

Bachelor of Vocation (Software Development)
First Semester

Course Code	Course Type	Course Title	Teaching (Hours/Week)			Marks Distribution		Total Marks	Credits
			L	T	P	External	Internal		
PBI(V)2001 PBI(V)2001A	General Educational	Punjabi Compulsory / Punjabi (Mudla Gyan)	5	0	0	60	40	100	5
BVSD-102	General Educational	Fundamentals of Computer and IT	4	1	0	60	40	100	5
BVSD-103	Skill	Programming Fundamentals	4	1	0	60	40	100	5
BVSD-104	Skill	Web Designing using HTML and DHTML	4	1	0	60	40	100	5
BVSD-105	Skill	Software Lab-I (Office Automation)	0	0	5	50	--	50	5
BVSD-106	Skill	Software Lab-II based on paper BVSD-104)	0	0	5	50	--	50	5
		Total				340	160	500	30

1. The Breakup of marks for practical will be as under
 - a. Lab record 30% Marks
 - b. Program Development and Execution 40% Marks
 - c. Viva-voce 30% Marks
2. The Breakup of marks for the internal assessment will be as under:
 - a. MST/Internal Examinations 50% Marks
 - b. Attendance 20% Marks
 - c. Assignment/Co-curricular etc. 20% Marks
 - d. Conduct of Student 10% Marks

Mr. Mukesh Kumar

Dr. Raman Maini

Dr. Sarabjeet Singh

Dr. Rajan Manro

Mr. Sandeep Sharma

Mr. Pardhuman Singh

Dr. Navdeep Singh

Dr. Harjeet Singh

Mr. Devinder Singh

Ms. HarsimratDeo

Ms. RituWalia

Ms. Devinder Kaur

Ms. Taranpreet Kaur

Dr. Sangeeta Joshi

Mr. Birinder Singh Sarao

Ms. Manpreet Kaur

Mr. Joga Singh

Bachelor of Vocation (Software Development)**Second Semester**

Course Code	Course Type	Course Title	Load Allocation			Marks Distribution		Total Marks	Credits
			L	T	P	External	Internal		
ENG1003	General Educational	English and Business Communication	4	1	0	60	40	100	5
BVSD- 202	General Educational	General Elective - I	4	1	0	60	40	100	5
BVSD-203	Skill	Programming using 'C'	4	1	0	60	40	100	5
BVSD- 204	General Educational	Web Designing Using Java Scripts	4	1	0	60	40	100	5
BVSD- 205	Skill	Software Lab – III (Based on paper BVSD - 203)	0	0	5	50	--	50	5
BVSD- 206	Skill	Software Lab-IV (Based on paper BVSD-204)	0	0	5	--	50	50	5
EVS-3001	Compulsory	Environment and Road Safety Awareness	2	--	--	35	15	50	2
Total						325	225	550	32

***General Elective-I:**

1	BVSD-202GE1	Mathematics
2	BVSD-202GE2	Statistical Methods

1. The Breakup of marks for practical will be as under
 - a. Lab record 30% Marks
 - b. Program Development and Execution 40% Marks
 - c. Viva Voce 30% Marks
2. The Breakup of marks for the internal assessment will be as under:
 - a. MST/Internal Examinations 50% Marks
 - b. Attendance 20% Marks
 - c. Assignment/Co-curricular etc. 20% Marks
 - d. Conduct of Student 10% Marks

Mr. Mukesh Kumar Dr. Raman Maini Dr.Sarabjeet Singh Dr. Rajan Manro

Mr. Sandeep Sharma Mr. Pardhuman Singh Dr. Navdeep Singh Dr. Harjeet Singh

Mr. Devinder Singh Ms. HarsimratDeo Ms. RituWalia Ms. Devinder Kaur

Ms. Taranpreet Kaur Dr. Sangeeta Joshi Mr. Birinder Singh Sarao Ms. Manpreet Kaur

Mr.Joga Singh

ਬੀ. ਵੋਕੇਸ਼ਨਲ (ਸਾਫਟਵੇਅਰ ਡਿਵੈਲਪਮੈਂਟ/ਰਿਟੇਲ. ਮੈਨੇਜਮੈਂਟ/
ਨਰਸਰੀ ਮੈਨੇਜਮੈਂਟ/ ਫੂਡ ਪ੍ਰੋਸੈਸਿੰਗ)

ਪਾਠਕ੍ਰਮ ਦਾ ਉਦੇਸ਼:

1. ਇਸ ਪਾਠਕ੍ਰਮ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਸਾਹਿਤ ਪੜ੍ਹਨ ਦੀ ਜਾਗ ਲਾਉਣਾ, ਉਨ੍ਹਾਂ ਅੰਦਰ ਰਚਨਾਤਮਕ ਰੁਚੀਆਂ ਪੈਦਾ ਕਰਨ ਦੇ ਨਾਲ-ਨਾਲ ਆਧੁਨਿਕ ਸਮਾਜ ਵਿੱਚ ਫੈਲੇ ਵਿਰੋਧਾਂ, ਵਿਸੰਗਤੀਆਂ ਤੇ ਤਣਾਵਾਂ ਨੂੰ ਘਟਾਉਣਾ ਹੈ।
2. ਵਿਆਕਰਨ ਦੇ ਵਿਭਿੰਨ ਪੱਖਾਂ ਦੇ ਅਧਿਐਨ ਰਾਹੀਂ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਭਾਸ਼ਾ ਵਿੱਚ ਮੁਹਾਰਤ ਹਾਸਿਲ ਕਰਨ ਅਤੇ ਉਚੇਰੀ ਸਿੱਖਿਆ ਗ੍ਰਹਿਣ ਕਰਨ ਲਈ ਪ੍ਰੇਰਿਤ ਕਰਨਾ ਹੈ।
3. ਮਨੁੱਖ ਦੀਆਂ ਵਿਹਾਰਿਕ ਲੋੜਾਂ ਨੂੰ ਮੁੱਖ ਰੱਖਦੇ ਹੋਏ ਚਿੱਠੀ-ਪੱਤਰ ਨੂੰ ਵੀ ਇਸ ਪਾਠਕ੍ਰਮ ਵਿੱਚ ਸ਼ਾਮਿਲ ਕੀਤਾ ਗਿਆ ਹੈ। ਇਸ ਪਾਠਕ੍ਰਮ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਸਮਾਜ ਵਿੱਚ ਫੈਲ ਰਹੇ ਦੁਰਾਚਾਰ ਅਤੇ ਸਮੱਸਿਆਵਾਂ ਬਾਰੇ ਸੁਚੇਤ ਕਰਨਾ ਅਤੇ ਚਿੰਤਨਸ਼ੀਲ ਬਣਾਉਣਾ ਹੈ। ਪਾਠਕ੍ਰਮ ਵਿੱਚ ਸ਼ਾਮਿਲ ਪੈਰਾ ਰਚਨਾ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਚਲੰਤ ਮਾਮਲਿਆਂ ਬਾਰੇ ਸੁਚੇਤ ਕਰਨਾ ਹੈ।

ਪਾਠਕ੍ਰਮ ਦੀ ਸਾਰਥਕਤਾ:

