BACHELOR OF VOCATION (B.VOC.) (SOFTWARE DEVELOPMENT) (Semester: I – II)

Session: 2020–21

KHALSA COLLEGE AMRITSAR

Bachelor of Vocation (B.Voc.)
(Software Development) Semester System

Eligibility:
+2 pass in any stream.

Scheme of Syllabus

Semester – I:

Paper Code	Paper	M. Marks
BVGC 101	Communication Skills in English –I	50
BVGC 102	Punjabi (Compulsory) / *Basic Punjabi / ** Punjab History & Culture (From Earliest Times to C 320) - I	50
BVGC 103	*** Drug Abuse: Problem, Management and Prevention (Compulsory Paper) -I	50
BVSD 104	Fundamentals of Information Technology	50
BVSD 105	Web Technology	50
BVSD 106	Programming using C Language	50
BVSD 107	Lab I: Office Automation and Web Technology	75
BVSD 108	Lab II: Programming in C Language	75
	Total:	**400**

Semester – II:

Paper Code	Paper	M. Marks
BVGC 201	Communication Skills in English –II	50
BVGC 202	Punjabi (Compulsory) / * Basic Punjabi /** Punjab History & Culture (C 320 TO 1000 B.C.) -II	50
BVGC 203	*** Drug Abuse: Problem, Management and Prevention (Compulsory Paper)-II	50
BVSD 204	Internet Applications	50
BVSD 205	Data Structure	50
BVSD 206	Object Oriented Programming	50
BVSD 207	Lab I: Programming in C++	75
BVSD 208	Lab II: Practical based on Data Structure	75
	Total:	**400**

Note: 1. * Special Paper in lieu of Punjabi Compulsory.
2. ** For those students who are not domicile of Punjab
3. ***Marks of this Paper will not be included in the Total Marks.

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – I

Paper	Paper Title	Theory	Practical	Internal Assessment	Total Marks	Page No.
BVGC 101	Communication Skills in English –I	25	12	13	50	3-4
BVGC 102	Punjabi (Compulsory) / * Basic Punjabi / ** Punjab History & Culture (From Earliest Times to C 320) -I	37	-	13	50	5-7
BVGC 103	*** Drug Abuse: Problem, Management and Prevention (Compulsory Paper) -I	37	-	13	50	8-9
BVSD 104	Fundamentals of Information Technology	37	-	13	50	10
BVSD 105	Web Technology	37	-	13	50	11-12
BVSD 106	Programming using C Language	37	-	13	50	13-14
BVSD 107	Lab I: Office Automation and Web Technology	-	56	19	75	15
BVSD 108	Lab II: Programming in C Language	-	56	19	75	16

Note: 1. * Special Paper in lieu of Punjabi Compulsory.

2. ** For those students who are not domicile of Punjab

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

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – I

PAPER – BVGC 101: COMMUNICATION SKILLS IN ENGLISH–I

Time: 3 Hours
Max. Marks: 50
Theory Marks: 25
Practical Marks: 12
Internal Assessment: 13

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.   (5X5=25 Marks)

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.

Section–B
Reading for understanding concepts, details, coherence.
Activities:
• Short comprehension questions based on content and development of ideas

Section–C
Writing Skills: Writing styles for application, personal letter, official/ business letter.
Activities:
• Formatting personal and business letters.

Section–D
Resume, memo and notices; outline and revision.
Activities:
• Converting a biographical note into a sequenced resume or vice-versa
• 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

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – I

PAPER – BVGC 101: COMMUNICATION SKILLS IN ENGLISH–I
(Practical)

Practical Marks: 12

Course Contents:-
1.   Assignment on selected topics in about 700-1000 words.
2.   Comprehension passage
Questions:-
1.   Handwritten Assignment should be submitted to the concerned teachers in a stick file.
2.   Short comprehension questions based on unseen passage.

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

Bachelor of Vocation (B.Voc.)
(Software Development) Semester-I

PAPER-BVGC 102 : ਲਾਜ਼ਮੀ ਪੰਜਾਬੀ

ਸਮਾਂ : 3 ਘੰਟੇ   ਥਿਊਰੀ ਅੰਕ : 37
                                              ਇੰਟਰਨਲ ਅਸੈੱਸਮੈਂਟ : 13
                                              ਕੁੱਲ ਅੰਕ : 50

ਪਾਠ-ਕ੍ਰਮ

ਭਾਗ-ਪਹਿਲਾ

ਸਾਹਿਤ ਦੇ ਰੰਗ (ਭਾਗ ਪਹਿਲਾ -ਕਵਿਤਾ ਅਤੇ ਕਹਾਣੀ)
ਡਾ. ਮਹਿਲ ਸਿੰਘ (ਸੰਪਾ.), ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
(ਲੇਖਕ ਦਾ ਜੀਵਨ ਅਤੇ ਰਚਨਾ/ਸਾਰ/ਵਿਸ਼ਾ-ਵਸਤੂ)

ਭਾਗ-ਦੂਜਾ

ਇਤਿਹਾਸਿਕ ਯਾਦਾਂ
ਸ. ਸ. ਅਮੋਲ (ਸੰਪਾ.), ਪੰਜਾਬੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
(ਨਿਬੰਧ 1 ਤੋਂ 6 ਤਕ ਸਾਰ/ ਵਿਸ਼ਾ-ਵਸਤੂ/ਸ਼ੈਲੀ)

ਭਾਗ-ਤੀਜਾ

(ੳ) ਪੈਰ੍ਹਾ ਰਚਨਾ (ਤਿੰਨਾਂ ਵਿਚੋਂ ਇੱਕ)
(ਅ) ਪੈਰ੍ਹਾ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ

