drug Use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
- 3. Inciardi, J.A. 1981. *The Drug Crime Connection*. Beverly Hills: Sage Publications.
- 4. Kapoor. T. (1985) Drug epidemic among Indian Youth, New Delhi: Mittal Pub.
- 5. Kessel, Neil and Henry Walton. 1982, Alcohalism. Harmond Worth: Penguin Books.
- 6. Modi, Ishwar and Modi, Shalini (1997) *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication.
- 7. National Household Survey of Alcohol and Drug abuse. (2003) New Delhi, Clinical Epidemiological Unit, All India Institute of Medical Sciences, 2004.
- 8. Ross Coomber and Others. 2013, *Key Concept in Drugs and Society*. New Delhi: Sage Publications.
- 9. Sain, Bhim 1991, *Drug Addiction Alcoholism*, Smoking obscenity New Delhi: Mittal Publications.
- 10. Sandhu, Ranvinder Singh, 2009, *Drug Addiction in Punjab*: A Sociological Study. Amritsar: Guru Nanak Dev University.
- 11. Singh, Chandra Paul 2000. Alcohol and Dependence among Industrial Workers: Delhi: Shipra.
- 12. Sussman, S and Ames, S.L. (2008). *Drug Abuse: Concepts, Prevention and Cessation,* Cambridge University Press.
- 13. Verma, P.S. 2017, "Punjab's Drug Problem: Contours and Characterstics", Economic and Political Weekly, Vol. LII, No. 3, P.P. 40-43.
- 14. World Drug Report 2016, United Nations office of Drug and Crime.
- 15. World Drug Report 2017, United Nations office of Drug and Crime.

Paper-I: Modern Office Automation Tools - II

Time: 3 Hrs. Max.Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Note for Candidate:

The students can use only Non -Programmable & Non- Storage type calculator.

Practical marks will include the appropriate weightage for proper maintenance of Lab Record

Section A

Elements of Modern Office Environment: Computer Hardware, Network Devices (Hub, Switch, Router, Gateway etc.), Users (Administrators, Programmers, Network Administrator, End User).

Basics of Computer Networks: Introduction to Computer Network, Need of Computer Networks, Types of Computer Networks, Classification of Computer Networks (LAN, WAN, MAN), Transmission media.

Section B

Understanding and Preparing Network Cables: Introduction to Ethernet Cables, Color Coding Standards, Preparing connection cables.

Section C

IP Addressing: Introduction to DNS, DHCP, IP Address and its classes, Configuring IP Address.

Section D

Wireless Router: Configuring wireless router.

Security: Computer Security threats (Virus, worms, Trojans etc.), concept of antivirus, firewall, and basic concepts of data security

- 1. Tannanbum, A.S.: Computer Networks, Prentice Hall, 1992, 3rd Edition.
- 2. Stallings, William: Local Networks: An Introduction: Macmillan Publishing Co., Stallings.
- 3. Bhandari, Pardeep et.: Computer Networks ,Kalyani Publishers

Paper – II: Internet Applications & Lab.

Time: 3 Hours

Max. Marks: 75 Theory: 50 Practical: 25

Note for Paper Setter:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Note for Candidate:

Attempt five questions in all by selecting one question from each section and the fifth question may by attempted from any sections.

The students can use only Non -Programmable & Non- Storage type calculator.

Practical marks will include the appropriate weightage for proper maintenance of Lab Record

Section A

Introduction: About internet and its working, business use of internet, services offered by internet, Evaluation of internet, internet service provider (ISP).

Section B

E-Mail Basic Introduction; Advantage and disadvantage, structure of an e-mail message, working of e-mail (sending and receiving messages).

Section C

WWW. Introduction, working of WWW, Web browsing (opening, viewing, saving and printing a web page and bokmark), web designing using HTML and CSS.

Section D

Search Engine: About search engine, component of search engine, working of search engine, difference between search engine and web directory, Basics of digital marketing

- 1. "Understanding The Internet", Kieth Sutherland, Buterworth–Heineman; 1st Editon (October 31, 200).
- 2. "Internet Technologies", S. K. Bansal, APH Publishing Corporation (April 1, 202). 3. "Data Communications and Networking", Behrouz A. Forouzan, 3rd Editon.

Paper-III: Basics of Spreadsheet & Lab

Time: 3 Hrs. Max. Marks: 75

Theory: 50 Practical: 25

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Note for Candidate:

The students can use only Non -Programmable & Non- Storage type calculator. Practical marks will include the appropriate weightage for proper maintenance of Lab Record

Section A

1. Exploring Microsoft Excel

Starting and Exiting the Application Examining Microsoft Excel's Interface Introduction to Free and Open Source(FOSS) Spreadsheet

2. Creating Workbook Files

Opening and Closing Files, Creating and Saving a New Workbook, Creating a New Workbook from a Template, Microsoft Excel File Types, Entering Data, Entering Data into a Selected Range

