B.Voc (Software Development) Part-I (Semester - I& II) Sessions 2021-22

(P.G. DEPARTMENT OF COMPUTER SCIENCE)

OUTLINES OF TESTS,
SYLLABI AND COURSES OF READING

FOR

BACHELOR OF VOCATION SOFTWARE DEVELOPMENT
(SEMESTER SYSTEM)
FIRST YEAR (Semester I & II)
(2021-22)

FACULTY OF COMPUTING SCIENCES

SRI GURU TEG BAHADUR KHALSA COLLEGE

Sri Anandpur Sahib

An Autonomous College

Affiliated to Punjabi University, Patiala

APPROVED
Board of Studies Meeting held on 19th June 2021

PROGRAMME OF STUDY
BACHELOR OF VOCATION SOFTWARE DEVELOPMENT
PART I (SEMESTER I)
Sessions: 2021-22

Code	Title of Paper	Credits	University Examination	Internal Assessment	Max. Marks	Exam. Duration Hours
BVSD-111	Fundamentals of Computer & Software Development	4.5	70	30	100	3
BVSD-112	Programming using C	4.5	70	30	100	3
BVSD-113	Web designing using HTML	4.5	70	30	100	3
BVSD-114	English (Communication Skills)	4	70	30	100	3
BVSD-115 BSP-101A,B	Punjabi Compulsory OR Punjabi Mudhla Gyan*	4	70	30	100	3
BVSD-116	Software Lab I(Based on BVSD-111)	4	70	30	100	3
BVSD-117	Software Lab II(Based on BVSD-112 &BVSD-113)	4.5	70	30	100	3
BVSD-118 (SAE 1.1)	Drug Abuse: Problem Management & Prevention (Qualifying)	-	35	15	50	3
Total		30	490	210	700	

1. **The breakup of marks for the practical will be as under:**

    i.   Internal Assessment   30 Marks

    ii.   Viva Voce (External Evaluation)   40 Marks

    iii.   Practical Performance & write up (External Evaluation)   30 Marks

2. **The breakup of marks for the internal assessment for theory Subjects will be as under:**

    Mid semester test – I   10 Marks

    Mid semester test – II   10 Marks

    Attendance   5 Marks

    Assignment   5 Marks

*Only those students who have not studied Punjabi up to matriculation can opt Mudhla Gyan. Other students will study Punjabi Compulsory.

B. Voc. Programme has been designed as per National Skill Qualification Framework (NSQF) emphasizing on skill based education.

APPROVED
Board of Studies Meeting held on 19th June 2021

PROGRAMME OF STUDY
BACHELOR OF VOCATION SOFTWARE DEVELOPMENT
PART I (SEMESTER II)
Sessions: 2021-22

Code	Title of Paper	Credits	University Examination	Internal Assessment	Max. Marks	Exam. Duration Hours
BVSD-121	Object Oriented Programming Using C++	4	70	30	100	3
BVSD-122	Data Structures	4	70	30	100	3
BVSD-123	Discrete Mathematics	4	70	30	100	3
BVSD-124	English Communication Skills	3	70	30	100	3
BVSD-125 BSP-201A,B	Punjabi Compulsory OR Punjabi Mudhla Gyan*	3	70	30	100	3
BVSD-126	Software Lab III(Based on BVSD-121 &BVSD-122)	4	70	30	100	3
BVSD-127	Language Lab –I (Based On BVSD-124 & BSP - 201A,B)	4	-	50	100	3
			-	50		
BVSD-128 (SAE 1.2)	Environmental and Road Safety Awareness	4	70	30	100	3
Total		**30**	**490**	**310**	**800**	

1.   **The breakup of marks for the practical will be as under:**
     i.   Internal Assessment   30 Marks
     ii. Viva Voce (External Evaluation)   40 Marks
     iii. Practical Performance & write up (External Evaluation)   30 Marks

2.   **The breakup of marks for the internal assessment for theory Subjects will be as under:**

     Mid semester test – I   10 Marks
     Mid semester test – II   10 Marks
     Attendance   5 Marks
     Assignment   5 Marks

*Only those students who have not studied Punjabi up to matriculation can opt Mudhla Gyan. Other students will study Punjabi Compulsory.

B. Voc. Programme has been designed as per National Skill Qualification Framework (NSQF) emphasizing on skill based education.

APPROVED
Board of Studies Meeting held on 19th June 2021   3

BVSD-111 FUNDAMENTALS OF COMPUTER AND SOFTWARE DEVELOPMENT

Time allowed: 3 hours   **Max Marks: 100**
Number of Lectures: 60   **External Marks : 70 marks**
Pass Marks: 35%   **Internal Assessment: 30 marks**
(CREDITS: 4.5)
Instructions for the paper setter
The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 10.5 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 28 marks, which will cover the entire syllabus uniformly. Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*
Instructions for the candidates
Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTION A
Introduction to Computer: Block diagram of a Computer, Characteristics of computers andGenerations of computers.
Software and Hardware: Types of Software and Hardware.
Input/output Devices, Memories: Main Memories - RAM, ROM and Secondary StorageDevices - Hard Disk, Compact Disk, DVD, and Portable devices.
Computer Languages: Machine language, assembly language, high level language, 4GL,
Operating System : Introduction to windows, Linux, MAC.,Software Installation, Driver Installation, Working with Control Panel, Window 7 installation.
Applications of Information Technology and Trends: IT in Business and Industry, IT inEducation & training, IT in Science and Technology, IT and Entertainment, Current Trends in IT Application - AI, Virtual Reports, voice recognition, Robots, Multimedia Technology.

SECTIONB
Number System: Non-positional and positional number systems, Base conversion, Concept of Bit and Byte, binary, decimal, hexadecimal, and octal systems, conversion from one system to the other.
Computer Network: Network types, network topologies.
Understanding Basics of Software Development: Basic Requirements for SoftwareDevelopment. Describing Software Quality Attributes and the problems associated with software and software Development. Professional issues related to Software Development. Understanding Core Programming, Understanding Object oriented Programming. Opportunities and Challenges facing softwareengineering.

Reference Books:
1   P.K. Sinha and P. Sinha, Foundations of Computing, BPB.
2   ChetanSrivastva, Fundamentals of Information Technology, Kalyani Publishers.
3   Roger S.Pressman, Tata Mcgraw Hill.
4   Ian Somerville, Software Engineering, Pearson education.
5   Rajib Mall, Fundamental of Software Engineering, PHI.

APPROVED

BVSD—112 PROGRAMMING USING C

Time allowed: 3 hours   **Max Marks: 100**
Number of Lectures: 60   **External Marks : 70 marks**
Pass Marks: 35%   **Internal Assessment: 30 marks**
 (CREDITS: 4.5)

Instructions for the paper setter
The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 10.5 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 28 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

Instructions for the candidates
Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTIONA
Fundamental of C programming: Overview, Basic Structure of C Program, Program Debugging, Compilation and Execution, Rules of Character set, Identifiers and keywords, Constants, Variables, Data types.
Header Files: stdio.h, math.h, string.h, process.h etc.
I/O functions: Formatted and Unformatted console I/O functions.
Operators: Need, Types, Precedence and Associativity. Type conversion (Implicit and Explicit conversion).
Control Structure: Decision making statements (if, if else, switch), Loop control statements (for, while and do-while), jumping statements (break, continue, goto), nested control structures.
Arrays: One dimensional and multidimensional arrays, Array declaration, initialization, reading values into an array, displaying array contents.
Strings: input/output of strings, string handling functions (strlen, strcpy, strcmp, strcat & strrev).
SECTIONB
Functions: Uses of functions, various categories of functions, Library functions and user defined functions, prototype, definition and call, formal and actual arguments, local and global variables, methods of parameter passing to functions, recursion.
Storage Classes: automatic, external, static and register variable**s.**
Structures and unions: using structures and unions, comparison of structure with arrays and union.
Pointers: pointer data type, pointer declaration, initialization, accessing values using pointers, pointers and arrays.
Introduction to Files in C: opening and closing files. Basic I/O operation on files.

Reference Books:
1. E. Balagurusamy, Programming in C, Tata McGraw-Hill.
2. Let Us C, Yashvant P Kanetkar, BPB.
3. Kernighan and Ritchie, The C Programming Language, PHI.
4. Byron Gottfried, Programming in C, Tata McGraw-Hill.
5. Kamathane, Programming in C, Oxford University Press.

BVSD-113 WEB DESIGNING USING HTML

Time allowed: 3 hours   **Max Marks: 100**
Number of Lectures: 60   **External Marks : 70 marks**
Pass Marks: 35%   **Internal Assessment: 30 marks**
(CREDITS: 4.5)

Instructions for the paper setter
The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 10.5 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 28 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

Instructions for the candidates
Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTION-A
Introduction to HTML: Basic HTML concepts, an overview of HTML markup.
What is good Web design, the process of Web publishing, implementation, the phases of Web site development, HTML's role in the Web, and issues facing HTML and the Web?
HTML overview: the structure of HTML documents; document types, the <HTML>element; the <HEAD> element, the <BODY> element.
Links and Addressing: Linking basics, what are URLs; linking in HTML, anchor attributes,images and anchors, image maps; semantic linking with the <LINK> element, meta-information.
HTML and Images: The role of images on the Web, image preliminaries; imagedownloading issues, obtaining images, HTML image basics, images as buttons; and image maps.
Introduction to Layout: Backgrounds, Colors, and Text**,** Design requirements, HTMLapproach to Web design, fonts, colors in HTML, document-wide color attributes for <BODY>, and background images.