1. ਪਾਠਕ੍ਰਮ ਵਿਚਲੀਆਂ ਕਹਾਣੀਆਂ ਦਾ ਅਧਿਐਨ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਕਹਾਣੀ ਪੜ੍ਹਨ ਦੇ ਨਾਲ-ਨਾਲ ਲਿਖਣ ਵੱਲ ਵੀ ਪ੍ਰੇਰਿਤ ਕਰੇਗਾ।
2. ਕਹਾਣੀ ਵਿਧਾ ਨਾਲ ਜੁੜਨ ਵਾਲੇ ਵਿਦਿਆਰਥੀ ਭਵਿੱਖ ਵਿੱਚ ਕਹਾਣੀ ਦੇ ਇਤਿਹਾਸ ਅਤੇ ਆਲੋਚਨਾ ਖੇਤਰ ਵਿੱਚ ਵਧੀਆ ਖੋਜੀ ਬਣਨਗੇ।
3. ਭਾਸ਼ਾ ਅਤੇ ਉਪ-ਭਾਸ਼ਾ ਦਾ ਅਧਿਐਨ ਵਿਦਿਆਰਥੀ ਨੂੰ ਵਿਹਾਰਕ ਜੀਵਨ ਵਿੱਚ ਬਹੁਤ ਮੁੱਲਵਾਨ ਜਾਣਕਾਰੀ ਪ੍ਰਦਾਨ ਕਰੇਗਾ।
4. ਚਿੱਠੀ-ਪੱਤਰ ਅਤੇ ਚਲੰਤ ਮਾਮਲਿਆਂ ਦੇ ਅਧਿਐਨ ਦੁਆਰਾ ਵਿਦਿਆਰਥੀ ਭਵਿੱਖ ਵਿੱਚ ਵਧੀਆ ਕਾਲਮ-ਨਵੀਸ, ਪੱਤਰਕਾਰ ਬਣ ਸਕਦੇ ਹਨ।



ਬੀ. ਵੇਕੇਸ਼ਨਲ (ਸਾਫਟਵੇਅਰ ਡਿਵੈਲਪਮੈਂਟ/ਰਿਟੇਲ. ਮੈਨੇਜਮੈਂਟ/ਨਰਸਰੀ ਮੈਨੇਜਮੈਂਟ/ ਫੂਡ ਪ੍ਰੋਸੈਸਿੰਗ)

ਭਾਗ-ਪਹਿਲਾ PBI (V) 2001

ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ

ਸੈਸ਼ਨ-2020-21

ਕੁੱਲ ਅੰਕ : 100

ਲਿਖਤੀ ਪਰੀਖਿਆ : 60 ਅੰਕ

ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ : 40 ਅੰਕ

ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਵਿਸ਼ੇ ਵਿਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ : 35%

ਲਿਖਤੀ ਪਰੀਖਿਆ ਵਿਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ : 21

ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ ਵਿਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ : 14

ਕਰੈਡਿਟ : 05

ਸਿਲੇਬਸ ਅਤੇ ਪਾਠ-ਪੁਸਤਕਾਂ

ਯੂਨਿਟ ਪਹਿਲਾ

1. 'ਕਥਾ-ਰੰਗ' (ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ) ਸੰਪਾਦਕ : ਡਾ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਅਤੇ ਡਾ. ਬਲਦੇਵ ਸਿੰਘ ਚੀਮਾ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ।
2. (ੳ) ਭਾਸ਼ਾ ਵੰਨਗੀਆਂ : ਭਾਸ਼ਾ ਦਾ ਟਕਸਾਲੀ ਰੂਪ, ਭਾਸ਼ਾ ਅਤੇ ਉਪਭਾਸ਼ਾ ਦਾ ਅੰਤਰ, ਪੰਜਾਬੀ ਦੀਆਂ ਉਪਭਾਸ਼ਾਵਾਂ ਅਤੇ ਪਛਾਣ ਚਿੰਨ੍ਹ (ਮਾਝੀ, ਮਲਵਈ, ਦੁਆਬੀ, ਪੁਆਧੀ)
(ਅ) ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ : ਪਰਿਭਾਸ਼ਾ ਅਤੇ ਕਿਸਮਾਂ (ਨਾਂਵ, ਪਤਨਾਂਵ, ਵਿਸ਼ੇਸ਼ਣ ਅਤੇ ਕਿਰਿਆ)

ਯੂਨਿਟ ਦੂਜਾ

3. ਨਿੱਜੀ ਚਿੱਠੀ ਪੱਤਰ/ਵਪਾਰਕ ਪੱਤਰ
4. ਚਲੰਤ ਮਾਮਲਿਆਂ ਨਾਲ ਸੰਬੰਧਤ ਪੈਰਾ ਰਚਨਾ

ਅੰਕ-ਵੰਡ ਅਤੇ ਪੇਪਰ ਸੈਟਰ ਲਈ ਹਦਾਇਤਾਂ

1. ਯੂਨਿਟ ਪਹਿਲਾ ਦੀ ਪੁਸਤਕ ਕਥਾ-ਰੰਗ (ਕਹਾਣੀ-ਸੰਗ੍ਰਹਿ) ਵਿਚੋਂ ਕਿਸੇ ਇੱਕ ਕਹਾਣੀ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ/ਸਾਰ।
(ਤਿੰਨ ਵਿਚੋਂ ਇੱਕ) 10 ਅੰਕ
2. ਯੂਨਿਟ ਪਹਿਲਾ ਵਿਚੋਂ ਵਿਆਕਰਨ ਨਾਲ ਸੰਬੰਧਤ ਵਰਣਨਾਤਮਿਕ ਪ੍ਰਸ਼ਨ
(ਦੋ ਵਿਚੋਂ ਇੱਕ) 10 ਅੰਕ
3. ਯੂਨਿਟ ਦੂਜੇ ਵਿਚੋਂ ਪੱਤਰ ਲਿਖਣ ਲਈ ਕਿਹਾ ਜਾਵੇ।
(ਦੋ ਵਿਚੋਂ ਇੱਕ) 10 ਅੰਕ
4. ਚੌਥੇ ਪ੍ਰਸ਼ਨ ਵਿਚ ਪੈਰਾ ਰਚਨਾ ਕਰਨੀ ਹੋਵੇਗੀ।
(ਤਿੰਨ ਵਿਚੋਂ ਇੱਕ) 10 ਅੰਕ
5. ਯੂਨਿਟ ਤੀਜੇ ਵਿਚ ਪਹਿਲਾ ਯੂਨਿਟ ਨਾਲ ਸੰਬੰਧਤ 'ਕਥਾ-ਰੰਗ' ਪੁਸਤਕ ਅਤੇ ਵਿਆਕਰਨ ਵਾਲੇ ਭਾਗ ਵਿਚੋਂ ਸੰਖੇਪ ਉੱਤਰਾਂ ਵਾਲੇ 10 (07+03) ਪ੍ਰਸ਼ਨ ਖੁੰਢੇ ਜਾਣ।
(10×02=20) ਅੰਕ

