RGPV WING)		(DIPLO	ОМА	OBE CURRI COURSE	CULUM FOR TI	HE	FORMA	_	Sheet No. 1/5	
Branch	Info	rmatio	n Tecl	hnology		Sem	ester	VI		
Course Code				Course Name	Network Admi Maintenance	inistra	ation a	and Hardware		
Course C	Outco	me -	Make use of available techniques and Teac Mark resources required for network server h s administration							
Learning 1	Out	come	Expla	in client server	system			6	10	
Contents ✓ Network Administration: Definition, Features, Need ✓ Network Server: Definition, Types ✓ Network Operating System: Features, Types, NOS ✓ Virtual Network: Concept & Features										
Method Assessme	ent	of	Exterr	nal: End semeste	r theory examina	tion (P	Pen pape	r test)		
Learning 2	Out	come	Outlii termi	ne Windows inologies	NT networ	k d	lomain	7	10	
Contents			✓ Co ✓ Ne Re ✓ Ov	ontrolling Access: etwork Browser S equest	: Concept & Type: User Account & F Gervice: Concept, ork terminologies	Right Brows				
Method Assessme	ent	of	Intern	nal: Mid semester	theory examinat	ion (P	en paper	test).		
Learning 3	Outo	come			operating system for server in ne			8	10	
Contents			✓ ✓ ✓	Build Domain C Add Active Dire Server Roles et	ctory Domain Ser	vices		Team\	Viewer	

Method Assessme	ent	of	Interr	nal: Lab Observat	ion/Assignment					
RGPV WING)	вно	(DIPL OPAL	ОМА	OBE CURRI	CULUM FOR T	HE	FORMA		Sheet No. 2/5	
Branch	Inf	ormatio	n Tec	hnology		Sem	ester	VI		
Course Code							ation a	nd Ha	ardware	
Course O	protocols							Teac h Hrs	Mark s	
Learning 4	Ou	tcome	Explain DHCP and DNS 6 10							
	 DHCP: Concept, component, working process Comparison with RARP & BOOTP DNS: Concept, working process Comparison with WINS 									
Method Assessme	ent	of	Exteri	nal: End semeste	r theory examina	tion (I	Pen pape	er test)		
Learning 5	Ou	tcome	Buil	d small Client S	erver network			12	10	
Contents ✓ Design a small network by configure router, TCP/IP properties, IP address, subnet mask, default gateway statically on Windows machine ✓ Configure and verify NTP/NTS operating in a client/server mode ✓ Configure DHCP (Dynamic Host Configuration Protocol). ✓ Configure DNS (Domain Name System).							y on a			
Method Assessme	ent	of	Interr	nal: Lab Observat	ion/Assignment					
RGPV WING)	RGPV (DIPL WING) BHOPAL			OBE CURRI COURSE	CULUM FOR T	HE	FORMA	_	Sheet No. 3/5	

Branch	Inf	ormatio	n Tecl	hnology		Semester	VI					
Course Code				Course Name	Network Adm Maintenance	inistration a	nd Har	dware				
Course C	Outc	ome -		ntify strategies vities in Client	Teac h Hrs	Mark s						
Learning 6	Οι	itcome	Expl	Explain Remoteboot process 6 10								
Contents				Remoteboot ✓ Concept ✓ Importance ✓ Remoteboot Process								
Method o Assessment			Exterr	External: End semester theory examination (Pen paper test).								
Learning Outcome 7				ine various t tegies	troubleshooting	tools and	6	10				
• Network Troubleshooting: ✓ Overview ✓ Need • TCP/IP Diagnostic Utilities: ✓ ipconfig, ping ✓ Address and name resolution ✓ IP Routing: The Route Table, Network Address, Net Gateway Address, Metric, Load Balancing and Route Bac ✓ Other Troubleshooting: Error 53, Telnet						-						
Method Assessme	ent	of	Exterr	nal: End semeste	er theory examina	tion (Pen pape	er test).					
Learning Outcome 8				Apply network troubleshooting activities 14 10								
✓ Ic ✓ Tc ✓ Ti ✓ Tc				entify the TCP/IF est Connection to oubleshoot NetB est IP-address-to	re available netwo Configuration by the TCP/IP Netwo IOS name resoluti -MAC-address Res ICP/IP Connection	Using ipconfigork by Using Piton by Using Notes to the Using Notes to the Using Notes to the Using Notes in	ing BTStat ng ARP	Using				

