

**FACULTY OF COMPUTER SCIENCE AND
APPLICATIONS**

SYLLABUS

of

Bachelor of Vocation (Artificial Intelligence and Data Science)

(Semester I, II)

(Under Credit Based Continuous Evaluation Grading System)

(12+3 System of Education)

Under DDU KAUSHAL Kendra

Session 2020-21



The Heritage Institution

**KANYA MAHA VIDYALAYA
JALANDHAR
(Autonomous)**

Bachelor of Vocation (Artificial Intelligence and Data Science)

Session 2020-21

PROGRAMME SPECIFIC OUTCOMES

On successful completion of B.Voc. Programme (Artificial Intelligence and Data Science) students will be able to:

PO 01: Get knowledge about various practical and professional skills for basics tools required for data entry.

PS 02: Get knowledge about document writing and technical writing concepts

PS 03: Professional development in the field of AI and Data Science

PS 04: Get knowledge about basic and advanced data science tools (e.g, Python, R and Weka) while working collaboratively on real-world problems.

PS 05: Get knowledge about methods to collect, organize, manage, examine, prepare, analyze, cleaning, transformation, modeling and visualize data on student-driven data analysis projects.

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULUM OF EXAMINATIONS OF THREE YEAR DEGREE PROGRAMME

Scheme of Bachelor of Vocation (B.Voc.)

(Artificial Intelligence and Data Science)

Session 2020-21

Session 2020-21

Bachelor in Vocation (Artificial Intelligence and Data Science) Semester I								
Course code	Course Title	Course Type	Credits L-T-P	Marks				Examination time (in Hours)
				Total	Ext.		CA	
					L	P		
BVIL-1421/ BVIL-1031/ BVIL-1431	Punjabi(Compulsory)/ ¹ Basic Punjabi/ ² Punjab History and Culture	C	2-0-0	50	40	-	10	3
BVIL-1102	Communication Skills in English –I	C	4-0-0	50	40	-	10	3
BVIL-1103	Introduction to Computers and Information Technology	C	2-0-0	50	40	-	10	3
BVIL-1104	Introduction to Artificial Intelligence and Data Science	S	4-0-0	75	60	-	15	3
BVIL-1105	Office Fundamentals	S	0-2-0	75	60	-	15	3
BVIP-1106	Lab in Office Fundamentals	S	0-0-4	50	40	-	10	3
BVIP-1107	Field Visit and Report	S	0-0-4	75	-	60	15	3
BVIP-1108	Minor Project -1	S	0-2-2	75	30	30	15	3
AECD-1161	³ Drug Abuse (Compulsory)	AC	2-0-0	50	40	-	10	3
SECF-I492	³ Foundation Course	AC	2-0-0	25	20	-	5	1
Total			30	575				

Note: C – Compulsory, S – Skill Enhancement, AC-Audit Course

1. Special paper on lieu of Punjabi (Compulsory)
2. Special paper in lieu of Punjabi (Compulsory) for those students who are not domicile of Punjab
3. Grade points or grades of these courses will not be included in SGPA/CGPA of the Semester/Programme

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULUM OF EXAMINATIONS OF THREE YEAR DEGREE PROGRAMME

Scheme of Bachelor of Vocation (B.Voc.)

Artificial Intelligence and Data Science

Session 2020-21

B.Voc (Artificial and Data Science) Semester II								
Course code	Course Title	Course Type	Credits Credits L-T-P	Marks				Examination time (in Hours)
				Total	Ext.		CA	
					L	P		
BVIL-2421/ BVIL-2031/ BVIL-2431	Punjabi(Compulsory)/ ¹ Basic Punjabi/ ² Punjab History and Culture	C	2-0-0	50	40	-	10	3
BVIL-2102	Communication Skills in English –II	C	3-0-1	50	25	15	10	3
BVIL-2112	Computational Problem Solving	S	3-0-0	75	60	-	15	4
BVIL-2113	Mathematical Foundation	C	2-0-0	50	40	-	10	3
BVIL-2114	Technical Writing	S	3-0-0	50	40	-	10	3
BVIL-2115	Data Collection and Analysis	S	4-0-0	75	60	-	15	3
BVIL-2116	Database Management System	S	4-0-0	75	60		15	3
BVIP-2117	Computational Problem Solving Lab	S	0-0-2	50	40	40	10	3
BVIL-2118	Minor Project-II	S	0-0-2	50	40	40	10	3
SECM-2502	³ Moral Education Course	C	2-0-0	50	40	-	10	3
AECD-2161	³ Drug Abuse: (Compulsory Paper)	C	2-0-0	50	40	-	10	3
	Total		30		575			

Note: C – Compulsory, S – Skill Enhancement

1. Special paper on lieu of Punjabi (Compulsory)
2. Special paper in lieu of Punjabi (Compulsory) for those students who are not domicile of Punjab
3. Grade points or grades of these courses will not be included in SGPA/CGPA of the Semester/Programme

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

COURSE CODE: BVIL-1421

Punjabi (Compulsory)

COURSE OUTCOMES

CO1: ਆਤਮ ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਵਿਤਾ ਭਾਗ ਨੂੰ ਪੜ੍ਹਾਉਣ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਅੰਦਰ ਕਵਿਤਾ ਪ੍ਰਤੀ ਦਿਲਚਸਪੀ, ਸੂਝ ਨੂੰ ਪੈਦਾ ਕਰਨਾ ਹੈ ਤਾਂ ਕਿ ਉਹ ਆਧੁਨਿਕ ਦੌਰ ਵਿਚ ਚੱਲਰਹੀਆਂ ਕਾਵਿ ਧਾਰਾਵਾਂ ਅਤੇ ਕਵੀਆਂ ਬਾਰੇ ਗਿਆਨ ਹਾਸਿਲ ਕਰ ਸਕਣ। ਇਸ ਦਾ ਹੋਰ ਮਨੋਰਥ ਕਵਿਤਾ ਦੀ ਵਿਆਖਿਆ, ਵਿਸ਼ਲੇਸ਼ਣ ਤੇ ਮੁਲੰਕਣ ਦੀ ਪ੍ਰਕਿਰਿਆ ਤੋਂ ਜਾਣੂ ਕਰਾਉਣਾ ਵੀ ਹੈ ਤਾਂਕਿ ਉਹ ਸਮਕਾਲੀ ਸਮਾਜਦੀਆਂ ਸਮੱਸਿਆਵਾਂ ਨੂੰ ਸਮਝ ਸਕਣ ਅਤੇ ਆਲੋਚਨਾਤਮਕ ਦ੍ਰਿਸ਼ਟੀ ਬਣਾ ਸਕਣ।

CO2: ਗਿਆਨ ਮਾਲਾ (ਵਿਗਿਆਨਕ ਤੇ ਸਮਾਜ ਵਿਗਿਆਨਕ ਲੇਖਾਂ ਦਾ ਸੰਗ੍ਰਹਿ) ਪੁਸਤਕ ਨੂੰ ਸਿਲੇਬਸ ਵਿਚ ਸ਼ਾਮਿਲ ਕਰ ਕੇ ਵਿਦਿਆਰਥੀਆਂ ਅੰਦਰ ਪੜ੍ਹਣ ਦੀ ਰੁਚੀ ਨੂੰ ਪੈਦਾ ਕਰਨਾ ਹੈ ਅਤੇ ਮੁੱਲਵਾਨ ਗਿਆਨ ਦੇਣਾ ਹੈ।