ਭਾਗ-ਚੌਥਾ

(ੳ) ਭਾਸ਼ਾ ਵੰਨਗੀਆਂ : ਭਾਸ਼ਾ ਦਾ ਟਕਸਾਲੀ ਰੂਪ, ਭਾਸ਼ਾ ਅਤੇ ਉਪ-ਭਾਸ਼ਾ ਵਿਚਲਾ ਅੰਤਰ, ਪੰਜਾਬੀ
                    ਉਪ-ਭਾਸ਼ਾਵਾਂ ਦੇ ਪਛਾਣ-ਚਿੰਨ੍ਹ
(ਅ) ਪੰਜਾਬੀ ਭਾਸ਼ਾ – ਨਿਕਾਸ ਤੇ ਵਿਕਾਸ

ਅੰਕ-ਵੰਡ ਅਤੇ ਪ੍ਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1.   ਸਿਲੇਬਸ ਦੇ ਚਾਰ ਭਾਗ ਹਨ ਪਰ ਪ੍ਰਸ਼ਨ-ਪੱਤਰ ਦੇ ਪੰਜ ਭਾਗ ਹੋਣਗੇ।
2.   ਪਹਿਲੇ ਚਾਰ ਭਾਗਾਂ ਵਿਚ 02-02 ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ। ਹਰੇਕ ਭਾਗ ਵਿਚੋਂ 01-01 ਪ੍ਰਸ਼ਨ ਕਰਨਾ ਲਾਜ਼ਮੀ
     ਹੋਵੇਗਾ। ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ (08) ਅੰਕ ਹੋਣਗੇ।
3.   ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਪੰਜਵੇਂ ਭਾਗ ਵਿਚ ਸਾਰੇ ਸਿਲੇਬਸ ਵਿਚੋਂ 01-01 ਅੰਕ ਦੇ ਛੇ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ, ਜਿਨ੍ਹਾਂ
     ਵਿਚੋਂ 05 ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ ਦੇਣਾ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ।
4.   ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ-ਪ੍ਰਸ਼ਨਾਂ ਵਿਚ
     ਕਰ ਸਕਦਾ ਹੈ।

ਨੋਟ :   ਇੰਟਰਨਲ ਅਸੈੱਸਮੈਂਟ 13 ਅੰਕਾਂ ਦੀ ਹੈ, ਜੋ ਕਾਲਜ ਵੱਲੋਂ ਨਿਰਧਾਰਿਤ ਦਿਸ਼ਾ ਨਿਰਦੇਸ਼ਾਂ ਅਨੁਸਾਰ ਇਨ੍ਹਾਂ
           ਅੰਕਾਂ ਤੋਂ ਵੱਖਰੀ ਹੋਵੇਗੀ। ਇਸ ਪੇਪਰ ਦੇ ਕੁੱਲ ਅੰਕ 37+13 = 50 ਹਨ।

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – I

PAPER-BVGC 102 : ਮੁੱਢਲੀ ਪੰਜਾਬੀ

(In Lieu of Compulsory Punjabi)

ਸਮਾਂ : 3 ਘੰਟੇ   ਥਿਊਰੀ ਅੰਕ : 37
                                                                    ਇੰਟਰਨਲ ਅਸੈੱਸਮੈਂਟ : 13
                                                                            ਕੁੱਲ ਅੰਕ : 50

ਪਾਠ-ਕ੍ਰਮ

ਭਾਗ-ਪਹਿਲਾ

ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ :
      (ੳ) ਨਾਮਕਰਣ ਤੇ ਸੰਖੇਪ ਜਾਣ-ਪਛਾਣ : ਗੁਰਮੁਖੀ ਵਰਣਮਾਲਾ, ਅੱਖਰ ਕ੍ਰਮ, ਸਵਰ ਵਾਹਕ (ੳ, ਅ, ੲ),
      ਲਗਾਂ-ਮਾਤਰਾਂ, ਪੈਰ ਵਿਚ ਬਿੰਦੀ ਵਾਲੇ ਵਰਣ, ਪੈਰ ਵਿਚ ਪੈਣ ਵਾਲੇ ਵਰਣ, ਬਿੰਦੀ, ਟਿੱਪੀ, ਅੱਧਕ
      (ਅ) ਸਿਖਲਾਈ ਤੇ ਅਭਿਆਸ

ਭਾਗ-ਦੂਜਾ

ਗੁਰਮੁਖੀ ਆਰਥੋਗਰਾਫੀ ਅਤੇ ਉਚਾਰਨ :
      ਸਵਰ, ਵਿਅੰਜਨ : ਮੁੱਢਲੀ ਜਾਣ-ਪਛਾਣ ਅਤੇ ਉਚਾਰਣ, ਮੁਹਾਰਨੀ, ਲਗ- ਮਾਤਰਾਂ ਦੀ ਪਛਾਣ

ਭਾਗ-ਤੀਜਾ

ਪੰਜਾਬੀ ਸ਼ਬਦ-ਜੋੜ :
      ਮੁਕਤਾ (ਦੋ ਅੱਖਰਾਂ ਵਾਲੇ ਸ਼ਬਦ, ਤਿੰਨ ਅੱਖਰਾਂ ਵਾਲੇ ਸ਼ਬਦ), ਸਿਹਾਰੀ ਵਾਲੇ ਸ਼ਬਦ, ਬਿਹਾਰੀ ਵਾਲੇ ਸ਼ਬਦ, ਔਂਕੜ
      ਵਾਲੇ ਸ਼ਬਦ, ਦੁਲੈਂਕੜ ਵਾਲੇ ਸ਼ਬਦ, ਲਾਂ ਵਾਲੇ ਸ਼ਬਦ, ਦੁਲਾਵਾਂ ਵਾਲੇ ਸ਼ਬਦ, ਹੋੜੇ ਵਾਲੇ ਸ਼ਬਦ, ਕਨੌੜੇ ਵਾਲੇ ਸ਼ਬਦ,
      ਲਗਾਖਰ (ਬਿੰਦੀ, ਟਿੱਪੀ, ਅੱਧਕ) ਵਾਲੇ ਸ਼ਬਦ

