SAMRAT ASHOK TECHNOLOGICAL INSTITUTE VIDISHA (M.P.)
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV Bhopal)

Scheme of Examination (Semester-I)

for Batch Admitted in session - 2024-25 w.e.f July 2024

Bachelor of Technology (B. Tech.) – Internet of Things (Department of IT)

Subject Code	Subject Category	Subject Name	Maximum Marks Allotted								Contact Hrs. per week			Total Credits
			Theory				Practical			Total Marks				
			ES	MS	Assignment	Quiz	ES	LW	Quiz		L	T	P	
PYB 101	BSC	Applied Physics	60	20	10	10	30	10	10	150	3	0	2	4
CSA 101	ESC	Introduction to Computer Science Engineering	60	20	10	10	30	10	10	150	3	0	2	4
IOA 103	ESC	Basic Electrical Engineering	60	20	10	10	30	10	10	150	3	0	2	4
CSA 102	ESC	Digital Electronics	60	20	10	10	--	--	--	100	3	0	0	3
MAB 101	BSC	Linear Algebra and Calculus	60	20	10	10	--	--	--	100	3	1	0	4
MAC 101	MAC*	Universal Human Values	--	--	--	--	60	20	20	100	0	0	2	Grade
ILC 100	ILC	Extracurricular Activities	It is a one credit per year activity endorse in eight semester marks											
Total			300	100	50	50	150	50	50	750	15	1	8	19

MST: Minimum two mid semester tests are to be conducted during Semester, MAC* -Mandatory courses classes will be conducted in off hours (Weekends)

MAC	Induction Program	Non Credit
HEC	NSS/NCC/NSO	Non Credit

Abbreviations: ES- End Semester, MS- Mid Semester, LW-Laboratory Work/Assignment (L-Lecture, T-Tutorial, P-Practical), BSC- Basic Science Course, ESC-Engineering Science Course, HSMC-Humanities Science and Management Course, MAC-Mandatory Audit Course, AC- Audit Course, HEC- Holistic Education Course, ITC- Information Technology Course, ILC- Institute Level Course, DC- Departmental Course, DE- Departmental Elective, OC- Open Course, DLC- Departmental Laboratory, ORPJ-Project Work

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE VIDISHA (M.P.)
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Scheme of Examination (Semester-II)

for Batch Admitted in session - 2024-25 w.e.f July 2024

Bachelor of Technology (B. Tech.) – Internet of Things (Department of IT)

Subject Code	Subject Category	Subject Name	Maximum Marks Allotted								Contact Hrs. per week			Total Credits
			Theory				Practical			Total Marks				
			ES	MS	Assignment	Quiz	ES	LW	Quiz		L	T	P	
CHB 101	BSC	Applied Chemistry	60	20	10	10	30	10	10	150	3	0	2	4
CSA 103	ESC	Problem Solving Using Data Structure	60	20	10	10	30	10	10	150	3	0	2	4
ITC 101	ITC	Python Programming	60	20	10	10	30	10	10	150	3	0	2	4
HUB 101	HSMC	Language and Writing Skill	60	20	10	10	--	--	--	100	3	0	0	3
MAB 102	BSC	Probability Distribution and Differential Equation	60	20	10	10	--	--	--	100	3	1	0	4
CSL 110	ESC	Computer Workshop (Linux Lab)	--	--	--	--	30	10	10	50	1	0	2	2
MAC 102	MAC	Professional Ethics and Social Responsibility	--	--	--	--	30	10	10	50	0	0	2	Grade
ILC 100	ILC	Extracurricular Activities	Based on participation in extra curriculum activities, one credit per year to be endorsed in the eight semester mark sheet.											
Total			300	100	50	50	150	50	50	750	15	1	10	21

MST: Minimum two mid semester tests are to be conducted during Semester, MAC* -Mandatory courses classes will be conducted in off hours (Weekends)

ILC	Internship-I (60 Hr) Institute Level	Non Credit
HEC	NSS/NCC/NSO	Non Credit

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE VIDISHA (M.P.)
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Scheme of Examination (Semester-III)

for Batch Admitted in session - 2024-25 w.e.f July 2024

Bachelor of Technology (B. Tech.) – Internet of Things (Department of IT)

Subject Code	Subject Category	Subject Name	Maximum Marks Allotted								Contact Hrs. per week			Total Credits
			Theory				Practical			Total Marks				
			ES	MS	Assignment	Quiz	ES	LW	Quiz		L	T	P	
MAB-301	BSC	Discrete Mathematics	60	20	10	10	--	--	--	100	3	-	-	3
IO-302	DC	Electronic Devices & Circuits	60	20	10	10	30	10	10	150	3	-	2	4
IO-303	DC	Object Oriented Programming with Java	60	20	10	10	30	10	10	150	3	-	2	4
IO-304	DC	Analysis and Design of Algorithms	60	20	10	10	30	10	10	150	3	-	2	4
IO-305	DC	Computer System Organization	60	20	10	10	--	--	--	100	3	-	-	3
IO-306	DL	Web Application Development	--	--	--	--	30	10	10	50	-	-	4	2
IO-307	ILC	Internship-I (60 Hrs) Institute Level (Evaluation)	--	--	--	--	-	50	--	50	-	-	4	2
		Total	**300**	**100**	**50**	**50**	**120**	**90**	**40**	**750**	**15**	**-**	**14**	**22**
	ILC	Extracurricular Activities	Based on participation in extra curriculum activities, one credit per year to be endorsed in the eight semester mark sheet.											
MAC-308	MAC*	Energy, Ecology, Environment & Society	-	20	20	10	-	-	-	-	-	-	-	Grade
HUM-309	HEC* (Optional)	Holistic Education Course (Indian Classic music Instrumental)	-	20	20	10	-	-	-	-	-	-		Grade