CO3: ਪੈਰਾ ਰਚਨਾ ਅਤੇ ਪੈਰਾਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉਤਰ ਦੇਣ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਬੁੱਧੀ ਨੂੰ ਤੀਖਣ ਕਰਦਿਆਂ ਉਨਾਂ ਦੀ ਲਿਖਣ ਪ੍ਰਤਿਭਾ ਨੂੰ ਉਜਾਗਰ ਕਰਨਾ ਹੈ।

CO4: ਧੁਨੀ ਵਿਉਂਤ ਪੜ੍ਹਣ ਨਾਲ ਵਿਦਿਆਰਥੀ ਧੁਨੀਆਂ ਦੀ ਉਚਾਰਨ ਪ੍ਰਣਾਲੀ ਤੋਂ ਵਾਕਫ਼ ਹੋਣਗੇ।

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

COURSE CODE: BVIL-1421

Punjabi (Compulsory)

ਪਾਠ ਕ੍ਰਮ ਅਤੇ ਪਾਠ ਪੁਸਤਕਾਂ

L - T - P

Max. Marks: 50

2- 0- 0

Theory: 40

CA: 10

ਯੂਨਿਟ-I

ਆਤਮ ਅਨਾਤਮ (ਕਵਿਤਾਭਾਗ),(ਸੰਪ. ਸੁਹਿੰਦਰ ਬੀਰ ਅਤੇ ਵਰਿਆਮਸਿੰਘ ਸੰਧੂ) ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।

ਪ੍ਰੋ.ਪੂਰਨ ਸਿੰਘ, ਪ੍ਰੋ.ਮੋਹਨ ਸਿੰਘ,ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਜਗਤਾਰ, ਸੁਰਜੀਤ ਪਾਤਰ(ਕਵੀ ਪਾਠ ਕ੍ਰਮ ਦਾ ਹਿੱਸਾ ਹਨ) (ਸਾਰ, ਵਿਸ਼ਾ ਵਸਤੂ)

08 ਅੰਕ

ਯੂਨਿਟ-II

ਗਿਆਨ ਮਾਲਾ (ਵਿਗਿਆਨਕ ਤੇ ਸਮਾਜ ਵਿਗਿਆਨਕ ਲੇਖਾਂ ਦਾ ਸੰਗ੍ਰਹਿ),(ਸੰਪਾ.ਡਾ. ਸਤਿੰਦਰ ਸਿੰਘ, ਪ੍ਰੋ. ਮਹਿੰਦਰ ਸਿੰਘ ਬਨਵੈਤ), ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।

ਲੇਖ : ਭਰੂਣ ਹੱਤਿਆ ਦੇ ਦੇਸ਼ ਵਿਚ, ਵਾਤਾਵਰਣੀ ਪ੍ਰਦੂਸ਼ਣ ਅਤੇ ਮਨੁੱਖ, ਏਡਜ਼ : ਇਕ ਗੰਭੀਰ ਸੰਕਟ।

(ਸਾਰ, ਵਿਸ਼ਾਵਸਤੂ)

08 ਅੰਕ

ਯੂਨਿਟ-III

(ੳ) ਪੈਰਾਰਚਨਾ

(ਅ) ਪੈਰਾ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉਤਰ।

08 ਅੰਕ

ਯੂਨਿਟ-IV

(ੳ) ਪੰਜਾਬੀ ਧੁਨੀ ਵਿਉਂਤ : ਪਰਿਭਾਸ਼ਾ, ਉਚਾਰਨ ਅੰਗ

(ਅ)ਸਵਰ, ਵਿਅੰਜਨ

08 ਅੰਕ

ਅੰਕ ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਸੈਕਸ਼ਨ ਹੋਣਗੇ। ਸੈਕਸ਼ਨ A-D ਤੱਕ ਦੇ ਪ੍ਰਸ਼ਨ ਯੂਨਿਟI-IV ਵਿਚੋਂ ਪੁੱਛੇ ਜਾਣਗੇ। ਹਰ ਸੈਕਸ਼ਨ ਵਿਚ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 08 ਅੰਕ ਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚਕਰ ਸਕਦਾ ਹੈ।

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

COURSE CODE: BVAL-1031

BASIC PUNJABI (In lieu of Compulsory Punjabi)

CO1: ਮੁੱਢਲੀ ਪੰਜਾਬੀ ਪੜ੍ਹਾਉਣ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਨੂੰ ਸਿਖਾਉਣ ਦੀ ਪ੍ਰਕਿਰਿਆ ਵਿਚ ਪਾ ਕੇ ਇਕ ਹੋਰ ਭਾਸ਼ਾ ਸਿੱਖਣ ਦਾ ਮੌਕਾ ਪ੍ਰਦਾਨ ਕਰਨਾ ਹੈ।

CO2: ਇਸ ਵਿਚ ਵਿਦਿਆਰਥੀ ਨੂੰ ਬਾਰੀਕੀ ਨਾਲ ਭਾਸ਼ਾ ਦਾ ਅਧਿਐਨ ਕਰਵਾਇਆ ਜਾਵੇਗਾ।

CO3: ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਸ਼ਬਦ ਰਚਨਾ ਤੇ ਜਾਣੂ ਕਰਵਾਇਆ ਜਾਵੇਗਾ।

CO4: ਮੁੱਢਲੀ ਪੰਜਾਬੀ ਪੜ੍ਹਾਉਣ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਨਿੱਤ ਵਰਤੋਂ ਦੀ ਪੰਜਾਬੀ ਸ਼ਬਦਾਵਲੀ ਬਾਰੇ ਦੱਸਣਾ ਹੈ।

CO5: ਮੁੱਢਲੀ ਪੰਜਾਬੀ ਪੜ੍ਹਾਉਣ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਦਾ ਸ਼ਬਦ ਘੇਰਾ ਵਿਸ਼ਾਲ ਕਰਨਾ ਹੈ।

CO6: ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਪੰਜਾਬੀ ਵਿਚ ਹਫਤੇ ਦੇ ਸੱਤ ਦਿਨਾਂ ਦੇ ਨਾਂ, ਬਾਰਾਂ ਮਹੀਨਿਆਂ ਦੇ ਨਾਂ, ਰੁੱਤਾਂ ਦੇ ਨਾਂ, ਇਕੱਤੋਂ ਸੌ ਤੱਕ ਗਿਣਤੀ ਸ਼ਬਦਾਂ ਵਿਚ ਸਿਖਾਉਣਾ ਹੈ।

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

COURSE CODE: BVIL-1031

BASIC PUNJABI

L - T - P

Max. Marks: 50

2-0-0

Theory: 40

Time : 3 Hours

CA: 10

ਪਾਠ ਕ੍ਰਮ

ਯੂਨਿਟ-I

ਪੈਂਤੀ ਅੱਖਰੀ, ਅੱਖਰ ਕ੍ਰਮ, ਪੈਰ ਬਿੰਦੀ ਵਾਲੇ ਵਰਣ ਅਤੇ ਪੈਰ ਵਿਚ ਪੈਣ ਵਾਲੇ ਵਰਣ ਅਤੇ ਮਾਤਰਾਵਾਂ (ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ) ਲਗਾਘਰ (ਬਿੰਦੀ, ਟਿੱਪੀ, ਅੱਧਕ) : ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ ।

ਯੂਨਿਟ-II

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

ਯੂਨਿਟ-III

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

ਯੂਨਿਟ-IV

ਹਫ਼ਤੇ ਦੇ ਸੱਤ ਦਿਨਾਂ ਦੇ ਨਾਂ, ਬਾਰ੍ਹਾਂ ਮਹੀਨਿਆਂ ਦੇ ਨਾਂ, ਰੁੱਤਾਂ ਦੇ ਨਾਂ, ਇੱਕਤੋਂ ਸੌ ਤੱਕ ਗਿਣਤੀ ਸ਼ਬਦਾਂ ਵਿਚ ।

ਅੰਕ ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਸੈਕਸ਼ਨ ਹੋਣਗੇ। ਸੈਕਸ਼ਨ A-D ਤੱਕ ਦੇ ਪ੍ਰਸ਼ਨ ਯੂਨਿਟ-I-IV ਵਿਚੋਂ ਪੁੱਛੇ ਜਾਣਗੇ। ਹਰ ਸੈਕਸ਼ਨ ਵਿਚ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਇੱਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 08 ਅੰਕ ਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚਕਾਰ ਸਕਦਾ ਹੈ।

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1431

Punjab History and Culture (1450-1716) (Special paper in lieu of Punjabi Compulsory)

Course Outcomes:

After the completion of Sem-I (Under Credit Based Continuous Evaluation Grading System) student will have a grasp on:

CO1: To enable them to have grasp on the physical features of Punjab, its flora & fauna, the composition of population, culture, society, religion and polity.