Method Assessme	ent	of	Re cli ✓ Co ✓ SN	emoteboot Service ent onfiguring Remote IMP troubleshoot	rting the Remotel e on machine per e Access - Telnet ing bservation and vi	form a	dding a		_		
RGPV WING)	вно	(DIPL	ОМА	OBE CURRIC	Т-3	Sheet No. 4/5					
Branch	Info	ormatio	n Tecl	hnology		Seme	ester	VI			
Course Code				Course Network Administration and Hardway Name Maintenance							
Course C	Outco	ome -	Ident of PC	ify and handli	Teac h Hrs	Mark s					
Learning 9	Out	tcome	Expla	in motherboard	i			6	10		
Contents			√	Interface Port: HDMI, Audio, Et	ith CPU's, CPU So I/O Ports (PS/2)	, Seria	l, Paral	lel, US	SB, VGA,		
Method Assessme	ent	of	Exterr	nal: End semeste	r theory examina	tion (Pe	en pape	er test)			
Learning Outcome Explain SMPS, Personal Computer Cabinets & 6 1 Protection							10				
Contents	 Switched Mode Power Supply: ✓ Block diagram, working principles, power rating Requirement of SMPS wattage depending parameters I processor, HDDs used SMPS Vs UPS Various types of cabinets of PC Gaming PCs Server cabinets: Rack mount and blade servers Protection of PC hardware: 							ters like			

			✓ ✓	Anti static wrist protection and							
Method Assessme	ent	of	Intern	nal: Mid semester	theory examina	tion (F	Pen paper	test).			
Learning 11	Outco	ome	Expla	in Central Proc	essing Unit			6	10		
Contents			Pr ✓ CF Ca	ocessor Specifica ocessor over cloo PU Packaging – arrier Package. PU Family: Intel,	cking DIP, PGA, SPG						
Method Assessme	ent	of	Exterr	nal: End semeste	r theory examina	ation (Pen pape	r test).			
Learning 12	Outco	ome	Ident	tify test and tro	ubleshoot PC C	Compo	nent	12	10		
Contents			PC Ca displa	fy, testing and tabinets like SMP y connector, Chi Cooling fan)	S, Motherboard(ATX n	notherboa	rd, co	nnector,		
Method Assessme	ent	of	Exterr	nal: Laboratory o	bservation and v	iva vo	ce				
RGPV WING)			ОМА	MA OBE CURRICULUM FOR THE FORMAT COURSE					Sheet No. 5/5		
Branch	Inform	matic	on Tecl	hnology		Sen	ester	VI			
Course Code				Course Name	Network Adm Maintenance	ninisti	ation a	nd Ha	rdware		
Course C	utcom	ie –	Identification and maintenance of computer components						Mark s		
Learning 13	_			Explain memory component of computer 6 10							
Contents Me				ory: ROM: PROM, EF RAM: SRAM, [•	DDR2	, DDR3,	DDR4,	VRAM,		

