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Maharashtra Institute of Technology Chhatrapati Sambhajinagar

An Autonomous Institute Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar, Maharashtra (India)

Third Year B. Voc. Syllabus (Software Development)

Under Choice Based Credit System (CBCS) Under Faculty of Science and Technology

(Effective from 2022-23 and onwards)

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Curriculum for B. Voc Software Development

NSQ	F Level -5								Sem	ester -
Sr.	Course	Course Title	Credit		ntact Hr r Week	E	valuati	on Sche	me	ESE
No.	Code			L	P	MSE	TA	ESE	Total	Hour
			Th	cory						
1.	VSD101	IT Foundation and Programming Concepts	3	3		10	15	25	50	1.5
2.	VSD102	Professional Communication	3	3	-	10	15	25	50	1.5
3.	VSD103	Programming in C++	3	3	-	10	15	25	50	1.5
4.	VSD104	Operating System (OS)	3	3	-	10	15	25	50	1.5
			Lab/P	racti	cal					
5.	VSD121	Professional Communication Lab	1.5	-	2		25	25	50	-
6.	VSD122	C++ Programming Lab	1.5	-	2	-	25	25	50	-
-		On Job Trai	ning (OJ]	r)/Qu	alification	n Packs*				
7.	VSD131	Allied skill Sector Council Qualification Pack /Job role - NSQF level 5	15	-	7-8 weeks	2 	50	150	200	-
		Total	30	12	4+	40	160	300	500	

Sr.	Course	Course Title	Credit		ntact Hr r Week	E	valuati	on Sche	me	ESE
No.	Code			L	P	MSE	TA	ESE	Total	Hou
			Th	eory		10000	1999			
1.	VSD151	Web Designing	3	3	-	10	15	25	50	1.5
2.	VSD152	Object Oriented Modelling and Design	3	3	-	10	15	25	50	1.5
3.	VSD153	Core Java	3	3	-	10	15	25	50	1.5
4.	VSD154	Linux Operating System – Operations and Management	3	3		10	15	25	50	1.5
			Lab/P	ractio	cal					
5.	VSD171	Web Designing Lab	1.5	S	2	-	25	25	50	-
6.	VSD172	Core Java Lab	1.5	·	2	<u></u>	25	25	50	-
		On Job Train	ning (OJ)	[]/Qu	alificatio	n Packs'	•			
7.	VSD181	Allied skill Sector Council Qualification Pack /Job role - NSQF level 5	15	-	7-8 weeks		50	150	200	-
		Total	30	12	4+	40	160	300	500	
Asse Jan T ocal	ssment by N	Studies on B.Voc. (Software Maharas Aur-431010 Chhatras	Dean (Ac	adem Discol	lics)	aste Mous Pa	r Co	arashtra Chhatra	Page 2 of Director Institute of path of the onomous I	f 20

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NSQ	F Level -6								Sem	ester -
Sr. No.	Course	Course Title	Credit		ntact Hr r Week	F	valuati	on Schen	ne	ESE
	Coure			L	Р	MSE	TA	ESE	Total	Hour
			Th	cory			-		1	-
1.	VSD201	Software Engineering	3	3		10	15	25	50	1.5
2.	VSD202	Relational Database Management System	3	3		10	15	25	50	1.5
3.	VSD203	Advanced Java Programming	3	3		10	15	25	50	1.5
4.	VSD204	Window Configuration and Server Administration	3	3	-	10	15	25	50	1.5
			Lab/P	racti	cal				17 - 11 - C	7
5.	VSD221	Relational Database Management System Lab	1.5		2	-	25	25	50	•
6.	VSD222	Advanced Java Programming Lab	1.5	-	2	•	25	25	50	-
		On Job Trai	ning (OJ)	r)/Q1	alificatio	n Packs			-	0
7.	VSD231	Allied skill Sector Council Qualification Pack /Job role - NSQF level 6	15		7-8 weeks		50	150	200	
	A State of State	Total	30	12	4+	40	160	300	500	

Curriculum for B. Voc Software Development

*Any one On-Job-Training as per guidelines of AICTE & SSC for the given skill sets for 150 Marks External Assessment by NSDC/SSC

Sr.	F Level -6 Course Code	Course Title	Credit		ntact Hr r Week	F	valuatio	on Schen		ester -l
NO.	Code			L	P	MSE	TA	ESE	Total	Hour
			Th	cory						10000
1.	VSD251	Software Testing and Project Management	3	3	-	10	15	25	50	1.5
2.	VSD252	Android Application Development	3	3	•	10	15	25	50	1.5
3.	VSD253	Web Development using PHP	3	3	•	10	15	25	50	1.5
4.	VSD254	Cyber Security	3	3	100	10	15	25	50	1.5
		1	Lab/P	ractio	cal					1.0
5.	VSD271	Android Application Development Lab	1.5		2	-	25	25	50	-
6.	VSD272	Web Development using PHP Lab	1.5		2	-	25	25	50	
		On Job Train	ning (OJ	Г)/Он	alificatio	n Packs		10000 C		1
7.	VSD281	Allied skill Sector Council Qualification Pack /Job role - NSQF level 6	15	-	7-8 weeks		50	150	200	•
		Total	30	12	4+	40	160	300	500	
Asses	ssment by ?	b-Training as per guidelines of Studies	of AICTE					for 150	Bage 3 o	