CO2: To make a comparison between the original philosophical & teachings of Sikh Gurus and their relevance in the present scenario.

CO3: To enable students of history to have deep insight into the origin of Sikhism, foundation of Khalsa, the conflict with Mughals and the rise of Banda Bahadur and the aftermath.

CO4: The paper has been designed specifically to have in dept peep into the past in order to have better understanding of present & apply corrective measures

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1431
Punjab History and Culture (1450-1716)
(Special paper in lieu of Punjabi Compulsory)

Examination Time: 3 Hours

Max. Marks: 50

Credits: 2-0-0

Theory: 40

C A: 10

Instructions for the Paper Setter:

Question paper shall consist of four Sections. Candidates shall attempt 5 questions in all, by at least selecting one Question from each unit and the 5th question may be attempted from any of the four sections. Each question carries 8 marks.

Section- A

1. Land and the People.
2. Bhakti Movement

Section- B

3. Life and Teaching of Guru Nanak Dev.
4. Contribution of Guru Angad Dev, Guru Arjun Dev, Guru Amar Das and Guru Ram Das.

Section –C

5. Guru Hargobind.
6. Martyrdom of Guru Teg Bahadur

Section- D

1. Guru Gobind Singh and the Khalsa.
2. Banda Singh Bahadur: Conquests and Execution.

Suggested Readings

1. Kirpal Singh(ed.), *History and Culture of the Punjab, Part-ii, Punjabi University, Patiala.* 1990.
2. Fauja Singh (ed.), *History of Punjab, Vol, III Punjabi University, Patiala, 1987.*
3. J.S. Grewal, *The Sikhs of the Punjab, Cup, Cambridge, 1991.*
4. Khushwant Singh, *A History of the Sikhs, Vol. I, OUP, New Delhi, 1990*

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1102
Communication Skills in English – I

COURSE OUTCOMES

At the end of this course, the students will develop the following Skills:

CO 1: Reading skills that will facilitate them to become an efficient reader

CO 2: The ability to realize not only language productivity but also the pleasure of being able to articulate well

CO 3: The power to analyze, interpret and infer the ideas in the text

CO 4: The ability to have a comprehensive understanding of the ideas in the text and enhance their critical thinking

CO 5: Writing skills of students which will make them proficient enough to express ideas in clear and grammatically correct English

CO 6: Ability to plan, organise and present ideas coherently on a given topic

CO 7: The skill to use an appropriate style and format in writing letters (formal and informal)

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1102

Communication Skills in English – I

Examination Time: 3 Hours

Max. Marks: 50

Credits: 3-0-1

Theory: 40

C A: 10

Instructions for the paper setter and distribution of marks:

The question paper will consist of four sections and distribution of marks will be as under:

Section-A: Two questions of theoretical nature will be set from Unit I of the syllabus and the candidates will have to attempt one carrying 8 marks.

Section-B: Two comprehension passages will be given to the students based on the Unit II and the candidates will have to attempt one carrying 8 marks.

Section-C: Two questions will be given based on the topics given in the Unit III and the candidates will have to attempt one carrying 8 marks.

Section-D: One out of the two questions will have to be attempted by the candidates based on the topics given in Unit IV of the syllabus. It will carry 8 marks.

Important Note:

The candidate will have to attempt five questions in all selecting one from each section of the question paper and the fifth question may be attempted from any of the four sections.

(8 x 5 = 40)

The syllabus is divided in four units as mentioned below:

Unit I

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

Unit II

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

Activities:

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

Unit III

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

Activities

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

Unit IV

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

Activities:

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

References:

1. *Oxford Guide to Effective Writing and Speaking* by John Seely.
2. *Business Communication*, by Sinha, K.K. Galgotia Publishers, 2003.
3. *Business Communication* by Sethi, A and Adhikari, B., McGraw Hill Education 2009.
4. *Communication Skills* by Raman, M. & S. Sharma, OUP, New Delhi, India (2011).
5. *English Grammar in Use: A Self Study Reference and Practice Book Intermediate Learners Book* by Raymond Murphy, Cambridge University Press

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1103

Introduction to Computers and Information Technology

Course Outcome: After passing course the student will be able to:

CO1: Comprehend fundamentals of Computer and Software

CO2: Describe Information Technology and its Applications

CO3: Comprehend the concepts of I/O devices and memory.

CO4: Demonstrate the Introduction to Emerging Technologies: Big Data, IoT and Cloud

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1103

Introduction to Computers and Information Technology

Examination Time: 3 Hours

Max. Marks: 50

Credits:2-0-0

Theory: 40

C A: 10

Instructions for Paper Setter -

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided 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

Unit-I

Introduction to Information Technology: Basic concepts of IT, Data Processing: Data and Information.

Introduction to Computers and its Applications:

- Computer as a system, basic concepts, functional units and their inter relation.
- Milestones in Hardware and Software.
- Batch oriented / on-line / real time applications.
- Application of computers.

Unit-II

Software: System and Application Software, Utility packages, Configuration of Computer System.

Applications of Information Technology: Wide range of Applications in: Home, Education and Training, Entertainment, Science, medicine, engineering etc

Unit-III

Input Devices: Keyboard, mouse, pens, touch screens, Bar Code reader, joystick, source data automation, (MICR, OMR, OCR), screen assisted data entry: portable / handheld terminals for data collection, vision input systems.

Output Devices: Monitor, Serial line page printers, plotters, voice response units.

Data Storage Devices and Media: Primary storage (Storage addresses and capacity, type of memory), Secondary storage, Magnetic storage devices and Optical Storage Devices.

UNIT-IV

Introduction to Emerging Technologies: Big Data: Characteristics, Architecture, Technologies and Applications,

Cloud: Predecessors technologies, characteristics, service models, Deployment models, benefits and challenges.

IoT: History, characteristics, applications and Adoption barriers.

Text Book/References:

1. P.K.Sinha, "Computer Fundamentals", Sixth Edition, BPB Publications, 2004.
2. N. Subramanian, "Introduction to Computers", First Edition, McGraw Hill Education India, 2001.
3. Peter Norton, "Introduction to Computers", First Edition, McGrawHill Education, 2017.
4. Gurvinder Singh, Rachpal Singh, "Windows Based Computer Courses", Third Edition, Kalyani Publishers, 2017

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1104

Introduction Artificial Intelligence and Data Science

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend the concepts of Artificial Intelligence.

CO2: Demonstrate various concepts of Data Science domain and its difference with business intelligence.

CO3 Comprehend Data Science methodologies and steps involved in data analysis.