	✓ External memory: Online Cloud Storage (like G)	 ✓ Virtual memory ✓ HDD, SSD and its interface: IDE, SATA, e-SATA ✓ External memory: Online Cloud Storage (like Google drive) ✓ HDD controllers: Introduction, SCSI controllers and RAID 							
Method of Assessment	External: End semester theory examination (Pen paper	er test).							
Learning Outcome 14	Explain BIOS and CMOS	5	10						
Contents	,	 ✓ Introduction, Dual BIOS Feature, Booting Sequence/Bootonger, Firmware upgrade, BIOS Functions, Cold & Warr Booting, BIOS Error Codes, BIOS Interrupts CMOS: ✓ Introduction, CMOS Battery rating 							
Method of Assessment									
Learning Outcome 15	Apply troubleshooting and maintenance 14 10 activities for PC								
Contents	 Identification of components and assembling of PC Perform BIOS/CMOS Setup Troubleshooting Activities ✓ Battery replacement on motherboard in case retaining correct values ✓ Error Codes- Beep Codes, Post Codes ✓ Troubleshoot common video and display issues Maintenance Activity ✓ Back Up, Disk Clean Up, Disk Defragment Settings Transfer Wizard, Scheduled Tasks, Statings Transfer Wizard, Sched	e BIOS ter, File Security nory m	es and Centre odules,						
Method of Assessment	External: Laboratory observation and viva voce								

NOTE: *"available" means latest tools / technology, since tools name mentioned as per current industry trends that may get change over course of time hence faculties are not restricted to teach or follow tools as mentioned, faculties can have their option with change of tool technology

REFERENCE BOOKS:

S No	Title & Publication	Author
1	TCP/IP Protocol Suite, TMH	Forouzan
2	Principles of Network & System Administration, 2 nd Edition, Wiley Publication	Mark Burgess
3.	Network Management Concept and Practice, PHI	J.Richard Burkey,
4.	Computer Hardware: Installation, Interfacing, Troubleshooting and Maintenance, PHI	K.L. James
5.	https://wordwall.net/resource/245409/computing/motherboard	Web resource
6.	https://wordwall.net/resource/139563/computing/computer-motherboard	Web resource
7.	https://oli.cmu.edu/courses/pc-hardware-open-free/	Web resource
8.	https://www.javatpoint.com	Web resource
9.	https://www.putty.org/	Web resource
10.	https://www.zabbix.com/network_monitoring	Network Monitoring tool
11.	E-books/E-tools/Relevant software to be used as recommended by AICTE/RGPV	

RO	GPV (Diplo	na Wing) Bhopal	SCHEME FOR		Branch Co	ode 4	Cours	se Co	Ahr	CO Code	LO Code	Form	nat No. 4
Course	Name	Network Administ	ration and Hardware	Maintenance							I		
CO De	scription	Make use of availa	ble techniques and res	sources required	for network se	erver ad	lministra	tion					
LO Des	scription	Explain client serv	er system										
				SCHEME O	F STUDY								
S. No.		Learning Con	tent	Teaching – Learning Method	Descripti Pro	ion of T	`-I,	eac 1 rs.	Pract. /Tut Hrs.	LF	Rs Requi	red	Remarks
1	 Network Administration: Definition, Features, Need Network Server: Definition, Types Network Operating System: Features, Types, NOS Software Virtual Network: Concept & Features 		Interactive classroom teaching, demonstration, quiz, assignments, tutorial	the content provide ha students. T conduct as quiz/tutoria students pr	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.		6	NIL	Handouts, chalk board, PPT, text book, charts, video film.		ext		
	ı		;	SCHEME OF A	SSESSMENT								
S. No.	Metho	d of Assessment	Description of A	ssessment	Maximum Marks		Res	our	ces Requi	red			aternal /
1		semester theory xamination	Pen Paper	Γest	10	Question paper + Rating scale			Е	xternal			
			ADDITIONAL INSTI	RUCTIONS FO	R THE HOD/ I	FACUL	TY (IF A	NY)				
				NII									