ਭਾਗ-ਚੌਥਾ

ਸ਼ੁੱਧ-ਅਸ਼ੁੱਧ ਸ਼ਬਦ

ਅੰਕ-ਵੰਡ ਅਤੇ ਪ੍ਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪਹਿਲੇ ਭਾਗ ਵਿਚੋਂ ਚਾਰ ਵਰਣਨਾਤਮਕ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ ਜਿਨਾਂ ਵਿਚੋਂ ਤਿੰਨ ਪ੍ਰਸ਼ਨਾਂ ਦਾ ਉੱਤਰ ਦੇਣਾ ਲਾਜ਼ਮੀ ਹੈ। ਹਰ
    ਪ੍ਰਸ਼ਨ ਦੇ ਚਾਰ-ਚਾਰ ਅੰਕ ਹਨ।   **(3x4)=12 ਅੰਕ**
2. ਭਾਗ ਦੂਸਰਾ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ ਪੰਜ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ। ਸਾਰੇ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹਨ।   **(5x2)=10 ਅੰਕ**
3. ਭਾਗ ਤੀਸਰਾ ਵਿਚੋਂ ਤਿੰਨ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ ਜਿਨਾਂ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਲਾਜ਼ਮੀ ਹਨ। ਇਨ੍ਹਾਂ ਦੇ ਪੰਜ-ਪੰਜ ਅੰਕ
    ਹਨ।   **(2x5)=10 ਅੰਕ**
4. ਭਾਗ ਚੌਥਾ ਵਿਚ ਪੰਜ ਅਸ਼ੁੱਧ ਸ਼ਬਦਾਂ ਨੂੰ ਸ਼ੁੱਧ ਕਰਕੇ ਲਿਖਣਾ ਹੋਵੇਗਾ।   **(5x1)=05 ਅੰਕ**

ਨੋਟ: ਇੰਟਰਨਲ ਅਸੈੱਸਮੈਂਟ 13 ਅੰਕਾਂ ਦੀ ਹੈ, ਜੋ ਕਾਲਜ ਵੱਲੋਂ ਨਿਰਧਾਰਿਤ ਦਿਸ਼ਾ ਨਿਰਦੇਸ਼ਾਂ ਅਨੁਸਾਰ ਇਨ੍ਹਾਂ
        ਅੰਕਾਂ ਤੋਂ ਵੱਖਰੀ ਹੋਵੇਗੀ। ਇਸ ਪੇਪਰ ਦੇ ਕੁੱਲ ਅੰਕ 37+13 = 50 ਹਨ।

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – I
PAPER – BVGC 102: 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   **Total. Marks: 50**
                                                                                        Theory: 37
                                                                  Internal Assessment: 13

Instructions for the Paper Setter:
The question paper consists of five units: I, II, III, IV and V. Units I, II, III and IV will have two questions each. Each question carries 8 marks. The students are to attempt one question from each unit approximately in 800 words. Unit-V consists of 7 short answer type questions to be set from the entire syllabus. Students are to attempt any 5 questions in about 20 words each. Each question carries 1 mark.

Note: The examiner is to set the question paper in two languages: English & Hindi.

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

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

Unit-III
5. Social, Religious and Economic life during Rig Vedic Age.
6. Social, Religious and Economic life during later Vedic Age.

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

Suggested Readings:-
1. L. 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.

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – I
PAPER – BVGC 103: Drug Abuse: Problem, Management and Prevention

(Compulsory Paper)

Time: 3 Hours   **Max. Marks: 50**
Theory Marks: 37
Internal assessment: 13

Instructions for the Paper Setters:
Section–A: (09 Marks): It will consist of five short answer type questions. Candidates will be required to attempt three questions, each question carrying 03 marks. Answer to any of the questions should not exceed two pages.
Section–B: (16 Marks) It will consist of four essay type questions. Candidates will be required to attempt two questions, each question carrying 08 marks. Answer to any of the questions should not exceed four pages.
Section–C: (12 Marks) It will consist of two questions. Candidate will be required to attempt one question only. Answer to the question should not exceed 5 pages

UNIT–I

- **Meaning of Drug Abuse**

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

UNIT-II

- **Consequences of Drug Abuse for:**

Individual : Education, Employment, Income.

Family   : Violence.

Society   : Crime.

Nation   : Law and Order problem.

UNIT-III

- **Management of Drug Abuse**

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

UNIT-IV

- Psychiatric Management: Counseling, Behavioral and Cognitive therapy.

- Social Management: Family, Group therapy and Environmental Intervention.

References:

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. 23

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

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

6. National Household Survey of Alcohol and Drug abuse. (2003) New Delhi, Clinical Epidemiological Unit, All India Institute of Medical Sciences, 2004.

7. Randhawa, J.K. and Randhawa, Samreet 2018. Drug Abuse-Management and Prevention. Kasturi Lal & Sons, Educational Publishers, Amritsar- Jalandhar.

