

INFORMATION TECHNOLOGY DEPARTMENT

LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: Mrs. A. R. BRAHMA	Academic Year: 2019-20
Course No.: Th.2	Course Name: Data Communication & Computer Networking
Program: Diploma	Branch: IT
Year / Sem : II/ IV	Section:

Sl. No.	Period /Class	Time (min)	Unit	Topic to be covered	Teaching method
1.	1.	55	1	Data Communication	Chalk & Talk
2.	2.	55	1	Networks	Chalk & Talk
3.	3.	55	1	Protocol & Architecture,	Chalk & Talk
4.	4.	55	1	Standards	Chalk & Talk
5.	5.	55	1	OSI	PPT
6.	6.	55	1	TCP/IP	PPT
7.	7.	55	1	Revision of Chapter 1	Questionnaires
8.	8.	55	1	Revision of Unit / Class -1	Quiz
9.	9.	55	2	Data transmission Concepts and Terminology	PPT
10.	10.	55	2	Analog and Digital Data transmission	PPT
11.	11.	55	2	Transmission impairments, Channel capacity	Chalk & Talk
12.	12.	55	2	Transmission media, Guided Transmission, Wireless Transmission	PPT
13.	13.	55	2	Revision of Chapter 2	Questionnaires
14.	14.		2	Revision of Unit / Class -2	Quiz
15.	15.	55	3	Data encoding	Chalk & Talk
16.	16.	55		Digital data digital signals,	Chalk & Talk
17.	17.	55	3	Digital data analog signals	Chalk & Talk
18.	18.	55	3	Analog data digital signals	Chalk & Talk
19.	19.	55	3	Analog data analog signals	Chalk & Talk
20.	20.	55	3	Revision of Chapter 3	Questionnaires
21.	21.	55	3	Revision of Unit / Class -3	Quiz
22.	22.	55	4	Asynchronous and Synchronous Transmission	Chalk & Talk
23.	23.	55	4	Error Detection	Chalk & Talk
24.	24.	55	4	Line configuration	Chalk & Talk
25.	25.	55	4	Flow Control	Chalk & Talk
26.	26.	55	4	Error Control	Chalk & Talk
27.	27.	55	4	Multiplexing	PPT
28.	28.	55	4	FDM synchronous TDM	Chalk & Talk
29.	29.	55	4	Statistical TDM	Chalk & Talk
30.	30.	55	4	Revision of Chapter-4	Questionnaires
31.	31.	55	5	Circuit Switching networks	Chalk & Talk
32.	32.	55	5	Packet Switching principles	Chalk & Talk

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33.	33.	55	5	X.25	Chalk & Talk
34.	34.	55	5	Routing in Packet switching	Chalk & Talk
35.	35.	55	5	Congestion	Chalk & Talk
36.	36.	55	5	Effects of congestion, congestion control	Chalk & Talk
37.	37.	55	5	Traffic Management	Chalk & Talk
38.	38.	55	5	Congestion Control in Packet Switching Network.	Chalk & Talk
39.	39.	55	5	Revision of Chapter-5	Questionnaires
40.	40.	55	6	Topology	Chalk & Talk
41.	41.	55	6	Topology	Chalk & Talk
42.	42.	55	6	Transmission Media	Chalk & Talk
43.	43.	55	6	Transmission Media	Chalk & Talk
44.	44.	55	6	LAN protocol architecture	Chalk & Talk
45.	45.	55	6	Medium Access control	Chalk & Talk
46.	46.	55	6	Bridges, Hub,	Chalk & Talk
47.	47.	55	6	Switch	Chalk & Talk
48.	48.	55	6	Ethernet (CSMA/CD),	Chalk & Talk
49.	49.	55	6	Ethernet (CSMA/CD),	Chalk & Talk
50.	50.	55	6	Fiber Channel	Chalk & Talk
51.	51.	55	6	Wireless LAN Technology	Chalk & Talk
52.	52.	55	6	Revision of Chapter 1	Questionnaires
53.	53.	55	6	Revision of Unit / Class -1	Quiz
54.	54.	55	7	Chapter 7: TCP/IP Protocol Suite	Chalk & Talk
55.	55.	55	7	Basic Protocol functions	Chalk & Talk
56.	56.	55	7	Principles of Internetworking	Chalk & Talk
57.	57.	55	7	Internet Protocol operations	Chalk & Talk
58.	58.	55	7	Internet Protocol	Chalk & Talk
59.	59.	55	7	Revision of Chapter 1	Questionnaires
60.	60.	55	7	Revision of Unit / Class -1	Quiz