3. Getting Help While You Work

Using Microsoft Excel's Built In Help

Section B

4: Editing Worksheet

Displaying or Hiding Gridlines and Headers, Zooming the Display, Changing Views, Splitting a Window, Freezing and Unfreezing Panels VI. Hiding Rows, Columns, and Sheets, Viewing and Arranging Multiple Sheets, Saving a Workspace, Saving a Custom View

5. Navigating Worksheets and Workbooks

Navigating in a Worksheet and Workbook, Using Find , Using Go To, Working with Multiple Workbooks

6. Managing Worksheets and Workbook Files

Managing Worksheets, Managing Workbook File

Section C

7. Formulas

What is a Formula? Creating a Basic Formula, Reference Data from other Worksheets, Using Auto Calculate

8. Editing Text and Values

Editing and Replacing Cell Content, Using Undo, Redo, and Repeat, Using Smart Tags

9. Clearing, Moving, and Copying Cell Content

Clearing Cell Content, Moving Cell Content III. Copying Cell Content, Collecting and Pasting Multiple Items, Using the Paste Special Command

Section D

10. Using Functions

The SUM Function, Using AutoSum, The SUMIF and SUMIFS Functions, Using pivot columns

11. Using Date and Time Functions

The DATE Function, The NOW Function, The TIME Function, The DATE VALUE Function

12. Previewing and Printing Worksheets

Using Print Preview, Using Page Break Preview, Using the Print Dialog Box, Using Quick Print, Displaying and Printing Formulas

- 1. Microsoft Excel Complete Reference
- 2. MS Office- BPB Publications

(Paper–IV: On Job Training (Project & Presentation)

Time: 3 Hrs. Maximum Marks: 100

On Job Training (8 Weeks)

PAPER-V: COMMUNICATION SKILLS IN ENGLISH - II

Time: 3 Hours

Max. Marks: 50 Theory Marks: 35 Practical Marks: 15

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Course Contents:

SECTION-A

Listening Skills: Barriers to listening; effective listening skills; feedback skills. **Activities:** Listening exercises – Listening to conversation, News and TV reports

SECTION-B

Attending telephone calls; note taking and note making.

Activities: Taking notes on a speech/lecture

SECTION-C

Speaking and Conversational Skills: Components of a meaningful and easy conversation; understanding the cue and making appropriate responses; forms of polite speech; asking and providing information on general topics.

Activities: 1) Making conversation and taking turns

2) Oral description or explanation of a common object, situation or concept

SECTION-D

The study of sounds of English,

Stress and Intonation,

Situation based Conversation in English,

Essentials of Spoken English. **Activities:** Giving Interviews

PRACTICAL / ORAL TESTING

Marks: 15

Course Contents:-

- 1. Oral Presentation with/without audio visual aids.
- 2. Group Discussion.
- 3. Listening to any recorded or live material and asking oral questions for listening comprehension.

Ouestions:-

- 1. Oral Presentation will be of 5 to 10 minutes duration (Topic can be given in advance or it can be student's own choice). Use of audio visual aids is desirable.
- 2. Group discussion comprising 8 to 10 students on a familiar topic. Time for each group will be 15 to 20 minutes.

Note: Oral test will be conducted by external examiner with the help of internal examiner.

PAPER-VI: ਪੰਜਾਬੀ (ਲਾਜ਼ਮੀ)

ਸਮਾਂ : 3 ਘੰਟੇ ਕੁਲ ਅੰਕ : 50

ਪਾਠ-ਕ੍ਰਮ ਅਤੇ ਪਾਠ-ਪੁਸਤਕਾਂ

ਸੈਕਸ਼ਨ-ਏ

ਆਤਮ ਅਨਾਤਮ (ਕਹਾਣੀ ਭਾਗ), (ਸੰਪ. ਸੁਹਿੰਦਰ ਬੀਰ ਅਤੇ ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ) ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ। (ਵਿਸ਼ਾ-ਵਸਤੁ, ਪਾਤਰ ਚਿਤਰਨ)

ਸੈਕਸ਼ਨ-ਬੀ

ਇਤਿਹਾਸਕ ਯਾਦਾਂ (ਇਤਿਹਾਸਕ ਲੇਖ-ਸੰਗ੍ਰਹਿ) ਸੰਪਾ. ਸ.ਸ.ਅਮੋਲ, ਪੰਜਾਬੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਲੁਧਿਆਣਾ। (ਲੇਖ 7 ਤੋਂ 12) (ਸਾਰ, ਲਿਖਣ ਸ਼ੈਲੀ)

ਸੈਕਸਨ-ਸੀ

(ੳ) ਸ਼ਬਦ-ਬਣਤਰ ਅਤੇ ਸ਼ਬਦ ਰਚਨਾ : ਪਰਿਭਾਸ਼ਾ, ਮੁੱਢਲੇ ਸੰਕਲਪ (ਅ) ਗ਼ਬਦ ਗ੍ਰਟਾਸ

ਸੈਕਸ਼ਨ-ਡੀ

- (ੳ) ਸੰਖੇਪ ਰਚਨਾ
- (ਅ) ਮੁਹਾਵਰੇ ਅਤੇ ਅਖਾਣ

ਅੰਕ–ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

- 1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਭਾਗ ਹੋਣਗੇ। ਹਰ ਭਾਗ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
- 2. ਵਿੰਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਭਾਗ ਵਿੰਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
- ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ ਅੰਕ ਹਨ।
- 4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ-ਪ੍ਰਸ਼ਨਾਂ ਵਿਚ ਕਰ ਸਕਦਾ ਹੈ।

