	<b>CAPITAL SCHOOL OF ENGINEERING</b>	
<b>PLOT NO. 1288, MAHATAPALLA, BAJAPUR, KHURDA, PIN-752060</b>		
<b>Session: 2023-2024</b>		
<b>Course Name: DIPLOMA</b>	<b>Branch Name: COMPUTER SCIENCE</b>	
<b>Subject Name: Th.2 :Data Communication and Computer Network</b>	<b>Theory/Practical: Theory</b>	
<b>Section: A</b>	<b>Teacher Name: ASWINI KUMAR POTHAL</b>	
<b>Semester: 4</b>		

Credit '4' External Evaluation(Marked) '80' Internal Evaluation(Marked) '20'

**Text Books:**

Sl.No	Text Books
1	Data Communication & Computer Networks By W.Stallings

**Reference books:**

Sl.No	Reference books
1	Introduction to Comp. Network By M.Bhatia
2	Data Communication & Network By Forouzen

**Course Outcomes:**

Sl.No	Course Outcomes
1	Know the concepts of Data Communication, networking, protocols, and networking models
2	Know the various transmission Medias
3	Understand the concepts of switching
4	Understand Various Error detection and correction methods

5	Know about data flow and error control, Learn the concepts of wired LANs and Ethernet, Know the concepts of network layer, logical addressing, IP, Forwarding and routing
6	Know about data link control, Understand brief concept on TCP/IP, Understand multiple access, Compare various connecting devices

SL No.	Lecture No.	Module/Unit No.	Topic To Be Taught	Cos	Reference Material Links
1	1	I	Network & Protocol	Cos 1	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
2	2	I	Data Communication	Cos 1	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
3	3	I	Networks	Cos 1	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
4	4	I	Protocol	Cos 1	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
5	5	I	Standards Protocol	Cos 1	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
6	6	I	Architecture of Protocol	Cos 1	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
7	7	I	OSI Model	Cos 1	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
8	8	I	TCP/IP Model	Cos 1	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>

9	9	II	Data Transmission & Media	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
10	10	II	Data transmission Concepts	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
11	11	II	Data transmission Con Terminology	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
12	12	II	Analog Data transmission	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
13	13	II	Digital Data transmission	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
14	14	II	Transmission impairments	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
15	15	II	Channel capacity	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
16	16	II	Transmission media	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
17	17	II	Guided Transmission	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
18	18	II	Wireless Transmission	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>

19	19	I	Class Test-I	Cos 1	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
20	20	I	Assignment	Cos 1	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
21	21	II	Class Test-II	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
22	22	II	Assignment	Cos 2	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
23	23	III	Data encoding	Cos 3	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
24	24	III	Digital data digital signals	Cos 3	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
25	25	III	Digital data analog signals	Cos 3	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
26	26	III	Analog data digital signals	Cos 3	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
27	27	III	Analog data analog signals	Cos 3	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
28	28	III	Class Test-III	Cos 3	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>

29	29	III	Assignment_III	Cos 3	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
30	30	IV	Data Communication & Data link control	Cos 4	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
31	31	IV	Asynchronous and Synchronous Transmission	Cos 4	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
32	32	IV	Error Detection	Cos 4	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
33	33	IV	Line configuration	Cos 4	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
34	34	IV	Flow Control	Cos 4	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
35	35	IV	Error Control	Cos 4	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
36	36	IV	Multiplexing	Cos 4	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
37	37	IV	FDM synchronous TDM	Cos 4	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
38	38	IV	Statistical TDM	Cos 4	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>



39	39	IV	Assignment-IV	Cos 4	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
40	40	IV	Class Test-IV	Cos 4	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
41	41	V	Switching & Routing	Cos 5	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
42	42	V	Circuit Switching networks	Cos 5	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
43	43	V	Packet Switching principles 4.3 X.25	Cos 5	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
44	44	V	Routing in Packet switching Congestion	Cos 5	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
45	45	V	Effects of congestion	Cos 5	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
46	46	V	congestion control	Cos 5	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
47	47	V	Traffic Management	Cos 5	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
48	48	V	Congestion Control in Packet Switching Network	Cos 5	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>

49	49	V	Class Test-V	Cos 5	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
50	50	V	Assignment-V	Cos 5	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
51	51	VI	LAN Technology	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
52	52	VI	Topology and Transmission Media	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
53	53	VI	LAN protocol architecture	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
54	54	VI	Medium Access control	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
55	55	VI	Bridges, Hub, Switch Ethernet (CSMA/CD), Fiber Channel Wireless LAN Technology	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
56	56	VI	Class Test-VI	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
57	57	VI	Assignment-VI	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
58	58	VI	TCP/IP Protocol Suite	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>

59	59	VI	Basic Protocol functions	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
60	60	VI	Principles of Internetworking	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
61	61	VI	Internet Protocol operations	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
62	62	VI	Class Test-VI	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>
63	63	VI	Assignment-VI	Cos 6	<a href="https://www.youtube.com/watch?v=F8foiRZeaSY">https://www.youtube.com/watch?v=F8foiRZeaSY</a>