SECTION-B
Introduction to Lists: Different types of list tags, Nested Lists, type attribute.
Tables: Basic Table tags, Setting table borders, Inserting Rows & Columns in Table, Including background colors and images in tables, Spanning Rows & Columns, Cell Spacing & Padding, Advantages & Disadvantages of using Tables.
Frames: Creating Framed documents, <Frameset>&<Frame> tags, Elastic & Nested Frames, Formatting Frames, Scroll Bars, <Noframe> tag, Advantages & Disadvantages of using Frames.
Basic Interactivity and HTML: Forms form preliminaries; the <FORM> element; formcontrols.
Style Sheets: style sheets basics, style sheet example, style sheet properties, positioning withstyle sheets.

Reference Books:
1. Deitel, Deitel and Nieto: Internet & WWW. How to program, Pearson Education.
2. Thomas A. Powell, HTML: The Complete Reference, Osborne/McGraw-Hill
3. E Stephen Mack, JananPlatt : HTML 4.0 , No Experience Required, BPB Publications.
4. "HTML Complete" by Sybex, BPB Publications.
5. Bayross, Web Enabled Commercial Applications Development Using HTML, DHTML, Java Script, Perl CGI, BPB Publication
6. Scott Mitchell, Designing Active Server Pages, O Relly.

APPROVED
Board of Studies Meeting held on 19th June 2021   6

2021-22, 2022-23 & 2023-24
Common for B.Voc Semester-I
Software Development (BVSD-114), Retail Management (BVRM-107), Hospitality & Tourism (BVHT-107), Food Processing (BVFP-112),
Sustainable Agriculture (BVSA-102), Industrial Microbiology (BVIM-112), Pharmaceutical Chemistry (BVPC-120),
English (Communication Skills)

Time Allowed: 3 Hours	**Max. Marks: 100**
Periods per week: 4	**Written Examination: 70**
Credits: 04	**Internal Assessment: 30**
Teaching Hours: 60	**Pass Percentage: 35%**

Instructions for the Paper Setter: The question paper will carry 70 marks and will be of three hours duration. The paper will consist of three Units. Following shall be the unit wise marks division:

- Unit-I   –   18 Marks
- Unit-II   –   22 Marks
- Unit-III   –   30 Marks

Note: - We humbly request that the paper setter consults the testing pattern given in testing section.

Instructions for the candidates: Candidates are required to attempt all the questions as per the instructions given in the testing section.

Course Objective:
The chief objective of the paper is to sharpen the literary and grammatical skills of the students. Selected short stories have been incorporated in the syllabus to give impetus to creativity and imagination of the students. The syllabi will also help the students to understand the nuances of English language & usage.

Pedagogy: Primarily the chalk and duster method will be used to teach this course. To evoke the interest of the students in the curriculum due emphasis will be laid on assignments, homework and periodic tests.

Unit-I

Text Prescribed: *Let's Go Home and Other Stories*
The following stories are to be studied:
1. A shadow
2. The Meeting Pool
3. Green Parrots in a Cage
4. The Portrait of a Lady
5. Let's Go Home
6. The Terrorist
7. The Death of a Hero
8. The Cow of the Barricades

APPROVED
Board of Studies Meeting held on 19th June 2021   7

Unit-II

Text Prescribed: *The Students' Companion* by Wilfred D. Best, Rupa & Co.

The following contents of this book are to be studied:
1. One word substitution (Professions or Trades)
2. Correction of frequently misspelt words
3. Antonyms and Synonyms

Unit-III

Text Prescribed: Living English Structure by W. Stannard Allen
Grammar& Composition:

1. Voice
2. Narration
3. Composition: Précis Writing (Unseen Passage)

Testing

Unit-I

1. The examiner shall set one essay type question with internal alternative on theme, incident or character from *Let's Go Home and Other Stories* prescribed in unit-I of the syllabus. The candidate is required to write the answer in about 250 words.   8 marks

2. The examiner shall set seven short-answer type questions from *Let's Go Home and Other Stories* prescribed in unit-I. The candidate is required to attempt any five out of the given seven. Each question shall carry two marks.   10 marks

Unit-II

3. The examiner shall set ten sentences related to different Professions or Trades. The candidate shall give one word substitute for each sentence. The candidate is required to attempt any seven out of given ten. The examiner shall set these sentences from the book *The Students' Companion* prescribed in unit-II of the syllabus. Each answer shall carry one mark.
     7 marks

4. The examiner shall set seven misspelt words for correction from the prescribed book *The Students' Companion.* The candidate is required to attempt any five. Each word shall carry one mark.
                                                                5 marks

5. This question will be pertaining to Antonyms and Synonyms. The examiner shall set seven words for antonyms and seven for synonyms from the prescribed book *The Students' Companion.* The candidate is required to attempt any five from each. Each word shall carry one mark.
                                                        5+5=10 marks

Unit-III

6. The examiner shall set 12 sentences for Change of Voice from the book *Living English Structure* prescribed in unit-III. The candidate is required to attempt any 10 sentences out of the given 12 sentences. Each correct answer shall carry one mark.   10 marks

APPROVED

7. The examiner shall set 12 sentences for Change of Narration from the book *Living English Structure* prescribed in unit-III. The candidate is required to attempt any 10 sentences out of the given 12 sentences. Each correct answer shall carry one mark. 10 marks

8. The examiner shall set an unseen passage for précis writing. The passage shall be of at least 150 words and not exceeding 220 words. The candidate is required to make a précis of the given passage along with a suitable/relevant title. The précis shall be one third of the given passage. 10 marks

Course Learning Outcomes:
1. Students will learn the nuances of English language
2. The course content is expected to improve their communicative skills and command over language
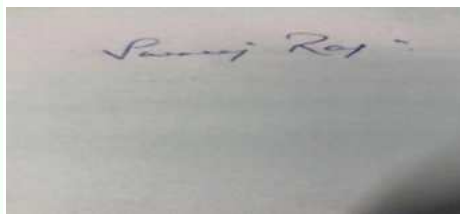3. Students will acquire fundamental knowledge of language and literature.

Suggested Readings:
Oxford Practice Grammar by John Eastwood (Ed. 2014).
Current English Grammar and Usage with Composition by R.P. Sinha, Oxford University Press.

Dr.Gurpreet Kaur   Dr. Ajay Verma   Dr. Swaraj Raj

APPROVED

ਬੀ.ਵਾਕ ਸਾਫਟਵੇਅਰ ਡਿਵੈਲਪਮੈਂਟ
ਭਾਗ ਪਹਿਲਾ,ਸਮੈਸਟਰ ਪਹਿਲਾ
ਪੇਪਰ-ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ,ਪੇਪਰ ਕੋਡ:BSP-101A
2020-21,2021-22 ਸੈਸ਼ਨ ਲਈ

ਪਾਠਕ੍ਰਮ ਦਾ ਉਦੇਸ਼:

1.ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਸਾਹਿਤ ਪੜ੍ਹਨ ਦੀ ਰੁਚੀ ਪੈਦਾ ਕਰਨਾ।

2.ਮਾਤ ਭਾਸ਼ਾ ਵਿੱਚ ਉਚੇਰੀ ਸਿੱਖਿਆ ਗ੍ਰਹਿਣ ਕਰਨ ਦੀ ਜਾਗ ਲਾਉਣਾ।

3.ਵਿਆਕਰਨਕ ਪੱਖਾਂ ਨਾਲ ਰਾਬਤਾ ਕਾਇਮ ਕਰਵਾਉਣਾ।

4.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਵਾਤਾਵਰਣ ਅਤੇ ਸਭਿਆਚਾਰਕ ਵਿਸ਼ਿਆਂ /ਸਮੱਸਿਆਵਾਂ ਤੋਂ ਜਾਣੂ ਕਰਵਾਉਣਾ।

ਪੇਪਰ ਸੈੱਟਰ ਅਤੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ ਹਦਾਇਤਾਂ

1.ਭਾਗ-ੳ: ਵਿਚੋਂ ਨਿਬੰਧ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ ਜਾਂ ਸਾਰ   (ਤਿੰਨ ਵਿਚੋਂ ਇੱਕ)10 ਅੰਕ

2.ਭਾਗ-ੳ: ਵਿਚੋਂ ਪੁਸਤਕ ਵਿਚਲੇ ਵਿਚਾਰਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ   (ਪੰਜ ਵਿਚੋਂ ਤਿੰਨ) 4+4+4=12 ਅੰਕ

3.ਭਾਗ–ਅ:1 ਵਿਚੋਂ ਨਿਬੰਧ ਰਚਨਾ   (ਤਿੰਨ ਵਿਚੋਂ ਇੱਕ) 08 ਅੰਕ

4.ਭਾਗ–ਅ:2 ਵਿਚੋਂ ਵਿਆਕਰਨ ਨਾਲ ਸੰਬੰਧਿਤ ਵਰਣਾਤਮਕ ਪ੍ਰਸ਼ਨ   (ਦੋ ਵਿਚੋਂ ਇੱਕ) 10 ਅੰਕ

5. ਭਾਗ-ੲ ਵਿਚ ਨਿਬੰਧ ਅਤੇ ਵਿਆਕਰਨ ਵਿੱਚੋਂ ਕੁੱਲ 15(8+7) ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਲਾਜ਼ਮੀ ਪ੍ਰਸ਼ਨ।ਵਿਦਿਆਰਥੀਆਂ ਲਈ ਸਾਰੇ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਲਾਜ਼ਮੀ ਹਨ ।ਹਰੇਕ ਪ੍ਰਸ਼ਨ 2ਅੰਕਾਂ ਦਾ ਹੋਵੇਗਾ ।
15X2=30 ਅੰਕ