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NSQ	F Level -7								Sem	ester -
Sr. No.	Course Code	Course Title	Credit		tact Hr Week	E	valuatio	on Scher	ne	ESE Hour
_				L	Р	MSE	TA	ESE	Total	
_			Th	eory				····		-
1.	VSD301	Introduction to AI and Data Mining	3	3	-	10	15	25	50	1.5
2.	VSD302	Advanced PHP	3	3		10	15	25	50	1.5
3.	VSD303	Management Information Systems	3	3	-	10	15	25	50	1.5
4.	VSD304	Introduction to Python Programming	3	3	-	10	15	25	50	1.5
			Lab/P	ractio	cal				100 M	
5.	VSD321	Advanced PHP Lab	1.5	-	2		25	25	50	-
6.	VSD322	Introduction to Python Programming Lab	1.5		2	-	25	25	50	-
		On Job Trai	ning (OJ	T)/Qu	alificatio	n Packs				
7.	VSD331	Allied skill Sector Council Qualification Pack /Job role - NSQF level 7	15	•	7-8 weeks	-	50	150	200	-
*An		Total	30	12	4+	40	160	300	500	

Sr. No.	Course Code	Course Title	Credit		tact Hr Week	E	aluatio	on Sche	me	ESE
				L	Р	MSE	TA	ESE	Total	
			Th	cory				-	-	1.3
1.	VSD351	Current Computing Trends	3	3	-	10	15	25	50	1.5
2.	VSD352	Cloud Computing	3	3	-	10	15	25	50	1.5
-			Lab/P	racti	cal				-	THE
3.	VSD371	Project	9	-	4		100	100	200	-
		On Job Trai	ning (OJ	T)/Q1	alificatio	n Packs	*			The state
4.	VSD381	Allied skill Sector Council Qualification Pack /Job role - NSQF level 7	15		7-8 weeks		50	150	200	· -
		Total	30	6	4+	20	180	300	500	
		bb-Training as per guidelines NSDC/SSC	(ex	-1		Vast			IVIU KS E	sor fail
llab	Geni6iTbi BUY		(An Aulono	mous	of Tanking			arashtra	Director Institute of	of 20

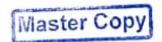


Semester-V (NSQF Level 7, Semester-I) Detail Course Curriculum

Third Year B. Voc. Syllabus (Software Development)

(Effective from 2022-23 and onwards)

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Maharashtra Institute of Technology

NSQF 1		oduction to AI and Data Mining Seme	ster-I
	eaching Scheme	Examination Scheme	
Lectures		MSE 10 Mark	s
Practica		TA 15 Mark	s
Credits	03	ESE 25 Mark	cs
		Duration of ESE 1.5 hour	rs
	Outcomes (CO)		
	will be able to		
1.	Understand the concepts of An	rtificial Intelligence.	
2.	Identify real-world problems v	where AI techniques can be effectively applied	
3.	Apply Data Mining Technique		
Unit			Hours
Unit 1	Introduction to Artificial Int		08
		gence, History of Artificial Intelligence, Turing	
	Test, Advantages and Di	sadvantages of Artificial Intelligence and	
	Applications of Artificial Inte	elligence, Capability-Based types of AI: Narrow	
	Al, General Al and Super /	AI, Functionality-Based types of AI: Reactive	
	Machine, Limited Memory, T	heory of Mind and Self Awareness, Branches of	
		p Learning, Robotics, Expert Systems, Natural	
11-1-3	Language Processing and Fuz	zy Logic	
Unit 2	Problem Solving	State State also State State State	07
	Search and Optimal Solution	State, State change, State Space, State Space	
	Water lug Problem Missione	n, Examples of Problems and their solutions:	
	8 Duzzla Problem Monkey	aries and Cannibals Problem, 8-Queen Problem, Banana Problem, Tower of Hanoi Problem,	
	Travelling Salesman Problem		
Unit 3	Agent and Environment		07
oun 5		le Reflex Agents, Model-Based Reflex Agents,	07
	Goal-Based Agents Utility.	Based Agents and Learning Agent, Intelligent	
	Agents and Rational Agent	Environments, Types of Environments: Fully	
		bservable, Static vs Dynamic, Discrete vs	
	Continuous Deterministic	vs Stochastic, Singleagent vs Multi-agent,	
	Episodic vs Sequential and Ki		
Unit 4	Search algorithms		07
Cant 4		ithms, Properties of search algorithms -	07
	Completeness, Optimality, T	ime complexity and Space complexity, Types:	
	Uninformed search and Info	ormed search, Uninformed search algorithms:	
	Breadth First Search, Depth F		
Unit 5	Data Mining		07
		stages, Disadvantages and Applications	51
		riptive Data Mining and Predictive Data Mining	
		assification, Clustering, Regression, Association	
	Data Mining Teeningdes. Ch	issilication, clustering, regression, Association	

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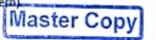


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Text/Refer	ence Books		
Sr. No.	Book	Author	Publisher
1	Artificial Intelligence	Parag Kulkarni, Prachi Joshi	PHI
2.	Artificial Intelligence For Dummies	J Paul Mueller, Luca Massaron	Wiley
3.	Data Mining Concepts and Techniques.	Han, Kamber, Pei	Morgan Kaufmann