MS: Minimum two mid semester tests are to be conducted during Semester, (L-Lecture, T- Tutorial, P-Practical)
MAC* -Mandatory audit course & & HEC*- Holistic education courses classes will be conducted in off hours (Weekends)

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE VIDISHA (M.P.)
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Scheme of Examination (Semester-IV)

for Batch Admitted in session - 2024-25 w.e.f July 2024

Bachelor of Technology (B. Tech.) – Internet of Things (Department of IT)

Subject Code	Subject Category	Subject Name	Maximum Marks Allotted								Contact Hrs. per week			Total Credits
			Theory				Practical			Total Marks				
			ES	MS	Assignment	Quiz	ES	LW	Quiz		L	T	P	
IO-401	DC	Microprocessors and Microcontrollers	60	20	10	10	30	10	10	150	3	0	2	4
IO-402	DC	Database Management System	60	20	10	10	30	10	10	150	3	0	2	4
IO-403	DC	Signals and Systems	60	20	10	10	30	10	10	150	3	0	2	4
IO-404	DC	Foundation of IoT	60	20	10	10	-	-	-	100	3	1	0	4
IO-405	DC	Communication System	60	20	10	10	-	-	-	100	3	1	0	4
IO-406	DLC	Advance Java Programming	-	-	-	-	60	20	20	100	0	0	4	2
		Total	**300**	**100**	**50**	**50**	**150**	**50**	**50**	**750**	**15**	**2**	**10**	**22**
	ILC	Extracurricular Activities	Based on participation in extra curriculum activities, one credit per year to be endorsed in the eight semester mark sheet.											

MS: Minimum two mid semester tests are to be conducted during Semester, (L-Lecture, T- Tutorial, P-Practical)

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE VIDISHA (M.P.)
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Scheme of Examination (Semester-V)

for Batch Admitted in session - 2024-25 w.e.f July 2024

Bachelor of Technology (B. Tech.) – Internet of Things (Department of IT)

Subject Code	Subject Category	Subject Name	Maximum Marks Allotted								Contact Hrs. per week			Total Credits
			Theory				Practical			Total Marks				
			ES	MS	Assignment	Quiz	ES	LW	Quiz		L	T	P	
IO 501	DC	Artificial Intelligence & Machine Learning	60	20	10	10	30	10	10	150	3	0	2	4
IO 502	DC	Operating Systems for IoT	60	20	10	10	30	10	10	150	3	0	2	4
IO 503	DC	Ad-hoc & Sensor Networks for IoT	60	20	10	10	30	10	10	150	3	0	2	4
IO 504	DE	DE -1	60	20	10	10	--	--	--	100	3	0	0	3
OE 505	OC	OC-1	60	20	10	10	--	--	--	100	3	0	0	3
IO 506	DLC	IoT Lab	--	--	--	--	30	10	10	50	0	0	4	2
IO 507	ILC	Internship-II (60 Hrs) Institute Level (Evaluation)	--	--	--	--		50	--	50	-	-	2	2
Total			**300**	**100**	**50**	**50**	**120**	**90**	**40**	**750**	**15**	**0**	**12**	**22**
	ILC	Extracurricular Activities	It is a one credit per year activity to be endorsed in eight semester marks sheet.											

	DE -1	OC-1
A	IoT Communication Protocols	IoT Communication Protocols
B	5G and IoT Technologies	Operating Systems for IoT
C	Wireless network	Ad-hoc & Sensor Networks for IoT

Minor Degree and Honour Degree:

Students can opt any number of subjects depending on the number of credits he/she wants to earn in a particular semester for Honours/Minor Degree. Total 20 credits required for Honours/Minor Degree (From V to VIII Semester – Refer pool of attached subjects for Honours/Minor Degree)

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE VIDISHA (M.P.)
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Scheme of Examination (Semester-VI)

for Batch Admitted in session - 2024-25 w.e.f July 2024

Bachelor of Technology (B. Tech.) – Internet of Things (Department of IT)