ਪਾਠਕ੍ਰਮ ਅਤੇ ਪ੍ਰਸ਼ਨ-ਪੱਤਰ ਦੀ ਰੂਪ-ਰੇਖਾ

ਭਾਗ-ੳ

ੳ -ਮੇਰਾ ਜੀਵਨ ਅਨੁਭਵ (ਵਾਰਤਕ –ਸੰਗ੍ਰਹਿ),ਮੁੱਖ ਸੰਪਾਦਕ ਡਾ.ਜਸਵੀਰ ਸਿੰਘ ,ਸੰਪਾ.ਡਾ.ਅਵਤਾਰ ਸਿੰਘ, ਡਾ.ਗੁਰਪ੍ਰੀਤ ਕੌਰ,ਪ੍ਰੋ.ਸੁਖਵਿੰਦਰ ਸਿੰਘ,ਸ੍ਰੀ ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਖਾਲਸਾ ਕਾਲਜ,ਸ੍ਰੀ ਅਨੰਦਪੁਰ ਸਾਹਿਬ,ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ

ਭਾਗ–ਅ

ਅ-1:ਸਮਾਜਿਕ ਅਤੇ ਵਾਤਾਵਰਨ ਵਿਸ਼ਿਆ ਨਾਲ ਸੰਬੰਧਿਤ ਨਿਬੰਧ ਰਚਨਾ

ਅ-2: ਵਿਆਕਰਨ

      (i)   ਸਵਰ:ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਵਰਗੀਕਰਣ

      (ii)   ਵਿਅੰਜਨ:ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਵਰਗੀਕਰਣ

      (iii)   ਉਚਾਰਨ ਅੰਗ

      (iv)   ਨਾਂਵ ਅਤੇ ਇਸਦਾ ਰੂਪਾਂਤਰਣ

      (v)   ਪੜਨਾਂਵ ਅਤੇ ਇਸਦਾ ਰੂਪਾਂਤਰਣ

      (vi)   ਕਿਰਿਆ ਅਤੇ ਇਸਦਾ ਰੂਪਾਂਤਰਣ

ਭਾਗ-ੲ ਨਿਬੰਧ ਅਤੇ ਵਿਆਕਰਨ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਬੂਟਾ ਸਿੰਘ ਬਰਾੜ,ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ,ਵਾਰਿਸ ਸ਼ਾਹ ਫਾਊਂਡੇਸ਼ਨ ਅੰਮ੍ਰਿਤਸਰ,2012

2. ਬੂਟਾ ਸਿੰਘ ਬਰਾੜ, ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ,ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ,ਲੁਧਿਆਣਾ,2008

APPROVED

Board of Studies Meeting held on 19th June 2021   10

3. ਬਲਦੇਵ ਸਿੰਘ ਚੀਮਾ, ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਤੇ ਭਾਸ਼ਾ ਵਿਗਿਆਨ,ਤਕਨੀਕੀ ਸ਼ਬਦਾਵਲੀ ਦਾ ਵਿਸ਼ਾ ਕੋਸ਼,ਪਬਲੀਕੇਸ਼ਨ ਬਿਉਰੋ   ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ,2009

4.ਡਾ.ਜੋਗਿੰਦਰ ਸਿੰਘ ਪੁਆਰ ਅਤੇ ਹੋਰ,ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਵਿਆਕਰਨਕ ਭਾਗ I,ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ,ਜਲੰਧਰ,1991

5.ਡਾ.ਜੋਗਿੰਦਰ ਸਿੰਘ ਪੁਆਰ ਅਤੇ ਹੋਰ,ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਵਿਆਕਰਨਕ ਭਾਗ II,ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ,ਜਲੰਧਰ,1991

6.ਗਿਆਨੀ ਲਾਲ ਸਿੰਘ ਤੇ ਹਰਕੀਰਤ ਸਿੰਘ ,ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਣ ,ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀ.ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ,ਚੰਡੀਗੜੂ

7.ਸੰਤ ਸਿੰਘ ਸੇਖੋੰ,ਸਾਹਿਤਆਰਥ,ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ,ਲੁਧਿਆਣਾ

8.ਬਲਵੀਰ ਸਿੰਘ ਦਿਲ, ਪੰਜਾਬੀ ਨਿਬੰਧ :ਸਰੂਪ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਕਾਸ,ਪਬਲੀਕੇਸ਼ਨ ਬਿਉਰੋ, ਪੰਜਾਬੀ,ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ।

9.ਖੋਜ ਪੱਤ੍ਰਿਕਾ, ਨਿਬੰਧ ਅੰਕ-29,ਪਬਲੀਕੇਸ਼ਨ ਬਿਉਰੋ, ਪੰਜਾਬੀ,ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ।

APPROVED
Board of Studies Meeting held on 19th June 2021   11

ਬੀ.ਵਾਕ ਸਾਫਟਵੇਅਰ ਡਿਵੈਲਪਮੈਂਟ
ਭਾਗ ਪਹਿਲਾ(ਸਮੈਸਟਰ-ਪਹਿਲਾ)
ਪੇਪਰ-ਪੰਜਾਬੀ ਮੁੱਢਲਾ ਗਿਆਨ,ਪੇਪਰ ਕੋਡ:BSP-101B
2020-21,2021-22 ਸੈਸ਼ਨ ਲਈ

ਕੁੱਲ ਅੰਕ :100   ਵਿਸ਼ੇ ਵਿੱਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ : 35
ਬਾਹਰੀ ਪਰੀਖਿਆ:70 ਅੰਕ   ਬਾਹਰੀ ਪਰੀਖਿਆ ਵਿੱਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ: 25
ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ :30 ਅੰਕ   ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ ਵਿੱਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ:10
ਸਮਾਂ:3 ਘੰਟੇ   ਕ੍ਰੈਡਿਟ-04,   ਕੁੱਲ ਲੈਕਚਰ:60

ਪਾਠਕ੍ਰਮ ਦਾ ਉਦੇਸ਼:
1.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਸਾਹਿਤ ਪੜ੍ਹਨ ਲਈ ਪ੍ਰੇਰਿਤ ਕਰਨਾ।
2.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਜਾਣਕਾਰੀ ਦੇਣਾ।
3.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਪੜ੍ਹਨਾ ਅਤੇ ਲਿਖਣਾ ਸਿਖਾਉਣਾ।
ਪੇਪਰ ਸੈਟਰ ਅਤੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ ਹਦਾਇਤਾਂ:
1.ਭਾਗ-ੳ: ਵਿੱਚੋਂ ਵੱਡੇ ਪ੍ਰਸ਼ਨ   (ਦੋ ਵਿੱਚੋਂ ਇੱਕ)10 ਅੰਕ
2.ਭਾਗ-ੳ ਵਿੱਚੋਂ ਛੇ ਛੋਟੇ ਪ੍ਰਸ਼ਨ   (ਛੇ ਵਿੱਚੋਂ ਤਿੰਨ) 5+5+5=15 ਅੰਕ
3.ਭਾਗ-ਅ ਵਿੱਚੋਂ ਵੱਡੇ ਪ੍ਰਸ਼ਨ   (ਦੋ ਵਿੱਚੋਂ ਇੱਕ)10 ਅੰਕ
4.ਭਾਗ-ਅ ਵਿੱਚੋਂ ਛੇ ਛੋਟੇ ਪ੍ਰਸ਼ਨ   (ਛੇ ਵਿੱਚੋਂ ਤਿੰਨ) 5+5+5=15 ਅੰਕ
5.ਭਾਗ-ੲ ਵਿਚ ਭਾਗ ੳ ਅਤੇ ਅ ਵਿੱਚੋਂ ਕੁੱਲ 15 ਆਬਜੈਕਟਿਵ ਪ੍ਰਸ਼ਨ।ਵਿਦਿਆਰਥੀਆਂ ਲਈ ਸਾਰੇ ਪ੍ਰਸ਼ਨ ਕਰਨੇ
ਲਾਜ਼ਮੀ ਹਨ । ਹਰੇਕ ਪ੍ਰਸ਼ਨ 2 ਅੰਕਾਂ ਦਾ ਹੋਵੇਗਾ ।   (15X2=30 ਅੰਕ)
ਪਾਠਕ੍ਰਮ ਅਤੇ ਪ੍ਰਸ਼ਨ-ਪੱਤਰ ਦੀ ਰੂਪ-ਰੇਖਾ
ਭਾਗ-ੳ

ੳ –1.ਪੈਂਤੀ ਅੱਖਰੀ ਅਤੇ ਭੁਲਾਵੇਂ ਅੱਖਰ

2.ਦੋ ਅੱਖਰਾਂ ਵਾਲੇ,ਤਿੰਨ ਅੱਖਰਾਂ ਵਾਲੇ ਅਤੇ ਚਾਰ ਅੱਖਰਾਂ ਵਾਲੇ ਪੰਜ-ਪੰਜ ਸ਼ਬਦ

3.ਲਗਾਮਾਤਰਾਵਾਂ ਦੀ ਵਰਤੋਂ ਕਰਕੇ ਪੰਜ-ਪੰਜ ਸ਼ਬਦ

4.ਲਗਾਖਰਾਂ ਦੀ ਵਰਤੋਂ ਕਰਕੇ ਪੰਜ-ਪੰਜ ਸ਼ਬਦ
ਭਾਗ-ਅ

ਅ-1. ਇੱਕ ਤੋਂ ਪੰਜਾਹ ਤੱਕ ਗਿਣਤੀ

2. ਹਫ਼ਤੇ ਦੇ ਦਿਨਾਂ ਦੇ ਨਾਂ

3.ਪੰਜ ਫਲਾਂ ਅਤੇ ਸਬਜ਼ੀਆਂ ਦੇ ਨਾਂ

੪.   ਪੰਜ ਘਰੇਲੂ ਵਸਤਾਂ ਅਤੇ ਆਵਾਜਾਈ ਦੇ ਸਾਧਨਾਂ ਦੇ ਨਾਂ

5.   ਪੰਜ ਰਿਸ਼ਤਿਆਂ ਦੇ ਨਾਂ

6.   ਪੰਜ ਪਸ਼ੂ ਪੰਛੀਆਂ ਦੇ ਨਾਂ
ਭਾਗ-ੲ
ਭਾਗ ੳ ਅਤੇ ਅ ਵਿੱਚੋਂ ਅਬਜੈਕਟਿਵ ਪ੍ਰਸ਼ਨ

APPROVED

ਨੋਟ:ਵਿਦਿਆਰਥੀ ਪਹਿਲੀ ਵਾਰ ਗੁਰਮੁਖੀ ਸਿੱਖ ਰਹੇ ਹਨ।ਇਸ ਲਈ ਵਿਦਿਆਰਥੀਆਂ ਦੇ ਪੱਧਰ ਨੂੰ ਧਿਆਨ ਵਿੱਚ ਰੱਖਦੇ ਹੋਏ ਸਰਲ ਅਤੇ ਸਪੱਸ਼ਟ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ।