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		02-Advanced PHP	Semester-I
	aching Scheme	Examination	
Lectures	03 hrs/Week	MSE	10 Marks
Practical	-	TA	15 Marks
Credits	03	ESE	25 Marks
0 0		Duration of ESE	1.5 hours
	utcomes (CO)		
and the second se	vill be able to		
1.	Understand foundations of AJA	X and object-oriented programming.	
2.	Utilize PDO and identify variou	is types of errors and exceptions in PHF	Ρ.
3.	Identify common security threa		
Unit		ourse Content	Hour
Unit 1	XMLHttpRequest, Onreadysta DOM, Ajax using PHP & M	rview of Important Concepts of Javas techange, Ajax using HTML, Javascr lySQL, Live Search using Ajax, Imp using Ajax, Introduction to JSON.	ript &
Unit 2	Classes & Objects (OOP's) Class and Objects, Features Inheritance, Polymorphism,	s of OOP's, Abstraction, Encapsu	lation, 08
	Access Specifiers (public/priva does not support Method Over	te/protected), Method Overriding, Why	y PHP toload
Unit 3	Access Specifiers (public/priva does not support Method Over (),Functions, How to use & Connecting with MySQL PHP Database Objects (PDO) PDO, getAvaliableDrivers, exe Difference between exec & q Inserting Values in table, Trans	te/protected), Method Overriding, Why loading, Constructor, Destructor, au call a function, Abstract Class, Inte	y PHP toload erface, 07 query, PDO, repare,
Unit 3 Unit 4	Access Specifiers (public/priva does not support Method Over (),Functions, How to use & Connecting with MySQL PHP Database Objects (PDO) PDO, getAvaliableDrivers, exe Difference between exec & q Inserting Values in table, Trans bindParam, execute, setAttribu Side) Error Handling and Exceptio Understanding Errors and Exc	te/protected), Method Overriding, Why loading, Constructor, Destructor,au call a function, Abstract Class, Inte c, beginTranscation, commit, rollback, uery, Connecting with MySQL using saction, Fetch Values from MySQL, pr ate, Introduction to Datatable (Server/ n Handling in PHP eptions, Using try, catch, and finally b Handling Different Types of Errors (y PHP ttoload erface, 07 query, PDO, repare, /Client 07 olocks,

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Text/Ref	erence Books		
Sr. No.	Book	Author	Publisher
1.	Ajax: The Definitive Guide	Anthony T. Holdener III	O'Reilly Media
2.	Pro JavaScript Techniques: Second Edition	John Resig	Apress
3.	Learning PHP, MySQL & JavaScript: With JQuery, CSS & HTML	Robin Nixon	O'Reilly Media

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Syllabus of Third Year B.Voc. (Software Development) (2022-23 Autonomous Pattern)