CO4: Apply learned techniques to solve problem associated with basic statistical operations on Real/Dummy data.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1104

Introduction to Artificial Intelligence and Data Science

Examination Time: 3 Hours

Max. Marks: 75

Credits: 4-0-0

Theory: 60

CA: 10

UNIT I

What is AI, How does it works, History of AI, AI- Intelligent Systems, benefits and Risk of AI, Challenges, Opportunities and Applications.AI its applications in data science, Problem Framing

UNIT II

Introduction to Data Science, Evolution of Data science, Need of Data Science, Components of Data Science, Data Science process.

Difference between data science and business intelligence. Application Areas and Challenges in Data Science, Job Roles in Data Science domain

UNIT III

Data Science Methodologies, Steps Involved in Data Analysis (data collection, integration, management, modeling, analysis, visualization, prediction and informed decision making)

UNIT IV

Statistical description of data: Mean, Median and Mode.

Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, Standard Deviation

References

1. J. Han, M. Kamber and J. Pei , “Data Mining: Concepts and Techniques”, Third Edition, Morgan Kaufmann Publishers, 2011.
2. Nong Ye, “Handbook of Data Mining”, First Edition, 2003.
3. Anshuman Sharma, “Fundamentals of Numerical Methods and Statistical Techniques”, Second Edition, Lakhanpal Publishers, 2014.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1105

Office Fundamentals

Examination Time: 3 Hours

Max. Marks: 75

Credits: 0-2-0

Theory: 60

C A: 15

After passing this course the student will be able to:

Course Outcomes:

After successful completion of this course, students will be able to:

CO1: Comprehend basics and formatting concepts of word document.

CO2: Have knowledge of creating, customize Tables and working with Graphics in word.

CO3: Comprehend basics of presentation involved in text formatting, graphs and animation.

CO4: Comprehend basics of spreadsheet involved in creation, editing of graphs, sorting, querying and filtering of data.

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Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1105

Office Fundamentals

Examination Time: 3 Hours

Max. Marks:75

Credits: 0-2-0

Theory: 60

CA: 10

Instructions for the Paper Setter

Eight questions of equal marks (8 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. 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.

Unit I

Basics of Word Document: Creating a New Document, Inserting and Deleting Text, Saving a Document, Opening a Document, Selecting and Replacing Text Using Undo, Redo and Repeat Navigating through a Document, Viewing a Document, Working with the Document, Window Viewing Multiple Document, and Windows Previewing and Printing a Document, Closing a Document

Formatting of a Word Document: Drop Caps, Add Shading to Draw Reader's Attention, Steps to Add Borders to a Document, work with Word Styles, Adjust the Horizontal Size of Characters, Insert and Prevent certain types of Page Breaks, Using the Word, Themes To Make a Professional Document look. Steps to Create, Modify or Attach a Template. Add, Edit or Delete Headers and Footers, Toolbars of word

Unit II

Creating and Customizing Tables: Methods to Create a Table, Steps to Create a Table that has Specific Column Widths. Deleting Column, Row or Entire Table in Word, Creating Table of Contents in word

Working with Graphics: Add, Crop, Change Pictures File Size and Wrap Picture with Text, Discover the Proper Steps to Add and Organize Clip Arts, Manipulating WordArt Effects to the Text

Unit III

Presentation: Introduction to PowerPoint, Exploring menus, starting a new slide, saving presentation, moving/rearranging slides, printing slides. Applying theme to presentation, Views (slide View, slide sorter, notes view, outline view), Formatting & enhancing text formatting. Creating a graph, displaying slide show, adding multimedia. Slide transitions, applying Animation, Timing slide display, adding movies & sounds. Using a pick look Wizards to change format.

Unit IV

Spreadsheet: Introduction to Worksheet/Spreads, Features of excel, Describe the excel Window, Creating a new workbook, different functions on different data in excel, creation of graphs, editing it and formatting, changing chart type to 2d chart or 3d chart, pivot table, creation of worksheet, adding, deleting, moving the text in worksheet, linking different sheets, sorting the data, querying the data, filtering the data (auto and advance filters), What-if analysis, To open an already existing workbook, Saving workbook, printing a worksheet, Closing the workbook & exiting.

REFERENCES:

1. Joyce Cox, Joan Lambert and Curtis Frye, “Microsoft office Professional 2010 Step by Step”, First Edition, Microsoft Press, 2010.
2. Bucki Lisa A, “Office 2016 Bible”, First Edition, Wiley, 2013.
3. WeverkaPeter, “Office 2016 All in One for Dummies”, First Edition, Wiley India, 2015.
4. Satish Jain, Kratika, M.Geetha, “MS–Office 2010”, First Edition, BPBPublications, 2012.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Lab in Office Fundamentals

Course Code: BVIL-1106

Examination Time: 3 Hours

Max. Marks:50

Credits: 0-0-4

Lab: 40

CA: 10

Lab based on office tools

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1107

Field Visit and Report

Examination Time: 3 Hours

Max. Marks: 75

Credits: 0-0-4

Theory: 60

CA: 15

The objective of the field visit is to help students to know the kind of work environment in AI and Data Science industry has,

After the field visit the students will able to:

CO1: Understand and familiarize themselves with the work environment of companies.

CO2: Learn coordination and cooperation of various teams for the project

CO3: Develop skills necessary for structuring, managing, and carrying out projects within an organization/industry.

CO4: Describe the observations through report writing.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: BVIL-1108

Minor Project – I

Examination Time: 3 Hours

Credits: 0-2-2

Max. Marks: 75

Project Report and Viva:60

C A: 15

The primary objective of the course is to encourage students to learn various tools and to build AI/ Data Science based Model: This module is delivered using a combination of introductory lectures and participation activities by the students.

CO1: Apply the tools and techniques learnt in the course to process and analyze data for problems associated with AI and Data science.

CO2: Apply their knowledge to work on assigned/self-identified project.

CO3: Work within defined time and resource constraints while working with real world applications.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: AECD-1161

Drug Abuse

Course outcomes:

CO1. This information can include factual data about what substance abuse is; warning signs of addiction; information about how alcohol and specific drugs affect the mind and body;

CO2. Learn to be supportive during the detoxification and rehabilitation process.

CO3. Main focus of substance abuse education is teaching individuals about drug and alcohol abuse and how to avoid, stop, or get help for substance use disorders.

CO4. Substance abuse education is important for students alike; there are many misconceptions about commonly used legal and illegal substances, such as alcohol and marijuana.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester I

Course Code: AECD-1161

Drug Abuse

Examination Time: 3 Hours

Credits: 2-0-0

Max. Marks: 50

Theory: 40

C A: 10

Instructions for the Paper Setter

Eight questions of equal marks are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. 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.

UNIT-I

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

UNIT-II

2) Consequences of Drug Abuse for:

Individual: Education, Employment, Income.

Family: Violence.

Society: Crime

Nation: Law and Order problem.

UNIT-III

3) Management of Drug Abuse

Medical management: medication for treatment and to withdrawal effects.

