GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Bachelor of Vocation (B.Voc), 1st Semester
Branch: Software Development
OJT Elective Name: Database System Assistant
Subject Code: 21110208

With effective from academic year 2021-22

Teaching and Examination Scheme:

Teaching Scheme			Credit	Examination Marks				Total Marks
				Theory Marks		Practical Marks		
L	**T**	**P**	**C**	ESE (E)	PA(M)	ESE(V)	PA(I)	
0	0	15	15	-	-	100	100	200

L- Lectures; T- Tutorial/Teacher Guided Student Activity; P- Practical; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment

OJT Hands on Exercise/Training:

Sr. No.	Training / Hands on Exercise	Hours.
1	**Basic configurations for requirements** PC1. Practice on Installation of Windows 7, 8, 10, Linux. PC2. Installation of MS Office, Libre Office, Open source and utilities, remote control, chat, voice and video, Live CD Operations. PC3. Operations browsing, downloading messages, pictures from internet, sending and receiving emails, sending attachments of pictures and text information, E-chatting. PC4. Testing and troubleshooting of Modem. Operating of Routers, Security Implementations, Troubleshooting of internet connection. PC5. Operating WiFi access points/ modems, setting up of blue tooth and data sharing with mobiles.	20
2	**Working with Database** PC1. Practice Excel - creating various worksheets, mathematical calculations, using different formulae. PC2. Preparing various types of Graphs/ charts, different Chart options, colouring etc. PC3. Creating and designing tables, forms in MS Access. PC4. Data entering using forms/ tables with different fields, modifying structure, generating queries, reports. PC5. Installation of MySQL. PC6. Configuration of MySQL. PC7. Practice on MySQL syntax and creating database design. Importing and exporting formats. PC8. Practice on Database repair and archival. PC9. Practicing on Creation and use of database, Data type, Creation of table. PC10. Practicing on simple insert query and insert query using select. PC11. Select Specific Column PC12. Concatenate the text value in the output. PC13. Practice on where clause. Practice on arithmetic operation, comparisons operator, and/ or operator. PC14. Practice on Null value, order by Top value of the table, Distinct. PC15. Practice on Aggregate and Group by –Min, Max, Sum, Count, Group by, Compute and compute by Pivot. PC16. Practice on Sub queries – and exists, Nested sub queries, Correlated sub queries. PC17. Create a online database using any one of Open Tools Postgre SQL (Or) Ingres (Or) Fire Bird, (Or) Cubrid (Or) ISQL.	80

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3	**Database Security, Backup and Recovery**	20
	PC1. Practice on configure and maintain back up strategy, manage different back up models. Practice on restoring a database to point in time.	
	PC2. Practice on Restoring in, create a restore strategy for redundant server.	
	PC3. Manage logins and server roles Configure server security; secure the SQL Server using Windows Account / SQL Server accounts, server roles; create login accounts.	
	PC4. Manage database permissions Configure database security; database level, permissions; protect objects from being modified.	
4	**Manage your work to meet requirements**	20
	PC1. Establish and agree your work requirements with appropriate people	
	PC2. Keep your immediate work area clean and tidy	
	PC3. Utilize your time effectively	
	PC4. Use resources correctly and efficiently	
	PC5. Treat confidential information correctly	
	PC6. Work in line with your organization's policies and procedures	
	PC7. Work within the limits of your job role	
	PC8. Obtain guidance from appropriate people, where necessary	
	PC9. Ensure your work meets the agreed requirements	
5	**Work effectively with colleagues**	20
	PC1. Communicate with colleagues clearly, concisely and accurately	
	PC2. Work with colleagues to integrate your work effectively with them	
	PC3. Pass on essential information to colleagues in line with organizational requirements	
	PC4. Work in ways that show respect for colleagues	
	PC5. Carry out commitments you have made to colleagues	
	PC6. Let colleagues know in good time if you cannot carry out your commitments,	
	PC7. explaining the reasons	
	PC8. Identify any problems you have working with colleagues and take the initiative to solve these problems	
	PC9. Follow the organization's policies and procedures for working with colleagues	
6	**Maintain a healthy, safe and secure working environment**	20
	PC1. Comply with your organization's current health, safety and security policies and procedures	
	PC2. Report any identified breaches in health, safety, and security policies and procedures to the designated person	
	PC3. Identify and correct any hazards that you can deal with safely, competently and within the limits of your authority	
	PC4. Report any hazards that you are not competent to deal with to the relevant person in line with organizational procedures and warn other people who may be affected	
	PC5. Follow your organization's emergency procedures promptly, calmly, and efficiently	
	PC6. Identify and recommend opportunities for improving health, safety, and security to the designated person	
	PC7. Complete any health and safety records legibly and accurately	
7	**Maintain a healthy, safe and secure working environment**	20
	PC1. Comply with your organization's current health, safety and security	

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		policies and procedures	
	PC2.	Report any identified breaches in health, safety, and security policies and procedures to the designated person	200
	PC3.	Identify and correct any hazards that you can deal with safely, competently and within the limits of your authority	
	PC4.	Report any hazards that you are not competent to deal with to the relevant person in line with organizational procedures and warn other people who may be affected	
	PC5.	Follow your organization's emergency procedures promptly, calmly, and efficiently	
	PC6.	Identify and recommend opportunities for improving health, safety, and security to the designated person	
	PC7.	Complete any health and safety records legibly and accurately	
TOTAL			**200**

Reference:

https://www.nqr.gov.in/sites/default/files/QF_Database%20System%20Assistant_CTS1.2_NSQF-5.pdf