REFERENCES

1. Text Book of Data Communication & Computer Networking , xxxxxxxx , xxxxxx and Publication

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LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: Mr. Rabi Kumar Darji	Academic Year: 2019-20
Course No.: Th.4	Course Name: DBMS
Program: Diploma	Branch: IT
Year / Semester : II/ IV	Section:

Sl. No.	Period /Class	Time (min)	Unit	Topic to be covered	Teaching method
1.	1.	55	1	Purpose of database Systems	Chalk & talk
2.	2.	55	1	Explain Data abstraction	Chalk & talk
3.	3.	55	1	Database users	NPTEL VIDEO
4.	4.	55	1	Data definition language	Chalk & talk
5.	5.	55	1	Data Dictionary	Chalk & talk
6.	6.	55	1	Revision of Chapter 1	Questionnaires
7.	7.	55	1	Old Question Discussion	Questionnaires
8.	8.	55	2	Data independence	Chalk & talk
9.	9.	55	2	Entity relationship models	NPTEL VIDEO
10.	10.	55	2	Entity sets and Relationship sets	NPTEL VIDEO
11.	11.	55	2	Explain Attributes	Chalk & talk
12.	12.	55	2	Mapping constraints	Chalk & talk
13.	13.	55	2	E-R Diagram	Chalk & talk
14.	14.	55	2	Relational model	Chalk & talk
15.	15.	55	2	Hierarchical model	Chalk & talk
16.	16.	55	2	Network model	Chalk & talk
17.	17.	55	2	Revision of Chapter 2	Questionnaires
18.	18.	55	2	Old Question Discussion	Questionnaires
19.	19.	55	3	Relational algebra	Chalk & talk
20.	20.	55	3	Relational algebra	Chalk & talk
21.	21.	55	3	Different operators select, project.	NPTEL VIDEO
22.	22.	55	3	Different types of join and simple Examples	NPTEL VIDEO
23.	23.	55	3	Revision of Chapter 3	Questionnaires
24.	24.	55	3	Old Question Discussion	Questionnaires
25.	25.	55	4	Functional Dependencies	NPTEL VIDEO
26.	26.	55	4	Lossless join	Chalk & talk
27.	27.	55	4	Importance of normalization	Chalk & talk
28.	28.	55	4	First normal forms	Chalk & talk
29.	29.	55	4	Second normal form	Chalk & talk
30.	30.	55	4	Third normal form	Chalk & talk
31.	31.	55	4	Compare of first, second & third normal forms	Chalk & talk
32.	32.	55	4	Explain BCNF	Chalk & talk
33.	33.	55	4	Revision of Chapter 4	Questionnaires & Quiz
34.	34.	55	4	Old Question Discussion	Questionnaires
35.	35.	55	5	Elementary idea of Query language	NPTEL VIDEO