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	Level-7	10000011	Tanagement	Information System		Semester	-1
	Feaching S	the second se		- Internet and the second seco	xamination Se		
Lectures Practical		03 hrs/Week		MSE		Marks	
				TA		Marks	
Total Cu	realts	03		ESE	The second se	Marks	
C	0	1000		Duration	of ESE 1.5	hours	
	Outcomes will be ab						
l.	The second s			6 1 6 J			
1. S	decision-	nd the role and making.	d importance	of information sys	tems in organ	nizations	fe
2.	Demonstr business.	rate awareness	of current inf	ormation technologie	es and their ap	oplication	s i
3.	Analyze organizat	the relationshi ional strategy.	p between i	information systems,	, business pro	ocesses,	an
Unit			Course	Content		Ho	urs
Unit 1		tion System I				0)7
	Concept	of Management,	Functions of	Management, Level	s of Manageme	ent,	
	Concept	of a System, Con	mponents of a	System - Input, Proc	essing and Out	put	
			the second s		and and a stat		
Unit 2		tion System II				0	08
Unit 2	Concept	of Information	n system, Co	omponents of infor	mation system	0	8
Unit 2	Concept Hardware	tion System II of Information c, Software, Dat	a, People and	omponents of infor Process, Types of In	mation system formation Syst	n -	8
Unit 2	Concept Hardward - Transac	tion System II of Information e, Software, Data tion Processing	a, System, Co a, People and System, Man	omponents of infor Process, Types of In agement Information	mation systen formation Syst System, Decis	0 tem tion	8
Unit 2	Concept Hardward - Transac Support	tion System II of Information e, Software, Dat tion Processing System and I	n system, Co a, People and System, Man Executive inf	omponents of infor Process, Types of In agement Information	mation systen formation Syst System, Decis	0 tem tion	8
Unit 2	Concept Hardward - Transac Support	tion System II of Information e, Software, Data tion Processing	n system, Co a, People and System, Man Executive inf	omponents of infor Process, Types of In	mation systen formation Syst System, Decis	0 tem tion	98
Unit 2 Unit 3	Concept Hardward - Transac Support	tion System II of Information e, Software, Dat tion Processing System and I	n system, Co a, People and System, Man Executive inf	omponents of infor Process, Types of In agement Information	mation systen formation Syst System, Decis	0 tem tion and	
	Concept Hardward - Transac Support disadvant MIS	tion System II of Information c, Software, Data tion Processing System and I ages of Informa	n system, Co a, People and System, Man Executive inf tion System	omponents of infor Process, Types of In agement Information formation systems,	mation systen formation Syst System, Decis Advantages	tem ion and	08
	Concept Hardward - Transac Support disadvant MIS Concept	tion System II of Information c, Software, Dat tion Processing System and I tages of Informa of MIS, Object	n system, Co a, People and System, Man Executive inf tion System	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr	mation system formation Syst System, Decis Advantages a occessing of Da	0 n - tem and and 0 ata,	
	Concept Hardward - Transac Support disadvant MIS Concept Storage,	tion System II of Information c, Software, Dat tion Processing System and I ages of Informa of MIS, Object Retrieval & D	a system, Co a, People and System, Man Executive inf tion System ives of MIS bissemination,	omponents of infor Process, Types of In agement Information formation systems,	mation system formation Syst System, Decis Advantages a occessing of Da	0 n - tem and and 0 ata,	
	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag	tion System II of Information e, Software, Data tion Processing System and I ages of Informa of MIS, Object Retrieval & D ges and Limitatio	a, People and System, Man Executive inf tion System ives of MIS Dissemination, ons of MIS.	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr	mation system formation Syst System, Decis Advantages a occessing of Da	0 tem and and IIS,)7
Unit 3	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag Business	tion System II of Information c, Software, Data tion Processing System and I ages of Informa of MIS, Object Retrieval & D ces and Limitation Applications of	a, People and System, Man Executive inf tion System ives of MIS Dissemination, ons of MIS. f MIS	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr Functions of MIS,	mation system formation Syst System, Decis Advantages a occessing of Da , Types of M	0 n - tem and and ata, IIS,	
Unit 3	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag Business Customer	tion System II of Information c, Software, Dat- tion Processing System and I ages of Informa of MIS, Object Retrieval & D es and Limitation Applications of r Relationship I	n system, Co a, People and System, Man Executive inf tion System ives of MIS Dissemination, ons of MIS. f MIS Management	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr Functions of MIS, (CRM) systems, En	mation system formation Syst System, Decis Advantages a ocessing of Da ocessing of Da Types of M terprise Resou	0 n - tem ion and ata, IIS, 0 urce)7
Unit 3	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag Business Customer Planning	tion System II of Information e, Software, Dat- tion Processing System and I ages of Informa of MIS, Object Retrieval & D es and Limitation Applications of r Relationship 1 (ERP) system	a system, Co a, People and System, Man Executive inf tion System ives of MIS Dissemination, ons of MIS. f MIS Management as, Supply C	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr Functions of MIS, (CRM) systems, En Chain Management	mation system formation Syst System, Decis Advantages occessing of Da occessing of Da terprise Resou (SCM) system	0 n - tem ion and ata, IIS, 0 urce)7
Unit 3	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag Business Customer Planning Business	tion System II of Information e, Software, Data tion Processing System and I ages of Informa of MIS, Object Retrieval & D es and Limitation Applications of Relationship I (ERP) system Intelligence (BI	a system, Co a, People and System, Man Executive inf tion System ives of MIS Dissemination, ons of MIS. f MIS Management as, Supply C) and Analytic	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr Functions of MIS, (CRM) systems, En	mation system formation Syst System, Decis Advantages occessing of Da occessing of Da terprise Resou (SCM) system	0 n - tem ion and and (IS, (IS, (IS, (IS, (IS, (IS, (IS, (IS,)7