ਸਹਾਇਕ ਪੁਸਤਕ ਸੂਚੀ

1. ਕਾਲਜ ਪੰਜਾਬੀ ਵਿਆਕਰਣ, ਹਰਕੀਰਤ ਸਿੰਘ ਤੇ ਗਿਆਨੀ ਲਾਲ ਸਿੰਘ, ਪੰਜਾਬ ਸਟੇਟ ਟੈਕਸਟ ਬੁੱਕ ਬੋਰਡ, ਚੰਡੀਗੜ੍ਹ, 1999
2. ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਵਿਗਿਆਨ, ਸੁਖਵਿੰਦਰ ਸਿੰਘ ਸੰਘਾ, ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਅਕਾਦਮੀ, ਜਲੰਧਰ, 2004
3. ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਸਰੋਤ ਤੇ ਬਣਤਰ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 1996
4. ਭਾਸ਼ਾ ਵਿਗਿਆਨ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ, ਹਰਕੀਰਤ ਸਿੰਘ, ਬਾਹਰੀ ਪਬਲਿਸ਼ਰਜ਼, ਦਿੱਲੀ, 1973
5. ਪੰਜਾਬੀ ਵਿਆਕਰਣ ਤੇ ਰਚਨਾਵਲੀ, ਨਰਿੰਦਰ ਸਿੰਘ ਦੁੱਗਲ, ਨਿਊ ਬੁੱਕ ਕੰਪਨੀ, ਮਾਈ ਹੀਰਾਂ ਗੇਟ ਜਲੰਧਰ, 1986
6. ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦਾ ਵਿਕਾਸ, ਦੁਨੀ ਚੰਦ, ਪੰਜਾਬ ਯੂਨੀਵਰਸਿਟੀ, ਚੰਡੀਗੜ੍ਹ, 1959

ਬੀ. ਵੋਕੇਸ਼ਨਲ (ਸਾਫਟਵੇਅਰ ਡਿਵੈਲਪਮੈਂਟ/ਰਿਟੇਲ. ਮੈਨੇਜਮੈਂਟ/ਨਰਸਰੀ ਮੈਨੇਜਮੈਂਟ/ ਫੂਡ ਪ੍ਰੋਸੈਸਿੰਗ)

ਭਾਗ-ਪਹਿਲਾ PBI (V) 2001... A

ਮੁੱਢਲਾ ਗਿਆਨ (ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ)

ਸੈਸ਼ਨ-2020-21

ਕੁੱਲ ਅੰਕ : 100

ਲਿਖਤੀ ਪਰੀਖਿਆ : 60 ਅੰਕ

ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ : 40 ਅੰਕ

ਸਮਾਂ : ਤਿੰਨ ਘੰਟੇ

ਵਿਸ਼ੇ ਵਿੱਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ : 35%

ਲਿਖਤੀ ਪਰੀਖਿਆ ਵਿੱਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ : 21

ਅੰਦਰੂਨੀ ਮੁਲਾਂਕਣ ਵਿੱਚੋਂ ਪਾਸ ਹੋਣ ਲਈ ਅੰਕ : 14

ਕਰੈਡਿਟ : 05

ਸਿਲੇਬਸ ਅਤੇ ਪਾਠ-ਪੁਸਤਕਾਂ

ਯੂਨਿਟ ਪਹਿਲਾ

- ਗੁਰਮੁਖੀ ਵਰਨਮਾਲਾ ਤੇ ਲਿਖਣ ਪ੍ਰਬੰਧ
(ੳ) ਅੱਖਰਸਿੱਖਿਆ:ਤਰਤੀਬਵਾਰ ਅਤੇ ਭੁਲਾਵੇਂ ਅੱਖਰ
(ਅ) ਅੱਖਰ ਬਣਤਰ : ਅੱਖਰ ਰੂਪ ਤੇ ਲਿਖਣ ਦੇ ਨਿਯਮ
- ਗੁਰਮੁਖੀ ਅੱਖਰ ਤੇ ਪੰਜਾਬੀ ਧੁਨੀਆਂ ਦਾ ਪ੍ਰਬੰਧ
(ੳ) ਸਵਰ ਅਤੇ ਵਿਅੰਜਨ : ਵਰਗੀਕਰਨ ਦੇ ਸਿਧਾਂਤ ਅਤੇ ਉਚਾਰਨ, ਸਵਰ ਸੂਚਕ ਅੱਖਰਾਂ ਤੇ ਧੁਨੀਆਂ ਦੀ ਪਛਾਣ ਤੇ ਵਰਤੋਂ
(ਅ) ਵਿਅੰਜਨ ਸੂਚਕ ਅੱਖਰਾਂ ਤੇ ਧੁਨੀਆਂ ਦੀ ਪਛਾਣ ਤੇ ਵਰਤੋਂ, ਲਗਾਂ-ਮਾਤਰਾਂ ਦੀ ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ, ਲਗਾਖਰਾਂ ਦੀ ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ

ਯੂਨਿਟ ਦੂਜਾ

- ਲਿੱਪੀ ਦੇ ਅੱਖਰਾਂ ਦੀ ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ ਦੇ ਨਿਯਮ
(ੳ) ਪੂਰੇ ਅਤੇ ਧੈਰ ਵਿਚ ਪੈਣ ਵਾਲੇ ਅੱਖਰਾਂ ਦੀ ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ, ਸਵਰ ਸੂਚਕ ਅੱਖਰਾਂ ਦੀ ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ, ਸਵਰ ਵਾਹਕਾਂ ਦੀ ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ
(ਅ) ਮਾਤਰਾ ਅਤੇ ਸਵਰ ਵਾਹਕਾਂ ਦੀ ਸਾਂਝੀ ਵਰਤੋਂ, ਮਾਤਰਾ ਦੀ ਵਿਅੰਜਨ ਸੂਚਕਾਂ ਨਾਲ ਵਰਤੋਂ
- ਪੰਜਾਬੀ ਸ਼ਬਦਾਵਲੀ ਨਾਲ ਜਾਣ-ਪਛਾਣ
(ੳ) ਗਿਣਤੀ, ਹਫ਼ਤੇ ਦੇ ਦਿਨ, ਮਹੀਨਿਆਂ ਦੇ ਨਾਂ,
(ਅ) ਰੰਗਾਂ ਦੇ ਨਾਂ, ਪਸ਼ੂ ਪੰਛੀਆਂ ਦੇ ਨਾਂ, ਫਲਾਂ-ਸਬਜ਼ੀਆਂ ਦੇ ਨਾਂ, ਘਰੇਲੂ ਵਸਤਾਂ ਦੀ ਸ਼ਬਦਾਵਲੀ
ਅੰਕ-ਵੰਡ ਅਤੇ ਪੇਪਰ ਸੈਟਰ ਲਈ ਹਦਾਇਤਾਂ

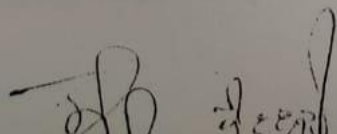
- ਯੂਨਿਟ ਪਹਿਲਾ ਵਿੱਚੋਂ ਗੁਰਮੁਖੀ ਵਰਨਮਾਲਾ ਤੇ ਲੇਖਣ ਪ੍ਰਬੰਧ ਨਾਲ ਸੰਬੰਧਤ ਪ੍ਰਸ਼ਨ ਪੁੱਛਿਆ ਜਾਵੇ।
(ਦੋ ਵਿੱਚੋਂ ਇੱਕ) 15 ਅੰਕ
- ਦੂਜਾ ਪ੍ਰਸ਼ਨ ਗੁਰਮੁਖੀ ਅੱਖਰ ਅਤੇ ਪੰਜਾਬੀ ਧੁਨੀਆਂ ਦੇ ਪ੍ਰਬੰਧ ਨਾਲ ਸੰਬੰਧਤ ਹੋਵੇਗਾ।
(ਦੋ ਵਿੱਚੋਂ ਇੱਕ) 15 ਅੰਕ
- ਯੂਨਿਟ ਦੂਜਾ ਵਿੱਚੋਂ ਲਿੱਪੀ ਦੇ ਅੱਖਰਾਂ ਦੀ ਵਰਤੋਂ ਦੇ ਨਿਯਮ ਨਾਲ ਸੰਬੰਧਤ ਪ੍ਰਸ਼ਨ ਪੁੱਛਿਆ ਜਾਵੇ।
(ਦੋ ਵਿੱਚੋਂ ਇੱਕ) 15 ਅੰਕ
- ਚੌਥਾ ਪ੍ਰਸ਼ਨ ਪੰਜਾਬੀ ਸ਼ਬਦਾਵਲੀ ਨਾਲ ਜਾਣ-ਪਛਾਣ ਬਾਰੇ ਪੁੱਛਿਆ ਜਾਵੇ।
(ਦੋ ਵਿੱਚੋਂ ਇੱਕ) 15 ਅੰਕ