PAPER-VI: ਮੁੱਢਲੀ ਪੰਜਾਬੀ (In lieu of Compulsory Punjabi)

ਸਮਾਂ: 3 ਘੰਟੇ ਕੁਲ ਅੰਕ: 50

ਪਾਠ-ਕ੍ਰਮ

ਸੈਕਸ਼ਨ-ਏ

ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ : ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ

(ਨਾਂਵ, ਪੜਨਾਂਵ, ਕਿਰਿਆ, ਵਿਸ਼ੇਸ਼ਣ, ਕਿਰਿਆ ਵਿਸ਼ੇਸ਼ਣ, ਸਬੰਧਕ, ਯੋਜਕ ਅਤੇ ਵਿਸਮਿਕ)

ਸੈਕਸ਼ਨ-ਬੀ

ਪੰਜਾਬੀ ਵਾਕ ਬਣਤਰ : ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ

- (ੳ) ਸਾਧਾਰਨ ਵਾਕ, ਸੰਯੁਕਤ ਵਾਕ ਅਤੇ ਮਿਸ਼ਰਤ ਵਾਕ (ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ)
- (ਅ) ਬਿਆਨੀਆ ਵਾਕ, ਪ੍ਰਸ਼ਨਵਾਚਕ ਵਾਕ ਅਤੇ ਹੁਕਮੀ ਵਾਕ (ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ)

ਸੈਕਸ਼ਨ-ਸੀ

ਪੈਰ੍ਹਾ ਰਚਨਾ ਸੰਖੇਪ ਰਚਨਾ

ਸੈਕਸ਼ਨ-ਡੀ

ਚਿੱਠੀ ਪੱਤਰ (ਘਰੇਲੂ ਅਤੇ ਦਫ਼ਤਰੀ) ਅਖਾਣ ਅਤੇ ਮਹਾਵਰੇ

ਅੰਕ-ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

- 1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਭਾਗ ਹੋਣਗੇ। ਹਰ ਭਾਗ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
- 2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਭਾਗ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
- ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ ਅੰਕ ਹਨ।
- 4. ਪੇਪਰ ਸੈੰਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ-ਪ੍ਰਸ਼ਨਾਂ ਵਿਚ ਕਰ ਸਕਦਾ ਹੈ।

PAPER-VI: Punjab History & Culture (C 320 to 1000 B.C.) (Special Paper in lieu of Punjabi compulsory) (For those students who are not domicile of Punjab)

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section-A

- 1. Alexander's Invasion and its Impact
- 2. Punjab under Chandragupta Maurya and Ashoka.

Section-B

- 3. The Kushans and their Contribution to the Punjab.
- 4. The Panjab under the Gupta Empire.

Section-C

- 5. The Punjab under the Vardhana Emperors
- 6. Socio-cultural History of Punjab from 7th to 1000 A.D.

Section-D

- 7. Development of languages and Education with Special reference to Taxila
- 8. Development of Art & Architecture

Suggested Readings:

- 1. L. M Joshi (Ed), *History and Culture of the Punjab*, Art-I, Punjabi University, Patiala, 1989 (3rd Edition)
- 2. L.M. Joshi and Fauja Singh (Ed.), *History of Punjab*, Vol. I, Punjabi University, Patiala, 1977.
- 3. Budha Parkash, Glimpses of Ancient Punjab, Patiala, 1983.
- 4. B.N. Sharma: Life in Northern India, Delhi. 1966.

PAPER – VII: DRUG ABUSE: PROBLEM, MANAGEMENT AND PREVENTION (COMPULSORY PAPER)

DRUG ABUSE: MANAGEMENT AND PREVENTION

Time: 3 Hours Max. Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section - A

Prevention of Drug abuse:

Role of family: Parent child relationship, Family support, Supervision, Shaping values, Active Scrutiny.

Section – B

School: Counselling, Teacher as role-model. Parent-teacher-Health Professional Coordination, Random testing on students.

Section - C

Controlling Drug Abuse:

Media: Restraint on advertisements of drugs, advertisements on bad effects of drugs, Publicity and media, Campaigns against drug abuse, Educational and awareness program

Section - D

Legislation: NDPs act, Statutory warnings, Policing of Borders, Checking Supply/Smuggling of Drugs, Strict enforcement of laws, Time bound trials.