*A. S. S.*  
07-2-2024  
Signature of Faculty

*A. S. S.*  
HoD  
7/2/2024

*A. S. S.*  
Principal  
7/2/24







## CAPITAL SCHOOL OF ENGINEERING

PLOT NO. 1288, MAHATAPALLA, BAJAPUR, KHURDA, PIN-752060

Session: 2023-2024

Course Name: DIPLOMA	Branch Name: COMPUTER SCIENCE
Subject Name: Th.4 :Database Management System	Theory/Practical: Theory
Section: A	Teacher Name: PALLABI PRIYADARSHINI
Semester: 4	

Credit '04' External Evaluation(Marked) " Internal Evaluation(Marked) '20'

### Text Books:

Sl.No	Text Books
1	Database System Concepts,Rog,Cornel
2	An Introduction to Database Systems,C.J. Date

### Reference books:

Sl.No	Reference books
1	Data Base System,Prateek Bhatia
2	Database System Concepts, A. Silberschatz, H.F. Korth

### Course Outcomes:

Sl.No	Course Outcomes
1	Understand the database concepts, their benefits and advantages
2	Understand the concepts of E-R diagrams & E-R modeling
3	Comprehend the different aspects of SQL
4	Understand the concepts of normalization
5	Comprehend the concepts & techniques of backup & recovery of database
6	Understand how to maintain security and integrity in database.



1	1	I	Purpose of database Systems	Cos 1	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
2	2	I	Explain Data abstraction	Cos 1	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
3	3	I	Database users	Cos 1	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
4	4	I	Data definition language	Cos 1	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
5	5	I	REVISION	Cos 1	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
6	6	I	ASSIGNMENT-1	Cos 1	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
7	7	I	CLASS TEST-1	Cos 1	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
8	8	II	Data independence	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
9	9	II	Entity relationship models	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
10	10	II	Entity sets and Relationship	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
11	11	II	Explain Attributes	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
12	12	II	Mapping constraints	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
13	13	II	E-R Diagram	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
14	14	II	Relational model	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
15	15	II	Hierarchical model	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
16	16	II	Network model	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>

17	17	II	REVISION	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
18	18	II	ASSIGNMENT-2	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
19	19	II	CLASS TEST-2	Cos 2	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
20	20	III	Relational algebra	Cos 3	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
21	21	III	Different operators select, project, join , simple Examples	Cos 3	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
22	22	III	REVISION	Cos 3	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
23	23	III	ASSIGNMENT-3	Cos 3	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
24	24	III	CLASS TEST-3	Cos 3	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
25	25	IV	Functional Dependencies	Cos 4	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
26	26	IV	Lossless join	Cos 4	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
27	27	IV	importance of normalization	Cos 4	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
28	28	IV	Compare First second and third normal forms	Cos 4	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
29	29	IV	Explain BCNF	Cos 4	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
30	30	IV	REVISION	Cos 4	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
31	31	IV	ASSIGNMENT-44	Cos 4	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
32	32	IV	CLASS TEST-4	Cos 4	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>



33	33	V	Queries in SQL	Cos 5	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
34	34	V	Simple queries to create, update, insert in SQL	Cos 5	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
35	35	V	REVISION	Cos 5	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
36	36	V	ASSIGNMENT-5	Cos 5	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
37	37	V	CLASS TEST-5	Cos 5	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
38	38	VI	Transaction & system concept	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
39	39	VI	dea about transaction processing	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
40	40	VI	Desirable properties of transaction	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
41	41	VI	Schedules and recoverability	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
42	42	VI	REVISION	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
43	43	VI	ASSIGNMENT-6	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
44	44	VI	CLASS TEST-6	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
45	45	VII	Basic concepts	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
46	46	VII	Locks, Live Lock, Dead Lock	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
47	47	VII	Serializability	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
48	48	VII	Serializability	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>

49	49	VII	REVISION	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
50	50	VII	ASSIGNMENT-7	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
51	51	VII	CLASS TEST-7	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
52	52	VIII	Authorization and views	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
53	53	VIII	Authorization and views	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
54	54	VIII	Security constraints	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
55	55	VIII	Integrity Constraints	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
56	56	VIII	Discuss Encryption	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
57	57	VIII	REVISION	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
58	58	VIII	REVISION	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
59	59	VIII	ASSIGNMENT-8	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>
60	60	VIII	CLASS TEST-8	Cos 6	<a href="https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun">https://youtu.be/kBdIM6hNDAE?si=uT-TZiH74DT3Kbun</a>

*[Signature]*  
07/02/24  
Signature of Faculty

*[Signature]*  
HoD 7/1/2024

*[Signature]*  
Principal 7/1/24





<b>CAPITAL SCHOOL OF ENGINEERING</b>	
PLOT NO. 1288, MAHATAPALLA, BAJAPUR, KHURDA, PIN-752060	
Session: 2023-2024	
Course Name: DIPLOMA	Branch Name: COMPUTER SCIENCE
Subject Name: Th.1: Operating System	Theory/Practical: Theory
Section: A	Teacher Name: AMALENDU BAG
Semester: 4	