Unit 3 Unit 4	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag Business Customer Planning Business Decision	tion System II of Information c, Software, Dat- tion Processing System and I ages of Informa of MIS, Object Retrieval & D es and Limitation Applications of r Relationship I (ERP) system Intelligence (BI Support System	n system, Co a, People and System, Man Executive inf tion System ives of MIS Dissemination, ons of MIS. f MIS Management as, Supply C) and Analytic n	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr Functions of MIS, (CRM) systems, En Chain Management es, E-commerce and r	mation system formation Syst System, Decis Advantages a ocessing of Da ocessing of Da Types of M terprise Resou (SCM) system n-commerce	and and and and and ata, arce ms, 0)7
Unit 3 Unit 4	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag Business Customer Planning Business Decision Decision	tion System II of Information c, Software, Dat- tion Processing System and I ages of Informa of MIS, Object Retrieval & D es and Limitation Applications of r Relationship I (ERP) system Intelligence (BI Support System	n system, Co a, People and System, Man Executive inf tion System ives of MIS Dissemination, ons of MIS. f MIS Management as, Supply C) and Analytic n m: Introduction	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr Functions of MIS, (CRM) systems, En Chain Management es, E-commerce and r	mation system formation Syst System, Decis Advantages a occessing of Da occessing occessing occession (SCM) system	0 h - tem ion and and 0 ata, 11S, 0 urce ms, 0 0 0 0 0 0 0 0 0 0 0 0 0)7
Unit 3 Unit 4	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag Business Customer Planning Business Decision Compone	tion System II of Information c, Software, Dat- tion Processing System and I ages of Informa of MIS, Object Retrieval & D ces and Limitation Applications of r Relationship I (ERP) system Intelligence (BI Support System Support System	a system, Co a, People and System, Man Executive inf tion System ives of MIS bissemination, ons of MIS. f MIS Management as, Supply C and Analytic n m: Introducti Support Syst	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr Functions of MIS, (CRM) systems, En Chain Management es, E-commerce and r	mation system formation Syst System, Decis Advantages occessing of Da topological content (SCM) system n-commerce and Capabilit Disadvantages	0 h - tem ion and and 0 ata, 11S, 0 urce ms, 0 0 0 0 0 0 0 0 0 0 0 0 0)7
Unit 3 Unit 4 Unit 5	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag Business Customer Planning Business Decision Compone	tion System II of Information c, Software, Dat tion Processing System and I ages of Informa of MIS, Object Retrieval & D tes and Limitation Applications of r Relationship I (ERP) system Intelligence (BI Support System Support System Support System	a system, Co a, People and System, Man Executive inf tion System ives of MIS bissemination, ons of MIS. f MIS Management as, Supply C and Analytic n m: Introducti Support Syst	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr Functions of MIS, (CRM) systems, En Chain Management es, E-commerce and r ion, Characteristics em, Advantages and	mation system formation Syst System, Decis Advantages advantages occessing of Da occessing of Da Types of M terprise Resou (SCM) system n-commerce and Capabilit Disadvantages	0 h - tem ion and and 0 ata, 11S, 0 urce ms, 0 0 0 0 0 0 0 0 0 0 0 0 0)7
Unit 3 Unit 4 Unit 5	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag Business Customer Planning Business Decision Componer Decision	tion System II of Information c, Software, Dat- tion Processing System and I ages of Informa of MIS, Object Retrieval & D ces and Limitation Applications of r Relationship I (ERP) system Intelligence (BI Support System Support System	a system, Co a, People and System, Man Executive inf tion System ives of MIS bissemination, ons of MIS. f MIS Management as, Supply C and Analytic n m: Introducti Support Syst	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr Functions of MIS, (CRM) systems, En Chain Management es, E-commerce and r ion, Characteristics em, Advantages and	mation system formation Syst System, Decis Advantages a occessing of Da terprise Resou (SCM) system n-commerce and Capabilit Disadvantages	0 h - tem ion and and 0 ata, 11S, 0 urce ms, 0 0 0 0 0 0 0 0 0 0 0 0 0)7
Unit 3 Unit 4 Unit 5 Referen	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag Business Customer Planning Business Decision Componer Decision	tion System II of Information c, Software, Dat tion Processing System and I ages of Informa of MIS, Object Retrieval & D tes and Limitation Applications of r Relationship I (ERP) system Intelligence (BI Support System Support System Support System	n system, Co a, People and System, Man Executive infi tion System ives of MIS Dissemination, ons of MIS. f MIS Management as, Supply C) and Analytic n m: Introducti Support Syst , Intelligent D	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr Functions of MIS, (CRM) systems, En Chain Management es, E-commerce and r ion, Characteristics ion, Characteristics ion, Advantages and becision Support System	mation system formation Syst System, Decis Advantages a occessing of Da terprise Resou (SCM) system n-commerce and Capabilit Disadvantages	ion and and and ata, IIS, IIS, irce ms, ies, s of)7)7
Unit 3 Unit 4 Unit 5 Referen Sr. No.	Concept Hardward - Transac Support disadvant MIS Concept Storage, Advantag Business Customer Planning Business Decision Componer Decision ce Book	tion System II of Information c, Software, Data tion Processing System and I ages of Informa of MIS, Object Retrieval & D es and Limitation Applications of r Relationship I (ERP) system Intelligence (BI Support System Support System Support System Book	n system, Co a, People and System, Man Executive inf tion System ives of MIS Dissemination, ons of MIS. f MIS Management as, Supply C) and Analytic m m: Introducti Support Syst , Intelligent D	omponents of infor Process, Types of In agement Information formation systems, - Data Capturing, Pr Functions of MIS, (CRM) systems, En Chain Management es, E-commerce and r ion, Characteristics tem, Advantages and decision Support System	mation system formation Syst System, Decis Advantages a ocessing of Da ocessing of Da Types of M terprise Resou (SCM) system n-commerce and Capabilit Disadvantages ems	ion and and ata, and ata, ata, ata, ata, arce ms, ata, ata, ata, ata, ata, ata, ata, at)7)7)7