8. Sain, Bhim 1991, Drug Addiction Alcoholism, Smoking obscenity New Delhi: Mittal Publications.

9. Sandhu, Ranvinder Singh, 2009, Drug Addiction in Punjab: A Sociological Study. Amritsar: Guru Nanak Dev University.

10. Singh, Chandra Paul 2000. Alcohol and Dependence among Industrial Workers: Delhi: Shipra.

11. Sussman, S and Ames, S.L. (2008). Drug Abuse: Concepts, Prevention and Cessation, Cambridge University Press.

12. World Drug Report 2010, United Nations office of Drug and Crime.

13. World Drug Report 2011, United Nations office of Drug and Crime.

1. Jasjit Kaur Randhawa & Samreet Randhawa, "Drug Abuse Problem, Management & Prevention", KLS, ISBN No. 978-81-936570-8-9, (2019).

2. Jasjit Kaur Randhawa, "Drug Abuse -Management & Prevention", KLS, ISBN No. 978-93-81278-80-2, (2018).

3. Rama Gandotra & Jasjit Kaur Randhawa, "ਡਰੱਗਜ਼ ਦੁਰਵਰਤੋਂ–(ਨਸ਼ਾਖੋਰੀ) ਪ੍ਰਬੰਧਨ ਅਤੇ ਰੋਕਥਾਮ", KLS, ISBN No. 978-93-81278-87-1, (2018).

4. Jasjit Kaur Randhawa & Samreet Randhawa, "Drug Abuse-Problem, Management & Prevention", KLS, ISBN No. 978-81-936570-6-5, (2018).

5. Jasjit Kaur Randhawa & Samreet Randhawa, "ਡਰੱਗਜ਼ ਦੁਰਵਰਤੋਂ–(ਨਸ਼ਾਖੋਰੀ) ਸਮੱਸਿਆ, ਪ੍ਰਬੰਧਨ ਅਤੇ ਰੋਕਥਾਮ", KLS, ISBN No. 978-81-936570-7-1, (2018).

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – I

Paper–BVSD 104 : Fundamentals of Information Technology

Time: 3 Hrs.   **Max. Marks: 50**
Theory Marks: 37
Internal Assessment Marks: 13

Instructions for the Paper Setters:-

Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry 1.5 marks with answer to each question up to 10 lines in length. The total weightage being 09 marks.
Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.
Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.

UNIT-I

An overview of computer system: Block diagram of Computer, Components of Computers, and advantages of computer.

[6 Hrs.]

I/O and storage Devices: Keyboard, mouse, pens, touch screens, Bar Code reader, joystick, Monitor, printers, plotters, Primary storage (Storage addresses and capacity, type of memory), Secondary storage, Magnetic storage devices and optical storage devices

[12 Hrs.]

UNIT-II

Number System: decimal, binary, octal, hexadecimal numbers and their–conversions

[12 Hrs.]

Development Tools: Editors, Translators, Compilers, Interpreters, Linkers Loaders, Debuggers.

[8 Hrs.]

Programming Tools: Problem Analysis, Program Constructs (Sequential, Decision, Loop), Algorithms, Flowcharts, Pseudo code, Decision table

[12 Hrs.]

Data Communications: Introduction to Data Communication, Network and its types, topologies, Transmission Media and modes.

[10 Hrs.]

References:
1. V.K. Jain: Fundamentals of Information Technology.
2. Norton, Peter: Introduction to Computers, McGraw Hill
3. Computer Fundamentals, P.K. Sinha

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – I

Paper–BVSD 105: Web Technology

Time: 3 Hrs.   **Max. Marks: 50**
Theory Marks:37
Internal Assessment Marks: 13

Instructions for the Paper Setters:-

Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry 1.5 marks with answer to each question up to 10 lines in length. The total weightage being 09 marks.
Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.
Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.

UNIT-I

Introduction to Web Development

Webpage, Website, Static Website, Dynamic Website, Web Servers, Web Browsers

[10 Hrs.]

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.

[15 Hrs.]

Introduction to JavaScript:

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

[10 Hrs.]

UNIT-II

Introduction to Dreamweaver

Understanding Workspace Layout, Managing Websites, Creating a Website, Using Dreamweaver Templates, Adding New WebPages, Text and Page Format, Inserting Tables, Lists, Images, Adding Links.

[15 Hrs.]

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.

[10 Hrs.]

Suggested Readings / Books:

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

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – I

Paper–BVSD 106: Programming using C Language

Time: 3 Hrs.   **Max. Marks: 50**
Theory Marks: 37
Theory Internal Assessment Marks: 13

Instructions for the Paper Setters:-
Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry 1.5 marks with answer to each question up to 10 lines in length. The total weightage being 09 marks.
Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.
Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.

UNIT-I

C language preliminaries: Introduction to C, Identifiers and Key Words, Data types, Constants, Variables, Expressions, Statements.

[10   Hrs.]

Operators and I/O functions: Arithmetic operators, Unary operators, RelationalOperators, Logical Operators, Assignment and Conditional Operators, getchar, putchar, printf, gets, puts

[10 Hrs.]

Control Statements: While, Do–while and for statements, Nested loops, If–else, Switch, Break – Continue statements.

[10 Hrs.]

Functions: Brief overview, types, defining, accessing functions, passing arguments to function, specifying argument data types, function prototypes, recursion.

[8 Hrs.]

UNIT-II

Arrays and Pointers Defining, processing an array, passing arrays to a function, multi–dimensional arrays, Introduction to pointers, Operations on pointers, Pointers and array.

[10 Hrs.]

Structure and Union: A simple structure, specifying the structure, defining a structure variable Accessing Structure member, Structure within structure, union, difference between structure and union.

[6 Hrs.]

Data Files: Opening, closing, creating, processing and unformatted data files.

[6 Hrs.]