ਨੋਟ : ਵਿਦਿਆਰਥੀ ਪਹਿਲੀ ਵਾਰ ਗੁਰਮੁਖੀ ਸਿੱਖ ਰਹੇ ਹਨ। ਹੋ ਸਕਦਾ ਹੈ ਕਿ ਵਿਦਿਆਰਥੀ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਤੋਂ ਅਣਜਾਣ ਹੋਣ, ਜੋ ਵਿਦਿਆਰਥੀਆਂ ਦੇ ਪੱਪਰ ਨੂੰ ਧਿਆਨ ਵਿਚ ਰੱਖਿਆ ਜਾਵੇ ਅਤੇ ਸਰਲ ਤੇ ਸਪਸ਼ਟ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣ।



ਸਹਾਇਕ ਪੁਸਤਕ ਸੂਚੀ

1. ਆਓ ਪੰਜਾਬੀ ਸਿੱਖੀਏ, ਸਤਿਨਾਮ ਸਿੰਘ ਸੰਪੂ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2009
2. ਗੁਰਮੁਖੀ ਸਿੱਖੋ, ਸਤਿਨਾਮ ਸਿੰਘ ਸੰਪੂ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2011
3. ਪੰਜਾਬੀ ਸਿੱਖੀਏ, ਸੀਤਾ ਰਾਮ ਬਾਹਗੀ, ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2002
4. ਪੰਜਾਬੀ ਗਿਆਨ ਸੀ. ਡੀ. (ਕੰਪਿਊਟਰ ਐਪਲੀਕੇਸ਼ਨ ਟੂ-ਲਰਨ ਐਂਡ ਟੀਚ ਪੰਜਾਬੀ), ਪਬਲੀਕੇਸ਼ਨ ਬਿਊਰੋ, ਪੰਜਾਬੀ ਯੂਨੀਵਰਸਿਟੀ, ਪਟਿਆਲਾ, 2011
5. Teach Yourself Punjabi, Hrdev Bahri, Publication Bureau, Punjabi University, Patiala, 2011
6. A Start in Punjabi, Henry A. Gleason and Harjeet Singh Gill, Publication Bureau, Punjabi University, Patiala, 1997
7. Introductory Punjabi, Ujjal Singh Bahri and Paramjit Singh Walia, Publication Bureau, Punjabi University, Patiala, 2003





BVSD-102: Fundamentals of Computer and IT

Max Marks: 100

External Examination: 60

Min Pass Marks: 35%

Maximum Time: 3 Hrs.

Internal Assessment: 40

Lectures to be delivered: 45-55 Hrs.

Course Objectives:

- To introduce the students the basics of computer, its organization, Input/output devices etc.
- To introduce the preliminary knowledge of computer, their operations and applications.
- To introduce the various computer languages & Number System.

Course Learning Outcomes:

On successful completion of the course, students will be able to:

- Familiarization with the terms like Operating System, peripheral devices, software etc.
- Represent data in binary form, convert numeric data between different number systems and perform arithmetic operations in binary

Instructions for External Examination: The question paper will consist of three sections A, B and C. Sections A and B will have four questions each from the respective Units of the syllabus and students will attempt any two questions, each question will carry **9** marks. Section C will have **8** short answer type questions which will cover the entire syllabus uniformly and will carry 3 marks.

Unit-I

Introduction: Characteristics of Computers, The Evolutions of Computers, Computer Generations, Classification of computers based on size and application like Notebook Computers, Personal Computers, workstations, Mainframe Systems, Super Computers, Clients and Servers etc.

Basic Computer Organization: Block diagram of Computer, Interrelationship between different units: Input Unit, Output Unit, Storage unit, Arithmetic Logic Unit, Control unit, Central Processing unit. Instruction Set, Registers, Processor Speed, Types of Processors.

Main Memory: Memory Organization, RAM, ROM, PROM and EPROM, Cache Memory

Input-output Devices: Characteristics of I/O devices, Input Devices(Keyboard, Point-and-draw Devices, Data scanning Devices, Digitizer, Electronic Card reader, Voice Recognition Devices, Vision-Input System). Output Devices (Monitors, printers, plotters, Screen Image Projector, Voice Response System).

Unit-II

Secondary Storage Devices: Sequential and Direct-Access Devices, Magnetic Tape, Hard Disk, Optical Disks. Basic principles of Operations, Advantages and limitations.

Types of Software: System Software, Application Software, Overview (function)of different types of system software's: Operating Systems, Language Translators. Overview of different types of Application Software: word Processing, spreadsheet, Database.

Computer languages: Machine Language, Assembly Language, High Level Language, Compiler, Linker, Interpreter, Object Oriented Programming Languages, Characteristics of Good Programming Language.

Number System & Codes: Bit, byte, binary, decimal, hexadecimal, and octal systems, conversion from one system to the other. Binary Arithmetic: Addition, subtraction and multiplication. Character codes (ASCII, EBCDIC, BCD, 8421, 2421, Excess-3, Gray, Hamming).

Text Books:

1. P.K Sinha "Fundamentals of IT",B.P.B Publications
2. Peter Norton "Computers today".

Reference Books:

1. D. H. Sanders, "Computers Today", McGraw Hill,
2. Satish Jain, "Information Technology", BPB,
3. V. Rajaraman, "Fundamentals of Computers" (2nd edition), Prentice Hall of India, New Delhi,
4. B. Ram, "Computer Fundamentals", Wiley,

Teaching Plan:

Week	Content
1-2	Introduction: Characteristics of Computers, The Evolutions of Computers, Computer Generations, Classification of computers based on size and application like Notebook Computers, Personal Computers, workstations, Mainframe Systems, Super Computers, Clients and Servers etc.
3-4	Basic Computer Organization: Block diagram of Computer, Interrelationship between different units: Input Unit, Output Unit, Storage unit, Arithmetic Logic Unit, Control unit, Central Processing unit. Instruction Set, Registers, Processor Speed, Types of Processors.
5-6	Main Memory: Memory Organization, RAM, ROM, PROM and EPROM, Cache Memor
7-8	Input-output Devices: Characteristics of I/O devices, Input Devices(Keyboard, Point-and-draw Devices, Data scanning Devices, Digitizer, Electronic Card reader, Voice Recognition Devices, Vision-Input System). Output Devices (Monitors, printers, plotters, Screen Image Projector, Voice Response System).
9-10	Secondary Storage Devices: Sequential and Direct-Access Devices, Magnetic Tape, Hard Disk, Optical Disks. Basic principles of Operations, Advantages and limitations. Types of Software: System Software, Application Software, Overview (function)of different types of system software's: Operating Systems, Language Translators. Overview of different types of Application Software: wordProcessing, spreadsheet, Database.