- 1. Ahuja, Ram (2003), Social Problems in India, Rawat Publication, Jaipur.
- 2. Extent, Pattern and Trend of Drug Use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.
- 3. Inciardi, J.A. 1981. *The Drug Crime Connection*. Beverly Hills: Sage Publications.
- 4. Kapoor. T. (1985) Drug Epidemic Among Indian Youth, New Delhi: Mittal Pub.
- 5. Kessel, Neil and Henry Walton. 1982, Alcohalism. Harmond Worth: Penguin Books.
- 6. Modi, Ishwar and Modi, Shalini (1997) *Drugs: Addiction and Prevention*, Jaipur: Rawat Publication.
- 7. National Household Survey of Alcohol and Drug Abuse. (2003) New Delhi, Clinical Epidemiological Unit, All India Institute of Medical Sciences, 2004.
- 8. Ross Coomber and Others. 2013, *Key Concept in Drugs and Society*. New Delhi: Sage Publications.
- 9. Sain, Bhim 1991, *Drug Addiction Alcoholism*, Smoking Obscenity, New Delhi: Mittal Publications.
- 10. Sandhu, Ranvinder Singh, 2009, *Drug Addiction in Punjab*: A Sociological Study. Amritsar: Guru Nanak Dev University.
- 11. Singh, Chandra Paul 2000. *Alcohol and Dependence among Industrial Workers*: Delhi: Shipra.
- 12. Sussman, S and Ames, S.L. (2008). *Drug Abuse: Concepts, Prevention and Cessation,* Cambridge University Press.
- 13. Verma, P.S. 2017, "*Punjab's Drug Problem: Contours and Characterstics*", Economic and Political Weekly, Vol. LII, No. 3, P.P. 40-43.
- 14. World Drug Report 2016, United Nations office of Drug and Crime.
- 15. World Drug Report 2017, United Nations office of Drug and Crime.

Paper-I: Commercial Correspondence & LAB

Time: 3 Hrs

Maximum Marks: 50

Theory: 35 Practical: 15

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

The student can use only Non-programmable & Non-storage type calculator.

Section A

Correspondence: Commercial, officials, semi official, meaning, importance, objectives, sales letter, trade order agency correspondence, import, export trade, secretarial correspondence, application for jobs, post of accountant, teacher, office memorandum, reminder, difference between official letter and semi-official letter,

Section B

correspondence between head of department and principal for asking honorarium and for admission notice, correspondence between principal and university for sending enrollment numbers and for the permission for extra admission, correspondence between principal and UGC for asking grant for vocational subject and for recognition of a new subject.

Section C

Typing in inscript (Indian Script) method for all Indian languages (Hindi, Punjabi etc.) Introduction to traditional system of typing in indian languages (Hindi, Punjabi etc.). knowledge of proof correction signs.

Section D

Introduction to various types of reprographers, knowledge of document scanning system, creating labels and filters in email account.

- 1. Modern Commercial Correspondence, S.Chand
- 2. Oxford Handbook of Commercial Correspondence, A Ashely

Paper II: Web Technologies

Time: 3 Hrs. Max. Marks: 75

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

The student can use only Non-programmable & Non-storage type calculator.

Section A

Introduction to Web Development: Webpage, Website, Static Website, Dynamic Website, Web Servers, Web Browsers

Introduction to HTML/DHTML: HTML Basics, HTML Elements (Tags), Structure of HTML Program, Attributes, Headings, Paragraphs, Formatting, Links, Images, Tables, Lists, Forms, Frames, Where to put Tables, Lists, Images, Forms, CSS in DHTML, Implementation of WebPages using CSS.

Section B

Introduction to JavaScript: How & Where to put the JavaScript Code, JavaScript Statements, Comments, Variables, Operators, Control Statements, Loops, Popup Boxes, Functions.

Section C

Introduction to Wordpress: Managing Websites, Creating a Website, Using Wordpress Templates, Adding New WebPages, Text and Page Format, Inserting Tables, Managing Menu Bars, Lists, Images, Adding Links.

Section D

Purchasing a Domain Name & Web Space: Domain Name & Web Space, Getting a Domain Name & Web Space (Purchase or Free), Uploading the Website to Remote Server.

- 1. Web Enabled Commercial Application Development HTML (Ivan Bayross)
- 2. JavaScript, a Beginner's Guide John Pollock, Third Edition
- 3. Dreamweaver CS5 for Dummies Janine C. Warner, Paperback Edition
- 4. The Essential Guide to Dreamweaver CS4 David Powers

Paper – III: Database Management System & Lab

Time: 3 Hrs

Maximum Marks: 75

Theory: 50 Practical: 25

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

The student can use only Non-programmable & Non-storage type calculator.

Section A

Introduction to Data, Field, Record, File, Database, Database management system. Structure of database system, Advantage and disadvantage, levels of database system,

Section B

Relational model, hierarchical model, network model, comparison of these models, E–R diagram, different keys used in a relational system, SQL.

Section C

DBA, responsibilities of DBA, Relational form like INF, 2NF, 3NF, BCNF. SQL: Introduction to SQL–DDL, DML, DCL

Section D

MS-Access:

Introduction, Understanding Databases. Creating the tables. Entering records in table, deleting table, modifying table fields, linking tables, Queries, Forms, formatting forms, relating a form to tables, Reports(building reports, formatting report. displaying the information of table using reports Adding Graphs to your reports.