ਸਹਾਇਕ ਪਾਠ ਸਮੱਗਰੀ

1.ਸਤਿਨਾਮ ਸਿੰਘ ਸੰਧੂ,ਆਓ ਪੰਜਾਬੀ ਸਿੱਖੀਏ,ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ,ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ,2009

2. ਸਤਿਨਾਮ ਸਿੰਘ ਸੰਧੂ,ਗੁਰਮੁਖੀ ਸਿੱਖੋ,ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ,ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ,2011

3.ਸੀਤਾ ਰਾਮ ਬਾਹਰੀ, ਪੰਜਾਬੀ ਸਿੱਖੀਏ,ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ,ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ,2002

4.ਪੰਜਾਬੀ ਗਿਆਨ ਸੀ.ਡੀ.(ਕੰਪਿਊਟਰ ਐਪਲੀਕੇਸ਼ਨ ਟੂ-ਲਰਨ ਐਂਡ ਟੀਚ ਪੰਜਾਬੀ), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ

5. ਚਰਨ ਪੁਆਧੀ,ਆਓ ਪੰਜਾਬੀ ਸਿੱਖੀਏ,ਸੰਗਮ ਪਬਲੀਕੇਸ਼ਨ,ਪਟਿਆਲਾ

BVSD-116 Software Lab I (Based on BVSD-111)

Time allowed: 3 hours	**Max Marks: 100**
Number of Lectures: 30	**External Marks : 70 marks**
Pass Marks: 35%	**Internal Assessment: 30 marks**
Credits:4	

Note : Student Have to Submit Project Report on MS- Office

MS-word: Design, create and modify a range of business documents, Displaying DifferentViews of a Document, Creating and Saving a Document, Selecting, Modifying, Finding and Replace Text, Align Text Using Tabs, Display Text as List Items. Apply Borders and Shading, Preview a document, and adjust its margins and orientation, Insert & Format a Table, Convert Text to a Table, Check Spelling and Grammar, Use the Thesaurus, Print with default or custom settings, Managing Lists – Sort, Renumber, Customize a List, Apply a Page Border and Colour, Sorting Table Data, Control Cell Layout, Perform Calculations in a Table, Creating Customized Formats with Styles and Themes. Create or Modify a Text Style, Create a Custom List or Table Style. Modifying Pictures & Picture Appearance Settings, Wrap Text around a Picture, Insert and Format Screenshots in a Document, Add WordArt , Use the Mail Merge Feature including Envelopes and Labels.

MS-Excel: Construct a spreadsheet and populating Cell Data, Formatting Cells – SearchWorksheet Data, Changing Fonts, Modify Rows and Columns, Managing Worksheets and Workbooks, Applying Formulas and Functions, Inserting Currency Symbols, Merging cells, Spell Check a Worksheet, Add Borders and Color to Cells, Printing options to output a chart, Modify the Layout of a Paragraph – Tabs, Headers, Footers, Apply Styles & Manage Formatting, Document Templates, Insert contents, page and section breaks, Apply Character Formatting.

Clip Art , Symbols, Illustrations, Set Page Breaks, Page Layout Options, Manage Workbook Views, Apply Cell and Range Names, Auto Sum in Cells, Calculate Data Across Worksheets, Sort or Filter Worksheet or Table Data, Create, Modify and Format Charts, Create, modify and format spreadsheets using the full range of the software formatting, features including conditional formatting for example Hide /unhide/freeze rows and columns.

MS-PowerPoint: Salient features of POWER POINT, Starting ,Saving and quittingpresentation, various components and elements of PowerPoint Package. Insert Clip Art and Graphs. Adding Multimedia Effects to the slide. Formatting and Editing Presentations. Adding Animation and Transition effects to the presentations.

Reference Books
1.   Microsoft Office Word by TorbenLageFrandsen
2.   Word 2010 Introduction by Stephen
3.   Word 2010 Advanced by Stephen Moffat

APPROVED
Board of Studies Meeting held on 19th June 2021   14

BVSD -117 SOFTWARE LAB – I I(Based on BVSD-112 and BVSD-113)

Time allowed: 3 hours   **Max Marks: 100**
Number of Lectures: 60   **External Marks : 70 marks**
Pass Marks: 35%   **Internal Assessment: 30 marks**
Credits:4.5

This laboratory course will comprise as exercises to supplement what is learnt under paper BVSD-112 and BVSD-113.

A. 'C ' Programming

Students are required to develop the following programs with internal documentation:

1   **Assignments on Data types, Operators, Control Structure (if else, while, for, Do-while), jumping statements in C .**

    i. Write a program to print the size of all the data types supported by C.
    ii. Write a program to check whether the given number is a even number or not.
    iii. Write a program to accept three numbers and find the largest among them.
    iv. Write a program to count the different vowels in a line of text using switch.
    v. Write a program to accept two numbers and perform various arithmetic operations (+, -, *, /) based on the symbol entered.
    vi. Write a program to find factorial of a number.
    vii. Write a program to print all prime numbers between any 2 given limits.
    viii. Write a program to print all the Armstrong numbers between any 2 given limits.
    ix. Write a program to demonstrate the use of break and continue statements.

2   **Assignment on Arrays(one and two dimensional) and strings (string handling functions)**

    i. Write a program to find largest element in an array.
    ii. Write a program to search an element in an array.
    iii. Write a program to find sum and average of numbers stored in an array.
    iv. Write a program to check whether a string is a Palindrome.
    v. Write a program to perform matrix addition.
    vi. Write a program to perform matrix multiplication.
    vii. Write a program to demonstrate string handling functions.

3   **Assignment on Pointers and Array of Pointers**

    i. Write a function to swap two numbers using pointers.
    ii. Write a program to access an array of integers using pointers.

4   **Assignment on Functions , Recursion and Storage Classes**

    i. Write a program to demonstrate the methods of argument passing.
    ii. Write a program to find the roots of a quadratic equation using function.
    iii. Write a recursive program to find the factorial of a number.
    iv. Write a recursive program to find the nth Fibonacci number.
    v. Write a program to show the significance of different storage classes.

5   **Assignment on Structures and Unions**

    i. Write a program to create an employee structure and display the same.
    ii. Write a program to create a student database storing the roll no, name, class etc and sort by name.

B. HTML

1. Assignment on Structure of HTML.

APPROVED

2. Assignment on HTML TAGS.

3. Assignment on HTML Lists.

4. Assignment on HTML Images.

5. Assignment on HTML Tables.

6. Assignment on HTML Links.

7. Assignment on HTML Forms.

8. Assignment on HTML Frames.

9. Assignment on CSS properties.

BVSD -118(SAE-1.1) DRUG ABUSE: PROBLEM, MANAGEMENT AND PREVENTION

Note: This is a compulsory qualifying paper, which the students have to study and qualify during three years of their degree course.

Total Marks: 50   **Theory 35**
Number of Lectures:30   **Internal Assessment 15**

INSTRUCTIONS FOR THE PAPER-SETTER
The question paper will consist of three sections: A, B & C. Section A& B will have four questions in each section from the respective sections of the syllabus and will carry 5 marks each. Section C will consist of 5 short-answer type questions will cover the entire syllabus uniformly and each will carry 3 marks.

INSTRUCTIONS FOR THE CANDIDATES
Candidates are required to attempt two questions from each section A & B of the question paper and the entire section C.

SECTION A

UNIT: I – Problem of Drug Abuse: Concept and Overview; Types of Drug Often Abused

(a) Concept and Overview

What are drugs and what constitutes Drug Abuse?

Prevalence of menace of Drug Abuse

How drug Abuse is different from Drug Dependence and Drug Addiction?

Physical and psychological dependence- concepts of drug tolerance

(b) Introduction to drugs of abuse: Short Term, Long term effects & withdrawal symptoms

Stimulants: Cocaine, Nicotine

Depressants: Alcohol, Barbiturates- Nembutal

Benzodiazepines –Diazepam

Narcotics: Opium, heroin

Hallucinogens: Cannabis & derivatives (marijuana, hashish, hash oil)

Steroids

Inhalants

UNIT: II –Nature of the Problem

Vulnerable Age Groups

Signs and symptoms of Drug Abuse

(a)- Physical indicators

(b)- Academic indicators

(c)- Behavioral and Psychological indicators

APPROVED
Board of Studies Meeting held on 19th June 2021   17

SECTION B

UNIT: III – Causes and Consequences of Drug Abuse

a) Causes

Physiological

Psychological

Sociological

b) Consequences of Drug Abuse

For individuals

For families

For society & Nation

UNIT: IV- Management & Prevention of Drug Abuse

Management of Drug Abuse

Prevention of Drug Abuse

Role of Family, School, Media, Legislation & Deaddiction Centers

SUGGESTED READINGSMATERIAL

1. Kapoor. T. (1985) Drug Epidemic among Indian Youth, New Delhi: Mittal Pub

2. Modi, Ishwar and Modi, Shalini (1997) Drugs: Addiction and Prevention,Jaipur: Rawat Publication.

3. Ahuja, Ram,(2003),Social Problems in India, Rawat Publications: Jaipur

4. 2003 National Household Survey of Alcohol and Drug Abuse. New Delhi, Clinical Epidemiological Unit, All India Institute of Medical Sciences, 2004.

