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Directorate of Academic Planning

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA-533003, Andhra Pradesh, INDIA
(Established by AP Government Act No. 30 of 2008)

Lr. No. 01-03/ JNTUK/DAP/AC/B. Tech-B. Pharmacy/II-III-IV Year/2020-21 *Date: 29-12-2020*

Dr. R. Srinivasa Rao,
Director, Academic Planning
JNTUK, Kakinada

To
All the Principals of Affiliated Colleges,
JNTUK, Kakinada.

Academic Calendar for II, III and IV - B. Tech & B. Pharmacy
Academic year 2020-21

I SEMESTER			
Description	**From**	**To**	**Weeks**
Commencement of Class Work	**02.11.2020**		
I Unit of Instruction	02.11.2020	19.12.2020	7W
II Unit of Instructions	21.12.2020	23.01.2021	5W
I Mid Examinations	25.01.2021	30.01.2021	1W
II Unit of Instructions(Continued)	01.02.2021	20.02.2021	3W
II Mid Examinations	22.02.2021	27.02.2021	1W
Preparation & Practicals	01.03.2021	06.03.2021	1W
End Examinations	08.03.2021	20.03.2021	2W
Commencement of II Semester Class Work	**22.03.2021**		
II SEMESTER			
I Unit of Instructions	**22.03.2021**	08.05.2021	7W
I Mid Examinations	10.05.2021	12.05.2021	1/2W
II Unit of Instructions	13.05.2021	30.06.2021	7W
II Mid Examinations	01.07.2021	03.07.2021	1/2W
Preparation & Practicals	05.07.2021	10.07.2021	1W
End Examinations	12.07.2021	24.07.2021	2W
Commencement of next Year Class Work			
Note: Calendar is prepared with 8 hrs/day hence 7 weeks per instruction period			

R. Srinivasa Rao
Director Academic Planning
Director
Academic Planning
JNTUK Kakinada

Copy to the Secretary to the Hon'ble Vice Chancellor, JNTUK
Copy to Rector, JNTUK
Copy to Registrar, JNTUK
Copy to Director Academic Audit, JNTUK
Copy to Director of Evaluation, JNTUK

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SRK INSTITUTE OF TECHNOLOGY
ENIKEPADU, VIJAYAWADA

SRK INSTITUTE OF TECHNOLOGY VIJAYAWADA	**SRK INSTITUTE OF TECHNOLOGY** **Enikepadu, Vijayawada 521108** **Department of MECHANICAL ENGINEERING** **RECORD OF SUBJECT WISE ALLOTMENT & RESPONSIBILITIES**	**SRKIT / ME / 09**

Academic year: 2020 – 21 **Semester: II**

S. No	Name of the Faculty	Theory subjects		Labs		Work Load / week (Periods)	Other responsibilities	Signature
		Subject Title	Branch	Lab Title	Branch			
1	Dr. P. KishoreKumar	PPC	ME	-	-	9	HOD, Lab Incharge	
2	Dr. T. S. S. Balaji	PPC	ME	-	-	6	Anti Ragging Duty	
3	Dr. R. Jaganathan	UCMP	ME	-	-	6	Anti Ragging Duty	
4	A. Stanly Kumar	CG, QRE	ME	-	-	11	Lab Incharge, Anti Ragging Duty	
5	D. Sree Ram Prasad	AT	ME	HT Lab	ME	18	Lab Incharge, Anti Ragging Duty	
6	G. Durga Prasad	ICS	ME	-	-	12	ISO Incharge, Lab Incharge, Anti Ragging Duty	
7	V. Bala Chinalingam	KOM	ME	FM&M Lab	ME	9	Lab Incharge, Anti Ragging Duty	
8	D. Rognatha Rao	UCMP	ME	-	-	10	Lab Incharge, Anti Ragging Duty	
9	P. Bhagya Lakshmi	NDE	ME	MET & ICS Lab	ME	17	Anti Ragging Duty	
10	V. Pavan Kumar	Metrology	ME	-	-	12	Lab Incharge, Anti Ragging Duty	
11	D. Haritha Bramha	MCMT	ME	MCMT Lab	ME	9	Anti Ragging Duty	