RG	PV (Diplo	ma Wing) Bhopal	ME FOR LEARN	ING I	Branch Code		Course C	ode	CO Code	LO Code	Format No. 4
	. (1		OUTCOME	I	0	4			1	2	
Course	Name	Network Administration and H	ardware Mainten	ance			'		'		'
CO Des	cription	Make use of available techniqu	es and resources r	equired for	network	server ad	lministratio	n			
LO Des	cription	Outline Windows NT network	lomain terminolo	gies							
			SCHI	EME OF ST	UDY						
S. No.		Learning Content	Teaching – Learning Method	Descriptio Proc		Teacl Hrs.	/ / Tint		LRs Req	uired	Remarks
1	• Doma	in Controller : Concept & Types	Interactive	Teacher wi	ll explair	n 7	NIL	Har	ndouts, ch	alk	
	Controlling Access: User Account & Right		classroom	the contents					rd, PPT, t		
	• Netwy	ork Browser Services Concer	teaching,	provide har	douts to			boo	k, charts,	video	

students. Teacher

quiz/tutorial to make students practice their knowledge.

will conduct

assignments/

film.

demonstratio

assignments,

n, quiz,

tutorial

• Network Browser Service: Concept,

• Overview of network terminologies :

Browser Announcement and Request

NetBIOS , Telnet Vs SSH, WLAN

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Mid semester theory examination (Pen paper test).	Pen Paper Test	10	Test Paper + rating scale	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RG	SPV (Diplo	oma Wing) Bhopal		CHEME FOR LEARNING OUTCOME		Branch Code		Course Co	ah	CO Lo	ormat No. 4
		g) -I	OUTCOM			0	4			1 3	
Course	Name	Network Administrati	on and Hardware Ma	intenance				<u> </u>		·	
CO Des	cription	Make use of available	techniques and resou	rces require	d for net	work	server a	dministration			
LO Des	cription	Make use of server op	erating system to assig	gn administı	ration ro	les fo	r server	in network.			
		<u>'</u>		SCHEME O	F STUD	Y					
S. No.	To. Learning Content		Teaching – Learning Method	Descript Pr	tion of T ocess	-L	Teach Hrs.	Pract. /Tut Hrs.	LRs I	Required	Remarks
1	✓ B ✓ A	l latest Window Ser ating System uild Domain Controller dd Active Directory Dom ervices erver Roles etc. of recent remote acc	classroom teaching, demonstration, quiz, assignments, tutorial	Teacher we demonstrate component the lab to students we provide quassignment teacher we demonstrate the students which is the students which is the students with the students	ate major nts inside students, will pract uiz, nt etc.,	ice,	NIL	8			

remedial and

tutorials.

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Lab Observation/Assignment	Student will be asked about server role and asked to perform task of remote service.	10	Observation schedule/check-list /rating scales /rubrics	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

Faculties install latest server operating system and demonstrate different role for server to students

software features like TeamViewer

RG	PV (Diplo)	na Wing) Bhopal		IE FOR LEAR	NING	Br	anch (Code	C	ourse Co	de	CO Code	LO Code	Format No. 4
110	(2 · pio	, ing / Enopur		OUTCOME		I	0	4				2	4	
Course	Name	Network Adminis	tration and Ha	rdware Mainte	nance									
CO Des	cription	Develop Client / S	erver network	by configuring	protoco	ols								
LO Des	cription	Explain DHCP an	d DNS											
				SCH	IEME O	F STU	DY							
S. No.		Learning Conte	ıt	Teaching – Learning Method	Descri	ption o		Tea Hr		Pract. /Tut Hrs.		LRs Req	uired	Remarks
1	 DHCP: Concept, component, working process Comparison with RARP & BOOTP DNS: Concept, working process Comparison with WINS 		Interactive classroom teaching, demonstratio n, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.			6	6 NIL		boo	Handouts, chalk board, PPT, text book, charts, video film.			
				SCHEM	IE OF A	SSESS	MENT	1						
S. No.	Metho	d of Assessment	Descripti	on of Assessme	nt		imum arks			Resourc	es Rec	quired		External / Internal
1		emester theory xamination	Pen	Paper Test			10		Que	estion pa	per + r	ating scal	e	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY) NIL