References:
1. Let us C, Yashwant Kanetkar
2. C – programming E. Balagurusamy Tata McGraw Hill
3. Complete reference with C Tata McGraw Hill

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – I

Paper–BVSD 107: Lab – I: Office Automation and Web Technology

Time: 3 Hrs.   **Max. Marks:75**
                                                                Practical Marks:56
                                                Internal Assessment Marks: 19

Practical based on Office Automation and Web Technology

- **Office Automation:** MS Word, MS Excel, MS PowerPoint
- **Web Technology:** HTML, DHTML, Dreamweaver

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – I

Paper–BVSD 108: Lab – II: Programming in C Language

Time: 3 Hrs.   **Max. Marks: 75**
Practical Marks: 56
Internal Assessment Marks: 19

Practical based on Programming in C language

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

Paper	Paper Title	Theory	Practical	Internal Assessment	Total Marks	Page No.
BVGC 201	Communication Skills in English – II	25	12	13	50	18-19
BVGC 202	Punjabi (Compulsory) / *Basic Punjabi / ** Punjab History & Culture (From Earliest Times to C 320) -II	37	-	13	50	20-22
BVGC 203	*** Drug Abuse: Problem, Management and Prevention (Compulsory Paper)-II	37	-	13	50	23-24
BVSD 204	Internet Applications	37	-	13	50	25-26
BVSD 205	Data Structure	37	-	13	50	27-28
BVSD 206	Object Oriented Programming	37	-	13	50	29-30
BVSD 207	Lab I: Programming in C++	-	56	19	75	31
BVSD 208	Lab II: Practical based on Data Structure	-	56	19	75	32

Note: 1. * Special Paper in lieu of Punjabi Compulsory.
2. ** For those students who are not domicile of Punjab
3. ***Marks of this Paper will not be included in the Total Marks.

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

PAPER – BVGC 201: COMMUNICATION SKILLS IN ENGLISH–II

Time: 3 Hours   **Max. Marks: 50**

Theory Marks: 25
Practical Marks: 12
Assessment: 13

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.   (5X5=25 Marks)
Course Contents:

SECTION–A
Listening Skills: Barriers to listening; effective listening skills.
Activities: Listening exercises- News and TV reports
SECTION–B

Attending telephone calls; 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

Situation based Conversation in English, Essentials of Spoken English

Activities: Giving Interviews

Recommended Books:

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

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

PAPER – BVGC 201: COMMUNICATION SKILLS IN ENGLISH–II

(Practical)

Practical Marks: 12

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.

Questions:-

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 20minutes.

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

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

PAPER-BVGC 202 : ਲਾਜ਼ਮੀ ਪੰਜਾਬੀ

ਸਮਾਂ : 3 ਘੰਟੇ   ਥਿਊਰੀ ਅੰਕ : 37

                                                               ਇੰਟਰਨਲ ਅਸੈੱਸਮੈਂਟ : 13

                                                               ਕੁੱਲ ਅੰਕ : 50

ਪਾਠ-ਕ੍ਰਮ

ਭਾਗ-ਪਹਿਲਾ

ਸਾਹਿਤ ਦੇ ਰੰਗ (ਭਾਗ ਦੂਜਾ – ਵਾਰਤਕ ਅਤੇ ਰੇਖਾ-ਚਿੱਤਰ)
ਡਾ. ਮਹਿਲ ਸਿੰਘ (ਸੰਪਾ.), ਰਵੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
(ਕਿਸੇ ਲੇਖ ਅਤੇ ਰੇਖਾ-ਚਿੱਤਰ ਦਾ ਸਾਰ/ਵਿਸ਼ਾ-ਵਸਤੂ/ਨਾਇਕ ਬਿੰਬ)

ਭਾਗ-ਦੂਜਾ

ਇਤਿਹਾਸਿਕ ਯਾਦਾਂ
ਸ. ਸ. ਅਮੋਲ (ਸੰਪਾ.), ਪੰਜਾਬੀ ਸਾਹਿਤ ਪ੍ਰਕਾਸ਼ਨ, ਅੰਮ੍ਰਿਤਸਰ।
(ਨਿਬੰਧ 7 ਤੋਂ 12 ਤਕ ਸਾਰ/ ਵਿਸ਼ਾ-ਵਸਤੂ/ਸ਼ੈਲੀ)

ਭਾਗ-ਤੀਜਾ

(ੳ) ਸ਼ਬਦ-ਬਣਤਰ ਅਤੇ ਸ਼ਬਦ-ਰਚਨਾ – ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਮੁੱਢਲੇ ਸੰਕਲਪ
(ਅ) ਸ਼ਬਦ-ਸ਼੍ਰੇਣੀਆਂ

ਭਾਗ-ਚੌਥਾ

(ੳ) ਦਫਤਰੀ ਚਿੱਠੀ ਪੱਤਰ
(ਅ) ਮੁਹਾਵਰੇ ਅਤੇ ਅਖਾਣ

ਅੰਕ-ਵੰਡ ਅਤੇ ਪ੍ਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1.   ਸਿਲੇਬਸ ਦੇ ਚਾਰ ਭਾਗ ਹਨ ਪਰ ਪ੍ਰਸ਼ਨ-ਪੱਤਰ ਦੇ ਪੰਜ ਭਾਗ ਹੋਣਗੇ।
2.   ਪਹਿਲੇ ਚਾਰ ਭਾਗਾਂ ਵਿਚ 02-02 ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ। ਹਰੇਕ ਭਾਗ ਵਿਚੋਂ 01-01 ਪ੍ਰਸ਼ਨ ਕਰਨਾ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ। ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ (08) ਅੰਕ ਹੋਣਗੇ।
3.   ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਪੰਜਵੇਂ ਭਾਗ ਵਿਚ ਸਾਰੇ ਸਿਲੇਬਸ ਵਿਚੋਂ 01-01 ਅੰਕ ਦੇ ਛੇ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ, ਜਿਨ੍ਹਾਂ ਵਿਚੋਂ 05 ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ ਦੇਣਾ ਲਾਜ਼ਮੀ ਹੋਵੇਗਾ।
4.   ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ-ਪ੍ਰਸ਼ਨਾਂ ਵਿਚ ਕਰ ਸਕਦਾ ਹੈ।