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12	Y. Durga Bhavani	HT	ME	HT Lab	ME	24	Lab Incharge, Anti Ragging Duty	
13	R. Kiran Kumar	EM	I ME	-	-	5	Anti Ragging Duty	
14	R. Karun Kumar	DMM-I, IR	ME	MCMT Lab	ME	15	Anti Ragging Duty	
15	U. Tanoj	AE	ME	MET & ICS Lab	ME	21	Lab Incharge, Anti Ragging Duty	
16	P. Tarun Naga Venkatesh	FMHM	ME	CFD Lab	ME	12	Placement Incharge, Anti Ragging Duty	
17	M. Hari Krishna	TD	ME	CFD Lab	ME	11	ARC Incharge, Anti Ragging Duty	
18	B. Nagendra	R & AC	ME	-	-	12	Anti Ragging Duty	

HOD/ Date

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Principal / Date

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ENIKEPADU, VIJAYAWADA-521 108

SRK INSTITUTE OF TECHNOLOGY

Enikepadu, Vijayawada 521108.

Department of Mechanical Engineering

CLASS TIME TABLE

SRKIT / ME / 10.1

Academic Year: 2020 - 21 **Year: II ME** **Semester: II**

Class Incharge : V. Bala Chinalingam / D. Haritha Bramha

SECTION A **W. E. F: 01/04/2021**

Time	9:00 to 9:50	9:50 to 10:40	10:45 to 11:35	11: 35 to 12:25	LUNCH	1:10 to 2:00	2:00 to 2:45	2:50 to 3:35	3:35 to 4:20
Period	1	2	3	4		5	6	7	8
MON	KOM	MCMT	FMHM	DMM-I		CVSM	FMHM LAB		
TUE	Dassualt Systems		KOM	AT		DMM-I	FMHM	MCMT	Library
WED	MCMT	EITK	FMHM	AT		Counselling	KOM	DMM-I	CVSM
THU	FMHM	KOM	AT	MCMT		CVSM	MCMT LAB		
FRI	Dassualt Systems		FMHM	DMM-I		KOM	CVSM	AT	DMM-I
SAT	MCMT	FMHM	KOM	AT		EITK	DMM-I	Sports	----

Design Of Machine Members -I	:	Mr. R. Karun Kumar
Fluid Mechanics & Hydraulic Machines	:	Mr. P. Tarun Naga Venkatesh
Metal Cutting & Machine Tools	:	Ms. D. Haritha Bramha
Kinematics of Machines	:	Mr. V. Bala Chinalingam
Applied Thermodynamics	:	Mr. D. Sree Ram Prasad
Complex Variable & Statistical Methods	:	Ms. T. Prasanna
Essence of Indian Traditional Knowledge	:	Dr. N. Sridevi
FMHM LAB	:	Mr. V. Bala Chinalingam / V. Pavan Kumar
MCMT LAB	:	Mr. R. Karun Kumar / Haritha Bramha

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HOD /Date

SRK INSTITUTE OF TECHNOLOGY VIJAYAWADA	**SRK INSTITUTE OF TECHNOLOGY** **Enikepadu, Vijayawada 521108** **Department of Mechanical Engineering** **FACULTY INDIVIDUAL TIME TABLE**	**SRKIT / ME / 10.2**

Mr. P. Tarun Naga Venkatesh

Time	9:00 to 9:50	9:50 to 10:40	10:45 to 11:35	11: 35 to 12:25		1:10 to 2:00	2:00 to 2:45	2:50 to 3:35	3:35 to 4:20
Period	1	2	3	4		5	6	7	8
MON			FMHM				CFD LAB		
TUE							FMHM		
WED			FMHM						
THU	FMHM								
FRI			FMHM				CFD LAB		
SAT		FMHM							

LUNCH

Signature of Faculty:

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SRK INSTITUTE OF TECHNOLOGY VIJAYAWADA	**SRK INSTITUTE OF TECHNOLOGY** **Enikepadu, Vijayawada 521108** **Department of Mechanical Engineering** **TEACHING PLAN CUM REALIZATION**	**SRKIT / ME /12**

Department: **Mechanical** Name of faculty: **P. Tarun Naga Venkatesh** Designation: **Assistant Professor**

Semester / Year: **II / II** Name of the subject: **Fluid Mechanics & Hydraulic Machines** Date: **01/04/2021** Academic Year: **2020 - 21**