11-12	Computer languages: Machine Language, Assembly Language, High Level Language, Compiler, Linker, Interpreter, Object Oriented Programming Languages, Characteristics of Good Programming Language.
13-14	Number System & Codes: Bit, byte, binary, decimal, hexadecimal, and octal systems, conversion from one system to the other. Binary Arithmetic: Addition, subtraction and multiplication. Character codes (ASCII, EBCDIC, BCD, 8421, 2421, Excess-3, Gray, Hamming).

BVSD-103: Programming Fundamentals

Max Marks: 100

External Examination: 60

Min Pass Marks: 35%

Maximum Time: 3 Hrs.

Internal Assessment: 40

Lectures to be delivered: 45-55 Hrs.

Objectives of the Subject:

- This course describes logic building for problem solving, declaration of variables, input and output functions, data types, expressions, basic control structures, and analyzed code for various programming languages that will use for structured programming.

Course Learning Outcomes:

After Completion of this course the students will be able to

- Read, understand and trace the execution of programs written in C language.
- Analyze the real life problems and write a program in C language to solve the problem.
- Implement Programs with pointers, arrays and perform various control statements.

Instructions for External Examination: The question paper will consist of three sections A, B and C. Sections A and B will have four questions each from the respective Units of the syllabus and students will attempt any two questions, each question will carry 9 marks. Section C will have 8 short answer type questions which will cover the entire syllabus uniformly and will carry 3 marks.

UNIT-I

Program Planning: Algorithms, characteristics and Examples of algorithms, Flowcharts, symbols used in flowcharts, Examples of flowcharts, Pseudocode Examples of Pseudocode, Non structured languages, structured Languages, Object Oriented Languages and 4th generation Languages.

Programming Fundamentals: character set, Identifiers and keywords, constants, variable, Tokens.

Data Types: Integer, Float, Character and String, Defining and Initializing Variables, Scope of Variables, Using Named Constants, Casting of Data Types

UNIT-II

Operators and expressions: Arithmetic(addition, subtraction, Multiplication division, modulo operator), Unary, Logical(And, Or, Not), Relational operators, assignment operators, Conditional operators. Bitwise operator

Input/ output statements: Input various types of data, Output of various types of data.

Branching statements: Branching constructs, Simple if, if else, nested if else etc.

Looping Statements: While, for loop etc, nested control structures, break and continue statements.

Text Books:

1. Dr. R..Nageswara Rao “Core Python Programming”, Dreamtech.
2. E. Balagurusway, “Programming in C”, Tata McGrwal Hill.

Reference Books

- 1.T. Budd, Exploring Python, TMH, 1st Ed, 2011
2. How to think like a computer scientist : learning with Python / Allen Downey, Jeffrey Elkner

Teaching Plan:

Week	Content
1-2	Program Planning: Algorithms, characteristics and Examples of algorithms, Flowcharts, symbols used in flowcharts, Examples of flowcharts, Pseudocode Examples of Pseudocode.
3-4	Non structured languages, structured Languages, Object Oriented Languages and 4th generation Languages. Programming Fundamentals: character set, Identifiers and keywords, constants, variable, Tokens.
5-6	Data Types: Integer, Float, Character and String, Defining and Initializing Variables, Scope of Variables, Using Named Constants, Casting of Data Types
7-8	Operators and expressions: Arithmetic(addition, subtraction, Multiplication division, modulo operator), Unary, Logical(And, Or, Not), Relational operators, assignment operators, Conditional operators. Bitwise operator
9-10	Input/ output statements: Input various types of data, Output of various types of data.
11-12	Branching statements: Branching constructs, Simple if, if else, nested if else etc.
13-14	Looping Statements: While, for loop etc, nested control structures, break and continue statements.

BVSD-104 Web Designing using HTML and DHTML

Max Marks: 100

External Examination: 60

Min Pass Marks: 35%

Maximum Time: 3 Hrs.

Internal Assessment: 40

Lectures to be delivered: 45-55 Hrs.

Course Objectives:

- To introduce the basic elements of web page designing.
- To introduce the basic concept of CSS.

Course Learning Outcomes:

On successful completion of the course, students will be able to:

- Students will understand and apply concepts and theories in the use and presentation of building website using HTML and CSS.
- Design and implement static and dynamic Web pages.

Instructions for External Examination: The question paper will consist of three sections A, B and C. Sections A and B will have four questions each from the respective Units of the syllabus and students will attempt any two questions, each question will carry **9** marks. Section C will have **8** short answer type questions which will cover the entire syllabus uniformly and will carry 3 marks.

Unit I

Internet Basics: WWW, Web pages, Web Browsers, URL, communicating on the internet, internet domains, internet server identities, establishing connectivity on the internet client IP address.

Introduction to HTML: HTML tags and attributes, paired and unpaired tags, Text-formatting tags-bold, italic, underline, strike, superscript, subscript, font face, font size, font color, marquee tag. Lists: Type of Lists (Unordered List, Ordered Lists, Definition Lists), Nested Lists. **Tables:** introduction (header, data rows, the caption tag), using width and border, attribute, using cell padding attribute, using cell spacing attribute, using BGCOLOR Attribute, using COLSPAN and ROWSPAN attributes. cells spanning multiple row and columns, coloring cells, column specification, Presenting information in tables, table attributes.

Hyperlinks: Creating external and internal links, using images as links.

Unit II

Forms: Introduction, form elements, Input elements, different control types created with input elements, button elements, text area element, drop down lists, action attributes and method attributes

DHTML and Style Sheets: Defining styles, Elements of styles, linking a stylesheet to an HTML Documents, In-Line Styles, External style sheets, Internal style sheets, Multiple Styles.. **CSS properties:** CSS Font Properties, CSS Text Properties, CSS Background Properties, CSS Border Properties, CSS Margin Properties. CSS List Properties.

Suggested Readings:

1. Thomas A. Powell , “HTML: The Complete Reference”, Osborne/McGraw-Hill
2. HTML 4.0 Unleashed by Rick Dranell; Tech Media Publications
3. Teach Yourself HTML 4.0 with XML, DHTML and Javascript by Stephanie, Cottrell, Bryant; IDG Books India Pvt. Ltd., New Delhi

Teaching Plan:

Week	Content
1-2	Internet Basics: WWW, Web pages, Web Browsers, URL, communicating on the internet, internet domains, internet server identities, establishing connectivity on the internet client IP address.
3-4	Introduction to HTML: HTML tags and attributes, paired and unpaired tags, Text-formatting tags-bold, italic, underline, strike, superscript, subscript, font face, font size, font color, marquee tag. Lists: Type of Lists (Unordered List, Ordered Lists, Definition Lists), Nested Lists
5-6	Tables: introduction (header, data rows, the caption tag), using width and border, attribute, using cell padding attribute, using cell spacing attribute, using BGCOLOR Attribute, using COLSPAN and ROWSPAN attributes. cells spanning multiple row and columns, coloring cells, column specification, Presenting information in tables, table attributes.
7-8	Hyperlinks: Creating external and internal links, using images as links.
9-10	Forms: Introduction, form elements, Input elements, different control types created with input elements, button elements, text area element, drop down lists, action attributes and method attributes
11-12	DHTML and Style Sheets: Defining styles, Elements of styles, linking a stylesheet to an HTML Documents, In-Line Styles, External style sheets, Internal style sheets, Multiple Styles..
13-14	CSS properties: CSS Font Properties, CSS Text Properties, CSS Background Properties, CSS Border Properties, CSS MarginProperties.CSS List Properties.