RGPV (Diplo	ma Wing) Bhopal	SCHEME FOR LEARNING	В	ranch	Code	Course Code	CO Code	LO Code	Format No. 4
	8/ 1	OUTCOME	I	0	4		2	5	
Course Name	Network Administra	ntion and Hardware Maintenance							
CO Description	Develop Client / Serv	ver network by configuring protoco	ols						
LO Description	Description Build small Client Server network								
	COHEME			IDX					

SCHEME OF STUDY

S. No.	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	 Design a small network by configure router, TCP/IP properties, IP address, subnet mask, default gateway statically on a Windows machine Configure and verify NTP/NTS operating in a client/server mode Configure DHCP (Dynamic Host Configuration Protocol). Configure DNS (Domain Name System). 	Interactive lab classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will demonstrate major components inside the lab to students, students will practice, provide quiz, assignment etc., teacher will conduct remedial and tutorials.	NIL	12	Handouts, chalk board, PPT, text book, charts, video film.	

SCHEME OF ASSESSMENT

		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Lab Observation/Assignment	Student asked to design small network	10	Observation schedule/check-list /rating scales /rubrics	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

- Faculties are instructed to construct small client server based network with router / switches and making one system as server for administration purpose and configure DHCP and DNS as per selected role
- Faculties may use simulation tools also to demonstrate the Client Server network

RG	RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNIN	NG Br	anch (Code	Cou	ırse Co	ode	CO Code	LO Code	Format No. 4	
RO	I (Dipioi	ina ((ing) bhopar	OUTCOME	I	0	4				3	6	1 01 mat 1 (0) 1
Course	Name	Network Administr	ation and Hardware Maintena	nce								
CO Des	cription	Identify strategies t	o perform administrative activi	ties in Clien	t Serve	er Netwo	ork					
LO Des	cription	Explain Remoteboo	ot process									
			SCHEM	ME OF STU	DY							
S. No.	I	Learning Content	Teaching –Learning Method	Descrip P	tion o	f T-L	Tea Hr		Pract. Fut Hrs.	LR	s Require	ed Remarks
I	Remoteboot:		Interactive classroom teaching, demonstration, quiz, assignments, tutorial	contents and handouts to Teacher wil assignments	er will explain the ts and provide ats to students. er will conduct ments/ quiz/tutorial e students practice nowledge.						douts, cha d, PPT, te c, charts, o film.	
			SCHEME (OF ASSESS	MENT	Γ		<u>'</u>		·		<u> </u>
S. No.	Metho	d of Assessment	Description of Assessment		imum ırks		R	Resourc	es Requ	iired		External / Internal
1		semester theory xamination	Pen Paper Test	-	0		Quest	tion par	per + rat	ing scal	e	External
		A	DDITIONAL INSTRUCTION	S FOR THE	HOD	/ FACUI	LTY (II	F ANY)			
				NIL								

RG	PV (Dinlor	na Wing) Bhopal		FOR LEARNING	Bra	nch C	ode	Course C	ode	CO Code	LO Code	Forr	nat No. 4
RO	ii (Dipioi	na (ting) bhopai	O	UTCOME	I	0	4			3	7		11101
Course	Name	Network Administ	ration and Hard	ware Maintenance				1					
CO Des	scription	Identify strategies	to perform adm	inistrative activities i	n Client	Server	Netw	ork					
LO Des	cription	Outline various tro	oubleshooting to	ols and strategies									
				SCHEME O	F STUE	ΟY							
S. No.		Learning Conter	ıt	Teaching — Learning Method		ption o Process		Teach Hrs.	Prac /Tut H		Rs Requ	ired	Remark
1	✓ Ov ✓ Ne • TCP/II ✓ ipo ✓ Ad ✓ IP Ad Me	ork Troubleshooting: Verview Led P Diagnostic Utilities: Lonfig, ping Idress and name resolution Routing: The Route Idress, Netmask, Garetric, Load Balancinckup her Troubleshooting:	Table, Network teway Address, ng and Route	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teache explain and pro- handou student will co assignr quiz/tu make s practic knowle	n the co ovide its to ts. Teac induct ments/ itorial to tudents e their	cher	6	NIL	cl P cl	landouts, halk board PT, text b harts, vide lm.	ook,	
				SCHEME OF A	SSESSN	MENT				·			
S. No.	Metho	d of Assessment	Description	of Assessment	Maxi Ma	-		Resour	ces Requ	uired			xternal / nternal
1		emester theory xamination	Pen P	aper Test	1	0		Question pa	nper + rat	ting scal	le	E	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)
NIL