UNIT-IV

4) Psychiatric Management: Counselling, Behavioural 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.
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. Sain, Bhim 1991, *Drug Addiction Alcoholism*, Smoking obscenity New Delhi: Mittal Publications.
8. Sandhu, Ranvinder Singh, 2009, *Drug Addiction in Punjab: A Sociological Study*. Amritsar: Guru Nanak Dev University.
9. Singh, Chandra Paul 2000. *Alcohol and Dependence among Industrial Workers*: Delhi: Shipra.
10. Sussman, S and Ames, S.L. (2008). *Drug Abuse: Concepts, Prevention and Cessation*, Cambridge University Press.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: AECD-2421

Punjabi (Compulsory)

Examination Time: 3 Hours

Credits: 2-0-0

Max. Marks: 50

Theory: 40

C A: 10

CO1:ਆਤਮ ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਹਾਣੀ ਭਾਗ ਨੂੰ ਸਿਲੇਬਸ ਵਿਚ ਸ਼ਾਮਲ ਕਰ ਕੇ ਵਿਦਿਆਰਥੀਆਂ ਅੰਦਰ ਕਹਾਣੀ ਨੂੰ ਪੜ੍ਹਣ ਦੀ ਰੁਚੀ ਨੂੰ ਪੈਦਾ ਕਰਨਾ ਹੈ ਅਤੇ ਕਹਾਣੀ ਜਗਤ ਨਾਲ ਜੋੜਣਾ ਹੈ।

CO2:ਗਿਆਨ ਮਾਲਾ ਪੁਸਤਕ ਨੂੰ ਸਿਲੇਬਸ ਵਿਚ ਸ਼ਾਮਲ ਕਰ ਕੇ ਵਿਦਿਆਰਥੀਆਂ ਅੰਦਰ ਪੜ੍ਹਣ ਦੀ ਰੁਚੀ ਨੂੰ ਪੈਦਾ ਕਰਨਾ ਹੈ।

CO3:ਸੰਖੇਪ ਰਚਨਾ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਸਮੇਂ ਅਤੇ ਮਿਹਨਤ ਦੀ ਬੱਚਤ ਕਰਨ ਬਾਰੇ ਦੱਸਣਾ ਹੈ।

CO4:ਪੈਰਾ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ ਦੇਣ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਬੁੱਧੀ ਨੂੰ ਤੀਖਣ ਕਰਦਿਆਂ ਉਨ੍ਹਾਂ ਦੀ ਲਿਖਣ ਪ੍ਰਤਿਭਾ ਨੂੰ ਉਜਾਗਰ ਕਰਨਾ ਹੈ।

CO5:ਸ਼ਬਦ ਬਣਤਰ ਅਤੇ ਸ਼ਬਦ ਰਚਨਾ ਪੜ੍ਹਣ ਨਾਲ ਵਿਦਿਆਰਥੀ ਇਸਦੇ ਮੁੱਢਲੇ ਸੰਕਲਪਾਂ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਇਹਨਾਂ ਸੰਕਲਪਾਂ ਤੋਂ ਜਾਣੂ ਹੋਣਗੇ।

CO6:ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ ਨੂੰ ਪੜ੍ਹਾਉਣ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਅੰਦਰ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਅਮੀਰੀਦਾ ਅਤੇ ਬਾਰੀਕੀਆਂ ਨੂੰ ਸਮਝਣ ਲਈ ਵੱਖਰੇ-ਵੱਖਰੇ ਸਿਧਾਂਤਾਂ ਦਾ ਵਿਕਾਸ ਕਰਨਾ ਹੈ।

CO7:ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਰਤੋਂ ਨਾਲ ਗੱਲਬਾਤ ਵਿਚ ਪਰਪੱਕਤਾ ਆਉਂਦੀ ਹੈ। ਇਹ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਗੱਲਬਾਤ ਵਿਚ ਨਿਖਾਰ ਲਿਆਉਣ ਦਾ ਕੰਮ ਕਰਨਗੇ।

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: AECD-2421

Punjabi (Compulsory)

Examination Time: 3 Hours
Credits: 2-0-0

Max. Marks: 50
Theory: 40

C A: 10

ਪਾਠ ਕ੍ਰਮ ਅਤੇ ਪਾਠ ਪੁਸਤਕਾਂ

ਯੂਨਿਟ-I

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

ਪ੍ਰੋ. ਪੂਰਨ ਸਿੰਘ, ਪ੍ਰੋ. ਮੋਹਨ ਸਿੰਘ, ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ, ਜਗਤਾਰ, ਸੁਰਜੀਤ ਪਾਤਰ (ਕਵੀ ਪਾਠ ਕ੍ਰਮ ਦਾ ਹਿੱਸਾ ਹਨ)

(ਸਾਰ, ਵਿਸ਼ਾ ਵਸਤੂ)

ਯੂਨਿਟ-II

ਗਿਆਨ ਮਾਲਾ (ਵਿਗਿਆਨਕ ਤੇ ਸਮਾਜ ਵਿਗਿਆਨਕ ਲੇਖਾਂ ਦਾ ਸੰਗ੍ਰਹਿ), (ਸੰਪਾ. ਡਾ. ਸਤਿੰਦਰ ਸਿੰਘ, ਪ੍ਰੋ. ਮਹਿੰਦਰ ਸਿੰਘ ਬਨਵੈਤ), ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ।

ਲੇਖ : ਭਰੂਣ ਹੱਤਿਆ ਦੇ ਦੇਸ਼ ਵਿਚ, ਵਾਤਾਵਰਣੀ ਪ੍ਰਦੂਸ਼ਣ ਅਤੇ ਮਨੁੱਖ, ਏਡਜ਼ : ਇਕ ਗੰਭੀਰ ਸੰਕਟ। (ਸਾਰ, ਵਿਸ਼ਾ ਵਸਤੂ)

ਯੂਨਿਟ-III

(ੳ) ਪੈਰਾ ਰਚਨਾ

(ਅ) ਪੈਰਾ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉਤਰ।

ਯੂਨਿਟ-IV

(ੳ) ਪੰਜਾਬੀ ਧੁਨੀ ਵਿਉਂਤ: ਪਰਿਭਾਸ਼ਾ, ਉਚਾਰਨ ਅੰਗ

(ਅ) ਸਵਰ, ਵਿਅੰਜਨ

ਅੰਕ ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਸੈਕਸ਼ਨ ਹੋਣਗੇ। ਸੈਕਸ਼ਨ A-D ਤੱਕ ਦੇ ਪ੍ਰਸ਼ਨ ਯੂਨਿਟ I-IV ਵਿੱਚੋਂ ਪੁੱਛੇ ਜਾਣਗੇ। ਹਰ ਸੈਕਸ਼ਨ ਵਿੱਚ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਸੈਕਸ਼ਨ ਵਿੱਚੋਂ ਇੱਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨ ਵਿੱਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 08 ਅੰਕ ਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚਕਾਰ ਸਕਦਾ ਹੈ।

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: AECD-2031

BASIC PUNJABI

CO1:ਆਤਮ ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਹਾਣੀ ਭਾਗ ਨੂੰ ਸਿਲੇਬਸ ਵਿਚ ਸ਼ਾਮਲਕਰ ਕੇ ਵਿਦਿਆਰਥੀਆਂ ਅੰਦਰ ਕਹਾਣੀ ਨੂੰ ਪੜ੍ਹਣ ਦੀ ਰੁਚੀ ਨੂੰ ਪੈਦਾ ਕਰਨਾ ਹੈ ਅਤੇ ਕਹਾਣੀ ਜਗਤ ਨਾਲ ਜੋੜਣਾ ਹੈ।

CO2:ਗਿਆਨ ਮਾਲਾ ਪੁਸਤਕ ਨੂੰ ਸਿਲੇਬਸ ਵਿਚ ਸ਼ਾਮਲ ਕਰ ਕੇ ਵਿਦਿਆਰਥੀਆਂ ਅੰਦਰ ਪੜ੍ਹਣ ਦੀ ਰੁਚੀ ਨੂੰ ਪੈਦਾ ਕਰਨਾ ਹੈ।

CO3:ਸੰਖੇਪ ਰਚਨਾ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਨੂੰ ਸਮੇਂ ਅਤੇ ਮਿਹਨਤ ਦੀ ਬੱਚਤ ਕਰਨ ਬਾਰੇ ਦੱਸਣਾ ਹੈ।