BVSD-105: Software Lab (Office Automation)

Max Marks: 50

External Examination: 50

Min Pass Marks: 35%

Maximum Time: 3 Hrs.

Lectures to be delivered: 45-55 Hrs.

Course Objectives:

- To facilitate and make the students learn to use open source software.
- To give hands on practice on libre / open office that facilitates them to create documents, spreadsheet and effective presentations.

Course Learning Outcomes:

- Skill to work with open source software.
- Initiation into the process of writing business letters or job applications, tabulating data, preparing PPTs etc .

Word Processing Tool: Introduction to Word Processing, Interface, Toolbars, Ruler, Menus, Keyboard Shortcut, Editing a Document, Previewing documents, Printing documents, Formatting Documents, Checking the grammar and spelling, Formatting via find and replace, Using the Thesaurus, Using Auto Correct, AutoComplete and Auto Text, word count, Hyphenating, Mail merge, mailing Labels Wizards and Templates, Handling Graphics, Tables and charts, Converting a word document into various formats.

SpreadSheet Tool: Creating worksheet, entering data into worksheet, heading information, data, text, dates, alphanumeric, values, saving & quitting worksheet, Opening and moving around in an existing worksheet, Toolbars and Menus, keyboard shortcuts, Working with single and multiple workbook, Working with formulas & cell referencing, Formatting of worksheet.

Presentation Tools: Creating slides, Applying transitions and sound effects, setting up slide shows, Animation.

The breakup of marks for the practical will be as under

i.	Lab Record(External Evaluation)	10 marks
ii.	Viva Voce (External Evaluation)	20 marks
iii.	Program Development and Execution(External Evaluation)	20 marks

BVSD-106: Software Lab
(Based on paper BVSD-104: Web designing using HTML and DHTML)

Max Marks: 50

University Examination: 50

Min Pass Marks: 35%

Maximum Time: 3Hrs.

Practical Sessions To Be Conducted:40-50Hrs

This laboratory course will comprise as exercises to supplement what is learnt under paper BVSD-104: Web Designing Using HTML and DHTML.

The breakup of marks for the practical will be as under

- | | | |
|------|-----------------------------------|----------|
| i. | Practical file Evaluation | 10 Marks |
| ii. | Viva Voce | 20 Marks |
| iii. | Project Development and Execution | 20 Marks |

CODE: ENG1003 ENGLISH AND BUSINESS COMMUNICATION
COMMON FOR B.VOC (SD), B. VOC (RM) & B.VOC (Food Processing)

Total: 100 Marks

External Evaluation: 60 Marks

Internal Evaluation: 40 Marks

Total Pass marks: 35 %

Time Duration: 3 hours

Credits: 05

Objective: 1. To develop communication skills of students.

2. To educate the students about the various nuances of verbal & written communication.

3. To apprise the students with the technicalities of presentation skills.

Learning Outcomes: 1. The students would learn to communicate effectively.

2. It would boost the confidence and help the students to present their thoughts eloquently.

3. Students would learn the role of body language as a non- verbal tool of communication.

4. Students would be trained for facing interviews with confidence.

5. Students would learn the technicalities of presentation skills.

UNIT-I

1. Communication–Meaning, Definition, Nature and Scope of Communication, Importance of Communication.
2. Communication Process; Principles of Communication; Types of Communication – Interpersonal Communication - Gateway to effective interpersonal Communication;
3. Barriers to Communication- Linguistic Barriers, Psychological Barriers, Interpersonal Barriers, Cultural Barriers, Physical Barriers, Organizational Barriers.
4. Informal Communication system; Approaches to Organizational Communication; Written Communication.

UNIT-II

1. Business reports, Types, Characteristics, format, writing of Business reports.
2. Business Letters – Inviting and, Sending quotations, placing orders, Sales letters.
3. Soft Skills: Listening, Speaking, Reading and Writing Skills,
4. **Interview:** meaning and types of interview, Tips for facing the interview, Group Discussion. Body Language, Presentation Skills..
5. Personal Skills: Emotional Intelligence, Emotion Management, Tolerance of Change, Taking Criticism, Self-Confidence, Adaptability, Resilience, Assertiveness, Self Assessment.
6. Official Correspondence: Memos, Email.



Session 2020-21

Recommended Texts:

1. *Developing Communication Skills*- Krishna Mohan and Meera Banerjee , Macmillan India Ltd.
2. *Communication Skills* - Sanjay Kumar & PushpLata, Oxford University Press
3. *Business Correspondence and Report Writing*, R.C.Sharma, Krishna Mohan. Mcgraw Hill
4. *Communication for Business*, Shirley Taylor, V.Chandra, Pearson
5. Rajendra Pal Korahill, "*Essentials of Business Communication*", Sultan Chand & Sons, New Delhi, 2006.
6. Ramesh, MS, & C. C Pattanshetti, "*Business Communication*", R.Chand & Co, New Delhi, 2003.

TESTING**UNIT-I**

Question I will have one long answer type question (with internal choice) which shall be set from Points 1 & 2 of Unit I. (10 marks)

Question II will have one long answer type question (with internal choice) which shall be set from Points 3 & 4 of Unit I. (10 marks)

UNIT-II

Question III will have one long answer type question (with internal choice) which shall be set from Points 1, 2 & 3 of Unit II. (10 marks)

Question IV will have one long answer type question (with internal choice) which shall be set from Points 4, 5 & 6 of Unit II. (10 marks)

Question V shall cover the **entire syllabus (Unit 1 and Unit II)**. This question will have 10 short answer type questions of about 50-60 words each. Each question will carry 2 marks. (10x2=20 marks)

The internal assessment will carry 40 marks and it will be distributed as follows.

MST	20 Marks.
Assignment/Quiz/ Seminar/ Co-curricular	08 marks
Attendance	08 marks
Class Behaviour	04 marks

Handwritten signatures and initials:
 H. Saw...
 Sandeep K...
 Ramesh...
 Ch...
 ...



BVSD-202 GE1 Mathematics

Max Marks: 100

External Examination: 60

Min Pass Marks: 35%

Maximum Time: 3 Hrs.

Internal Assessment: 40

Lectures to be delivered: 45-55 Hrs.

Course Objectives:

- This course will provide the knowledge of Matrix solving, Set Theory and methods to solve series of numbers.
- To learn various Trigonometric functions.

Course Learning Outcomes:

Upon completion of the course, students will be able to:

- Explain basic concepts in set theory, probability and Trigonometric functions.
- Students will be able to generate solutions to unfamiliar problems.
- Apply knowledge of computing and mathematics appropriate to the discipline.

Instructions for External Examination: The question paper will consist of three sections A, B and C.

Sections A and B will have four questions each from the respective Units of the syllabus and students will attempt any two questions, each question will carry **9** marks. Section C will have **8** short answer type questions which will cover the entire syllabus uniformly and will carry 3 marks.

UNIT - I

Matrices: Introduction, Types of Matrices, Operations on Matrices, Determinants, Properties of determinants, Singular and Non-Singular matrices, Adjoint and Inverse of a Matrix, Solution of Linear equation using Matrices.