5. World Drug Report 2011, United Nations Office of Drug and Crime.

6. World Drug Report 2010, United nations Office of Drug and Crime.

7. Extent, Pattern and Trend of Drug Use in India, Ministry of Social Justice and Empowerment, Government of India, 2004.

8. The Narcotic Drugs and Psychotropic Substances Act, 1985, (New Delhi: Universal, 2012)

Pedagogy of the Course Work:
The pedagogy of the course work will consist of the following:
70% lectures (including expert lectures).
30% assignments, discussion and seminars and class tests.
Note: A visit to drug de-addiction centre could also be undertaken.

APPROVED
Board of Studies Meeting held on 19th June 2021   18

Semester II

BVSD-121 Object Oriented Programming Using C++

Time allowed: 3 hours   **Max Marks: 100**
Number of Lectures: 60   **External Marks : 70 marks**
Pass Marks: 35%   **Internal Assessment: 30 marks**
CREDITS: 4

Instructions for the paper setter
The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 10.5 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 28 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*
Instructions for the candidates
Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTION-A

Evolution of OOP : Procedure Oriented Programming, OOP Paradigm, Advantages and disadvantages of OOP over its predecessor paradigms.
Characteristics of Object Oriented Programming : Abstraction, Encapsulation, Data hiding, Inheritance, Polymorphism, code Extensibility and Reusability, User defined Data Types.
Introduction to C++ : Identifier and keywords, Constants, Operators
Pointers: Pointer Operations, Pointer Arithmetic, Pointers and Arrays, Multiple indirections, Pointer to functions.
Function : Prototyping, Definition and Call, Scope Rules, Parameter Passing Value, by address and by reference, Functions returning references, Const Functions, recursion, function overloading, Default Arguments, Const Arguments.
Classes, Objects and Members : Class Declaration and Class Definition, Defining member functions, Defining Object, making functions inline, Members access control, Nested Classes, This Pointer.

SECTION-B

Object as function arguments, array of objects, functions returning objects, const members and member functions. Static data members and static member functions, Friend functions and Friend classes.
Constructors : Properties, types of constructors (Default, parameterized and copy), Dynamic constructors, Multiple constructors in classes.
Destructors : Properties, Virtual destructors, Destroying objects, Rules for constructors and destructors, Array of objects.
Dynamic memory allocation using new and delete operators.
Inheritance : Defining derived classes, inheriting private members, single inheritance, types of derivation, function, function redefining, constructors in derived class.
Types of inheritance: Single, Multiple, Multi level and Hybrid,
Types of base classes: Direct, Indirect, Virtual, Abstract, Code Reusability.
Polymorphism : Methods of achieving polymorphic behavior. Polymorphism with pointers, virtual functions, late binding, pure virtual functions and abstract base class.Difference between function overloading, redefining and overriding.
Operator overloading: Overloading binary operator, overloading unary operators, rules for operator overloading, operator overloading using friend function. Function overloading, early binding.

APPROVED

Introduction to Files in C++: opening and closing files. Basic I/O operation on files.

Reference Books:
1. E. Balaguruswamy, Object Oriented Programming with C++, Tata McGraw-Hill.
2. Deitel&Deitel, "C++ How to Program", Pearson Education.
3. Herbert Schildt, The Complete Reference C++, Tata McGraw-Hill.
4. Robert Lafore, Object Oriented Programming in C++, Galgotia Publications,
5. BjarneStrautrup, "The C++ Programming Language", Addition- Wesley Publication.
6. E. Balagurusamy, Object Oriented Programming with C++, Tata McGraw-Hill.
7. Anshuman Sharma, Learn Programming in C++, Lakhanpal Publishcations.

BVSD-122 DATA STRUCTURES

Time allowed: 3 hours   **Max Marks: 100**
Number of Lectures: 60   **External Marks : 70 marks**
Pass Marks: 35%   **Internal Assessment: 30 marks**
CREDITS: 4

Instructions for the paper setter
The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 10.5 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 28 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

Instructions for the candidates
Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTION A

Basic concepts and notations: Types of data structures, Data structure operations, Mathematical notations and functions, Algorithmic complexity, Big 'O' notation, Time and space trade off.
Arrays: Linear array, representation of array in memory, traversing linear array, insertion and deletion in an array, Two-dimensional array, row major and column major orders, sparse matrix.
Stacks: Representation of stacks in memory (linked and sequential), operations on stacks, Applications of stacks: string reversal, parentheses matching.
Queues: Representation of queues in memory (linked and sequential), operations on queues, insertion in rear, deletion from front.

SECTION B

Linked list: Representation of linked list using dynamic data structures, insertion and deletion of a node from linked list, searching in link list, searching in sorted link list.
Trees: Definition and basic concepts, linked representation and representation in contiguous storage, binary tree, binary tree traversal, Binary search tree, searching, insertion and deletion in binary search tree.
Searching and sorting algorithms: Linear and binary search, bubble sort, insertion sort, selection sort, quick sort, merge sort.

Reference Books:
1. Seymour Lipschutz, Theory and Practice of Data Structures, McGraw-Hill.
2. Vishal Goyal, Lalit Goyal, Pawan Kumar, A Simplified Approach to Data Structures, Shroff Publications.
3. Y. L. Tenenbaum, and A. J. Augenstein, Data Structures using C and C++, PHI.
4. Robert Sedgewick, Algorithms in C, Pearson Education.

BVSD-123: Discrete Mathematics

Time allowed: 3 hours   **Max Marks: 100**
Number of Lectures: 60   **External Marks : 70 marks**
Pass Marks: 35%   **Internal Assessment: 30 marks**
CREDITS: 4

Instructions for the paper setter
The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 10.5 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 28 marks, which will cover the entire syllabus uniformly. Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

Instructions for the candidates
Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTION-A

Set Theory: Sets, Type of sets, Set operations, Principle of Inclusion-Exclusion, Cartesian prodouct of sets, Partitions.
Logic : Propositions, Implications, Precedence of logical operators, Translating English sentences into logical expressions, Propositional equivalence
Principle of Mathematical induction.
Relations: Relations and diagraph, n-ary relations and their applications, properties of relations, representing relations, closure of relation, equivalence relation, operation on relations, partial ordering.

SECTION- B

Functions: Functions, One-to-one Functions, Onto Functions, Inverse and Composition of Functions, Floor Function, Ceiling Function.
Basic Concepts (Only Definition): Big-O Notation, Big-Omega and Big-Theta Notation.
Graphs: Introduction to Graph, Graph terminology, Representing graphs and Graph Isomorphism, Connectivity, Euler Paths and Circuits, Hamillonian paths and circuits, Shortest Path Problems, Planar Graphs.
Trees : Trees, labelled trees, Tree Traversal, Undirected trees, Spanning Trees, Minimum spanning trees.
Text Book :

1. Discrete Mathematical Structures-Bernard Kolman, Robert C. Busby, Sharon C. Ross, 4th Edition, Pearson Education Asia.

Reference Books :

1. Discrete Mathematics-Richard Johnsonbaugh, 5th Edition, Pearson Education, Asia.
2. Elements of Discrete Mathematics, Second Edition, Tata McGraw Hill.
3. Discrete Mathematics, SeymonLipschutz& Max Lans Lipson, Tata McGraw Hill.

APPROVED

2021-22, 2022-23 & 2023-24

Common for B. Voc Semester-II
Software Development (BVSD-124), Retail Management (BVRM-207), Hospitality & Tourism (BVHT-207), Food Processing (BVFP-212),
Sustainable Agriculture (BVSA- 202), Industrial Microbiology (BVIM-212), Pharmaceutical Chemistry (BVPC-219),
English (Communication Skills)

Time Allowed: 3 Hours	**Max. Marks: 100**
Periods per week: 4	**Written Examination: 70**
Credits: 03	**Internal Assessment: 30**
Teaching Hours: 60	**Pass Percentage: 35%**

Instructions for the Paper Setter: The question paper will carry 70 marks and will be of three hours duration. The paper will consist of three Units. Following shall be the unit wise marks division:

- Unit-I   –   20 Marks
- Unit-II   –   50 Marks

Note: - We humbly request that the paper setter consults the testing pattern given in testing section.
Instructions for the candidates: Candidates are required to attempt all the questions as per the instructions given in the testing section.

Course Objective:
The objective of the paper is to introduce the students to the theory, fundamentals and tools of communication. The course aims at developing the vital communication skills among students for personal, social and professional interactions

Pedagogy: Primarily the chalk and duster method will be used to teach this course. To evoke the interest of the students in the curriculum due emphasis will be laid on assignments, homework and periodic tests.