- 1. Microsoft Access–Wiley's
- 2. PC Computing R.K. Taxali
- 3. Database Management System Parteek Bhatia (Kalyani Publisher)

Paper – IV: Desktop Publishing

Time: 3 Hrs Maximum Marks: 75

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

The student can use only Non-programmable & Non-storage type calculator.

Section A

- 1. Concepts of vector graphics.
- 2. Color palate, Pasteboard, &. Print Page
- 3. Using ruler unit's etc...
- 4. Corel Tools (Pick, Shape, Knife, Eraser, Zoom, Freehand, Natural Pen, Dimensions, Ellipse, Polygon etc.).

Section B

- 5. Transformations, Trimming, Wielding, Intersection of Objects, Snapping, Using Object Manager.
- 6. Giving effects, (Envelope, Adding Perspective, Contours, Blending Image.)

Section C

- 1. Introduction to Graphics, Vector Graphics & Bitmaps
- 2. Understanding Image Size & resolution
- 3 Relation between resolution, File sizes & output
- 4. Using menu & Palettes.
- 5. Concept of Path (Segment, Anchor, Curved, Closed, Open, Subpath)

Section D

- 1. Photoshop Tools (Pen, Pencil, Brush, History, Air, Eraser, Rubber stamp, Smudge, Dodge, Burn, Sponge), Masks & Histogram.
- 2. Acquiring &. Importing Images
- 3. Concept of Lyres Channels & Path, Filters, Rendering Effects, Transformation, Strokes, Image Modes, Canvas & Images.
- 4. Using navigator & Photo Shop plugins.

- 1. Adobe Photoshop CS6– Wiles's
- 2. Adobe Photoshop– Complete Reference
- 3. Core Draw–Complete Reference

Paper – V: Lab Based on Web Technologies

Time: 3 Hrs Maximum Marks: 50

Paper-VI: Lab Based on Photoshop and Corel Draw

Time: 3 Hrs Maximum Marks: 75

Paper-I: Computer Networks

Time: 3 Hrs Maximum Marks: 75

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

The student can use only Non-programmable & Non-storage type calculator.

Section A

- 1. **Introduction:** Network Definition, Basic Components of a Network, Network types and topologies, Uses of Computer Networks, Network Architecture. Transmission Media: Coaxial cable, twisted pair cable, fibre optics & satellites. OSI reference model, TCP/IP reference model, comparison of OSI and TCP reference model.
- 2. **Introduction to Analog and Digital Transmission:** Types of modems, Transmission & witching: Multiplexing, circuit switching, packet switching, hybrid switching.

Section B

- 3. **Local Area Network Protocols:** CSMA Protocols, IEEE standards 802, Token Bus, Token Ring, FDDI.
- 4. **Data Link Layer Design Issues:** Services provided to Network layer framing, error control, flow control, link management. Error detection & correction.

Section C

5. **Design Issues of Network Layer:** Services provided to transport layer, routing, connection, internet & World Wide Web.

Section D

- 6. **Network Security and Privacy:** Brief Introduction to Cryptography.
- 7. **Network Services:** File transfer, Access & Management, Remote login

- 1. Tannanbum, A.S.: Computer Networks, Prentice Hall, 1992, 3rd Edition.
- 2. Stallings, William: Local Networks: An Introduction: Macmillan Publishing Co., Stallings.
- 3. Bhandari, Pardeep et.: Computer Networks, Kalvani Publisher

Paper-II: Management Information System

Time: 3 Hrs Maximum Marks: 50

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

The student can use only Non-programmable & Non-storage type calculator.

Section A

Fundamental aspects of Information, Capturing of Information, Converting Information to Computer – readable form, source of Information, on–line Information access and capture.

Section B

What are systems? Information Systems? Categories of Information Systems, Development Life Cycle of Information system.

Technologies for Information System: Latest trends in Hardware and Software.

Section C

Various types of information systems: Transaction processing systems, office Automation systems, MIS and decision support system.

Section D

Case studies of the Information System: Accounting Information systems, Inventory control systems & Marketing systems.

- 1. "Information Systems" by Mudride & Ross.
- 2. "Business Information Systems", Muneesh Kumar.
- 3. "Information Systems for Managers", Ashok Arora and A.K. Shaya

Paper – III: Operating System

Time: 3 Hrs Maximum Marks: 75

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

The student can use only Non-programmable & Non-storage type calculator.

Section A

Introduction:

Definition, evolution, need, early system, function, buffering spooling, single user, multiuser, multiprogramming, multiprocessing, multitasking, multithreading, batch processing, real time, time systems, time sharing systems, security, protection.

Section B

Processor Management / CPU Scheduling: CPU – I/O Basic Cycle, process state, process control lock, Scheduling, Queue, Schedulers, Scheduling Algorithms, Performance criteria, FCFS, SJF, Priority, SRTF, Round Robin, Multi – Levels users Algorithm.