Trigonometric Functions: Introduction, Angles (Degree Measure, Radian Measure, Relation between Degree and Radian), Sum and Product formulae for Trigonometric Functions, Trigonometric Equations.

UNIT - II

Set Theory: Definition of Set, Types of Sets, Operations on Sets: Union, Intersection, Complement, Cartesian product, De-Morgan Theorem.

Logic and Propositions: Conjunction, Disjunction, Tautology, Contradiction Using Truth table.

Sequences and Series: Arithmetic progression (A.P), Arithmetic mean, Geometric progression (G.P), General terms, Sum of n terms of A.P and G.P, Geometric mean, Relation between A.M and G.M.

Text Books:

1. Discrete Mathematical Structures-Bernard Kolman, Robert C. Busby, Sharon C. Ross, 4th Edition, Pearson Education Asia.
2. Rosen, K.H: Discrete Mathematics and Its Applications 5th Edition, TMH Publications.

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, Seymour Lipschutz & Max Lans Lipson, Tata McGraw Hill.

Teaching Plan:

Week	Content
1-2	Matrices: Introduction, Types of Matrices, Operations on Matrices, Determinants, Properties of determinants, Singular and Non-Singular matrices.
3-4	Adjoint and Inverse of a Matrix, Solution of Linear equation using Matrices. Trigonometric Functions: Introduction, Angles (Degree Measure, Radian Measure, Relation between Degree and Radian).
5-6	Sum and Product formulae for Trigonometric Functions, Trigonometric Equations.
7-8	Set Theory: Definition of Set, Types of Sets, Operations on Sets: Union, Intersection, Complement, Cartesian product, De-Morgan Theorem.
9-10	Logic and Propositions: Conjunction, Disjunction, Tautology, Contradiction Using Truth table.
11-12	Sequences and Series: Arithmetic progression (A.P), Arithmetic mean, Geometric progression (G.P),
13-14	General terms, Sum of n terms of A.P and G.P, Geometric mean, Relation between A.M and G.M.

BVSD-202 GE2 Statistical Methods

Max Marks: 100

External Examination: 60

Min Pass Marks: 35%

Maximum Time: 3 Hrs.

Internal Assessment: 40

Lectures to be delivered: 45-55 Hrs.

Course Objectives:

- To understand the basic principles of Statistical inference.
- To learn the language and core concepts of the statistical theory.

Course Learning Outcomes:

Upon Completion of the course, Students will be able to,

- Skill to choose and apply appropriate numerical methods to obtain approximate solutions to difficult mathematical problems.
- Ability to apply various statistical techniques such as Measures of Central Tendency and Dispersion.

Instructions for External Examination: The question paper will consist of three sections A, B and C. Sections A and B will have four questions each from the respective Units of the syllabus and students will attempt any two questions, each question will carry **9** marks. Section C will have **8** short answer type questions which will cover the entire syllabus uniformly and will carry 3 marks.

UNIT - I

Introduction: Meaning and Definitions of Statistics, Data and Data Sources, Types of Statistics, Importance of Statistics in computers, an overview of central tendency, Arithmetic Mean, Median, Mode, Relationships of the Mean, Median and Mode, The Best Measure of Central Tendency, Geometric Mean, Harmonic Mean.

Dispersion: Meaning and Definition of Dispersion, Significance and Properties of Measuring Variation, Measures of Dispersion, Range, Interquartile Range or Quartile Deviation, Mean Deviation, Standard Deviation.

Correlation Analysis: Definition, Scatter Diagram, Correlation Graph, Pearson's Coefficient of Correlation, Spearman's Rank Correlation, Concurrent Deviation Method, Limitations of Correlation Analysis.

UNIT - II

Computer Arithmetic :Basics of Floating point representation of numbers, arithmetic operation with normalised floating point numbers and its consequences, errors in numbers, binary representation of numbers.

Iterative Methods for finding roots : Bisection, False Position, Regula-falsi method, Secant Method, Newton Raphson, Successive Approximation, Discuss convergence only without derivation.

Solution of simultaneous algebraic equations: Gauss elimination method, pivoting, ill conditioned equations, Gauss-Seidel iterative method, comparison of direct and iterative method.

Text Books:

1. V. Rajaraman, "Computer Oriented Numerical Methods", PHI, New Delhi.
2. J.H. Mathews, "Numerical Methods for Computer Science, Engineering and Mathematics", PHI.

Reference Books:

1. M K. Jain, S.R.K. Iyengar and R.K. Jain, " Numerical Methods for Scientific and Engineering Computation", Wiley Eastern Limited, New Delhi.
2. S.C. Chopra and R.P.C Anale, "Numerical Methods for Engineers", McGraw-Hill, New York.
3. Balaguruswamy E., "Computer oriented Statistical and Numerical methods", Macmillan India Ltd.

Teaching Plan:

Week	Content
1-2	Introduction: Meaning and Definitions of Statistics, Data and Data Sources, Types of Statistics, Importance of Statistics in computers.
3-4	An overview of central tendency, Arithmetic Mean, Median, Mode, Relationships of the Mean, Median and Mode, The Best Measure of Central Tendency, Geometric Mean, Harmonic Mean.
5-6	Dispersion: Meaning and Definition of Dispersion, Significance and Properties of Measuring Variation, Measures of Dispersion, Range, Interquartile Range or Quartile Deviation, Mean Deviation, Standard Deviation.
7-8	Correlation Analysis: Definition, Scatter Diagram, Correlation Graph, Pearson's Coefficient of Correlation, Spearman's Rank Correlation, Concurrent Deviation Method, Limitations of Correlation Analysis.
9-10	Computer Arithmetic : Basics of Floating point representation of numbers, arithmetic operation with normalised floating point numbers and its consequences, errors in numbers, binary representation of numbers.
11-12	Iterative Methods for finding roots : Bisection, False Position, Regula-falsi method, Secant Method, Newton Raphson, Successive Approximation, Discuss convergence only without derivation
13-14	Solution of simultaneous algebraic equations: Gauss elimination method, pivoting, ill conditioned equations, Gauss-Seidel iterative method, comparison of direct and iterative method.

BVSD-203 Programming using 'C'

Max Marks: 100

Maximum Time: 3 Hrs.

External Examination: 60

Internal Assessment: 40

Min Pass Marks: 35%

Lectures to be delivered: 45-55 Hrs.

Course Objectives:

- To introduce students to a powerful programming language – C.
- To understand the basic structure of a C program.
- To gain knowledge of various programming errors.

Course Learning Outcomes:

After Completion of this course the students will be able to

- Read, understand and trace the execution of programs written in C language.
- Analyze the real life problems and write a program in C language to solve the problem.
- Implement Programs with pointers, arrays and perform various control statements.

Instructions for External Examination: The question paper will consist of three sections A, B and C. Sections A and B will have four questions each from the respective Units of the syllabus and students will attempt any two questions, each question will carry **9** marks. Section C will have **8** short answer type questions which will cover the entire syllabus uniformly and will carry 3 marks.

Unit-I

Programming Process: Problem definition, Algorithm development, Flowchart, Coding, Compilation and debugging.

Basic structure of C program: Character set, Identifiers and keywords, constants, variable. Data types, input and output statements.

Operators and Expressions: Arithmetic, Unary, Logical and Relational operators, assignment operators, Conditional operators, type conversion. Library functions. Control statements: Branching, Looping using For, While and Do-While statements, Nested control structures, Switch, Break and Continue statements.