Unit I
Part-A: Communication Skills
1. Meaning of Communication
2. Importance of Communication
3. Process of Communication
4. Types of Communication
5. Channels of Communication
6. Barriers to Effective Communication
7. Effective listening skills
8. Public speaking skills

Part-B: Interview Skills
1. Types of Interview
2. Appearing for an Interview

APPROVED
Board of Studies Meeting held on 19th June 2021   24

3. Conducting an Interview
4. Body Language & Dress Code
5. Group Discussion

Unit III

Composition:
1. Report Writing
2. E-mail Writing (Address, Subject, Content, Complementary Closed)
3. Meeting Skills (Writing Agenda and Minutes of Meeting)
4. Job application along with Resume/ Curriculum Vitae
5. Business Letters/ Official Letters/Memorandum Writing

Testing
Unit-I

1. The examiner shall set one long answer type question with internal choice from Part-A of Unit-I of the syllabus.   10 marks
2. The examiner shall set one long answer type question with internal choice from Part -B of unit-I of the syllabus.   10 marks

Unit-II

3. The examiner shall set one question pertaining to report writing with internal choice.
                                                                                            10 marks
4. The examiner shall set one question pertaining to email writing with internal choice.
                                                                                            10 marks
5. The examiner shall set one question about the Meeting Skills. An internal choice will be given between Agenda and Minutes of Meeting.   10 marks
6. The examiner shall set one question with an internal choice pertaining to job application & Resume/CV Writing. The candidate is required to write a job application along with resume/C.V.
                                                                            5+5=10 marks
7. The examiner shall one question relating to letter and memorandum writing. There shall be an internal choice between business/official letters and Memorandum Writing.   10 marks

Course learning outcome:
1. Communication skills of students will improve.
2. The students will distinguish among various levels of organizational communication.
3. Students will develop an ability for effective business correspondence with brevity and clarity.

Suggested Readings:
Business Communication by M K Sehgal, Vandana Khetarpal.
Bovee and Thill. *Business Communication Today,* Pearson Education.
Brian R Hollaway. *Technical Writing Basis: A Guide to Style and Form*. 4th Pearson -Prentice Hall.
Kaur, Gurpreet. *Communication Skills and Technical Writings*. New Academic Publishing Co. 2014.

Dr. Gurpreet Kaur   Dr. Ajay Verma   Dr. Swaraj Raj

APPROVED

ਬੀ.ਵਾਕ (ਸਾਫ਼ਟਵੇਅਰ ਡਿਵੈਲਪਮੈਂਟ)

ਭਾਗ ਪਹਿਲਾ , ਸਮੈਸਟਰ ਦੂਜਾ

ਪੇਪਰ–ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ,ਪੇਪਰ ਕੋਡ:**BSP-201A**, ਕ੍ਰੈਡਿਟ–03

2020-21,2021-22 ਸੈਸ਼ਨ ਲਈ

ਕੁੱਲ ਅੰਕ :100   ਵਿਸ਼ੇ ਵਿੱਚੋਂ ਪਾਸ ਅੰਕ : 35

ਬਾਹਰੀ ਪਰੀਖਿਆ:70 ਅੰਕ   ਬਾਹਰੀ ਪਰੀਖਿਆ ਵਿੱਚੋਂ ਪਾਸ ਅੰਕ: 25

ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ :30 ਅੰਕ   ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ ਵਿੱਚੋਂ ਪਾਸ ਅੰਕ:10

ਸਮਾਂ:3 ਘੰਟੇ   ਕੁੱਲ ਲੈਕਚਰ:60

ਪਾਠਕ੍ਰਮ ਦਾ ਉਦੇਸ਼:

1.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਸਾਹਿਤ ਪੜ੍ਹਨ ਲਈ ਪ੍ਰੇਰਿਤ ਕਰਨਾ।

2.ਮਾਤ ਭਾਸ਼ਾ ਵਿਚ ਉਚੇਰੀ ਸਿੱਖਿਆ ਗ੍ਰਹਿਣ ਕਰਨ ਦੀ ਜਾਗ ਲਾਉਣਾ।

3.ਵਿਆਕਰਨਕ ਪੱਖਾਂ ਨਾਲ ਰਾਬਤਾ ਕਾਇਮ ਕਰਵਾਉਣਾ।

4.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਚਿੱਠੀ-ਪੱਤਰ ਲਿਖਣਾ ਸਿਖਾਉਣਾ।

<div align="center">ਪੇਪਰ ਸੈੱਟਰ ਅਤੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ ਹਦਾਇਤਾਂ</div>

1.ਭਾਗ-ੳ: ਵਿੱਚੋਂ ਨਿਬੰਧ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ ਜਾਂ ਸਾਰ   (ਤਿੰਨ ਵਿੱਚੋਂ ਇੱਕ)10 ਅੰਕ

2.ਭਾਗ-ੳ: ਵਿੱਚੋਂ ਪੁਸਤਕ ਵਿਚਲੇ ਵਿਚਾਰਾਂ ਸੰਬੰਧੀ ਪ੍ਰਸ਼ਨ   (ਪੰਜ ਵਿੱਚੋਂ ਦੋ) 5+5=10ਅੰਕ

3.ਭਾਗ-ਅ:1 ਵਿੱਚੋਂ ਚਿੱਠੀ-ਪੱਤਰ   (ਤਿੰਨ ਵਿੱਚੋਂ ਇੱਕ) 10 ਅੰਕ

4.ਭਾਗ-ਅ:2 ਵਿੱਚੋਂ ਵਿਆਕਰਨ ਨਾਲ ਸੰਬੰਧਿਤ ਵਰਣਾਤਮਕ ਪ੍ਰਸ਼ਨ   (ਦੋ ਵਿੱਚੋਂ ਇੱਕ) 10 ਅੰਕ

5. ਭਾਗ-ੲ ਵਿਚ ਨਿਬੰਧ ਦੀ ਪਾਠ-ਪੁਸਤਕ ਅਤੇ ਵਿਆਕਰਨ ਵਿੱਚੋਂ ਕੁੱਲ 15(8+7) ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਲਾਜ਼ਮੀ ਪ੍ਰਸ਼ਨ।ਵਿਦਿਆਰਥੀਆਂ ਲਈ ਸਾਰੇ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਲਾਜ਼ਮੀ ਹਨ ।ਹਰੇਕ ਪ੍ਰਸ਼ਨ 02ਅੰਕਾਂ ਦਾ ਹੋਵੇਗਾ ।

<div align="right">**15X2=30 ਅੰਕ**</div>

<div align="center">ਪਾਠਕ੍ਰਮ ਅਤੇ ਪ੍ਰਸ਼ਨ-ਪੱਤਰ ਦੀ ਰੂਪ-ਰੇਖਾ</div>

<div align="center">ਭਾਗ-ੳ</div>

ੳ –ਜੀਵਨ-ਵਿਹਾਰ (ਵਾਰਤਕ-ਸੰਗ੍ਰਹਿ),ਮੁੱਖ ਸੰਪਾ.ਡਾ.ਜਸਵੀਰ ਸਿੰਘ,ਸੰਪਾ.ਡਾ.ਅਵਤਾਰ ਸਿੰਘ,

ਡਾ.ਗੁਰਪ੍ਰੀਤ ਕੌਰ,ਪ੍ਰੋ.ਸੁਖਵਿੰਦਰ ਸਿੰਘ,ਸ੍ਰੀ ਗੁਰੂ ਤੇਗ ਬਹਾਦਰ ਖ਼ਾਲਸਾ ਕਾਲਜ,

    ਸ੍ਰੀ ਅਨੰਦਪੁਰ ਸਾਹਿਬ ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ

<div align="center">ਭਾਗ–ਅ</div>

ਅ1:ਦਫ਼ਤਰੀ ਚਿੱਠੀ -ਪੱਤਰ

ਅ-2:ਵਿਆਕਰਨ

(i)   ਭਾਸ਼ਾ ਦਾ ਟਕਸਾਲੀ ਰੂਪ

(ii)   ਭਾਸ਼ਾ ਅਤੇ ਉਪਭਾਸ਼ਾ ਦਾ ਅੰਤਰ

(iii)   ਪੂਰਬੀ ਪੰਜਾਬ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ ਦੇ ਪਛਾਣ– ਚਿੰਨ੍ਹ

(iv)   ਸ਼ਬਦ :ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਵਰਗੀਕਰਨ

(v)   ਵਧੇਤਰ

APPROVED

Board of Studies Meeting held on 19th June 2021   26

ਭਾਗ-ੲ
ਭਾਗ-ੳ ਅਤੇ ਵਿਆਕਰਨ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ ਪ੍ਰਸ਼ਨ

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1. ਬੂਟਾ ਸਿੰਘ ਬਰਾੜ,ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਸ੍ਰੋਤ ਤੇ ਸਰੂਪ,ਵਾਰਿਸ਼ ਸ਼ਾਹ ਫਾਉਂਡੇਸ਼ਨ ਅੰਮ੍ਰਿਤਸਰ,2012

2. ਬੂਟਾ ਸਿੰਘ ਬਰਾੜ, ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਸਿਧਾਂਤ ਅਤੇ ਵਿਹਾਰ,ਚੇਤਨਾ ਪ੍ਰਕਾਸ਼ਨ ,ਲੁਧਿਆਣਾ,2008

3. ਬਲਦੇਵ ਸਿੰਘ ਚੀਮਾ, ਪੰਜਾਬੀ ਵਿਆਕਰਨ ਤੇ ਭਾਸ਼ਾ ਵਿਗਿਆਨ,ਤਕਨੀਕੀ ਸ਼ਬਦਾਵਲੀ ਦਾ ਵਿਸ਼ਾ ਕੋਸ਼, ਪਬਲੀਕੇਸ਼ਨ ਬਿਉਰੋ ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ,2009

4. ਡਾ.ਜੋਗਿੰਦਰ ਸਿੰਘ ਪੁਆਰ ਅਤੇ ਹੋਰ,ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਵਿਆਕਰਨਕ ਭਾਗ **I**,ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ,ਜਲੰਧਰ,1991

5. ਡਾ.ਜੋਗਿੰਦਰ ਸਿੰਘ ਪੁਆਰ ਅਤੇ ਹੋਰ,ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਵਿਆਕਰਨਕ ਭਾਗ **II**,ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ,ਜਲੰਧਰ,1991