RO	GPV (Din	loma Wing) Bhopal	SCHEME FOR LEARNI	NG	Br	anch (Code	Cou	irse Code	CO Code	LO Code	Forn	nat No. 4
110	31 , (2.p	omu ((mg) znopur	OUTCOME		I	0	4			3	8		
Course	Name	Network Admini	stration and Hardware Maintena	nce					'	'			
CO De	scription	Identify strategie	s to perform administrative activ	ities i	n Clien	t Serv	er Netw	ork					
LO De	scription	Apply network to	oubleshooting activities										
			SCHE	ME O	F STU	DY							
S. No.		Learnin	g Content	L	aching earning Aethod	3		ption of Process	Teach Hrs.	Pract. /Tut Hrs.		Rs uired	Remark s
1	 Iden Test Trou Test Disp Nets Setti the F delet Cont 	tify the TCP/IP Config Connection to the TCP bleshoot NetBIOS nan IP-address-to-MAC-ad lay current TCP/IP Co tat ng Up and Starting the	ble network monitoring tool. uration by Using ipconfig P/IP Network by Using Ping ne resolution by Using NBTStat Idress Resolution by Using ARP nnections and Statistics by Using Remoteboot Service Installing machine perform adding and s - Telnet & SSH	classi teach demo quiz,	ing, onstration	on,	students students practice quiz, ass etc., tea	trate ents ne lab to s, s will , provide signment cher will remedia		14	Hand chalk board PPT, book, charts video	text	
			SCHEME	OF A		MEN'						F-	ternal /
S. No.	Met	hod of Assessment	Description of Assessment			arks		R	esources R	Required			iternal
1	L	aboratory test by observation	Laboratory observation and viva	voce		10	О	bservatio	on schedule scales /ru	/check-list / brics	rating	Е	xternal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

Faculty installs available network monitoring tools on server machine and configures client system. (https://www.zabbix.com/network_monitoring)

RG	PV (Diplo	ma Wing) Bhopal		R LEARNING	Bı	anch (Code	Co	Course Code		CO Code	LO Code	Format No. 4	
	· (F	g) 17.	OUT	COME	I	0	4				4	9		
Course	Name	Network Administrati	on and Hardwai	e Maintenance		1								
CO Des	Description Identify and handling of internal con			onents of PC										
LO Des	cription	Explain motherboard												
				SCHEME OF	STU	DY								
S. No.		Learning Content		Teaching – Learning Method			ption of Process	T-L	Teach Hrs.		act. t Hrs.	LRs Require	Remark	
1	Motherbo	ard:		Interactive			will exp	lain	6			Handouts,		
	✓ De	efinition, Architecture		classroom teaching			ents and					chalk boar	d,	
		ompatibility with CPU's,	CPU Sockets.	demonstration,			handouts					PPT, text		
	Chipset, FSB, BSB		quiz, assignments,			Teache					book, char	·		

tutorial

✓ Interface Port: I/O Ports (PS/2, Serial,

✓ Form factors & Power supplies - AT, ATX, LPX & NLX, Voltage & Signal Lines

Ethernet)

Parallel, USB, VGA, HDMI, Audio,

conduct assignments/

quiz/tutorial to make

students practice their

knowledge.

video film.