ਨੋਟ : ਇੰਟਰਨਲ ਅਸੈੱਸਮੈਂਟ 13 ਅੰਕਾਂ ਦੀ ਹੈ, ਜੋ ਕਾਲਜ ਵੱਲੋਂ ਨਿਰਧਾਰਿਤ ਦਿਸ਼ਾ ਨਿਰਦੇਸ਼ਾਂ ਅਨੁਸਾਰ ਇਨ੍ਹਾਂ ਅੰਕਾਂ ਤੋਂ ਵੱਖਰੀ ਹੋਵੇਗੀ। ਇਸ ਪੇਪਰ ਦੇ ਕੁੱਲ ਅੰਕ 37+13 = 50 ਹਨ।

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

PAPER-BVGC 202 : ਮੁੱਢਲੀ ਪੰਜਾਬੀ

(In Lieu of Compulsory Punjabi)

ਸਮਾਂ : 3 ਘੰਟੇ

ਥਿਊਰੀ ਅੰਕ : 37
ਇੰਟਰਨਲ ਅਸੈੱਸਮੈਂਟ : 13
ਕੁੱਲ ਅੰਕ : 50

ਪਾਠ-ਕ੍ਰਮ

ਭਾਗ–ਪਹਿਲਾ

ਪੰਜਾਬੀ ਸ਼ਬਦ-ਬਣਤਰ :

ਧਾਤੂ, ਵਧੇਤਰ (ਅਗੇਤਰ, ਮਧੇਤਰ, ਪਿਛੇਤਰ), ਪੰਜਾਬੀ ਕੋਸ਼ਗਤ ਸ਼ਬਦ ਅਤੇ ਵਿਆਕਰਨਕ ਸ਼ਬਦ

ਭਾਗ–ਦੂਜਾ

ਪੰਜਾਬੀ ਸ਼ਬਦ-ਪ੍ਰਕਾਰ :

(ੳ) ਸੰਯੁਕਤ ਸ਼ਬਦ, ਸਮਾਸੀ ਸ਼ਬਦ, ਦੋਜਾਤੀ ਸ਼ਬਦ, ਦੋਹਰੇ/ਦੁਹਰੁਕਤੀ ਸ਼ਬਦ ਅਤੇ ਮਿਸ਼ਰਤ ਸ਼ਬਦ।
(ਅ) ਸਿਖਲਾਈ ਤੇ ਅਭਿਆਸ

ਭਾਗ–ਤੀਜਾ

ਪੰਜਾਬੀ ਸ਼ਬਦ-ਰਚਨਾ :

ਇੱਕ-ਵਚਨ ਬਹੁ-ਵਚਨ, ਲਿੰਗ-ਪੁਲਿੰਗ, ਬਹੁਅਰਥਕ ਸ਼ਬਦ, ਸਮਾਨਅਰਥਕ ਸ਼ਬਦ, ਬਹੁਤੇ ਸ਼ਬਦਾਂ ਲਈ ਇੱਕ ਸ਼ਬਦ, ਸ਼ਬਦ ਜੁੱਟ, ਵਿਰੋਧਅਰਥਕ ਸ਼ਬਦ, ਸਮਨਾਮੀ ਸ਼ਬਦ

ਭਾਗ–ਚੌਥਾ

ਨਿਤ ਵਰਤੋਂ ਦੀ ਪੰਜਾਬੀ ਸ਼ਬਦਾਵਲੀ :

ਖਾਣ-ਪੀਣ, ਸਾਕਾਦਾਰੀ, ਰੁੱਤਾਂ, ਮਹੀਨਿਆਂ, ਗਿਣਤੀ, ਮੌਸਮ, ਬਾਜ਼ਾਰ, ਵਪਾਰ, ਧੰਦਿਆਂ ਨਾਲ ਸੰਬੰਧਿਤ

ਅੰਕ-ਵੰਡ ਅਤੇ ਪ੍ਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਭਾਗ ਪਹਿਲਾਂ ਵਿਚੋਂ ਚਾਰ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ ਜਿਨ੍ਹਾਂ ਵਿਚੋਂ ਤਿੰਨ ਪ੍ਰਸ਼ਨਾਂ ਦਾ ਉੱਤਰ ਦੇਣੇ ਲਾਜ਼ਮੀ ਹਨ। ਹਰ ਪ੍ਰਸ਼ਨ ਦੇ ਚਾਰ-ਚਾਰ ਅੰਕ ਹਨ ।   **(3x4)=12 ਅੰਕ**

2. ਭਾਗ ਦੂਸਰਾ ਵਿਚੋਂ ਦੋ-ਦੋ ਅੰਕ ਦੇ ਪੰਜ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ। ਸਾਰੇ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹਨ।**(5x2)=10 ਅੰਕ**

3. ਭਾਗ ਤੀਸਰਾ ਵਿਚੋਂ ਚਾਰ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ ਜਿਨ੍ਹਾਂ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨੇ ਲਾਜ਼ਮੀ ਹਨ।
    (2x5)=10 ਅੰਕ