6. ਗਿਆਨੀ ਲਾਲ ਸਿੰਘ ਤੇ ਹਰਕੀਰਤ ਸਿੰਘ ,ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਣ ,ਪੰਜਾਬ ਸਟੇਟ ਯੂਨੀ.ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ,ਚੰਡੀਗੜ੍ਹ

7. ਸੰਤ ਸਿੰਘ ਸੇਖੋ,ਸਾਹਿਤਆਾਰਥ,ਲਾਹੌਰ ਬੁੱਕ ਸ਼ਾਪ,ਲੁਧਿਆਣਾ

8. ਬਲਵੀਰ ਸਿੰਘ ਦਿਲ, ਪੰਜਾਬੀ ਨਿਬੰਧ :ਸਰੂਪ, ਸਿਧਾਂਤ ਅਤੇ ਵਿਕਾਸ,ਪਬਲੀਕੇਸ਼ਨ ਬਿਉਰੋ, ਪੰਜਾਬੀ,ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ।

9. ਖੋਜ ਪੱਤ੍ਰਿਕਾ, ਨਿਬੰਧ ਅੰਕ-29,ਪਬਲੀਕੇਸ਼ਨ ਬਿਉਰੋ, ਪੰਜਾਬੀ,ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ।

ਬੀ.ਵਾਕ ਸਾਫ਼ਟਵੇਅਰ ਡਿਵੈਲਪਮੈਂਟ

ਭਾਗ ਪਹਿਲਾ , ਸਮੈਸਟਰ ਦੂਜਾ

ਪੇਪਰ-ਪੰਜਾਬੀ ਮੁੱਢਲਾ ਗਿਆਨ

ਪੇਪਰ ਕੋਡ:BSP-201B, ਕ੍ਰੈਡਿਟ-03

2020-21,2021-22 ਸੈਸ਼ਨ ਲਈ

ਕੁੱਲ ਅੰਕ :100	ਵਿਸ਼ੇ ਵਿੱਚੋਂ ਪਾਸ ਅੰਕ : 35
ਬਾਹਰੀ ਪਰੀਖਿਆ:70 ਅੰਕ	ਬਾਹਰੀ ਪਰੀਖਿਆ ਵਿੱਚੋਂ ਪਾਸ ਅੰਕ: 25
ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ :30 ਅੰਕ	ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ ਵਿੱਚੋਂ ਪਾਸ ਅੰਕ:10
ਸਮਾਂ:3 ਘੰਟੇ	ਕੁੱਲ ਲੈਕਚਰ:60

ਪਾਠਕ੍ਰਮ ਦਾ ਉਦੇਸ਼:

1.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਸਾਹਿਤ ਪੜ੍ਹਨ ਲਈ ਪ੍ਰੇਰਿਤ ਕਰਨਾ।

2.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਜਾਣਕਾਰੀ ਦੇਣਾ।

3.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਪੜ੍ਹਨਾ ਅਤੇ ਲਿਖਣਾ ਸਿਖਾਉਣਾ।

ਪੇਪਰ ਸੈਟਰ ਅਤੇ ਵਿਦਿਆਰਥੀਆਂ ਲਈ ਹਦਾਇਤਾਂ:

1.ਭਾਗ-ਓ: ਵਿੱਚੋਂ ਵੱਡੇ ਪ੍ਰਸ਼ਨ	(ਦੋ ਵਿੱਚੋਂ ਇੱਕ)10 ਅੰਕ
2.ਭਾਗ-ਓ ਵਿੱਚੋਂ ਛੇ ਛੋਟੇ ਪ੍ਰਸ਼ਨ	(ਛੇ ਵਿੱਚੋਂ ਚਾਰ) 5+5+5+5=20ਅੰਕ
3.ਭਾਗ-ਅ ਵਿੱਚੋਂ ਵੱਡੇ ਪ੍ਰਸ਼ਨ	(ਦੋ ਵਿੱਚੋਂ ਇੱਕ)10 ਅੰਕ
4.ਭਾਗ-ਅ ਵਿੱਚੋਂ ਛੇ ਛੋਟੇ ਪ੍ਰਸ਼ਨ	(ਛੇ ਵਿੱਚੋਂ ਚਾਰ) 5+5+5+5=20 ਅੰਕ

5.ਭਾਗ-ੲ ਵਿਚ ਭਾਗ ਓ ਅਤੇ ਅ ਵਿੱਚੋਂ ਕੁੱਲ 10 ਆਬਜੈਕਟਿਵ ਪ੍ਰਸ਼ਨ।ਵਿਦਿਆਰਥੀਆਂ ਲਈ ਸਾਰੇ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਲਾਜ਼ਮੀ ਹਨ । ਹਰੇਕ ਪ੍ਰਸ਼ਨ 01 ਅੰਕ ਦਾ ਹੋਵੇਗਾ ।   (10X1=10 ਅੰਕ)

ਪਾਠਕ੍ਰਮ ਅਤੇ ਪ੍ਰਸ਼ਨ-ਪੱਤਰ ਦੀ ਰੂਪ-ਰੇਖਾ

ਭਾਗ-ਓ

ਓ –1.ਵਿਰੋਧੀ ਸ਼ਬਦ,ਸਮਾਨਾਰਥਕ ਸ਼ਬਦ

    2.ਲਿੰਗ,ਵਚਨ,ਕਾਲ ਅਤੇ ਪੁਰਖ

    3.ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ(ਨਾਂਵ,ਪੜਨਾਂਵ ਅਤੇ ਕਿਰਿਆ):ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਉਦਾਹਰਨਾਂ

    4.ਵਿਸ਼ਰਾਮ ਚਿੰਨ੍ਹਾਂ ਦੀ ਵਰਤੋਂ

ਭਾਗ-ਅ

ਅ –ਲੇਖ ਰਚਨਾ(200 ਸ਼ਬਦਾਂ ਵਿੱਚ):ਮੇਰਾ ਅਧਿਆਪਕ,ਮੇਰਾ ਕਾਲਜ ਅਤੇ ਦੀਵਾਲੀ

    2. ਚਿੱਠੀ ਪੱਤਰ:ਫੀਸ ਮੁਆਫੀ ਅਤੇ ਬਿਮਾਰੀ ਕਾਰਨ ਛੁੱਟੀ ਲੈਣ ਸੰਬੰਧੀ

    3.ਦੇਸੀ ਅਤੇ ਅੰਗਰੇਜ਼ੀ ਮਹੀਨਿਆਂ ਦੇ ਨਾਂ

   ੪. ਇੱਕ ਤੋਂ ਸੌ ਤੱਕ ਗਿਣਤੀ

        ਭਾਗ-ੲ

ਭਾਗ ਓ ਅਤੇ ਅ ਵਿੱਚੋਂ ਆਬਜੈਕਟਿਵ ਪ੍ਰਸ਼ਨ

APPROVED

Board of Studies Meeting held on 19th June 2021   28

ਨੋਟ:ਵਿਦਿਆਰਥੀ ਗੁਰਮੁਖੀ ਸਿੱਖ ਰਹੇ ਹਨ।ਇਸ ਲਈ ਵਿਦਿਆਰਥੀਆਂ ਦੇ ਪੱਧਰ ਨੂੰ ਧਿਆਨ ਵਿੱਚ ਰੱਖਦੇ ਹੋਏ ਸਰਲ ਅਤੇ
          ਸਪੱਸ਼ਟ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ।

ਸਹਾਇਕ ਪੁਸਤਕਾਂ

1.ਸਤਿਨਾਮ ਸਿੰਘ ਸੰਧੂ,ਆਓ ਪੰਜਾਬੀ ਸਿੱਖੀਏ,ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ,ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ,2009

2. ਸਤਿਨਾਮ ਸਿੰਘ ਸੰਧੂ,ਗੁਰਮੁਖੀ ਸਿੱਖੋ,ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ,ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ,2011

3.ਸੀਤਾ ਰਾਮ ਬਾਹਰੀ, ਪੰਜਾਬੀ ਸਿੱਖੀਏ,ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ,ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ,2002

4.ਪੰਜਾਬੀ ਗਿਆਨ ਸੀ.ਡੀ.(ਕੰਪਿਊਟਰ ਐਪਲੀਕੇਸ਼ਨ ਟੂ-ਲਰਨ ਐਂਡ ਟੀਚ ਪੰਜਾਬੀ), ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ,ਪਟਿਆਲਾ

5. ਚਰਨ ਪੁਆਧੀ,ਆਓ ਪੰਜਾਬੀ ਸਿੱਖੀਏ,ਸੰਗਮ ਪਬਲੀਕੇਸ਼ਨ,ਪਟਿਆਲਾ

BVSD-126 SOFTWARE LAB – III(Based on BVSD-121 and 122)

Time allowed: 3 hours   **Max Marks: 100**
Number of Lectures: 60   **External Marks : 70 marks**
Pass Marks: 35%   **Internal Assessment: 30 marks**
 (CREDITS: 4)

This laboratory course will comprise as exercises to supplement what is learnt under paper BVSD-121 and 122.Students are required to perform following activities with internal documentation:

1.   Write a program to find area of rectangle using the concept of classes & object.
2.   Write a program to implement the concept of array of object.
3.   Write a program to show the use of friend function.
4.   Write a program to show the use of constructor overloading.
5.   Write a program to show the use of copy constructor.
6.   Write a program to show the use of destructors.
7.   Write a program to show the use of virtual function.
8.   Write a program to implement the concept of multilevel inheritance.
9.   Write a program to implement the concept of multiple inheritance.
10.   Write a program of unary operator overloading.
11.   Write a program of Binary operator overloading.
12.   Write a program to swap two values independent of type of the variable using function template.
13.   Write a program to illustrate how an exception is handled using try catch block using throw statements.