CO4:ਪੈਰਾ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ ਦੇਣ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਬੁੱਧੀ ਨੂੰ ਤੀਖਣ ਕਰਦਿਆਂ ਉਨ੍ਹਾਂ ਦੀ ਲਿਖਣ ਪ੍ਰਤਿਭਾ ਨੂੰ ਉਜਾਗਰ ਕਰਨਾ ਹੈ।

CO5:ਸ਼ਬਦ ਬਣਤਰ ਅਤੇ ਸ਼ਬਦ ਰਚਨਾ ਪੜ੍ਹਣ ਨਾਲ ਵਿਦਿਆਰਥੀ ਇਸਦੇ ਮੁੱਢਲੇ ਸੰਕਲਪਾਂ ਨੂੰ ਆਧਾਰ ਬਣਾ ਕੇ ਇਹਨਾਂ ਸੰਕਲਪਾਂ ਤੋਂ ਜਾਣੂ ਹੋਣਗੇ।

CO6:ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ ਨੂੰ ਪੜ੍ਹਾਉਣ ਦਾ ਮਨੋਰਥ ਵਿਦਿਆਰਥੀਆਂ ਅੰਦਰ ਪੰਜਾਬੀ ਭਾਸ਼ਾ ਦੀ ਅਮੀਰੀ ਦਾ ਅਤੇ ਬਾਰੀਕੀਆਂ ਨੂੰ ਸਮਝਣ ਲਈ ਵੱਖਰੇ-ਵੱਖਰੇ ਸਿਧਾਂਤਾਂ ਦਾ ਵਿਕਾਸ ਕਰਨਾ ਹੈ।

CO7:ਮੁਹਾਵਰਿਆਂ ਦੀ ਵਰਤੋਂ ਨਾਲ ਗੱਲਬਾਤ ਵਿਚ ਪਰਪੱਕਤਾ ਆਉਂਦੀ ਹੈ। ਇਹ ਵਿਦਿਆਰਥੀਆਂ ਦੀ ਗੱਲਬਾਤ ਵਿਚ ਨਿਖਾਰ ਲਿਆਉਣ ਦਾ ਕੰਮ ਕਰਨਗੇ।

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code:AECD-2031

BASIC PUNJABI

Examination Time: 3 Hours
Credits: 2-0-0

Max. Marks: 50
Theory: 40

C A: 10

ਪਾਠ ਕ੍ਰਮ

ਯੂਨਿਟ-I

ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ: ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ (ਨਾਂਵ, ਪੜਨਾਂਵ, ਕਿਰਿਆ, ਵਿਸ਼ੇਸ਼ਣ, ਕਿਰਿਆ ਵਿਸ਼ੇਸ਼ਣ, ਸਬੰਧਕ, ਯੋਜਕ ਅਤੇ ਵਿਸਮਿਕ)

ਯੂਨਿਟ-II

ਭੰਜਾਬੀ ਵਾਕ ਬਣਤਰ: ਮੁੱਢਲੀ ਜਾਣ ਪਛਾਣ

(ੳ) ਸਾਧਾਰਨ ਵਾਕ, ਸੰਯੁਕਤਵਾਕ ਅਤੇ ਮਿਸ਼ਰਤਵਾਕ (ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ)

(ਅ) ਬਿਆਨੀਆ ਵਾਕ, ਪ੍ਰਸ਼ਨਵਾਚਕ ਵਾਕ ਅਤੇ ਹੁਕਮੀ ਵਾਕ (ਪਛਾਣ ਅਤੇ ਵਰਤੋਂ)

ਯੂਨਿਟ-III

ਪੈਰ੍ਰਾ ਰਚਨਾ

ਸੰਖੇਪ ਰਚਨਾ

ਯੂਨਿਟ-IV

ਚਿੱਠੀ ਪੱਤਰ (ਘਰੇਲੂ ਅਤੇ ਦਫ਼ਤਰੀ)

ਮੁਹਾਵਰੇ

ਅੰਕ ਵੰਡ ਅਤੇ ਪਰੀਖਿਅਕ ਲਈ ਹਦਾਇਤਾਂ

1. ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਸੈਕਸ਼ਨ ਹੋਣਗੇ। ਸੈਕਸ਼ਨ A-D ਤੱਕ ਦੇ ਪ੍ਰਸ਼ਨ ਯੂਨਿਟ-I-IV ਵਿਚੋਂ ਪੁੱਛੇ ਜਾਣਗੇ। ਹਰ ਸੈਕਸ਼ਨ ਵਿਚ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ।
2. ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ। ਹਰ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
3. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 08 ਅੰਕ ਹਨ।
4. ਪੇਪਰ ਸੈੱਟ ਕਰਨ ਵਾਲਾ ਜੇਕਰ ਚਾਹੇ ਤਾਂ ਪ੍ਰਸ਼ਨਾਂ ਦੀ ਵੰਡ ਅੱਗੋਂ ਵੱਧ ਤੋਂ ਵੱਧ ਚਾਰ ਉਪ ਪ੍ਰਸ਼ਨਾਂ ਵਿਚ ਕਰ ਸਕਦਾ ਹੈ।

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2431

Punjab History and Culture (1717-1947) (Special paper in lieu of Punjabi Compulsory)

This course aims to enhance students' knowledge and understanding of Maharaja Ranjit Singh's period and to challenge preconceptions about that period with fresh perspectives on the people and their contacts with the British.

On successful completion of the course, students will have developed the capacity to:

- CO1. Critically discuss major social, political, economic, and cultural structures, events, and themes shaping the administration of Punjab under British period
- CO2. Evaluate and analyse different sources and modern historiography
- CO3. Identify and assess evidence of social change and continuity throughout the period
- CO4. Critically evaluate the rise and fall of Sikh Empire and the internal disputes
- CO5. Conduct research using primary sources and historiography relating to the period
- CO6. Formulate logical arguments substantiated with historical evidence
- CO7. Express ideas clearly in both written and oral modes of communication

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2431

Punjab History and Culture (1717-1947) (Special paper in lieu of Punjabi Compulsory)

**Examination Time: 3 Hours
Credits: 2-0-0**

**Max. Marks: 50
Theory: 40**

C A: 10

Instructions for the Paper Setter:

Question paper shall consist of four Sections. Candidates shall attempt 5 questions in all, by at least selecting One Question from each section and the 5th question may be attempted from any of the four sections. Each question will carry 8 marks.

Section-A

1. Sikh Struggle for Sovereignty.
2. Ranjit Singh: Conquests, Administration and the Anglo-Sikh Relations.

Section-B

3. Anglo-Sikh Wars and the Annexation.
4. The Punjab under the British: New Administration, Education and social Change.

Section-C

5. Economic Changes: Agricultural
6. Socio-Religious Reform Movements.

Section-D

7. Role of Punjab in the Freedom Struggle.
8. Fairs and Festivals.

Suggested Readings

Kirpal Singh (ed.), *History and Culture of the Punjab*, Part-II, Punjabi University, Patiala, 1990.

Fauja Singh (ed.), *History of Punjab*, Vol, III, Punjabi University, Patiala, 1987.

J.S. Grewal, *The Sikhs of the Punjab*, Cup, Cambridge, 1991.

Khushwant Singh, *A History of the Sikhs*, Vol. I, OUP, New Delhi, 1990

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2102

COMMUNICATION SKILLS IN ENGLISH – II

Course Outcomes

After passing this course the student will develop the following Skills:

CO1: Enhancement of listening skills with the help of listening exercises based on conversation, news and TV reports.