S. No	Unit / Topic	Teaching Planned	Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	Unit - 1				
1	Dimensions and units: physical properties of fluids - specific gravity		01/04/2021	1	
2	viscosity and its significance		02/04/2021	1	
3	surface tension		03/04/2021	1	
4	capillarity, vapor pressure		05/04/2021	1	
5	Atmospheric, gauge and vacuum pressure		06/04/2021	1	
6	Measurement of pressure		07/04/2021	1	
7	Manometers	**From: 01/04/2021**	08/04/2021	1	
8	Piezometer, U-tube, inverted manometers		09/04/2021	1	
9	differential manometers		10/04/2021	1	
10	Pascal's & hydrostatic laws	**To: 19/04/2021**	12/04/2021	1	
11	Buoyancy and floatation		14/04/2021	1	
12	Meta center, stability of floating body		15/04/2021	1	
13	stability of Submerged bodies		16/04/2021	1	
14	Calculation of metacenter height		17/04/2021	1	
15	Stability analysis and applications		19/04/2021	1	
	Unit - 2				
16	Fluid kinematics: Introduction		20/04/2021	1	
17	Types of flows		22/04/2021	1	

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18	Equation of continuity for one dimensional flow	**From: 20/04/2021**	23/04/2021	**1**	
19	circulation and vorticity		24/04/2021	**1**	
20	Stream line, path line and streak lines and stream tube	**To: 13/05/2021**	26/04/2021	**1**	
21	Stream function		27/04/2021	**1**	
22	velocity potential function, differences and relation between them		28/04/2021	**1**	
23	Condition for irrotational flow		29/04/2021	**1**	
24	flow net, source and sink		30/04/2021	**1**	
25	doublet and vortex flow		01/05/2021	**1**	
26	Fluid dynamics: surface and body forces		03/05/2021	**1**	
27	Euler's equations for flow along a stream line		04/05/2021	**1**	
28	Bernoulli's equations for flow along a stream line		05/05/2021	**1**	
29	momentum equation and its applications		06/05/2021	**1**	
30	force on pipe bend		07/05/2021	**1**	
31	Closed conduit flow: Reynold's experiment		08/05/2021	**1**	
32	Darcy Weisbach equation		10/05/2021	**1**	
33	Minor losses in pipes		11/05/2021	**1**	
34	pipes in series and pipes in parallel		12/05/2021	**1**	
35	total energy line-hydraulic gradient line		13/05/2021	**1**	
	Unit - 3				
36	Boundary Layer Theory: Introduction	**From: 15/05/2021**	15/05/2021	**1**	
37	momentum integral equation		17/05/2021	**1**	
38	displacement, momentum and energy thickness	**To: 27/05/2021**	18/05/2021	**1**	
39	separation of boundary layer		19/05/2021	**1**	

15/6/21

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	SRK INSTITUTE OF TECHNOLOGY Enikepadu, Vijayawada 521108 Department of Mechanical Engineering TEACHING PLAN CUM REALIZATION	SRKIT / ME /12

40	control of flow separation		20/05/2021	1	
41	Stream lined body, Bluff body and its applications		21/05/2021	1	
42	basic concepts of velocity profiles		22/05/2021	1	
43	Dimensional Analysis: Dimensions and Units		24/05/2021	1	
44	Dimensional Homogeneity, Non dimensionalization of equations		25/05/2021	1	
45	Method of repeating variables		26/05/2021	1	
46	Buckingham Pi Theorem		27/05/2021	1	
	Unit - 4				
47	hydrodynamic force of jets on stationary flat, inclined vanes		28/05/2021	1	
48	hydrodynamic force of jets on stationary curved vanes		29/05/2021	1	
49	hydrodynamic force of jets on moving flat, inclined vanes		31/05/2021	1	
50	hydrodynamic force of jets on moving curved vanes		01/06/2021	1	
51	jet striking centrally and at tip		02/06/2021	1	
52	velocity diagrams, work done and efficiency	**From: 28/05/2021**	03/06/2021	1	
53	flow over radial vanes		04/06/2021	1	
54	Hydraulic Turbines: classification of turbines		05/06/2021	1	
55	impulse and reaction turbines	**To: 14/06/2021**	07/06/2021	1	
56	Pelton wheel		08/06/2021	1	
57	Francis turbine		09/06/2021	1	
58	Kaplan turbine-working proportions		10/06/2021	1	
59	work done, efficiencies		11/06/2021	1	
60	hydraulic design		12/06/2021	1	