Section C

Memory Management: Preliminaries, Machine Resident monitor, relocation, Swapping, backing storage, swap time, registers, box and limit registers, MFT, MFT job scheduling, region size selection, memory fragmentation, MVT, MVT job scheduling compaction, paging, Hardware, Job Scheduling.

Virtual Memory: Overlays, demand paging, page fault, performance of demand paging, page replacement, page replacement algorithm, FIFO, optional replacement fault frequency, page size.

Section D

File Management: Disk and File Management.

Deadlocks: Definition, Necessary condition, to occur RAG, Deadlock Prevention Mutual exclusion, Hold and wait, No pre–emption, circular wait Banker's algorithms, Recovery from deadlock, semaphores.

References:

1. Operating System: Peter Galvin

2. Operating System: Ekta Walia, Kalyani Publishers

Paper–IV: Lab Based on Operating System

Time: 3 Hrs Maximum Marks: 50

Paper-V

Time: 3 Hrs Maximum Marks: 50

Lab Based on Flash

PAPER-VII (ESL-221): ENVIRONMENTAL STUDIES

Time: 3 Hrs. Max. Marks: 100

Teaching Methodologies

The Core Module Syllabus for Environmental Studies includes class room teaching and field work. The syllabus is divided into 8 Units [Unit-1 to Unit-VII] covering 45 lectures + 5 hours for field work [Unit-VIII]. The first 7 Units will cover 45 lectures which are class room based to enhance knowledge skills and attitude to environment. Unit-VIII comprises of 5 hours field work to be submitted by each candidate to the Teacher in-charge for evaluation latest by 15 December, 2019.

Exam Pattern: End Semester Examination- 75 marks

Project Report/Field Study- 25 marks [based on submitted report]

Total Marks- 100

The structure of the question paper being:

Part-A, Short answer pattern with inbuilt choice **– 25 marks** Attempt any five questions out of seven distributed equally from Unit-1 to Unit-VII. Each question carries 5 marks. Answer to each question should not exceed 2 pages.

Part-B, Essay type with inbuilt choice **– 50 marks** Attempt any five questions out of eight distributed equally from Unit-1 to Unit-VII. Each question carries 10 marks. Answer to each question should not exceed 5 pages.

Project Report / Internal Assessment:

Part-C, Field work – 25 marks [Field work equal to 5 lecture hours]

The candidate will submit a hand written field work report showing photographs, sketches, observations, perspective of any topic related to Environment or Ecosystem. The exhaustive list for project report/area of study are given just for reference:

- 1. Visit to a local area to document environmental assets: River / Forest/ Grassland / Hill / Mountain / Water body / Pond / Lake / Solid Waste Disposal / Water Treatment Plant / Wastewater Treatment Facility etc.
- Visit to a local polluted site Urban / Rural / Industrial / Agricultural
- 3. Study of common plants, insects, birds
- 4. Study of tree in your areas with their botanical names and soil types
- 5. Study of birds and their nesting habits
- 6. Study of local pond in terms of wastewater inflow and water quality
- 7. Study of industrial units in your area. Name of industry, type of industry, Size (Large, Medium or small scale)
- 8. Study of common disease in the village and basic data from community health centre
- 9. Adopt any five young plants and photograph its growth
- 10. Analyze the Total dissolved solids of ground water samples in your area.

 11. Study of Particulate Matter (PM_{2.5} or PM₁₀) data from Sameer website. Download from Play
- 12. Perspective on any field on Environmental Studies with secondary data taken from Central Pollution Control Board, State Pollution Control Board, State Science & Technology Council

Unit-I

The multidisciplinary nature of environmental studies

Definition, scope and importance, Need for public awareness

(2 lectures)

Natural Resources: Renewable and non-renewable resources:

Natural resources and associated problems.

- Forest resources: Use and over-exploitation, deforestation, case studies. Timber (a) extraction, mining, dams and their effects on forests and tribal people. Water resources: Use and over-utilization of surface and ground water, floods, drought,
- (b) conflicts over water, dams-benefits and problems.
- (c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
- Food resources: World food problems, changes caused by agriculture and overgrazing, (d) effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
- Energy resources: Growing energy needs, renewable and non-renewable energy sources, (e) use of alternate energy sources, case studies.
- Land resources: Land as a resource, land degradation, man induced landslides, soil (f) erosion and desertification.
 - Role of an individual in conservation of natural resources.
 - Equitable use of resources for sustainable lifestyles.