Students are required to develop the following programs in C/C++ with internal documentation:

1   Program to insert an element from an array.
2   Program to delete an element from an array.
3   Program to store an array using sparse representation.
4   Program to apply various operations on stack.
5   Program for parenthesis matching using stack.
6   Program for String reversal using stack.
7   Program to insert and delete nodes in a queue.
8   Program to insert and delete nodes in a linked list.
9   Program to search a node in a linked list.
10   Program to insert or delete node in a binary tree.
11   Program to traverse binary tree.
12   Program for implementing linear search.
13   Program for implementing binary search.
14   Program for implementing Bubble sort.
15   Program for implementing Selection sort.
16   Program for implementing Insertion sort.
17   Program for implementing Quick sort.
18   Program for implementing Merge sort.

APPROVED
Board of Studies Meeting held on 19th June 2021   30

B.VSD-127 LANGUAGE LAB-I (Based on B.VSD 124 BSP201A,B)

Time allowed: 3 hours   **Max Marks: 100**
Number of Lectures: 60   **Internal Assessment: 100 marks**
Pass Marks: 35%
 (CREDITS: 4)

A. Based on B.VSD-124

English (Communication Skills) Laboratory

Max. Marks: 50   **Periods per week: 4**
Credits: 02   **Teaching Hours: 30**
Pass Percentage: 35%
- Listening and note taking, writing skills,
- Reading and comprehension of general and technical articles, newspaper reading session
- Précis writing, summarizing, abstracting;
- Individual and group presentations, seminars.
- Group discussions
- Role play
- Giving introduction
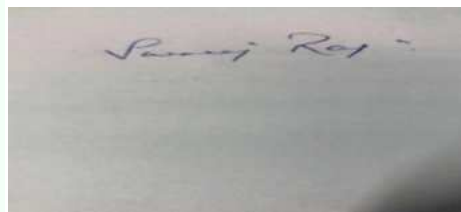- Just a minute (JAM): speaking activities

Instructions for the Examiner:
The evaluator shall give the marks according to the following criteria:
- Participation and involvement   : 20 marks
- Presentation (Dress code, body language, confidence,
  delivery, eye contact)   : 30 marks

Dr.Gurpreet Kaur   **Dr. Ajay Verma**   **Dr. Swaraj Raj**

APPROVED
Board of Studies Meeting held on 19th June 2021   31

B. Based on BSP-201 A, B

ਕੁੱਲ ਅੰਕ–50   ਵਿਸ਼ੇ ਵਿਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ–18

ਪਾਠਕ੍ਰਮ ਦਾ ਉਦੇਸ਼:

1.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਆਧੁਨਿਕ ਯੁੱਗ ਦੇ ਹਾਣੀ ਬਣਾਉਣਾ।
2.ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿੱਚ ਟਾਈਪਿੰਗ ਸਿਖਾਉਣਾ।
3.ਵਿਦਿਆਰਥੀਆਂ ਦੀਆਂ ਵਿਵਹਾਰਕ ਅਤੇ ਕਿੱਤਾਮੁਖੀ ਲੋੜਾਂ ਦੀ ਪੂਰਤੀ ਕਰਨਾ।

1	ਅਨਮੋਲ ਫੌਂਟ ਵਿਚ ਟਾਈਪ ਕਰਨਾ
2	ਵਿਸ਼ੇਸ਼ ਅੱਖਰ ਪਾਉਣ ਲਈ ਕੀ. ਬੋਰਡ ਸ਼ਾਰਟਕੱਟ
3	ਯੂਨੀਕੋਡ ਪ੍ਰਣਾਲੀ ਵਿਚ ਟਾਈਪ ਕਰਨਾ
4	ਯੂਨੀਕੋਡ ਦੇ ਲਾਭ
5	ਫੌਂਟ ਬਦਲਣਾ
6	ਈ. ਮੇਲ ਭੇਜਣਾ
7	ਵੈੱਬਸਾਈਟ ਖੋਲ੍ਹਣਾ

APPROVED
Board of Studies Meeting held on 19th June 2021   32

BVSD-128(SAE-1.2)- Environmental and Road Safety Awareness

Credits : (4)

Max Marks: 100
Internal Assessment: 30
Number of Lectures:30

Max Time: 3hrs.
External Marks: 70

INSTRUCTIONS FOR THE PAPER SETTERS

The question paper will consist of three sections A, B and C. Each of sections A and B will have four questions from the respective sections of the syllabus. Each question shall carry 7 marks. Section C will consist of 7 short answer type questions of 1 mark each.

INSTRUCTIONS FOR THE CANDIDATES

Candidates are required to attempt any two questions from each section A and B. Section C is compulsory.

SECTION-A

INTRODUCTION TO ENVIRONMENTAL STUDIES: The multidisciplinary nature of environmental studies. Definition, scope and importance, Concept of Biosphere – Lithosphere, Hydrosphere, Atmosphere.

ECOSYSTEM & BIODIVERSITY CONSERVATION

Ecosystem and its components, Types of Ecosystems
Biodiversity - Definition and Value, Threats to biodiversity and its conservation
Level of biological diversity: genetic, species and ecosystem diversity; bio-geographic zones of India; biodiversity patterns and global biodiversity hot spots.
India as Mega-biodiversity nation; Endangered and endemic species of India.
Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and informational value.

NATURAL RESOURCES–RENEWABLE AND NON-RENEWABLE RESOURCES

Land resources and land use change; land degradation, soil erosion and desertification.
Deforestation: causes and impacts due to mining, dam building on environment, Forests, Biodiversity and tribal populations.
Water: Use and over-exploitation of surface and ground water, Floods, droughts, conflicts over water (international & inter-state)
Energy resources: renewable and nonrenewable energy sources, use of alternate energy sources, growing energy needs, case studies.

SECTION-B

ENVIRONMENTAL POLLUTION

Environmental Pollution: types, causes, effects and controls; Air, water, soil, chemical and noise pollution, Nuclear hazards and human health risks, Solid waste management: Control measures of urban and industrial waste, Pollution case studies.

APPROVED

ENVIRONMENTAL POLICIES AND PRACTICES

Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture.

Environment Laws : Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act; International agreements; Montreal and Kyoto protocols and conservation on Biological Diversity (CBD). The Chemical Weapons Convention(CWC), Nature reserves, tribal population and rights, and human, wildlife conflicts in Indian context.

Human Communities and the Environment: Human population growth: Impacts on environment, human health and welfare, Sanitation & Hygiene. Resettlement and rehabilitation of project affected persons; case studies. Disaster management: floods, earthquake, cyclones and landslides. Environment movements: Chipko, Silent valley, Bishnois of Rajasthan. Environmental ethics: Role of Indian and other religions and cultures in environmental conservation for a Clean-green pollution free state.

Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi)

Suggested Readings:

1. Carson, R. *2002. Silent Spring.* Houghton MifflinHarcourt.
2. Gadgil, M., &Guha, R.1993. This *Fissured Land:* An Ecological History of India. Univ. of CaliforniaPress.
3. Gleeson,B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.
4. Gleick, P.H. 1993. Water in *Crisis*. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ.Press.
5. Groom, MarthaJ. Gary K. Meffe, andCarl Ronald carroll. *Principles of ConservationBiology.* Sunderland:SinauerAssociates,2006.

6. Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. Science, 339:36-37.
7. McCully, P.1996. *Rivers no more: the environmental effects of dams*(pp. 29-64). ZedBooks.
8. McNeil, John R. 2000. Something New Under the Sun: An Environmental History of the TwentiethCentury.
9. Odum,E.P.,Odum,h.T.&Andrews,J.1971.*FundamentalsofEcology.*
   Philadelphia: Saunders.

10. Pepper, I.L., Gerba, C.P. &Brusseau, M.L. 2011. Environmental and Pollution Science. AcademicPress.
11. Rao, M.N. &Datta, A.K. 1987. *Waste Water Treatement.* Oxford and IBH Publishing Co. Pvt.Ltd.
12. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012.*Environment.* 8th edition. John Wiley &Sons.
13. Rosencranz, A., Divan, S., & Noble, M.L. 2001. *Environmental law and policy in India.* Tripathi1992.
14. Sengupta, R. 2003.*Ecology and economics:* An approach to sustainable development.OUP.
15. Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. *Ecology, Environmental Science and*

APPROVED

Conservation. S. Chand Publishing, NewDelhi.

16. Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. *Conservation Biology: Voices from the Tropics.* John Wiley &Sons.

17. Thapar, V. 1998.   *Land of the Tiger: A Natural History of the Indian Subcontinent.*

18. Warren, C.E. 1971.*Biology and Water Pollution Control.* WBSaunders.

19. Wilson, E.O. 2006. *The Creation: An appeal to save life on earth.* New York: Norton.

20. World Commission on environment and Development. 1987.   *Our Common Future.* Oxford University Press.

21. www.nacwc.nic.in

22. www.opcw.org
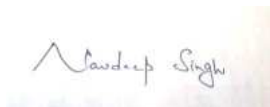
Members of Board of Studies
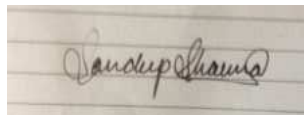
1. **Dr. Surender Kumar**	2. **Dr. Dharamveer Sharma**	3. **Dr. Major Singh Goraya**
4. **Dr. Navdeep Singh**	5. **Mr. Sandeep Sharma**	6. **Mr. Rakesh Kumar**
7. **Prof. Tajinder Kaur**	8. **Prof. Paramjit Kaur**	9. **Prof. Amandeep Kaur**

APPROVED

Board of Studies Meeting held on 19th June 2021