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61	draft tube- theory, functions and efficiency		14/06/2021	1	
	Unit - 5				
62	Performance of hydraulic turbines: Geometric similarity	From: 15/06/2021 To: 30/06/2021	15/06/2021	1	
63	Unit and specific quantities, characteristic curves		16/06/2021	1	
64	governing of turbines		17/06/2021	1	
65	selection of type of turbine, cavitation		18/06/2021	1	
66	surge tank, water hammer		19/06/2021	1	
67	Hydraulic systems- hydraulic ram		21/06/2021	1	
68	hydraulic lift, hydraulic coupling		22/06/2021	1	
69	Fluidics – amplifiers, sensors and oscillators		23/06/2021	1	
70	Centrifugal pumps: classification, working		24/06/2021	1	
71	work done of centrifugal pumps, manometric head-losses and efficiencies		25/06/2021	1	
72	specific speed- pumps in series and parallel-performance characteristic curves		26/06/2021	1	
73	cavitation & NPSH		28/06/2021	1	
74	Reciprocating pumps: Working, Discharge		29/06/2021	1	
75	slip, indicator diagrams		30/06/2021	1	

Faculty/ Date

HOD/Date 05/07/21

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FLUID MECHANICS

→ It is a branch of science which deals with the behaviour of fluids (liquids (or) gases) at rest as well as in motion.

→ The study of fluids at rest is called fluid statics.

→ The study of fluids in motion, where pressure forces are not considered is called fluid kinematics and if pressure forces are also considered is called fluid dynamics.

→ A fluid is a substance that deforms continuously when subjected to a shear stress, no matter how small that shear stress may be. This property distinguishes liquid from a solid, no matter how viscous the liquid may be.

Properties of fluid

→ Any characteristic of a system is called its property.

1) Density (or) Mass density

→ It is defined as the ratio of the mass of a fluid to its volume. It is denoted by the symbol 'ρ (rho)'

→ The unit of mass density in SI unit is $\frac{kg}{m^3}$.

→ The density of a substance, depends on temp. and pressure.

→ The density of most gases is proportional to pressure and inversely proportional to temperature.

$$\text{Mass density, } \rho = \frac{\text{mass of fluid}}{\text{Volume of fluid}}$$

→ density of water is 1 gm/cm^3 (or) 1000 kg/m^3

2) Specific weight (or) Weight density

→ It is defined as the ratio between the weight of the fluid to its volume.

→ It is denoted by the symbol 'w'

Specific weight (or) Weight density

$$w = \frac{\text{(N) Weight of the fluid}}{\text{(m}^3\text{) Volume of the fluid}} \quad (\because W = mg)$$

$$w = \frac{\text{(mass of fluid)} \times \text{Acceleration due to gravity}}{\text{volume of fluid}}$$

$$= \frac{\text{mass of fluid} \times g}{\text{volume of fluid}}$$

$$\boxed{w = \rho \times g}$$

$$\left\{ \because \frac{\text{Mass of fluid}}{\text{Volume of fluid}} = \rho \right\}$$

→ Unit of specific weight is $\frac{N}{m^3}$.

→ The value of specific weight (or) weight density of water is $9.81 \times 1000 \frac{N}{m^3}$.

3) Specific Volume

→ It is defined as the volume of fluid occupied by a unit mass of fluid.

→ It is the reciprocal of mass density.

→ It is expressed as $\frac{m^3}{kg}$.

→ It is commonly applied to gases.

$$\text{Specific volume} = \frac{\text{Volume of fluid}}{\text{mass of fluid}}$$

$$= \frac{1}{\frac{\text{mass of fluid}}{\text{volume of fluid}}} = \frac{1}{\rho}.$$

4) Specific Gravity

→ It is defined as the ratio of the weight density of the fluid to the weight density of the standard fluid.

→ For liquids, standard fluid is taken water and For gases, standard fluid is taken air.

→ It is dimensionless quantity and is denoted by the symbol 'S'.