Subject Code	Subject Category	Subject Name	Maximum Marks Allotted								Contact Hrs. per week			Total Credits
			Theory				Practical			Total Marks				
			ES	MS	Assignment	Quiz	ES	LW	Quiz		L	T	P	
IO 601	DC	IoT Cloud Processing and Analytics	60	20	10	10	30	10	10	150	3	0	2	4
IO 602	DC	Programming Languages for IoT	60	20	10	10	30	10	10	150	3	0	2	4
IO 603	DE	DE-2	60	20	10	10				100	3	0	0	3
IO 604	DE	DE -3	60	20	10	10				100	3	1	0	4
OE 605	OC	OC – 2	60	20	10	10				100	3	0	0	3
IO 606	DLC	Lab View					30	10	10	50	0	0	4	2
IO 607	DLC	Minor Project					50	50		100	0	0	4	2
			300	**100**	**50**	**50**	**140**	**80**	**30**	**750**	**15**	**`1**	**12**	**22**
	ILC	Extracurricular Activities	It is a one credit per year activity endorse in eight semester mark sheet											
MST: Minimum two mid semester tests to be conducted during Semester														

	DE -2	DE -3	OC – 2
A	IoT Security	Mobile Application Development for IoT	IoT Cloud Processing and Analytics
B	Cryptography	Web Technology	Programming Languages for IoT
C	Information Theory and Coding	UI/UX	IoT Security

Minor Degree and Honour Degree:

Students can opt any number of subjects depending on the number of credits he/she wants to earn in a particular semester for Honours/Minor Degree. Total 20 credits required for Honours/Minor Degree (From V to VIII Semester – Refer pool of attached subjects for Honours/Minor Degree)

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE VIDISHA (M.P.)
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Scheme of Examination (Semester-VII)

for Batch Admitted in session - 2024-25 w.e.f July 2024

Bachelor of Technology (B. Tech.) – Internet of Things (Department of IT)

Subject Code	Subject Category	Subject Name	Maximum Marks Allotted								Contact Hrs. per week			Total Credits
			Theory				Practical			Total Marks				
			ES	MS	Assignment	Quiz	ES	LW	Quiz		L	T	P	
IO 701	DC	Data Analytics for IoT	60	20	10	10	30	10	10	150	3	0	2	04
IO 702	DE	DE-4	60	20	10	10	--	--		100	3	1	0	04
IO 703	DE	DE-5	60	20	10	10	--	--		100	3	1	0	04
IO 704	PROJ	Major Project Prelim	--	--	--		60	40		100	0	0	8	04
IO 705	ILC	Internship-III (Completed in Third Year)	--	--	--			50		50	0	0	4	02
Total			**180**	**60**	**30**	**30**	**90**	**100**	**10**	**500**	**9**	**2**	**14**	**18**
	ILC	Extracurricular Activities			It is a one credit per year activity endorse in eight semester mark sheet									

MST: Minimum two mid semester tests to be conducted during Semester

	DE -4	DE-5
A	IoT System Architectures	Industrial IoT
B	Embedded Systems Design	AR and VR
C	Real time Systems	Edge Computing

Minor Degree and Honour Degree:

Students can opt any number of subjects depending on the number of credits he/she wants to earn in a particular semester for Honours/Minor Degree. Total 20 credits required for Honours/Minor Degree (From V to VIII Semester – Refer pool of attached subjects for Honours/Minor Degree)

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE VIDISHA (M.P.)
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Scheme of Examination (Semester-VIII)

for Batch Admitted in session - 2024-25 w.e.f July 2024

Bachelor of Technology (B. Tech.) -Internet of Things (Department of IT)

Subject Code	Subject Category	Subject Name	Maximum Marks Allotted						Contact Hrs. per week			Total Credits
			Theory			Practical		Total Marks				
			ES	MS	Assignment/ Quiz	ES	LW		L	T	P	
IO 801	PROJ	Major Project				300	200	500	0	0	20	10
IO 802	ILC	Extracurricular Activities		It is a one credit per year activity endorsed in eight semester mark sheet								04
Total						**300**	**200**	**500**				**14**

Minor Degree and Honour Degree:

Students can opt any number of subjects depending on the number of credits he/she wants to earn in a particular semester for Honours/Minor Degree. Total 20 credits required for Honours/Minor Degree (From V to VIII Semester – Refer pool of attached subjects for Honours/Minor Degree)

Tentative Pool of subjects for Honours and Minor Degree

SWAYAM/NPTEL/MOOC's Courses

S. No.	Honours Degree for students of parent department	Minor Degree for students of other department	Remark
1.	Cloud Computing and Distributed Systems	Analog and Digital Electronics	8-12 Weeks
2.	Switching Circuits and Logic Design	Computer Networks And Internet Protocol	8-12 Weeks
3.	Advanced Computer Networks	Microprocessor and Microcontroller	8-12 Weeks
4.	Embedded System Design with ARM	Foundation of Cloud IoT Edge ML	8-12 Weeks
5.	Embedded Sensing, Actuation and Interfacing Systems	Foundations of Cyber Physical Systems	8-12 Weeks
6.	Digital System Design	Introduction to Embedded System Design	8-12 Weeks
7.	An Introduction to Information Theory	Introduction To Industry 4.0 And Industrial Internet Of Things	8-12 Weeks
8.	Industrial Automation And Control	Introduction To Internet Of Things	8-12 Weeks

*Note: Those subjects which are already studied in the core scheme from I to VIII semester cannot be opted.

20 additionally to be earned between V to VIII semester Maximum 6 credits per semester from V semester onwards will be permitted.