Arrays: Definition, accessing and dereferencing operators, declaration, assignment, one dimensional and two dimensional arrays.

Unit-II

Strings: Input/ Output of strings, string handling functions.

Pointers: pointer data type, pointer declaration, initialization, accessing values using pointer.

Structures and unions: Initialization, accessing structure members, nesting of structure, array of structure, comparison of structure & unions

Functions: prototype, definition and call, formal and actual arguments, methods of parameter passing to functions: call by value, call by reference, recursion. Storage Classes. **File handling:** opening and closing files. Basic I/O operation on files.

Text Books:

1. E. Balaguruswamy, "Programming in C", Tata McGrwal Hill.
2. Byron Gotfried, : "Programming with C", Second Edittion Publisher, Schaum's outline series, TMH Edition

Reference Books:

1. Kernighan; Dennis M. Ritchie. The C Programming Language (2nd ed.).
2. Ram Kumar and Rekesh Aggarwal, : "Programing in ANSIC", TMH Ed
3. Brain W. Kernigham and Dennis M. Richie, : "The C Programming Language", 2nd Ed., PHI

Teaching Plan:

Week	Content
1-2	Programming Process: Problem definition, Algorithm development, Flowchart, Coding, Compilation and debugging.
3-4	Basic structure of C program: Character set, Identifiers and keywords, constants, variable. Data types, input and output statements.
5-6	Operators and Expressions: Arithmetic, Unary, Logical and Relational operators, assignment operators, Conditional operators, type conversion. Library functions. Control statements: Branching, Looping using For, While and Do-While statements, Nested control structures, Switch, Break and Continue statements.
7-8	Arrays: Definition, accessing and dereferencing operators, declaration, assignment, one dimensional and two dimensional arrays.
9-10	Strings: Input/ Output of strings handling functions. Pointers: pointer data type, pointer declaration, initialization, accessing values using pointer.
11-12	Structures and unions: Initialization, accessing structure members, nesting of structure, array of structure, comparison of structure & unions
13-14	Functions: prototype, definition and call, formal and actual arguments, methods of parameter passing to functions: call by value, call by reference, recursion. Storage Classes. File handling: opening and closing files. Basic I/O operation on files

BVSD-204: Web Designing Concepts using Java Script

Max Marks: 100

External Examination: 60

Internal Assessment: 40

Maximum Time: 3 Hrs.

Min Pass Marks: 35%

Lectures to be delivered: 45-55 Hrs.

Course Objectives:

- To introduce the students to the web design.
- To understand advanced and complicated structures and concepts of web design using JavaScript and jQuery.

Course Learning Outcomes:

After Completion of this course the students will be able to

- Implement simple and impressive design techniques, from basics till advanced to focus on goal oriented and user centric designs.

INSTRUCTIONS FOR THE PAPER SETTER

The question paper will consist of three units I, II and III. Each of units I and II will have four questions from the respective sections of the syllabus and each question carry 9 marks. unit III will consist of one compulsory question having 12 parts of short-answer type covering the entire syllabus uniformly and each question will carry 2 marks.

INSTRUCTIONS FOR THE CANDIDATES

Candidates are required to attempt two questions each from unit I and II and the entire unit III.

UNIT-I

Java Script:

Introduction to Java Script: Syntax, Comments, Statements, data types, variable declaration, scope of variables, Expressions and Operators, getting inputs, output functions,

Sequence control statements: decision taking statements, iterative (looping) statements, break and continue.

Understanding arrays: creating an array, accessing elements in array, functions on arrays, iterating over arrays.

Working with functions: User defined functions - Function declaration, function calling, function arguments, hoisting, . Built In Functions: math functions, string functions, date and time functions.

Data Validation and verification: Form validation: email validation, name validation.

UNIT-II

Events in JavaScript: handling events, using addEventListener() method, using on<event> handlers: onchange, onclick, onmouseover, onmouseout, onkeydown, onload events. Key Events: onkeypress, onkeydown, onkeyup,

Document object model (DOM): Introduction, **fetching elements:** getElementById, getElementsByTagName, getElementsByClassName, query selectors.

jQuery:

Introduction, jQuery selectors and its syntax, events, jQuery effects- hide/show, fade, slide, animate, fetching elements, modifying HTML attributes and CSS attributes using jQuery, event handling using jQuery.

Bootstrap:

Introduction to Bootstrap, exploring bootstrap classes – containers, grid system, custom forms, navbars.

Text Book : Laura Lemay, Mastering HTML,CSS & JavaScript Web Publishing, BPB Publication

Reference Books: 1. Thomas Powell, The Complete Reference HTML & CSS, TMH 5th edition.

2. David Flanagan , JavaScript : The Definitive Guide, O'REILLY.

Teaching Plan:

Week	Content
1-2	Introduction to Java Script: Syntax, Comments, Statements, data types, variable declaration, scope of variables, Expressions and Operators, getting inputs, output functions,
3-4	Sequence control statements: decision taking statements, iterative (looping) statements, break and continue.
5-6	Understanding arrays: creating an array, accessing elements in array, functions on arrays, iterating over arrays.
7-8	Working with functions: User defined functions - Function declaration, function calling, function arguments, hoisting, . Built In Functions: math functions, string functions, date and time functions. Data Validation and verification: Form validation: email validation, name validation.
9-10	Events in JavaScript: handling events, using addEventListener() method, using on<event> handlers: onchange, onclick, onmouseover, onmouseout, onkeydown, onload events. Key Events: onkeypress, onkeydown, onkeyup,
11-12	Document object model (DOM): Introduction, fetching elements: getElementById, getElementsByTagName, getElementsByClassName, query selectors.
13-14	jQuery: Introduction, jQuery selectors and its syntax, events, jQuery effects- hide/show, fade, slide, animate, fetching elements, modifying HTML attributes and CSS attributes using jQuery, event handling using jQuery.

BVSD-205: Software Lab Based on paper BVSD-203)

Max Marks: 50

External Examination: 50

Maximum Time: 3Hrs.

Min Pass Marks: 35%

Practical Sessions to be conducted: 40-50Hrs

Objective of the Lab:

This laboratory course will comprise as exercises to supplement what is learnt under paper BVSD-203: Programming in C.

Implement programs in C:

1. Using input & output statements.
2. Using flow control statements.(for, while, do while, if, if else, switch)
3. Using Arrays
4. Using functions
5. Using Structures
6. Using Unions
7. Using Pointers
8. Using Strings
9. Using Files

The break up of marks for the practical will be as under

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|--|----------|
| i. Lab Record (External Evaluation) | 10 Marks |
| ii. Viva Voce (External Evaluation) | 20 Marks |
| iii. Program Development and Execution (External Evaluation) | 20 Marks |

BVSD-206: Software Lab Based on paper BVSD-204)

MaxMarks: 50

External Examination: 50

Maximum Time: 3Hrs.

Min Pass Marks: 35%

Practical Sessions to be conducted: 40-50Hrs

This laboratory course will comprise as exercises to supplement what is learnt under paper BVSD-204: Web Designing Concepts using Java Script

The breakup of marks for the practical will be as under

- | | | |
|-----|---------------------------|----------|
| i. | Practical file Evaluation | 10 Marks |
| ii. | Viva Voce | 20 Marks |
- Project Development and Execution 20 Marks