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	End semester theory examination	Pen Paper Test	10	Question paper + rating scale	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diplo	ma Wing) Bhopal	opal SCHEME FOR LEARNING OUTCOME I		Branch Code			Course Code		Code	LO Code	Format No. 4	
	87 1			0	4				4	10		
Course Name	Network Administra	tion and Hardware Maintenance										
CO Description	Identify and handlin	g of internal components of PC										
LO Description	v G I											
	1	SCHEME O	F STI	JDY								

	SCHEME OF STODI													
S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks							
1	 Switched Mode Power Supply: ✓ Block diagram, working principles, power rating ✓ Requirement of SMPS wattage depending parameters like processor, HDDs used ✓ SMPS Vs UPS Various types of cabinets of PC ✓ Gaming PCs ✓ Server cabinets: Rack mount and blade servers Protection of PC hardware: ✓ Anti static wrist band ✓ protection and safety devices 	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.	6	NIL	Handouts, chalk board, PPT, text book, charts, video film.								

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Quiz/ Short Answer type questions	Pen Paper / Quiz	10	Pen paper test + rating scale	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RG	GPV (Diplon	na Wing) Bhopal		R LEARNING	Br	anch Co	de C	ourse Co	ode	CO Code	LO Code	Format No.
	` •	•	0010	OUTCOME		0	4				11	
Course	Name	Network Administr	ation and Hardwa	re Maintenance								
CO Des	scription	Identify and handli	ng of internal com	onents of PC								
LO Des	scription	Explain Central Pr	ocessing Unit									
				SCHEME O	F STU	DY						
S. No.	Le	earning Content	Teaching – Learning Method	Description of Process	f T-L	Teach Hrs.	Pract. /Tut Hrs	. LI	Rs Req	quired		Remarks
1	 Processor Specification – Clock Speed, FSB, L1, L2 & L3 cache, Processor over clocking CPU Packaging – DIP, PGA, SPGA, MCM, LCC, PLCC & Tape Carrier Package. CPU Family: Intel, AMD 		teaching, demonstration, quiz, assignments,	the contents and provide handouts to students. Teacher we conduct assignment		6	NIL		outs, ch text boo film.	·		
				SCHEME OF A	SSESS	MENT						
S. No.	Method	l of Assessment	Description of A	Assessment		imum arks	Resources R			equired		External / Internal
1	End semester theory examination		Pen Paper	Pen Paper Test		10	Question paper + ratio			ating scal	e	External
		Al	DITIONAL INST	RUCTIONS FO	R THE	HOD/ F	ACULTY	(IF ANY))			1
				NI				<u>^</u>				

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		ranch (Code	Course	Course Code		LO Code	Format No. 4
				0	4			4	12	
Course Name	Network Administration and Hardware Maintenance									
CO Description	Identify and handlin	g of internal components of PC								
LO Description	iption Identify test and troubleshoot PC Component									
		COMPLE	E CEL	TD T 7						

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Identify, testing and troubleshooting of internal components in the PC Cabinets like SMPS, Motherboard(ATX motherboard, connector, display connector, Chipset, Expansion Slots (PCI, AGP),memory slot, CPU, Cooling fan)	Interactive lab classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will demonstrate major components inside the lab to students, students will practice, provide quiz, assignment etc., teacher will conduct remedial and tutorials.	NIL	12	Handouts, chalk board, PPT, text book, charts, video film.	

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Laboratory observation and viva voce.	Student asked to identify and troubleshoot method about internal component of computers	10	Observation schedule/check-list /rating scales /rubrics	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

Faculty may visit some web resources https://wordwall.net/resource/139563/computing/computer-motherboard or https://wordwall.net/resource/245409/computing/motherboard