→ Specific gravity is also called relative density.

$$S \text{ (for liquids)} = \frac{\text{Weight density (or density) of fluid (liquid)}}{\text{Weight density (or density) of water}}$$

$$S \text{ (for gases)} = \frac{\text{Weight density of fluid (gas)}}{\text{Weight density of air}}$$

Weight density of liquid = S × weight density of water

$= S \times 1000 \times 9.81 \ N/m^3$

Density of a liquid = S × density of water

$= S \times 1000 \ kg/m^3$

For example,

The specific gravity of mercury is 13.6. Calculate the density of mercury.

∴ Density of mercury = S × density of water

$= 13.6 \times 1000$

$\therefore \rho = 13600 \ kg/m^3$

Pb.

Calculate the specific weight, specific mass, specific volume and specific gravity of a liquid having a volume of $6m^3$ and weight of 44kN.

Given,

Volume of liquid $= 6m^3$

Weight of liquid $= 44kN$.

Specific weight, $w = \frac{W}{V} = \frac{44}{6} = \underline{7.33 \frac{kN}{m^3}}$.

Specific mass, $\rho \cdot w = \rho g \Rightarrow \rho = \frac{w}{g}$.

$$\rho = \frac{7.33}{9.81} \times 1000 = \underline{747.19 \, kg/m^3}$$

Specific Volume, $V_s = \frac{1}{\rho} = \frac{1}{747.19} = \underline{0.00134 \, m^3/kg}$.

Specific gravity of liquid $= \frac{\text{Sp. weight of liquid}}{\text{Sp. weight of standard liquid (Water)}}$

$$= \frac{7.33}{9.81} = \underline{0.747}.$$

Pb

A volume of $2.5m^3$ of certain liquid weighs 9.81kN. Determine the specific weight, mass density and specific gravity of the liquid.

Given, volume of liquid $= 2.5m^3$

Weight of liquid $= 9.81kN$

Specific weight of liquid, $w = \frac{W}{V} = \frac{9.81}{2.5} = \underline{3.924 \frac{kN}{m^3}}$.

mass density, $w = \rho g \Rightarrow \rho = \frac{w}{g}$

$$\rho = \frac{3.924}{9.81} = 0.4 \times 1000 \frac{kg}{m^3} = \underline{400 \frac{kg}{m^3}}.$$

Fluid kinematics

→ It is defined as that branch of science which deals with motion of particles without considering the forces causing the motion

→ The velocity at any point in a fluid flow at any time is studied in fluid kinematics.

→ Once the velocity is known at any point in a fluid flow, then the pressure distribution and hence forces acting on the fluid can be determined.

Methods of describing fluid motion

→ The fluid motion is described by two methods.

(i) Lagrangian method

(ii) Eulerian method

→ In Lagrangian method, a single fluid particle is followed during its motion and its velocity, acceleration, density etc; are described.

→ In Eulerian method, the velocity, acceleration, pressure, density etc; are described at a point in flow field.

→ The Eulerian method is commonly used in fluid mechanics

Types of fluid flow

→ the fluid flow is classified as:

1) Steady and unsteady flows.
2) Uniform and non-uniform flows
3) Laminar and turbulent flows
4) Compressible and incompressible flows.

PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

Name of Teacher (s) 1. P. Tarun Naga Venkatesh 2. Year II Semester II B.Tech Course Mechanical Branch EMHM Subject