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Maharashtra Institute of Technology

	Level-7	VSD304:	Introducti	on to Python P	rogramming	g Se	mester-I
	Teaching				Exam	ination Sch	eme
Lectures		03 hrs/Week			MSE	10	Marks
Practica		-			TA	15	Marks
Total C	redits	03			ESE		Marks
	-				Duration of	'ESE 1.5	hours
	Outcome						
	will be a						
١,	Demons	trate understandi	ng of funda	mental program	ming concep	ts like varia	bles, dat
2	types, of	perators, expressi	ons and utili	ze Decision ma	king and loop	oing stateme	nts.
2.	Design a	and implement fu	nctions to m	odularize code	and improve	program rei	sability.
3.	Utilize e	exceptional handl	and the second se				
Unit			Cours	e Content			Hours
Unit 1		ction to Python					07
	Fython:	Introduction,	History, F	eatures, Appli	cations, Py	thon IDEs	
		ers, Reserved w				bata Types	
Unit 2		, String, List, Tup n making and lo	the second se	ry and Set, Typ	e conversion		00
Unit 2		output operations		Buthon has		a sittematio	08
	-	ison, assignment,					· .
		if statements, if					
		while loop, for lo					
				d loons Loon	control stater	nents break	-
	statemen				control stater	nents: breal	
Unit 3	The Owner of Concession of Concession, Name	nt, continue states			control stater	nents: breal	
Unit 3	Python	nt, continue stater Function	nent and pas	ss statement			07
Unit 3	Python Python	nt, continue states Function function: definition	nent and pas	the function, Ca	alling a functi	ion, function	07
Unit 3	Python Python argumen	nt, continue stater Function	nent and pas on, defining e and pass b	the function, Ca y reference, Lo	alling a functi cal and Glob	ion, function al variables	07
Unit 3	Python Python argumen Python	nt, continue states Function function: definition at - pass by value	nent and pase on, defining e and pass b standard 1	the function, Ca y reference, Lo ibrary module,	alling a functi cal and Glob fromimpor	ion, function al variables t statement	07
Unit 3	Python Python argumer Python Python	nt, continue states Function function: definition t - pass by value Modules, import	nent and pase on, defining e and pass b standard 1	the function, Ca y reference, Lo ibrary module,	alling a functi cal and Glob fromimpor	ion, function al variables t statement	07
Unit 3 Unit 4	Python Python argumer Python Python lambda	nt, continue states Function function: definition at - pass by value Modules, import packages, Built-in	nent and pase on, defining e and pass b standard 1	the function, Ca y reference, Lo ibrary module,	alling a functi cal and Glob fromimpor	ion, function al variables t statement	07
	Python Python argumer Python Python lambda Excepti	nt, continue stater Function function: definition nt - pass by value Modules, import packages, Built-in function	nent and pase on, defining and pass b standard 1 n functions:	the function, Ca y reference, Lo ibrary module, mathematical,	alling a functi cal and Glob fromimpor string and lis	ion, function al variables t statement ts functions	07
	Python Python Python Python lambda Excepti Exceptio	nt, continue states Function function: definition t - pass by value Modules, import packages, Built-in function on Handling	nent and pas on, defining and pass b standard 1 n functions: ning and use	the function, Ca y reference, Lo ibrary module, mathematical,	alling a functi cal and Glob fromimpor string and lis andling using	ion, function al variables t statement ts functions	07
	Python Python Python Python lambda Excepti Exceptio	nt, continue stater Function function: definition to pass by value Modules, import packages, Built-in function on Handling finally, User-definition	nent and pas on, defining and pass b standard 1 n functions: ning and use	the function, Ca y reference, Lo ibrary module, mathematical,	alling a functi cal and Glob fromimpor string and lis andling using	ion, function al variables t statement ts functions	07
Unit 4	Python Python Python Python lambda Excepti Excepti else and File I/O Reading	nt, continue states Function function: definition to pass by value Modules, import packages, Built-in function on Handling on Handling mean finally, User-definally, User-definally, User-definally	nent and pase on, defining and pass b standard 1 n functions: ning and use ined Except ting to a Tex	the function, Ca y reference, Lo ibrary module, mathematical, es, Exception ha ion, Assertions	alling a functi cal and Glob fromimpor string and lis undling using in python	ion, function al variables t statement ts functions Try, except	07
Unit 4	Python Python Python Python lambda Excepti Excepti else and File I/O Reading	nt, continue stater Function function: definition that - pass by value Modules, import packages, Built-in function on Handling on Handling mean finally, User-def	nent and pase on, defining and pass b standard 1 n functions: ning and use ined Except ting to a Tex	the function, Ca y reference, Lo ibrary module, mathematical, es, Exception ha ion, Assertions	alling a functi cal and Glob fromimpor string and lis undling using in python	ion, function al variables t statement ts functions Try, except	07
Unit 4 Unit 5	Python Python Python Python lambda Exceptic else and File I/O Reading a File E	nt, continue states Function function: definition to pass by value Modules, import packages, Built-in function on Handling on Handling mean finally, User-definally, User-definally, User-definally	nent and pas on, defining and pass b standard 1 n functions: ning and use ined Except	the function, Ca y reference, Lo ibrary module, mathematical, es, Exception ha ion, Assertions	alling a functi cal and Glob fromimpor string and lis undling using in python	ion, function al variables t statement ts functions Try, except	07
Unit 4 Unit 5 Referen	Python Python Python Python lambda Excepti Excepti else and File I/O Reading a File Exception	nt, continue states Function function: definition to pass by value Modules, import packages, Built-in function on Handling on Handling mean finally, User-definally, User-definally, User-definally	nent and pas on, defining and pass b standard 1 n functions: ning and use ined Except	the function, Ca y reference, Lo ibrary module, mathematical, es, Exception ha ion, Assertions at File, Creating e a File	alling a functi cal and Glob fromimpor string and lis undling using in python a Text File, 0	ion, function al variables t statement ts functions Try, except Checking If	07
Unit 4 Unit 5 Referen Sr. No.	Python Python Python Python lambda Exceptic else and File I/O Reading a File Est ce Book	nt, continue states Function function: definition function: definition Modules, import packages, Built-in function on Handling on Handling mean finally, User-definally, User-definally, User-definally, User-definally, and the states of the states	nent and pas on, defining and pass b standard 1 n functions: ning and use ined Except	the function, Ca y reference, Lo ibrary module, mathematical, es, Exception ha ion, Assertions at File, Creating e a File	alling a functi cal and Glob fromimpor string and lis undling using in python a Text File, (Publ	ion, function al variables t statement ts functions Try, except Checking If	07
Unit 4 Unit 5 Referen	Python Python Python Python lambda Exceptic else and File I/O Reading a File Esceptic ce Book Book	nt, continue stater Function function: definition function: definition Modules, import packages, Built-in function on Handling on Handling mean finally, User-definition a Text File, Writt xists, Renaming a Programming An	nent and pase on, defining e and pass b standard 1 in functions: ning and use ined Except ting to a Tex File, Delete	the function, Ca y reference, Lo ibrary module, mathematical, es, Exception ha ion, Assertions at File, Creating e a File	alling a functi cal and Glob fromimpor string and lis undling using in python a Text File, (Publ Frank	ion, function al variables t statement ts functions Try, except Checking If isher clin, Beedle	07
Unit 4 Unit 5 Referen Sr. No. 1.	Python Python Python Python Jambda Exception else and File I/O Reading a File Est Ce Book Python I Introduc	nt, continue stater Function function: definition function: definition to pass by value Modules, import packages, Built-in function on Handling on Handling mean finally, User-definally, User-definally, User-definally, a Text File, Write xists, Renaming an errogramming An- ction to Computer	nent and pase on, defining e and pass b standard 1 in functions: ning and use ined Except ting to a Tex File, Delete	the function, Ca y reference, Lo ibrary module, mathematical, es, Exception ha ion, Assertions at File, Creating e a File <u>Author</u> John M. Zelle	alling a functi cal and Glob fromimpor string and lis undling using in python a Text File, (Publ Frank Assoc	ion, function al variables t statement ts functions Try, except Checking If isher clin, Beedle ciates Inc	07
Unit 4 Unit 5 Referen Sr. No.	Python Python Python Python Jambda Exception else and File I/O Reading a File Est Ce Book Python I Introduc	nt, continue stater Function function: definition function: definition Modules, import packages, Built-in function on Handling on Handling mean finally, User-definition a Text File, Writt xists, Renaming a Programming An	nent and pase on, defining e and pass b standard 1 in functions: ning and use ined Except ting to a Tex File, Delete	the function, Ca y reference, Lo ibrary module, mathematical, es, Exception ha ion, Assertions at File, Creating e a File	alling a functi cal and Glob fromimpor string and lis undling using in python a Text File, (Publ Frank Assoc	ion, function al variables t statement ts functions Try, except Checking If isher clin, Beedle	07