Credit '4' External Evaluation(Marked) '80' Internal Evaluation(Marked) '20'

**Text Books:**

Sl.No	Text Books
1	Operating System By Donovan
2	Operating System By Silverschz & Galvin
3	Operating Systems By P. Balakrishna Prasad

**Reference books:**

Sl.No	Reference books
1	Operating System By Er. Rajiv Chopra

**Course Outcomes:**

Sl.No	Course Outcomes
1	Understand the concept and function of operating system
2	Understand Concept of a process and all computation
3	To introduce the critical "section problem whose solutions can be used to ensure the consistency of the shared data
4	Understand the concept of deadlock, its avoidance prevention and recovery
5	To provide a detailed description of various memory management techniques, To describe the benefits of a virtual memory system



6	To explain the function of file system , To describe the details of implementing local file systems and directory structures,Und
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SL	Lecture No.	Module/Unit No.	Topic To Be Taught	Cos	Reference Material Links
1	1	I	Introduction To Operating System	Cos 1	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
2	2	I	Objectives Of Operating System	Cos 1	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
3	3	I	Functions of Operating System	Cos 1	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
4	4	I	Evolution of Operating system	Cos 1	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
5	5	I	Structure of operating system	Cos 1	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
6	6	I	Class Test-I	Cos 1	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
7	7	I	Assignment-I	Cos 1	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
8	8	II	Introduction to Process Management	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
9	9	II	Process concept	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
10	10	II	Introduction to process control	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
11	11	II	Interacting processes	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
12	12	II	Inter process messages	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
13	13	II	Implementation issues of Processes	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
14	14	II	Process scheduling	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>

15	15	II	Job Scheduling	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
16	16	II	Process Synchronization	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
17	17	II	semaphore	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
18	18	II	Principle of concurrency	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
19	19	II	Types of scheduling	Cos 2	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
20	20	III	Introduction to Memory Management	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
21	21	III	Memory allocation Techniques	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
22	22	III	Contiguous memory allocation	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
23	23	III	Non contiguous memory allocation	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
24	24	III	Swapping	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
25	25	III	Paging	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
26	26	III	Segmentation	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
27	27	III	Virtual Memory using paging	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
28	28	III	Demand paging	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
29	29	III	Page Fault handling	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
30	30	III	Class Test-III	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
31	31	III	Assignment-III	Cos 5	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>


32	32	IV	Introduction to Device Management	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
33	33	IV	Techniques for Device Management	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
34	34	IV	Dedicated Device	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
35	35	IV	Shared Device	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
36	36	IV	Virtual Device	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
37	37	IV	Device allocation considerations	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
38	38	IV	I/O traffic control	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
39	39	IV	I/O Schedule	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
40	40	IV	I/O Device handlers.	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
41	41	IV	Class Test-IV	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
42	42	IV	Assignment-IV	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
43	43	IV	SPOOLING	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
44	44	V	Introduction to Deadlock	Cos 4	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
45	45	V	Concept of deadlock	Cos 4	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
46	46	V	System Model	Cos 4	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
47	47	V	Dead Lock Detection	Cos 4	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
48	48	V	Resources allocation Graph	Cos 4	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>

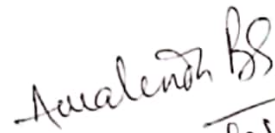


49	49	V	Methods of Deadlock handling	Cos 4	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
50	50	V	Recovery & Prevention	Cos 4	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
51	51	V	Bankers Algorithm & Safety Algorithm	Cos 4	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
52	52	V	Class Test-V	Cos 4	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
53	53	V	Assignment V	Cos 4	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
54	54	VI	Introduction to File Management	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
55	55	VI	File organization, Directory & file structure, sharing of files	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
56	56	VI	File access methods, file systems, reliability	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
57	57	VI	Allocation of disk space	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
58	58	VI	File protection	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
59	59	VI	secondary storage management	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
60	60	VI	Class Test-VI	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
61	61	VI	Assignment-VI	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
62	62	VII	Introduction to System Programming	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>
63	63	VII	Concept of system programming and show difference from Application Compiler: Compiler, functions of compiler	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAumfIA">https://www.youtube.com/watch?v=WJ-UaAumfIA</a>



64	64	VII	Compare compiler and interpreter. Seven phases of compiler, brief description of each phase	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
65	65	VII	Class Test-VII	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>
66	66	VII	Assignment-VII	Cos 6	<a href="https://www.youtube.com/watch?v=WJ-UaAaumNA">https://www.youtube.com/watch?v=WJ-UaAaumNA</a>

  
 Signature of Faculty 7/5/2024

  
 HoD 7/2/2024

  
 Principal 7/2/24