Academic Year

Theory / Drawing / Practical

Sl. No.	Periods: Day	Time	Date	Topic Covered	Sl. No.	Periods: Day	Time	Date	Topic Covered
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
1	THU	6th	1/4	Dimensions and units physical properties of fluids	21	TUE	6th	27/4	Stream function
2	FRI	2nd	2/4	specific gravity, viscosity and significance	22	WED	3rd	28/4	velocity potential function, relation between
3	SAT	2nd	3/4	Surface tension	23	THU	1st	29/4	Condition for irrotational flow
4	MON	3rd	5/4	Capillarity, Vapor pressure	24	FRI	3rd	30/4	-flow net, source and sink
5	TUE	6th	6/4	Atmospheric, gauge and vacuum pressure	25	SAT	2nd	1/5	doublet and vortex flow
6	WED	3rd	7/4	measurement of pressure.	26	MON	3rd	3/5	fluid dynamics: Surface and body forces.
7	THU	1st	8/4	manometers	27	TUE	6th	4/5	Euler's equation along a stream line.
8	FRI	3rd	9/4	Piezometer, U-tube, inverted manometers	28	WED	3rd	5/5	Bernoulli's equation along a stream line
9	SAT	2nd	10/4	differential manometers	29	THU	1st	6/5	momentum equation and its applications
10	MON	3rd	12/4	Pascals & hydrostatic laws	30	FRI	3rd	7/5	force on pipe bend
11	WED	3rd	14/4	Buoyancy and floatation	31	SAT	2nd	8/5	-losed conduit flow - reynold's experiment
12	THU	1st	15/4	metacentre, stability of floating body	32	MON	3rd	10/5	Darcy weisbach equation
13	FRI	3rd	16/4	stability of submerged bodies	33	TUE	1st	11/5	minor losses in pipes
14	SAT	2nd	17/4	Calculation of metacentre height	34	WED	3rd	12/5	pipes in series and pipes in parallel.
15	MON	3rd	19/4	Stability analysis and applications	35	THU	1st	13/5	Total energy line, hydraulic gradient line
16	TUE	6th	20/4	Introduction to fluid kinematics	36	SAT	2nd	15/5	Introduction to boundary layer theory.
17	THU	1st	22/4	Types of flows.	37	MON	3rd	17/5	momentum integral equation
18	FRI	3rd	23/4	Continuity equation for 1D flow	38	TUE	6th	18/5	Displacement, momentum and energy equations
19	SAT	2nd	24/4	Circulation and vorticity	39	WED	3rd	19/5	Separation of boundary layer
20	MON	3rd	26/4	Stream line, path line, streak line	40	THU	1st	20/5	Control of flow separation

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PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

Name of Teacher (s) 1. P.Tarun Naga Venkatesh 2. Year II Semester II Course B.Tech Branch Mechanical Subject FMHM Academic Year

Theory / Drawing / Practical

Sl. No.	Periods			Topic Covered	Sl. No.	Periods			Topic Covered
	Day	Time	Date			Day	Time	Date	
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
41	FRI	3rd	21/5	Streamlined body, bluff body.	61	MON	3rd	14/6	draft tube - theory, functions and efficiency
42	SAT	2nd	22/5	basic concepts of velocity profiles	62	TUE	6th	15/6	Performance of hydraulic turbines
43	MON	3rd	24/5	dimensional analysis and units.	63	WED	3rd	16/6	Unit and specific quantities.
44	TUE	6th	25/5	dimensional homogeneity.	64	THU	1st	17/6	Governing of turbines
45	WED	3rd	26/5	method of repeating variables	65	FRI	3rd	18/6	Selection of type of turbine, Cavitation
46	THU	1st	27/5	buckingham Pi-Theorem	66	SAT	2nd	19/6	Surge tank, water hammer
47	FRI	3rd	28/5	hydrodynamic forces on stationary vanes	67	MON	3rd	21/6	hydraulic ram
48	SAT	2nd	29/5	hydrodynamic force on moving vanes	68	TUE	6th	22/6	hydraulic lift, hydraulic coupling.
49	MON	3rd	31/5	hydrodynamic forces on inclined vanes	69	WED	3rd	23/6	fluidics - amplifiers, sensors.
50	TUE	6th	1/6	hydrodynamic forces of curved vanes	70	THU	1st	24/6	classification of centrifugal pump
51	WED	3rd	2/6	Jet striking centrally and at tip	71	FRI	3rd	25/6	working of centrifugal pump
52	THU	1st	3/6	velocity diagrams, work done and effic	72	SAT	2nd	26/6	Specific speed, characteristic curves
53	FRI	3rd	4/6	flow over radial vanes	73	MON	3rd	28/6	Cavitation & NPSH.
54	SAT	2nd	5/6	Classification of hydraulic turbines	74	TUE	6th	29/6	working of reciprocating pumps
55	MON	3rd	7/6	Impulse and reaction turbines	75	WED	3rd	30/6	Slip, indicator diagrams.
56	TUE	6th	8/6	Pelton wheel	76				
57	WED	3rd	9/6	Francis turbine	77				
58	THU	1st	10/6	Kaplan turbine	78				
59	FRI	3rd	11/6	work done, efficiencies	79				
60	SAT	2nd	12/6	hydraulic design	80				

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Website: www.jntuk.edu.in
Email: dapjntuk@gmail.com

Phone: 0884-2300991
Mobile: 7032606555

Directorate of Academic Planning

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA-533003, Andhra Pradesh, INDIA
(Established by AP Government Act No. 30 of 2008)

Lr. No. 01-08/ JNTUK/DAP/AC/B. Tech-B. Pharmacy/II-III-IV Year/2020-21 *Date: 04-08-2020*

Dr. R. Srinivasa Rao,
Director, Academic Planning
JNTUK, Kakinada

To
All the Principals of Affiliated Colleges,
JNTUK, Kakinada.