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-	SQF Level -7		VSD321Advanced PHPLab		Semester-		
Teaching Scheme		Scheme			Examir	nation Scheme	
Practic	al	2 Hours/week	2 Hours/week		TA	25 Marks	
Credit	s	1.5		Ī	ESE/PE	25 Marks	
Sr. No.	List of I	Experiments	_				
1	Create a Http Rec	simple HTML form quest to send data to a	with JavaScript PHP script and	ot to perform A. I display the resp	JAX reque oonse.	st and use XN	
2	Build a	webpage with dynami	ic content loadi	ng using AJAX.			
3	Develop	a live search function	nality using AJ	AX.			
4	Create a class, se	class representing a t properties, and call 1	basic object w methods.	ith properties a	nd method	s. Instantiate	
5	Experim	ent based on Inherita	nce and Polymo	orphism.			
5 6	Develop		-		(CRUD	Operation	
-	Develop Search/S	Registration for	m with Db		(CRUD	Operation	
6	Develop Search/S Experin	Registration for Sort/Pagination).	m with Db andling.		(CRUD	Operation	
6 7	Develop Search/S Experim Experim	Registration for Sort/Pagination).	m with Db andling. onal Handling.	Connectivity	(CRUD	Operation	

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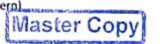


	Level -7		hon Programming Lab	Semester-I	
	Teaching	Scheme		ation Scheme	
Practica		2 Hours/week	TA	25 Marks	
Credits	5	1.5	ESE/PE	25 Marks	
Sr. No.	List of	Experiments			
1	List out	Different IDEs. Download and in	istall python.		
2	Write a	python program to print formatte	d input/output statements.		
3	Write a operato	python program to perform urs.	ise of Arithmetic, relatio	nal and logica	
4	Write a	python program to demonstrate u	use of decision making.		
5	Write a	python program to demonstrate u	ise of looping.		
6	Write a python program to demonstrate use functions.				
7	Write a python program to demonstrate use modules.				
8	Write function	a python program to demonst	rate use mathematical, s	string and list	
9	Write a python program to Handle Exceptions.				
,		pymon program to manare Excep			

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NSQF Level -7		VSD331: On Job Training/Qualification Packs*		Semester-I	
Teac	ching Sche	eme	Examination Schem		
Practical	7	7-8 weeks	TA	50 Marks	
Credits	1	5	ESE/PE	150 Marks	
VSD331 *Any one	On-Job-Tr	aining as per guidelin	Pualification Pack /Job role - NSQF		
Marks Exte	ernal Asse	ssment by NSDC/SSC	0		

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Syllabus of Third Year B.Voc. (Software Development) (2022-23 Autonomous Patt Master Cop

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Semester-VI (NSQF Level 7, Semester-II) Detail Course Curriculum

Third Year B. Voc. Syllabus (Software Development)

(Effective from 2022-23 and onwards)

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Syllabus of Third Year B.Voc. (Software Development) (2022-23 Autonomous Pattern



NSQF Level-7 Teaching Scheme			VSD351: Current Computing Trends		ester-I
the second se	and the second se			Examination Schen	
hrs/Week		03 hrs/Week	MSE	10 N	iarks
Practical -		-	ТА	15 N	larks
Credits		03	ESE	25 Marks	
			Duration of	ESE 1.51	ours
Students	will be a	ble to			
1.	Underst	tand the cone	cept of Big Data and Tools.		
2.	Learn a	pplications of	of IOT and Edge Computing.		
3.	Underst	tand Web 3.0) and Emerging Technologies.		
Unit			Course Content		Hour
Unit 1	Big Data Concept of Big Data, Types of Big Data: Structured data, Unstructured data and Semi-structured data, Characteristics of Big Data: Volume, Variety, Veracity, Value and Velocity, Importance of Big Data, Big Data Tools: Apache Hadoop, Apache Cassandra, Apache Spark, Mongo DB, KNIME, Rapid Miner and Tableau, Advantages and Disadvantages of Big data, Case studies: Google, Facebook, Netflix, Uber, Walmart and American Express				
			over, wannar and American Express		
Unit 2	Interne Concep 2.4 Ad	et of Things of of loT 2.2 vantages and	Characteristics of IoT 2.3 Architecture of Internet Disadvantages of IoT 2.5 Challenges in IoT 2. Intelligence of Things		
Unit 2 Unit 3	Interne Concep 2.4 Ad loT and Web 3. Concep 3.0. Ap Blockc Blockc Advant	et of Things ot of loT 2.2 vantages and d Artificial In 0 ot of Web 3.0 oplications of hain Techno hain and H	Characteristics of IoT 2.3 Architecture of Internet Disadvantages of IoT 2.5 Challenges in IoT 2. Intelligence of Things D. Features of Web 3.0, Advantages and Challen f Web 3.0, Concept of Blockchain Technology logy: Public Blockchain, Private Blockchain, Working of Blockchain, T isadvantages of Blockchain Technology, Appl	6 Industrial ges of Web y, Types of Consortium Fechnology,	07
Unit 3	Interne Concep 2.4 Ad loT and Web 3. Concep 3.0. Ap Blockc Blockc Advant Blockc Advant Blockc	et of Things of of loT 2.2 vantages and d Artificial In 0 of of Web 3.0 oplications of hain Techno hain and H ages and D hain Techno ented Reality of of AR, nted Reality	Characteristics of IoT 2.3 Architecture of Internet Disadvantages of IoT 2.5 Challenges in IoT 2. Intelligence of Things D. Features of Web 3.0, Advantages and Challen f Web 3.0, Concept of Blockchain Technology logy: Public Blockchain, Private Blockchain, Working of Blockchain, T isadvantages of Blockchain Technology, Appl	6 Industrial ges of Web y, Types of Consortium Technology, lications of	07