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36.	36.	55	5	Queries in SQL	Chalk & talk
37.	37.	55	5	Simple queries to create, update, insert in SQL	Chalk & talk
38.	38.	55	5	Revision of Chapter 5	Questionnaires & Quiz
39.	39.	55	5	Old Question Discussion	Questionnaires
40.	40.	55	6	Idea about transaction processing	Chalk & talk
41.	41.	55	6	Types of transaction	Chalk & talk
42.	42.	55	6	Transaction & system concept	NPTEL VIDEO
43.	43.	55	6	Desirable properties of transaction	Chalk & talk
44.	44.	55	6	Schedules and recoverability	Chalk & talk
45.	45.	55	6	Revision of Chapter 6	Questionnaires
46.	46.	55	6	Old Question Discussion	Questionnaires
47.	47.	55	7	Basic concepts	Chalk & talk
48.	48.	55	7	Locks,	Chalk & talk
49.	49.	55	7	Live Lock	Chalk & talk
50.	50.	55	7	Dead Lock	Chalk & talk
51.	51.	55	7	Serializability (only fundamentals)	Chalk & talk
52.	52.	55	7	Revision of Chapter 7	Questionnaires
53.	53.	55	7	Old Question Discussion	Questionnaires
54.	54.	55	8	Authorization and views	Chalk & talk
55.	55.	55	8	Security constraints	NPTEL VIDEO
56.	56.	55	8	Integrity Constraints	Chalk & talk
57.	57.	55	8	Integrity Constraints	Chalk & talk
58.	58.	55	8	Discuss Encryption	PPT
59.	59.	55	8	Revision of Chapter 8	Chalk & talk
60.	60.	55	8	Old Question Discussion	Questionnaires

REFERENCES

1. Text Book of Database System Concepts:Rog,Cornel:Cengage Learning Publication.
2. Text Book of Database System Concepts: A.Silberschatz,H.F. Korth:TMH Publication.

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LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: Mr. Sourav Kumar Purohit	Academic Year: 2019-20
Course No.: Th.3	Course Name: MP & MC
Program: Diploma	Branch: IT
Year / Semester : II/ IV	Section:

Sl. No.	Period /Class	Time (min)	Unit	Topic to be covered	Teaching method
1.	1.	55	1	Introduction to Microprocessor and Microcomputer	Chalk & talk
2.	2.	55	1	Concept of Address bus, data bus, control bus & System Bus	PPT
3.	3.	55	1	Register Organizations, Distinguish between SPR & GPR	Chalk & talk
4.	4.	55	1	Basic Architecture of 8085 (8 bit) Microprocessor	NPTEL Video
5.	5.	55	1	Signal Description (Pin diagram) of 8085 Microprocessor	Chalk & talk
6.	6.	55	1	Stack, Stack pointer & Stack top	Chalk & talk
7.	7.	55	1	8085 Interrupts, Masking of Interrupt (SIM, RIM)	Chalk & talk
8.	8.	55	1	Revision of Chapter 1	Questionaries
9.	9.	55	2	Instruction Set and Assembly Language Programming	Chalk & talk
10.	10.	55	2	Addressing modes in instructions with suitable examples.	NPTEL Video
11.	11.	55	2	Addressing data & Differentiate between one-byte, two-byte & three-byte instructions with examples.	Chalk & talk
12.	12.	55	2	Instruction Set of 8085	PPT
13.	13.	55	2	Simple Assembly Language Programming of 8085(Arithmetic, Logic, Counters)	Chalk & talk
14.	14.	55	2	Simple Assembly Language Programming of 8085(Looping, Stack, BCD, Array)	Chalk & talk
15.	15.	55	2	Revision of Chapter 2	Questionaries
16.	16.	55	3	Timing Diagrams	Chalk & talk
17.	17.	55	3	Define opcode, operand, T-State, Fetch cycle, Machine Cycle, Instruction cycle & concept of timing diagram.	Chalk & talk
18.	18.	55	3	Timing diagram for memory read, write, I/O read, I/O write machine cycle	PPT
19.	19.	55	3	Timing diagram for 8085 instruction (MOV, MVI, LDA instruction)	NPTEL Video
20.	20.	55	3	Revision of Chapter 3	Questionaries
21.	21.	55	4	Microprocessor Based System Development	Chalk & talk