Academic Calendar for II, III and IV - B. Tech & B. Pharmacy
Academic year 2020-21

I SEMESTER			
Description	**From**	**To**	**Weeks**
Commencement of Class Work	**17.08.2020**		
I Unit of Instruction	17.08.2020	03.10.2020	7W
I Mid Examinations	28.09.2020	03.10.2020	
II Unit of Instructions	05.10.2020	21.11.2020	7W
II Mid Examinations	16.11.2020	21.11.2020	
Preparation & Practicals	23.11.2020	28.11.2020	1W
End Examinations	30.11.2020	12.12.2020	2W
Commencement of II Semester Class Work	**14.12.2020**		
II SEMESTER			
I Unit of Instructions	**14.12.2020**	30.01.2021	7W
I Mid Examinations	25.01.2021	30.01.2021	
II Unit of Instructions	01.02.2021	20.03.2021	7W
II Mid Examinations	15.03.2021	20.03.2021	
Preparation & Practicals	22.03.2021	27.03.2021	1W
End Examinations	29.03.2021	10.04.2021	2W
Commencement of next Year Class Work	**14.06.2021**		
Note: Calendar is prepared with 8 hrs/day hence 7 weeks per instruction period			

R. Srinivasa Rao
Director Academic Planning

Director
Academic Planning
JNTUK Kakinada

Copy to the Secretary to the Hon'ble Vice Chancellor, JNTUK
Copy to Rector, JNTUK
Copy to Registrar, JNTUK
Copy to Director Academic Audit, JNTUK
Copy to Director of Evaluation, JNTUK

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(ISO 9001:2015 Certified Institution)

ACADEMIC CALENDAR - 2020-21

S.NO.	DATE	EVENT
		JULY
1	22-07-2020	Instruction for B.Tech I,II,III,IV - II semester continued through online.
		AUGUST
1	3-8-2020 to 14-8-2020	Conduction of Practicals for B.Tech III-II semester
		SEPTEMBER
1	7-9-2020 to 18-9-2020	Conduction of Practicals for B.Tech II-II semester
		OCTOBER
1	12-10-2020 to 15-10-2020	End Examinations for B.Tech IV-II semester
2	26-10-2020	End Examinations for B.Tech III-II semester starts
		NOVEMBER
1	02-11-2020	**Commencement of Class Work** for B.Tech II,III,IV - I semester, MCA III-I semester, MCA II-I semester,MBA II-I semester,IMBA II,III,IV,V - I semester – I Unit of Instructions starts,**Commencement**
2	14-11-2020	Diwali
3	26-11-2020	End Examinations for B.Tech III-II semester ends
		DECEMBER
1	19-12-2020	II,III&IV B.Tech I semester, IMBA II,III,IV,V - I semester, M.Tech II-I semester,MCA II-I semester,MBA II-I semester – I Unit of Instructions ends
2	21-12-2020	II,III&IV B.Tech I semester,II,III,IV,V I Sem IMBA,II-I M.TECH,II-I MCA,II-I MBA – II Unit of Instructions starts
3	25-12-2020	Christmas
		JANUARY
1	23-01-2021	II,III&IV B.Tech I sem, IMBA II,III,IV,V - I semester, M.Tech II-I semester, MCA II-I semester, MBA II-I semester - II Unit of Instructions ends
2	26-1-2021	Republic Day
3	25-01-2021 to 30-01-2021	I Mid Examinations for B.Tech II,III,IV-I semester, IMBA II,III,IV,V - I semester, M.Tech II-I semester, MCA II-I semester, MBA II-I semester
		FEBRUARY
1	01-02-2021	II,III&IV B.Tech I sem, IMBA II,III,IV,V - I semester, M.Tech II-I semester,MCA II-I semester,MBA II-I semester – II Unit of Instructions (CONTINUED)
2	20-2-2021	II,III&IV B.Tech I semester, IMBA V-I semester, M.Tech II-I semester, MCA II-I semester, MBA II-I semester – II Unit of Instructions ends
3	22-2-2021 to 27-2-2021	II Mid Examinations for B.Tech II,III,IV-I semester,IMBA II,III,IV,V - I semester, M.Tech II-I semester, MCA II-I semester, MBA II-I semester
		MARCH
1	1-3-2021 to 6-3-2021	Preparations & Practicals for B.Tech II,III,IV-I Sem, IMBA II,III,IV,V - I semester, M.Tech II-I semester, MCA II-I semester,MBA II-I semester
2	8-3-2021 to 20-3-2021	**End Examinations** for B.Tech II,III,IV-I semester,IMBA II,III,IV,V - I semester, M.Tech II-I semester, MCA II-I semester,MBA II-I semester
3	22-3-2021	**Commencement of Class Work** for II,III&IV B.Tech II sem, IMBA II,III,IV II semester, MCAII-I semester, MBA II-I semester – I Unit of Instructions starts, **Commencement of Project Work** for V-II IMBA,II-II M.TECH