4. ਭਾਗ ਚੌਥਾ ਵਿਚੋਂ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ ਜਿਨ੍ਹਾਂ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਹੱਲ ਕਰਨਾ ਹੋਵੇਗਾ।   **(1x5)=05 ਅੰਕ**

ਨੋਟ: ਇੰਟਰਨਲ ਅਸੈੱਸਮੈਂਟ 13 ਅੰਕਾਂ ਦੀ ਹੈ, ਜੋ ਕਾਲਜ ਵੱਲੋਂ ਨਿਰਧਾਰਿਤ ਦਿਸ਼ਾ ਨਿਰਦੇਸ਼ਾਂ ਅਨੁਸਾਰ ਇਨ੍ਹਾਂ ਅੰਕਾਂ ਤੋਂ ਵੱਖਰੀ ਹੋਵੇਗੀ। ਇਸ ਪੇਪਰ ਦੇ ਕੁਲ ਅੰਕ 37+13 = 50 ਹਨ।

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

PAPER – BVGC 202: PUNJAB HISTORY & CULTURE (C 321 TO 1000 A.D.)

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

Time: 3 Hours **Total. Marks: 50**
Theory: 37
Internal Assessment: 13

Instructions for the Paper Setter:
The question paper consists of five units: I, II, III, IV and V. Units I, II, III and IV will have two questions each. Each question carries 8 marks. The students are to attempt one question from each unit approximately in 800 words. Unit-V consists of 7 short answer type questions to be set from the entire syllabus. Students are to attempt any 5 questions in about 20 words each. Each question carries 1 mark.
Note: The examiner is to set the question paper in two languages: English & Hindi.

Unit-I
1. Punjab under Chandragupta Maurya and Ashoka.
2. The Kushans and their Contribution to the Punjab.

Unit-II
3. The Punjab under the Gupta Emperors.
4. The Punjab under the Vardhana Emperors

Unit-III
5. Political Developments 7th Century to 1000 A.D.
6. Socio-cultural History of Punjab from 7th Century to 1000 A.D.

Unit-IV
7. Development of languages and Literature.
8. Development of art & Architecture.

Suggested Readings:-
1. L. Joshi (ed), History and Culture of the Punjab, Part-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.

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

PAPER – BVGC 203: DRUG ABUSE: PROBLEM, MANAGEMENT AND PREVENTION
(Compulsory Paper)

Time: 3 Hours
Max. Marks: 50
Theory Marks: 37
Internal assessment: 13

Instructions for the Paper Setters:
Section–A: (09 Marks): It will consist of five short answer type questions. Candidates will be required to attempt three questions, each question carrying 03 marks. Answer to any of the questions should not exceed two pages.
Section–B: (16 Marks) It will consist of four essay type questions. Candidates will be required to attempt two questions, each question carrying 08 marks. Answer to any of the questions should not exceed four pages.
Section–C: (12 Marks) It will consist of two questions. Candidate will be required to attempt one question only. Answer to the question should not exceed 5 pages.

UNIT-I

- **Prevention of Drug abuse**

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

UNIT-II

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

UNIT-III

- **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

UNIT-IV

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

References:

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

2. Gandotra, R. and Randhawa, J.K. 2018. voZrI d[otos'A (BPky'oh) gqpzXB ns o'eEkw. Kasturi Lal & Sons, Educational Publishers, Amritsar- Jalandhar.

3. Inciardi, J.A. 1981. The Drug Crime Connection. Beverly Hills: Sage Publications.

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

5. Randhawa, J.K. and Randhawa, Samreet 2018. Drug Abuse-Management and Prevention. Kasturi Lal & Sons, Educational Publishers, Amritsar- Jalandhar.

6. Sain, Bhim 1991, Drug Addiction Alcoholism, Smoking obscenity New Delhi: Mittal Publications.

7. Sandhu, Ranvinder Singh, 2009, Drug Addiction in Punjab: A Sociological Study. Amritsar: Guru Nanak Dev University.

8. Singh, Chandra Paul 2000. Alcohol and Dependence among Industrial Workers: Delhi: Shipra.

9. World Drug Report 2011, United Nations office of Drug and Crime.

10. World Drug Report 2010, United Nations office of Drug and Crime

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

Paper–BVSD 204: Internet Applications

Time: 3 Hrs.   **Max. Marks: 50**
Theory Marks: 37
Internal Assessment Marks: 13

Instructions for the Paper Setters:-

Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry 1.5 marks with answer to each question up to 10 lines in length. The total weightage being 09 marks.
Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.
Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.

UNIT–I

Introduction: About internet and its working, business use of internet, services offered by internet, evaluation of internet, internet service provider (ISP), windows environment for dial up networking (connecting to internet), audio on internet, internet addressing (DNS) and IP addresses).

[12 Hrs.]

E–Mail: Concept, Advantage and disadvantage, structure of an e–mail message, working of e–mail (sending and receiving messages), managing e–mail (creating new folder, deleting messages, forwarding messages, filtering messages) Implementation of outlook express.

[12 Hrs.]

Internet Protocol: Introduction, file transfer protocol (FTP), Gopher, Telnet, other protocols like HTTP and TCP/IP.

[6 Hrs.]

UNIT-II

WWW: Introduction, working of WWW, Web browsing (opening, viewing, saving and printing a web page and bookmark).

[6 Hrs.]

Intranet and Extranet Introduction, application of intranet, business value of intranet, working of intranet, role of extranet, working of extranet, difference between intranet and extranet.

[10 Hrs.]

Search Engine: About search engine, component of search engine, working of search engine, difference between search engine and web directory.