(8 Lectures)

Unit-III

Ecosystems

- Concept of an ecosystem
- Structure and function of an ecosystem
- Producers, consumers and decomposers
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids
- Introduction, types, characteristic features, structure and function of the following ecosystem: Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)

(6 Lectures)

Unit-IV

Biodiversity and its conservation

- Introduction Definition: genetic, species and ecosystem diversity
- Biogeographical classification of India
- Value of biodiversity: consumptive use, productive use, social, ethical aesthetic and option values
- Biodiversity at global, national and local levels
- India as a mega-diversity nation
- Hot-spots of biodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts
- Endangered and endemic species of India
- Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity

(8 Lectures)

Unit-V

Environmental Pollution:

Definition:

- Causes, effects and control measures of Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear pollution
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution
- Pollution case studies
- Disaster management: floods, earthquake, cyclone and landslides

(8 Lectures)

Unit-VI

Social Issues and the Environment

- From unsustainable to sustainable development
- Urban problems and related to energy
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people; its problems and concerns. Case studies.
- Environmental ethics: Issues and possible solutions
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- Wasteland reclamation
- Consumerism and waste products
- Environmental Protection Act, 1986
- Air (Prevention and Control of Pollution) Act, 1981
- Water (Prevention and control of Pollution) Act, 1974
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation
- Public awareness

(7 Lectures)

Unit-VII

Human Population and the Environment

- Population growth, variation among nations
- Population explosion Family Welfare Programmes
- Environment and human health
- Human Rights
- Value Education
- HIV / AIDS
- Women and Child Welfare
- Role of Information Technology in Environment and Human Health
- Case Studies

(6 Lectures)

Unit-VIII

Field Work

- Visit to a local area to document environmental assets River / forest / grassland / hill / mountain
- Visit to a local polluted site Urban / Rural / Industrial / Agricultural
- Study of common plants, insects, birds
- Study of simple ecosystems-pond, river, hill slopes, etc

(Field work equal to 5 lecture hours)

References:

- 1. Bharucha, E. 2005. Textbook of Environmental Studies, Universities Press, Hyderabad.
- 2. Down to Earth, Centre for Science and Environment, New Delhi.
- 3. Heywood, V.H. & Waston, R.T. 1995. Global Biodiversity Assessment, Cambridge House, Delhi.
- 4. Joseph, K. & Nagendran, R. 2004. Essentials of Environmental Studies, Pearson Education (Singapore) Pte. Ltd., Delhi.
- 5. Kaushik, A. & Kaushik, C.P. 2004. Perspective in Environmental Studies, New Age International (P) Ltd, New Delhi.
- 6. Rajagopalan, R. 2011. Environmental Studies from Crisis to Cure. Oxford University Press, New Delhi.
- 7. Sharma, J. P., Sharma. N.K. & Yadav, N.S. 2005. Comprehensive Environmental Studies, Laxmi Publications, New Delhi.
- 8. Sharma, P. D. 2009. Ecology and Environment, Rastogi Publications, Meerut.
- 9. State of India's Environment 2018 by Centre for Sciences and Environment, New Delhi.
- 10. Subramanian, V. 2002. A Text Book in Environmental Sciences, Narosa Publishing House, New Delhi.

Paper I: PROGRAMMING USING PYTHON

Time: 3 Hrs. M. Marks: 75

Note:

- (i) The paper setter is required to set eight questions in all and the candidates will be required to attempt any five questions out of these eight questions. All questions will carry equal marks.
- (ii) The student can use only Non-programmable & Non-storage type calculator.

Introduction to Python: Process of Computational Problem Solving, Python Programming Language

Data and Expressions: Literals, Variables and Identifiers, Operators, Expressions, Statements and Data Types

Control Structures: Boolean Expressions (Conditions), Logical Operators, Selection Control, Nested conditions, Debugging

Lists: List Structures, Lists (Sequences) in Python, Iterating Over Lists (Sequences) in Python

Functions: Fundamental Concepts, Program Routines, Flow of Execution, Parameters & Arguments

Iteration: While statement, Definite loops using For, Loop Patterns, Recursive Functions, Recursive Problem Solving, Iteration vs. Recursion

Dictionaries: Dictionaries and Files, Looping and dictionaries, Advanced text parsing

Objects and Their Use: Introduction to Object Oriented Programming

Modular Design: Modules, Top-Down Design, Python Modules

Reference Books:

- 1. Python for Informatics, Charles Severance, version 0.0.7
- 2. Introduction to Computer Science Using Python: A Computational Problem-Solving Focus, Charles Dierbach, Wiley Publications, 2012, ISBN: 978-0-470-91204-1
- 3. Introduction To Computation And Programming Using Python, GUTTAG JOHN V, PHI, 2014, ISBN-13: 978-8120348660
- 4. Introduction to Computating& Problem Solving Through Python, Jeeva Jose and Sojan P. Lal, Khanna Publishers, 2015, ISBN-13: 978-9382609810
- 5. Introduction to Computing and Programming in Python, Mark J. Guzdial, Pearson Education, 2015, ISBN-13: 978-9332556591
- 6. Fundamentals of Python by Kenneth Lambert, Course Technology, Cengage Learning, 2015
- 7. Learning Python by Mark Lutz, 5th Edition, O'Reilly Media, 2013

Paper II: Multimedia & Its Applications

Time: 3 Hrs. Max. Marks: 75

Note: (i) The paper setter is required to set eight questions in all and the candidates will be required to attempt any five questions out of these eight questions. All questions will carry equal marks. (ii) The student can use only Non-programmable & Non-storage type calculator.