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				Aids	
22.	22.	55	4	Concept of interfacing	Chalk & talk
23.	23.	55	4	Mapping & Data transfer mechanisms - Memory mapping & I/O Mapping	Chalk & talk
24.	24.	55	4	Interfacing EPROM & RAM Memories	PPT
25.	25.	55	4	Address decoding for I/O devices	Chalk & talk
26.	26.	55	4	Programmable Peripheral Interface: 8255	NPTEL Video
27.	27.	55	4	ADC & DAC with Interfacing	Chalk & talk
28.	28.	55	4	Interfacing Seven Segment Displays	PPT
29.	29.	55	4	Generate square waves on all lines of 8255	Chalk & talk
30.	30.	55	4	Design Interface a traffic light control system using 8255	PPT
31.	31.	55	4	Design interface for stepper motor control using 8255	PPT
32.	32.	55	4	Revision of Chapter 3	Questionnaires
33.	33.	55	4	Revision of Chapter 1, 2, 3, 4	Quizzes
34.	34.	55	5	Microprocessor (Architecture and Programming-16 bit-8086)	Chalk & talk
35.	35.	55	5	Register Organisation of 8086	Chalk & talk
36.	36.	55	5	Internal architecture of 8086	PPT
37.	37.	55	5	Signal Description of 8086	PPT
38.	38.	55	5	General Bus Operation & Physical Memory Organisation	Chalk & talk
39.	39.	55	5	Minimum Mode & Timings	Chalk & talk
40.	40.	55	5	Maximum Mode & Timings	Chalk & talk
41.	41.	55	5	Interrupts and Interrupt Service Routines	NPTEL Video
42.	42.	55	5	Addressing Modes, Instruction Set, Assembler Directives and Operators	Chalk & talk
43.	43.	55	5	Assembly language programming using 8086 instructions	Chalk & talk
44.	44.	55	5	Revision of Chapter 5	Questionnaires
45.	45.	55	6	Microcontroller (Architecture and Programming-8 bit)	PPT
46.	46.	55	6	Distinguish between Microprocessor & Microcontroller	Chalk & talk
47.	47.	55	6	8 bits & 16-bit microcontroller	Chalk & talk
48.	48.	55	6	CISC & RISC processor	Chalk & talk
49.	49.	55	6	Architecture of 8051 Microcontroller	NPTEL Video
50.	50.	55	6	Signal Description of 8051 Microcontrollers	Chalk & talk
51.	51.	55	6	Memory Organization-RAM structure, SFR	Chalk & talk
52.	52.	55	6	Registers, timers, interrupts of 8051 Microcontrollers	NPTEL Video
53.	53.	55	6	Addressing Modes of 8051	PPT
54.	54.	55	6	Interrupts, Timer & Counters	Chalk & talk
55.	55.	55	6	Serial Communication	Chalk & talk
56.	56.	55	6	Microcontroller Interrupts to 8255	PPT
57.	57.	55	6	Microcontroller Interfacing to 8255	PPT
58.	58.	55	6	8051 Assembly Language Programming Arithmetic & Logic Instructions, JUMP,	Chalk & talk

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				LOOP, CALL Instructions, I/O Port Programming	
59.	59.	55	6	Revision of Chapter 6	Questionnaires
60.	60.	55	6	Old Question Discussion	Questionnaires

Text Book (TB)	Name of the Book
1	Microprocessor architecture, programming & application with 8085 by R.S. Gaonkar, PenramInternational Publishing. (India) Pvt. Ltd.
2	The 8051 Microcontroller & Embedded Systems by Mazidi & Mazidi, - Pearson publication
3	Advanced Microprocessor and Peripherals (Architecture, Programming & Interfacing) by A.K. Roy & K.M. Bhurchandi, - TMH Publication
4	Microprocessor & Microcontroller by N.SenthilKumar,M.Sarvanan,S.Jeevananthan,S K Shah- OXFORD
5	Microprocessor & Microcontroller by R.S. Kaler, IKI Publishing
6	Microprocessor & its application by B.Ram,Dhanpat rai
7	Microcontroller, Theory and application by Ajaya V. Deshmukh. TMH

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LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: Mrs. Barsha Rani Patel	Academic Year: 2019-20
Course No.: Th.1	Course Name: Operating System
Program: Diploma	Branch: IT
Year / Semester : II/ IV	Section:

Sl. No.	Period /Class	Time (min)	Unit	Topic to be covered	Teaching method
1.	1.	55	1	Introduction	Chalk & talk
2.	2.	55	1	Objectives and Explain functions of Operating system	Chalk & talk
3.	3.	55	1	Evolution of operating system	Chalk & talk
4.	4.	55	1	Structure of operating system	Chalk & talk
5.	5.	55	1	Revision Chapter -1	Chalk & talk
6.	6.	55	2	Process Management	Chalk & talk
7.	7.	55	2	Process concept, Process control ,interacting processes, inter process massages.	Chalk & talk
8.	8.	55	2	Implementation issues of processes	Chalk & talk
9.	9.	55	2	Process scheduling, job scheduling	Chalk & talk
10.	10.	55	2	Process synchronization, semaphore	Chalk & talk
11.	11.	55	2	Principal of concurrency, types of scheduling.	Chalk & talk
12.	12.	55	2	Revision Chapter -2	Chalk & talk
13.	13.	55	3	Memory Management	Chalk & talk
14.	14.	55	3	Memory allocation techniques.	Chalk & talk
15.	15.	55	3	Contiguous memory allocation	Chalk & talk
16.	16.	55	3	Non contiguous memory allocation	Chalk & talk
17.	17.	55	3	Swapping	Chalk & talk
18.	18.	55	3	Paging Segmentation virtual memory using paging	Chalk & talk
19.	19.	55	3	Demand paging, page fault handling	Chalk & talk
20.	20.	55	3	Revision Chapter -3	Chalk & talk
21.	21.	55	4	Device Management	Chalk & talk
22.	22.	55	4	Techniques for device management	Chalk & talk
23.	23.	55	4	Dedicated	Chalk & talk
24.	24.	55	4	Shared and	Chalk & talk
25.	25.	55	4	Virtual	Chalk & talk
26.	26.	55	4	Device allocation considerations I/O traffic control & I/O schedule, I/O device handlers	Chalk & talk
27.	27.	55	4	SPOOLING	Chalk & talk
28.	28.	55	4	Revision Chapter -4	Chalk & talk
29.	29.	55	5	Dead Locks	Chalk & talk
30.	30.	55	5	Concept of dead locks	Chalk & talk
31.	31.	55	5	System model	Chalk & talk
32.	32.	55	5	Dead lock detection	Chalk & talk
33.	33.	55	5	Resources allocation Graph	Chalk & talk

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34.	34.	55	5	Methods of dead lock handling	Chalk & talk
35.	35.	55	5	Recovery & prevention,	Chalk & talk
36.	36.	55	5	Explain bankers algorithm & safety algorithm	Chalk & talk
37.	37.	55	5	Revision Chapter -5	Chalk & talk
38.	38.	55	5	Old Question Discussion	Questioner
39.	39.	55	6	File Management	Chalk & talk
40.	40.	55	6	File organization	Chalk & talk
41.	41.	55	6	Directory	Chalk & talk
42.	42.	55	6	File structure	Chalk & talk
43.	43.	55	6	Sharing of files	Chalk & talk
44.	44.	55	6	File access methods	Chalk & talk
45.	45.	55	6	File system reliability.	Chalk & talk
46.	46.	55	6	Allocation of disk space	Chalk & talk
47.	47.	55	6	File protection	Chalk & talk
48.	48.	55	6	secondary storage management.	Chalk & talk
49.	49.	55	6	Revision Chapter -6	Chalk & talk
50.	50.	55	6	Old Question Discussion	Questioner
51.	51.	55	7	System Programming	Chalk & talk
52.	52.	55	7	Concept of System programming.	Chalk & talk
53.	53.	55	7	show difference from application compiler.	Chalk & talk
54.	54.	55	7	Compiler, functions of compiler.	Chalk & talk
55.	55.	55	7	Compiler	Chalk & talk
56.	56.	55	7	Interpreter.	Chalk & talk
57.	57.	55	7	Seven phases of compiler	Chalk & talk
58.	58.	55	7	Brief description of each phase	Chalk & talk
59.	59.	55	7	Problems & Revision	Chalk & talk
60.	60.	55	7	Old Question Discussion	Questioner

Text Book (TB)	Name of the Book
1	Rohit Khurana, Operating System, Second Edition
2	Silverschz & Galvin , Operating System, PHI Publisher