[6 Hrs.]

News Group: Basic concepts of newsgroup, connecting to a news server, subscribing to newsgroup, organization of articles, reading messages, posting replies and new messages, managing newsgroup and messages.

[8 Hrs.]

References:
Internet and its Applications by Ackerman.
Internet – The Complete Reference

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

Paper–BVSD 205: Data Structure

Time: 3 Hrs.   **Max. Marks: 50**
Theory Marks:37
Internal Assessment Marks: 13

Instructions for the Paper Setters:-
Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry 1.5 marks with answer to each question up to 10 lines in length. The total weightage being 09 marks.
Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.
Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.
.

UNIT-I
Basic Data Structure: Introduction to Data Structure, Common Operations on Data Structures, Algorithm Complexity, Big O Notation, Time – Space trade off between Algorithms.
[7 hrs.]
Arrays: Define Array, Representing Arrays in Memory, Various Operations on Linear Arrays, Linear Search and Binary Search
[8 hrs.]

Linked Lists: Types of Linked Lists, Representing Linked Lists in Memory, Advantages of using Linked Lists over Arrays, Various Operations on Linked Lists.
[8 hrs.]
Stacks: Description of STACK structure, Implementation of Stack using Arrays and Linked Lists, Push and Pop operations of Stack, Applications of Stacks – Converting Arithmetic expression from infix notation to polish and their subsequent evaluation
[8 hrs.]

UNIT-II

Queues: Description of queue structure, Implementation of queue using arrays and linked lists, Insertion and Deletion operations in Circular Queue, description of priorities of queues, dequeues.
[8 hrs.]
Trees: Description of Tree Structure and its Terminology, Binary Trees and Binary Search trees and their representation in Memory
[7 hrs.]

Graphs: Description of Graph Structure, Implement Graphs in Memory using Adjacency Matrix and Adjacency list, BSF and DFS traversal of the graph
[7 hrs.]
Sorting techniques: Sorting Algorithms, Bubble Sort, Insertion Sort, Selection Sort, Merge Sort
[7 hrs.]

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

References:
1. Seymour Lipschutz, Theory and Problems of Data Structures, Schaum's Outline Series, McGraw Hill Company.
2. Tanenbaum, Data Structure using C.

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

Paper–BVSD 206: Object Oriented Programming

Time: 3 Hrs.   **Max. Marks: 50**
                                            Theory Marks:37
                                            Internal Assessment Marks: 13

Instructions for the Paper Setters:-
Section A: It will have question No.1 consisting of 10 very short answer questions from the entire syllabus. Students will attempt 6 questions. Each question will carry 1.5 marks with answer to each question up to 10 lines in length. The total weightage being 09 marks.
Section B: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 2, 3, 4 and 5 will be set by the examiner from Unit-I of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.
Section C: It will consist of essay type/numerical questions up to five pages in length. Four questions numbering 6, 7, 8 and 9 will be set by the examiner from Unit-II of the syllabus. The students will be required to attempt any two questions. Each question will carry 07 marks. The total weightage of this section shall be 14 marks.

UNIT-I
Object-Oriented Programming Concepts: Introduction, comparison between procedural programming paradigm and object-oriented programming paradigm, basic concepts of object-oriented programming, Data Types, Operators and Control Structures.   **[8 hrs.]**
Standard Input/output: Concept of streams, hierarchy of console stream classes, input/output using cin (>>) and cout (<<), formatting output using ios class functions, flags and manipulators.
                                            [**4 hrs.**]
Functions: Defining and accessing function, passing arguments to functions, inline functions, static function and storage classes.   **[4 hrs.]**

Classes and Objects: Specifying a class, creating class objects, accessing class members, access specifiers, static members, friend function, empty classes and nested classes**.**   **[8 hrs.]**
UNIT-II
Pointers and Dynamic Memory Management: dynamic memory management using *new* and *delete* operators, pointer to an object, *this* pointer, pointer related problems - dangling/wild pointers, null pointer, memory leak and allocation failures**.**   [**6 hrs.**]
Constructors and Destructors: Need for constructors and destructors, Default Constructor, Parameter Constructor and Copy Constructor, destructors, constructors and destructors with static members.   [**8 hrs.**]

Inheritance: Introduction, defining derived classes, types of inheritance: Multiple, Multilevel, Hybrid and Hierarchical Inheritance, virtual base class, overriding member functions,

[**8 hrs.**]

Operator Overloading: Overloading operators, rules for overloading operators, overloading of various operators: unary and binary operators, type conversion: implicit and Explicit.

[**7 hrs.**]

Polymorphism: Concept of binding - early binding and late binding, function overloading, virtual functions, pure virtual functions, abstract classes, virtual destructors.   **[7 hrs.]**

Recommended Books:
1. Lafore R., **Object Oriented Programming in C++**, Waite Group.
2. E. Balagurusamy, **Object Oriented Programming with C++**, Tata McGraw Hill.
3. Bjarne Stroustrup, **The C++ Programming Language**, Addison Wesley.
Herbert Schildt, **The Complete Reference to C++ Language**, McGraw Hill-Osborne.

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

Paper–BVSD 207: Lab – I: Programming in C++

Time: 3 Hrs.   **Max. Marks: 75**
                                                            Practical Marks: 56
                                          Internal Assessment Marks: 19

Practical based on Programming in C++

Bachelor of Vocation (B.Voc.)
(Software Development) Semester – II

**Paper–BVSD 208: Lab – II: Practical based on Data
Structure**

Time: 3 Hrs.   **Max. Marks: 75**
Practical Marks:56
Internal Assessment Marks: 19

Practical based on Data Structure