Multimedia: Introduction, Data and File Formats standards, Conversion of different media types, criteria for designing multimedia presentation.

Multi–Media Building Blocks: – Text, Graphics, Video capturing, sound capturing, editing. Basic

Design Principle: proximity, visual hierarchy, symmetry/asymmetry, repetition, unity, contrast, dynamics, emphasis.

Advertisement and Computers: Definition, Concepts, Types, Principles, Objectives, Concepts, Role of computers in advertisement, animation, applications of software's like Photoshop, CorelDraw, quark–express etc.

Tools of Public Relations: Definition, concept and role of public relations in public and corporate sector. Tools of public relations including internet. Image building and public relation campaigns.

References:

- 1. Fundamentals of Multimedia by Ze-Nian Li, and Mark S. Drew, Pearson Prentice Hall
- 2. Multimedia Magic by Gokul, BPB Publication.
- 3. Multimedia Systems by Bufford, Addison Wesley.
- 4. Multimedia in Practice by Jeffcoate, Prectice-Hall.

Paper-III: Lab Based on Python

Time: 3 Hrs Maximum Marks: 75

Paper-IV: Personality Development & Soft Skills

Time: 3 Hrs

Maximum Marks: 100

Theory: 75 Viva: 25

Note:

- (i) The paper setter is required to set eight questions in all and the candidates will be required to attempt any five questions out of these eight questions. All questions will carry equal marks.
- (ii) The student can use only Non-programmable & Non-storage type calculator.

Communication Skill: Introduction to Communication, The Process of Communication, Barriers to Communication, Listening Skills, Writing Skills, Technical Writing, Letter Writing, Job Application, Report Writing, Non-verbal Communication and Body Language, Interview Skills, Group Discussion, Presentation Skills, Technology-based Communication.

Critical Thinking & Problem Solving: Creativity, Lateral thinking, Critical thinking, Multiple Intelligence, Problem Solving, Six thinking hats Mind Mapping & Analytical Thinking. **Teamwork:** Groups, Teams, Group Vs Teams, Team formation process, Stages of Group, Group Dynamics, Managing Team Performance & Team Conflicts.

Ethics, Moral & Professional Values: Human Values, Civic Rights, Engineering Ethics, Engineering as Social Experimentation, Environmental Ethics, Global Issues.

Leadership Skills: Leadership, Levels of Leadership, Making of a leader, Types of leadership, Transactions Vs Transformational Leadership.

References:

- 1. Barun K. Mitra; (2011), "Personality Development & Soft Skills", First Edition; Oxford Publishers.
- 2. Kalyana; (2015) "Soft Skill for Managers"; First Edition; Wiley Publishing Ltd.
- 3. Larry James (2016); "The First Book of Life Skills"; First Edition; Embassy Books.
- 4. Shalini Verma (2014); "Development of Life Skills and Professional Practice"; First Edition; Sultan Chand (G/L) & Company
- 5. John C. Maxwell (2014); "The 5 Levels of Leadership", Centre Street, A division of Hachette Book Group Inc.

Paper-V: Use of Social Media & LAB

Time: 3 Hrs

Maximum Marks: 75

Theory: 50 Practical: 25

Note:

- (i) The paper setter is required to set eight questions in all and the candidates will be required to attempt any five questions out of these eight questions. All questions will carry equal marks.
- (ii) The student can use only Non-programmable & Non-storage type calculator.

UNIT-I

- 1. Introduction to Social Media
 - Social media sites
 - 3 Zones of social media introduced
 - 5 Ps of marketing (participation)
 - Careers in social media marketing
- 2. Social consumers
 - Social media marketing segments
 - Digital consumers
 - Why people do what they do online
 - Diffusion of innovation in a wired world
 - 3. Zones of social media: Zone 1 Social Community
 - Activities
 - Marketing Applications
 - Sites: Google+, Facebook, LinkedIn, Twitter, Reddit, Path, Mylife

UNIT-II

- 4. Zones of social media: Zone 2 Social Publishing
 - Activities
 - Marketing Applications
 - Sites: Tumblr, Instagram, Pinterest, Wikipedia, Vine, facebook, StumbleUpon

UNIT-III

- 5. Zones of social media: Zone 3 Social Entertainment
 - Activities
 - Marketing Applications
 Sites: Friendster, MySpace, Second Life, YouTube, Flickr, Tagged

Paper–I Major Project/ Training (Report and Presentation)

Duration: 6 Months

Max. Marks: 400 External Assessment: 200 Internal Assessment: 200

Report and Presentation should be submitted monthly

Internal Assessment is based upon the performance of above said report and presentation made.

Monthly report is to be evaluated by internal examiner of the concerned college.

Final report is to be submitted by the end of training period. External assessment is based on final report and viva voce. Final report is to be evaluated by external examiner appointed by Guru Nanak Dev University, Amritsar.