CO2: Improvement of speaking skills enabling them to converse in a specific situation.

CO3: Acquisition of knowledge of phonetics which will help them in learning about correct pronunciation as well as effective speaking.

CO4: The capability to present themselves well in a job interview.

CO5: The ability of Note-Taking to be able to distinguish the main points from the supporting details and the irrelevant information from the relevant one.

CO6: Speaking skills of the students enabling them to take active part in group discussion and present their own ideas.

CO7: The capability of narrating events and incidents in a logical sequence.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2102

COMMUNICATION SKILLS IN ENGLISH – II

Examination Time: 3 Hours

Credits: 3-0-1

Max. Marks: 50

Theory: 40

CA:10

Instructions for the paper setters and distribution of marks:

The question paper will consist of four sections and distribution of marks will be as under:

Section-A: Two questions of theoretical nature will be set from Unit I of the syllabus and the candidates will have to attempt one carrying 5 marks.

Section-B: Two questions will be set from Unit II of the syllabus. One will be theoretical and the second will be practical in nature. Candidates will have to attempt one carrying 5 marks.

Section-C: Two questions will be given based on the topics given in the Unit III and the candidates will have to attempt one carrying 5 marks.

Section-D: Two questions will be set from Unit IV of the syllabus. One question will be theoretical in nature and the other will be practical in nature (based on phonetic transcription and stress). Candidates will have to attempt one carrying 5 marks.

Important Note:

The candidate will have to attempt five questions in all selecting one from each section of the question paper and the fifth question may be attempted from any of the four sections.

(5 x 5 = 25)

Course Contents:

Unit I

Listening Skills: Barriers to listening; effective listening skills; feedback skills.

Activities: Listening exercises – Listening to conversation, News and TV reports

Unit II

Attending telephone calls; note taking and note making.

Activities: Taking notes on a speech/lecture

Unit III

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

Unit IV

The study of sounds of English, stress Situation based

Conversation in English Essentials of Spoken English

Activities: Giving Interviews

Recommended Books:

1. *Oxford Guide to Effective Writing and Speaking* by John Seely.
2. *Business Communication* by Sethi, A and Adhikari, B., McGraw Hill Education 2009.
3. *Communication Skills* by Raman, M. & S. Sharma, OUP, New Delhi, India (2011).
4. *A Course in Phonetics and Spoken English* by J. Sethi and P.V. Dhamija, Phi Learning.

PRACTICAL / ORAL TESTING

Time: 3 hours

Marks: 15

Course Contents:

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

Questions:

1. Oral Presentation will be of 5 to 7 minutes duration. (Topic can be given in advance or it can be of student's own choice). Use of audio-visual aids is desirable.
2. Group discussion comprising 8 to 10 students on a familiar topic. Time for each group will be 15 to 20 minutes.

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

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2112

Computational Problem Solving

Course Outcomes:

After passing course the student will be able to:

CO1: Comprehend the concepts of computation problem, data and expressions

CO2: Demonstrate the usage of algorithms under several categories like list, string, dictionary and control structures

CO3: Implement various problems associated with functions and file handling using related languages

CO4: Comprehend the concepts of Object Oriented Programming and Database using related programming language

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2112

Computational Problem Solving

Examination Time: 3 Hours

Max. Marks: 75

Credits: 3-0-0

Theory: 60

CA:10

Instructions for Paper Setter -

Eight questions of equal marks are to set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided 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

UNIT-I

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

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

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

UNIT-II

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

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

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

UNIT-III

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

Files: Opening Files, Using Text Files, String Processing, Exception Handling

UNIT-IV

Objects and Their Use: Introduction to Object Oriented Programming

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

Using Databases and SQL: Database Concepts, SQLite Manager Firefox Add-on, SQL basics summary, basic Data Modeling, Programming with multiple tables.

Reference:

1. Charles Severance, "Python for Informatics: version0.0.8-d2", Amazon Digital Services, Second Edition, 2013.
2. Charles Dierbach, "Introduction to Computer Science Using Python: A Computational Problem-Solving Focus", First Edition, John Wiley & Sons, 2013.
3. GUTTAG JOHN V, "Introduction To Computation And Programming Using Python", Second Edition, PHI, 2014.
4. Jeeva Jose, Sojan P.Lal, "Introduction to Computing & Problem Solving Through Python", First Edition, Khanna Publishers, 2015.
5. Mark J. Guzdial, Barbara Ericson, "Introduction to Computing and Programming in Python", First Edition, Pearson Education, 2015.
6. Kenneth Lambert, "Fundamentals of Python", First Edition, Cengage Learning, 2015.
7. Mark Lutz, "Learning Python", Fifth Edition, O'Reilly Media, 2013.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2113

Mathematical Foundation

Course Outcomes:

After passing this course the student will be able to reflect on

CO1: Set and operations on sets

CO2: Relation, Representation of Relation, Types of Relation and their Properties

CO3: To encode information in form of logical sentences through propositional and predicate logic

CO4: Concept of Duality law, Algebra of propositions, Propositional Functions, Predicates, Quantifiers, Negation of Quantified Statements

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2113

Mathematical Foundation

Examination Time: 3 Hours

Max. Marks: 50

Credits: 2-0-0

Theory: 40

CA:10

UNIT-I

Definition of Set, Representation of Sets, Types of Sets, Operations on Sets – Intersection, Union, Complement, Set Difference, Symmetric Difference. Problems on Cardinality of Sets, Venn diagram, Laws of Set theory, Countable and Uncountable sets, Cartesian product, Partition of Set, Minset, Maxset, Normal Forms.

UNIT-II

Definition of Relation, Representation of Relation, Types of Relation, Properties of Relation – Reflexive, Symmetric, Anti-Symmetric, Asymmetric, Transitive, Equivalence, Irreflexive, POSET, Representation of relation: Digraph, Matrix and ordering diagram

UNIT-III

Proposition and Compound Propositions, basic Logical Operations, Propositions and Truth Tables, Tautologies and Contradictions, Logical Implication, Logical Equivalence,

UNIT IV

Duality law, Algebra of propositions, Arguments, Propositional Functions, Predicates and Quantifiers, Negation of Quantified Statements.

Reference Books:

1. Lipschutz S., Lipson M., “Discrete Mathematics”, Revised Third Edition, Schaum’s outlines Series, 2017.
2. Kolman, Busby “Discrete Mathematical structures for Computer Sciences”, Second Edition, PHI, 1987.

3. Alan Doerr, "Applied Discrete Structures for Computer Science", First Edition, Galgotia Publications, 1991.
4. Trambley J.P., "Manohar R., Discrete Mathematical Structures with Applications to Computer Science", First Edition, O'Reilly, 2002.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2114

Technical Writing

Course Outcomes:

After passing this course the student will be able to:

CO1 Write effective reports, proposals and papers.

CO2 Correspond effectively through different modes of written communication.

CO3 Present himself/ herself professionally through effective resumes and interviews.

CO3 Understand different technical writing style and concept of editing.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2114

Technical Writing

Examination Time: 3 Hours

Max.Marks:50

Credits: 3-0-0

Theory:40

CA:10

UNIT-I

Technical Communication Overview: Meaning of Technical Writer, Role of Technical Writer, Evolution of Technical Communication Characteristics of Technical Communication, Essential Skills of Technical Communication.

UNIT-II

Goals of Technical Writing, Process of Technical Writing – Prewriting, writing and Re-writing.

Audience Analysis: Basic Classification of Readers, Types of Audiences, Audience Analysis.

UNIT-III

Research Interviews: Research Tools, Conducting Interviews: Pre-Interview, During Interview, After the Interview, Validation.