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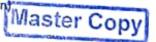


Maharashtra Institute of Technology

Referen	ce Book		
Sr. No	Book	Author	Publisher
1.	Big Data and Hadoop	V. K. Jain	Khanna Book Publishing
2.	Internet of Things (IoT)	Dr Kamlesh Lakhwani, Dr Hemant Kumar Gianey, Joseph Kofi Wireko, Kamal Kant Hiran	BPB Publications
3.	Web3 Made Easy	Liew Voon Kiong	Liew Voon Kiong
4.	Virtual & Augmented Reality For Dummies	Paul Mealy	Wiley
5.	Edge Computing: Fundamentals, Advances and Applications	K. Anitha Kumari, G. Sudha Sadasivam, D. Dharani, M. Niranjanamurthy	CRC Press

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NSQF Le		VSD352: Cloud Computing Sem				
Tea	ching Scheme		Examination	Scher	ne	
Lectures	03 hrs/Week	N	ISE	10 M	arks	
Practical -		Т	Α	15 Mark		
Credits	03	E	SE	25 Marks		
		D	uration of ESE 1.5 h		ours	
	utcomes (CO)					
the second second second second second	vill be able to					
1.	Understand Distributed	computing and Cloud computi	ng.			
2.	Develop proficiency in (Cloud Architecture and Service	e Models.			
3.	Understand Virtualization					
Unit		Course Content			Hours	
Unit 1	Introduction				07	
	Computing, Cluster co Computing, Character disadvantages of Cloud	nd Distributed Computing, Ov mputing and Grid computing istics of Cloud Computing Computing, Applications of C	g, Concept of Cl g, Advantages	loud		
Unit 2	Cloud Architecture Cloud Computing Architecture, Types of Clouds: Private Cloud, Public Cloud, Hybrid Cloud & Community Cloud, Cloud Service Providers: Amazon Web Services, Microsoft Azure and Google Cloud Platform					
Unit 3	Applications, PaaS disadvantages and Ap Advantages disadvantag	characteristics, Advantages - Introduction, character oplications, IaaS - Introduc ges and Applications, XaaS - Database as a Service etc.	ristics, Advanta tion, characteris	ages tics,	08	
Unit 4	Virtualization				07	
	Concept of Virtualization, Characteristics of Virtualization, Types of Virtualization: Data, Desktop, Application, CPU, Network, Storage & Server, Advantages and disadvantages of Virtualization, Virtualization in Cloud			8		
Unit 5	Cloud best practices, Cl	rity, Cloud CIA security mod oud Scalability and Fault Tole		oud,	07	
Reference						
Sr. No.	Book	Author	Publis	her		
1	Cloud Computing	Ruchi Doshi, Temitayo Fagbola, Mehul Mahrishi	BPB Publ	ication	ns	
	Cloud Computing	Sandeep Bhowmik	Cambridge Uni	versit	y Press	
2.	Cloud Computing For		Wiley			

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NSQF Level	-7	VSD371:Project	Semester-II
Teaching Scheme		Exam	ination Scheme
Practical	4 Hours/week	ТА	100 Marks
Credits	9	ESE/PE	100 Marks

On the basis of learning in the B. Voc. Programme, i.e. Level 5 to Level 7, a project to be taken up by the student strengthening his/ her vocational skills and prepare a report in following format:

Formatting:

• The font for chapter number should be in Calibri 16 and chapter title should be in upper case with Bold Calibri 20. Use after paragraph spacing should be 6 pts.

• The font for sub-title like (1.1) should be in Bold Calibri 14 and chapter title should be in upper case with Calibri 20. Use text font as Calibri 12 for a text with 1.5 line spacing. The text should be aligned with justify setting.

Report:

Student has to submit a detailed report in two copies which shall be used for evaluation.

Evaluation:

Teachers Assessment will be based on the presentation of project in periodic reviews (like Review 1 and Review 2) during the semester.

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NSQF Level -7		VSD381: On Job Training/Qualification Packs*		Semester-I	
Fea	Feaching Scheme		Examination	Scheme -	
Practical Credits		7-8 weeks	TA	50 Marks	
		15	ESE/PE	150 Marks	
VSD381 *Any one (Marks Exte	On-Job-		ualification Pack /Job role - NSQF		

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