

COMPUTER ORGANISATION AND OPERATING SYSTEM (Theory)

Total Marks: 50 Marks

Sr. No.	Topic	Sub Topic	Periods	Marks	Remarks
1	Networking Concepts	1. Computer Network 1.1 What is Computer Network 1.2 Uses of Computer Network 1.3 Advantages, characteristics of Network. 1.4 What is data transmission 2. Types of Networks (Basic information) 2.1 LAN 2.2 MAN 2.3 WAN 2.4 Wired network 2.5 Wireless network 3. Topologies 3.1 Physical 3.2 Logical 3.3 Linear bus 3.4 Ring 3.5 Star 3.6 Hybrid Topologies 3.7 Mesh Topologies	15	25	Makes the students aware of the networking hardware and design used in big companies
2	Network Basics	4. Servers 4.1 What are Servers? 4.2 Different types of servers 4.2.1 Dedicated 4.2.2 Non dedicated 4.2.3 File servers 4.2.4 Mail servers 4.2.5 Print servers	20	10	Gives knowledge regarding different types of network servers

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		<p>4.2.6 Web servers</p> <p>5. Workstations</p> <p>5.1 Clients</p> <p>5.2 Nodes</p> <p>6. Client Server Architecture</p> <p>6.1 Domains</p> <p>6.2 Workgroup</p> <p>7. Peer to Peer Network</p> <p>8. Internet & Intranets</p> <p>8.1 EDI</p>			
3	Network Components	<p>9. Cables(give basic definitions)</p> <p>9.1 Classification of Cables</p> <p>9.2 Types of Cables</p> <p>9.2.1 Coaxial Cable</p> <p>9.2.2 Twisted pair Cable</p> <p>9.2.3 Fibre Optic Cable</p> <p>10 Hubs, Repeaters, Switches</p> <p>11 NIC, Ethernet Cards</p> <p>12 Connectors- BNC, RJ-11, RJ-45, fibre, line drivers</p> <p>13 Gateways, Routers, Bridges</p>	15	10	Is necessary to know the different network devices
4	Linux System	<p>14 Linux System (Basic knowledge)</p> <p>14.1 Linux introduction and file system- Basic features, basic architecture of Linux system.</p> <p>14.2 Commands for files & directories: cd, ls, cp, rm, md, mkdir, rmdir, more, less.</p> <p>14.3 Creating and viewing files Using cat, touch File Comparisons.</p> <p>10.4 Disk related commands: Checking disk free spaces.</p>	15	5	Most widely used operating system in networking and also for standalone machines freely available.

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COMPUTER ORGANISATION AND OPERATING SYSTEM (Practicals)

Total Marks: 100 Marks

1. Identifying switch, connector, modem, types of printers, scanner, parts of CPU and other devices of the systems.
2. Sketching of co-axial cable, twisted pair, fiber- optic cables, BNC, RJ-11, RJ-45.
3. **Internet:**
 - Getting connected to internet, creating mail account, logging to the mail account, checking mails, composing mails, sending & receiving mails, attachments, spam mails, maintaining address book and signature files.
 - Personalized webpages, GPRS, Wikipedia searching.
 - Downloading chat
4. IP address of the system (formation and need of it)
5. **Linux :**
 - Installation of Linux Operating System(just showing for demonstration purpose)
 - Login and Logout
 - Practicing basic Linux commands with its option –cd, cal, date, ls, cat
 - Practicing redirection commands
 - Access controls: logging and logging out.
 - File management commands: touch, cat, mv, cp, rm
 - Directory commands: ls, pwd, mkdir, cd, rmdir

Practical marks distribution:

- 20 Marks internal (Files, Journals)
 - 80 Marks practicals

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DESIGN OF QUESTION PAPER
Final Exam
CLASS: XII Computer Technique
SUBJECT: Computer Organization and Operating Systems

Time: 2 hrs.Max. Marks: 50

The weightage or the distribution of marks over different dimensions of the question paper shall be as follows:

1. Weightage to Learning Outcomes

Sr. No.	Learning Outcomes	Marks	Percentage of Marks
1.	Knowledge	8	16 %
2.	Understanding	12	24 %
3.	Application	13	26 %
4.	Skill	17	34 %

2. Weightage to Content/Subject Units

Sr. No.	Units	Marks	Percentage
1	Networking Concepts	25	50 %
2	Network Basics	10	20 %
3	Network Components	10	20 %
4	Linux System Basics	5	10 %

3. Weightage to form of questions

Sr. No.	Form of questions	Marks for each questions	No. of questions	Total Marks	Percentage
1	Very Short Answer Type(VSA)	1 mark	30	30	60 %
2	Short	2 mark	10	20	40 %

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	Answer Type(SA-I)				
	Short Answer Type(SA-II)				
3	Long Answer Type(LA)				
	Total		40	50	100 %

The expected time for different types of question would be as follows:

Sr. No.	Form of questions	Approx. Time for each question in mins(t)	No. of questions(n)	Approx. Time for each form of question in mins(n * t)
1	Long Answer Type(LA)			
2	Short Answer Type(SA-I)	5 min	10	50
3	Short Answer Type(SA-II)			
4	Very Short Answer Type(VSA)	2 min	30	60
	Total		36	111

As the total time is calculated on the basis of the number of questions required and the length of their anticipated answers, it would, therefore, be advisable for the candidates to budget their time properly by cutting out the superfluous words and be within the expected time limits.

4. Scheme of Options

There will be no overall choice. However, there is an internal choice in three (3) questions of 4 marks category.

5. Weightage to Difficulty level of questions:

Sr. No.	Level of difficulty	No. of quest	Marks	Percentage
1	Easy	28	28	56 %
2	Average	5	10	20 %
3	Difficult	3	12	24 %

A question may vary in difficulty level from individual to individual. As such, the Assessment in respect of each question will be made by the paper setter on the basis of general anticipation from the group as a whole taking the examination. This provision is only to make the paper balanced in weightage, rather than to determine the pattern of marking at any stage.

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BLUE –PRINT OF QUESTION PAPER

Objectives → ↓ Units	Knowledge				Understanding				Application				Skill				Total
	O	VS	SA	LA	O	VS	SA	LA	O	VS	SA	LA	O	VS	SA	LA	
1. Networking concepts	1(1)	1(1)	2(1)		1(2)		2(1)		1(4)	1(2)	2(2)		1(3)	1(2)	2(1)		25
2. Network Basics	1(1)	1(1)			1(1)	1(1)			1(1)			2(1)	1(1)		2(1)		10
3. Network Components	1(1)				1(1)		2(1)		1(1)	1(2)	2(1)		1(1)				10
4. Linux System Basics	1(1)	1(1)			1(1)								1(1)	1(1)			5
Total	1(4)	1(3)	2(1)		1(5)	1(1)	2(2)		1(6)	1(4)	2(3)	2(1)	1(6)	1(3)	2(2)		50

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Note: Figures within brackets indicate the number of question and figures outside the brackets indicate marks. For example 4(2).

*Indicates option