Technical Writing Style: Concise Communication, Common Errors while constructing sentences. Clarity and Precision: Guidelines to clear and specific writing.

UNIT-IV

Technical Communication Editing: Meaning, Types of Editing, Role of a Technical Editor. Proof Reading: Proof reading symbols, Abbreviations.

Technical Communication Ethics: What is Legal & Ethical? Ethical Issues in Technical Communication.

References

1. Elizabeth Tebeaux, Sam Dragga, “The Essentials of Technical Communication”, First Edition, OUP USA, 2012.

2. Alan S. Pringle, Sarah S. O’Keefe, “Technical Writing 101”,First Edition, Scriptorium Publishing Services, Inc., 2009.
3. Mike Markel, “Technical Communication”, First Edition, Bedford Publishers, 2009.
4. Sheryl Lindsell-Roberts, “Technical Writing For Dummies”, First Edition, Wiley Publishers, 2011.
5. Kieran Morgan, Sanja Spajic, “Technical Writing Process”,First Edition, Better On Paper Publications, 2015.
6. Phillip A. Laplante, “Technical Writing: A Practical Guide for Engineers and Scientists”, Second Edition, CRC Press, 2014.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

COURSE CODE: BVIL-2115

Data Collection and Data Analytics

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend the term Data Collection and Analytics and Data Collection methods

CO2: Describe the application of basic Data Analysis Tools.

CO3: Understand the process of Data Analysis along with its applications.

CO4: Comprehend Data Analysis using spreadsheet software and Data Analysis tools.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2115

Data Collection and Data Analytics

Examination Time: 3 Hours

Max. Marks: 75

Credits: 4-0-0

Theory: 60

C A: 15

UNIT I

Introduction to the terms: Data Collection and Data Analytics.

Data Collection sources, Data collection methods – Primary data collection methods and Secondary data collection methods.

UNIT II

Data Collection Tools – online and offline.

Understanding Data Analytics: Why Data analytics Matter, Characteristics of Data Analysis, Types- Descriptive, Predictive, Diagnostic, Prescriptive.

UNIT III

Process of Data Analysis, Applications of Data Analysis. Technical Skills of a data Analyst. Exploratory and Confirmatory Data Analysis.

UNIT IV

Data Analysis using spreadsheet . Creating Complex Formulas , Working with Basic Functions - to find values for a range of cells. Data Analysis tools: Analyze, Detect, Fill from, Forecast, Scenario tool, Google tools: google sheet, forms, collaborations

References

1. Patricia Pulliam Phillips, Cathy A. Stawarski, “Data Collection: Planning for and Collecting All Types of Data”, Wiley Publisher, First Edition, 2008.
2. Roger Sapsford, Victor Jupp, “Data Collection -and Analysis”, Second Edition, Sage Publishing, 2006.
3. Uwe Flick, “The SAGE Handbook of Qualitative Data Collection”, First Edition, Sage Publishing, 2018.
4. A. Maheshwari, “Data Analytics Made Accessible”, Third Edition, McGraw Hill India, 2020.

5. John Walkenbach, "Excel 2010 Bible" First Edition, Wiley, 2010.
6. Wayne L. Winston, "Microsoft Excel Data Analysis and Business Modeling" First Edition, Microsoft Press, 2017.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2116

Database Management System

Course Outcomes:

After passing course the student will be able to:

CO1: Understand the various terms like database, database models and ER diagrams.

CO2: Comprehend Relational Algebra and Relational Calculus

CO3: Explain the concept of database normalization and its various forms

CO4: Demonstrate the use of SQL to create basic to intermediate level of databases

CO5: Comprehend the concept of Cursors and Triggers

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2116

Database Management System

Examination Time: 3 Hours

Max. Marks: 75

Credits: 4-0-0

Theory: 60

CA: 15

UNIT-I

Introduction to Data, Field, Record, File, Database, Database Management System. Structure of database system, Advantages and Disadvantages, levels of database system, Relational model, Hierarchical model, Network model, comparison of models, E-R diagram, different keys used in a relational system, DBA, responsibilities of DBA.

UNIT-II

Codd's Rules, Relational Algebra, Relational Calculus - Domain and Tuple relational calculus,

UNIT-III

Introduction to normalization – need and advantages of normalization, 1NF, 2NF, 3NF, BCNF, 4NF and 5NF, Introduction to transaction management – ACID Properties, concurrency control and its management, protection, security, recovery of database

UNIT-IV

SQL: Introduction to SQL–DDL, DML, DCL, Join methods & sub query, Union Intersection, Minus, Built in Functions, Views, Security amongst users, sequences, Indexing

Introduction to PL/SQL: Cursors – Implicit and Explicit, Procedures, Functions, Packages, Database Triggers.

References

1. Parteek Bhatia, Gurvinder Singh, "Simplified Approach to DBMS", Eighth Edition, Kalyani Publisher, 2016.
2. C.J. Date, "An Introduction to Database System", Eighth Edition, Pearson, 2015.
3. B.C. Desai, "Database Management System", Revised First Edition, Galgotia Publication, 2012.
4. Silberschatz, Henry F. Korth, S. Sudarshan, "Database Concepts", Seventh Edition, McGraw Hills, 2016.
5. Ivan Bayross, "Oracle – Developer – 2000", Third Edition, BPB Publishers, 2010.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2117

Lab based on Computational Problem Solving

Examination Time: 3 Hours

Max. Marks: 50

Credits: 0-0-2

Lab: 40

CA:10

Lab based on Computational Problem Solving

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: BVIL-2118

Minor Project-II

Examination Time: 3 Hours

Max. Marks: 50

Credits: 0-0-2

Note: The students need to submit the self-made project at the end of the Semester. The marks will be awarded to the student on the basis of quality showcased in the project to build AI/ Data Science based Model.

CO1: Apply the tools and techniques learnt in the course to process and analyze data for problems associated with AI and Data science.

CO2: Apply their knowledge to work on assigned/self-identified project.

CO3: Demonstrate an ability to work in teams and manage the conduct of the research study.

CO4: Describe the observations through project report submission.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: AECD-2161

DRUG ABUSE

Course outcomes:

CO1: This information can include factual data about what substance abuse is; warning signs of addiction; information about how alcohol and specific drugs affect the mind and body;

CO2. Learn to be supportive during the detoxification and rehabilitation process.

CO3: Main focus of substance abuse education is teaching individuals about drug and alcohol abuse and how to avoid, stop, or get help for substance use disorders.

CO4: Substance abuse education is important for students alike; there are many misconceptions about commonly used legal and illegal substances, such as alcohol and marijuana.

Bachelor of Vocation (Artificial Intelligence and Data Science) - Semester II

Course Code: AECD-2161

DRUG ABUSE

Examination Time: 3 Hours

Max. Marks: 50

Credits: 2-0-0

Lab: 40

CA:10

Instructions for the Paper Setter

Eight questions of equal marks are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. 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.

UNIT-I

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

UNIT-II

School: Counselling, 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.

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4. Kapoor. T. (1985) *Drug epidemic among Indian Youth*, New Delhi: Mittal Pub.
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6. National Household Survey of Alcohol and Drug abuse. (2003) New Delhi, Clinical Epidemiological Unit, All India Institute of Medical Sciences, 2004.
7. Sain, Bhim 1991, *Drug Addiction Alcoholism, Smoking obscenity* New Delhi: Mitta Publications.
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9. Singh, Chandra Paul 2000. *Alcohol and Dependence among Industrial Workers*: Delhi: Shipra.
10. Sussman, S and Ames, S.L. (2008). *Drug Abuse: Concepts, Prevention and Cessation*, Cambridge University Press.