RC	RGPV (Dinloma Wing) Rhonal		OR LEARNING	Branch (Code	Course Code		CO Code		ormat No. 4				
		8/ 1	CCOME	I 0	4			5	13					
Course	Name	Network Administr	ation and Hardw	are Maintenance			·	· · · · · · · · · · · · · · · · · · ·						
CO Des	scription	Identification and n	naintenance of co	mputer components										
LO Des	scription	Explain memory co	emponent of comp	outer										
				SCHEME OF	STUDY									
S. No.		Learning Conten	nt	Teaching – Learning Method		tion of T-	Teach Hrs.	Prace /Tut H		Rs Required	Remarks			
1	✓ RA DD SIN ✓ Vir ✓ HD e-S ✓ Ext (lik ✓ HD	M: PROM, EPROM, EM: SRAM, DRAM, SPR3, DDR4, VRAM, MM, DIMM tual memory DD, SSD and its interfactorial memory: Online Google drive) DD controllers: Introllers and RAI quirement and Configur	SDRAM, DDR2, Memory Package: ace: IDE, SATA, e Cloud Storage oduction, SCSI ID controllers,	Interactive classroom teaching, demonstration, quiz assignments, tutorial	Teacher very explain the	he and andouts ts. will ents/ rial to dents their	6	NIL	ch Pl ch	andouts, nalk board, PT, text book narts, video lm.	,			

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required		
1	End semester theory examination	Pen Paper Test	10	Question paper + rating scale	External	

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RG	SPV (Diplor	na Wing) Bhopal	SCHEME FOR L		Br	anch (Code	Course	Code	CO Code	LO Code	Format No. 4
	\ 1	8/ 1	OUTCON	AE	I	0	4			5	14	
Course	Name	Network Administ	Administration and Hardware Maintenance									
CO Des	scription	Identification and	maintenance of compute	er components	S							
LO Des	scription	Explain BIOS and	CMOS									
				SCHEME O	F STU	DΥ						
S. No.	Lea	rning Content	Teaching –Learning Method	Description Proce			Teach Hrs.	Pract. /Tut Hrs.	LRs	Require	d	Remarks
1	BIOS Feature, Booting Sequence/Boot Order,		Interactive classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.		11 5/	5	NIL	Handouts, chalk board, PPT, text book, charts, video film.		t	
			SC	HEME OF A	SSESS	MENT	Γ					
S. No.	Metho	d of Assessment	Description of Asse	essment		imum ırks		Resou	irces Re	quired		External / Internal
1		Quiz/ Short Answer type questions Pen Paper / Qu		niz 10				Pen pape	r test + ra	+ rating scale		Internal
	1		ADDITIONAL INSTRU	CTIONS FO	R THE	HOD	/ FACU	JLTY (IF AN	NY)			
				NII								

RGPV (Diplo	ma Wing) Bhopal	SCHEME FOR LEARNING		Branch Code			Course Code		LO Code	Format No. 4	
Tion (Dipromise (Mag) Emopin		OUTCOME		0	4			5	15		
Course Name	e Network Administration and Hardware Maintenance										
CO Description	Identification and m	aintenance of computer component	8								
LO Description	iption Apply troubleshooting and maintenance activities for PC										
		SCHEME O	F STU	DY							

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	 Identification of components and assembling of PC Perform BIOS/CMOS Setup Troubleshooting Activities: Battery replacement on motherboard in case BIOS is not retaining correct values Error Codes- Beep Codes, Post Codes Troubleshoot common video and display issues Maintenance Activity: Back Up, Disk Clean Up, Disk Defragmenter, Files and Settings Transfer Wizard, Scheduled Tasks, Security Centre System Information, System Restore, Memory modules, 	Interactive lab classroom teaching, demonstratio n, quiz, assignments, tutorial	Teacher will demonstrate major components inside the lab to students, students will practice, provide quiz, assignment etc., teacher will conduct remedial and tutorials.	NIL	14	Handouts, chalk board, PPT, text book, charts, Computer	
	memory slots, Hard Disc Drives, CDROM/DVD/Blue-Ray Disc. CDROM, DVD lens cleaning or replacement						

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Laboratory test by observation	Laboratory observation and viva voce	10	Observation schedule/check-list /rating scales /rubrics	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

Faculties demonstrate the maintenance activities of PC , windows operating system , faculties may use simulation technique to do the same