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APRIL		
1	1-4-2021 to 7-4-2021	Online Professional Development Programs / Faculty Development Programs
2	02-04-2021	Good Friday
3	05-04-2021	Babu Jagjivan Ram Jayanthi
4	14-4-2021	Dr.B.R. Ambedkar Jayanthi
5	21-4-2021	Sri Rama Navami
MAY		
1	08-05-2021	II,III, IV B.Tech II Sem, II,III,IV- II Sem IMBA,II-II MCA,II-II MBA - I Unit of Instructions ends
2	10-5-2021 to 12-5-2021	I Mid Examinations for B.Tech II,III,IV-II semester, IMBA II,III,IV- II semester,MCA II-II semester, MBA II-II semester
3	13-5-2021	II,III,IV B.Tech II semester,IMBA II,III,IV- II semester,II-II MCA,II-II MBA - II Unit of Instructions starts
4	14-5-2021	Eid- Al-Fitr
JUNE		
1	10-06-2021 to 15-7-2021	Online Professional Development Programs
2	20-6-2021	**End of project work for IMBA V-II semester**
3	26-6-2021	**Project work Phase - II ends for M.Tech II-II semester**
4	28-6-2021	Thesis submission duration starts for IMBAV-II semester,M.Tech II-II semester
5	30-6-2021	II,III,IV B.Tech II Sem,II-II MCA,II-II MBA -- II Unit of Instructions ends
JULY		
1	1-7-2021 to 3-7-2021	II Mid Examinations for B.Tech II,III,IV-II semester, IMBA II,III,IV- II semester, MCA II-II semester, MBA II-II semester
2	5-7-2021 to 10-7-2021	Preparations & Practicals for B.Tech II,III,IV-II semester, IMBA II,III,IV- II semester, MCA II-II semester, MBA II-II semester
3	12-7-2021 to 24-7-2021	**End Examinations** for B.Tech II,III,IV-II semester,IMBA II,III,IV- II semester,MCA II-II semester , MBA II-II semester & Thesis submission duration ends for IMBA V-II semester, M.tech II-II semester
AUGUST		
1	15-08-2021	Independence Day
SEPTEMBER		
1	13-09-2021	**End Examinations** for B.Tech II-II Sem starts

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Academic Year: 2020-21 **Semester : II**

S. No	Name of the Faculty	Theory subjects		Labs		Work Load / week (Periods)	Other responsibilities	Signature
		Subject Title	Branch	Lab Title	Branch			
1	Dr. S. Sri Gowri	AC II-A&B	ECE	-	-	6	Administration Disciplinary Committee Incharge II/IV Sec-A Student Mentor PRC Member UG&PG NAAC Criteria-2 Incharge ISO files-38 to 60,64,67,68,71	
2	Dr. B.Vanajakshi	BME III-A&B	ECE	-	-	6	III/IV Sec-B Student Mentor Disciplinary Committee Incharge PRC Member UG&PG NAAC Criteria-3	
3	Ms. T. Vishnu Priya	AC II-A&B DLD I-A&B	ECE CSD	AC-A	ECE	6+5+6	II/IV Sec-A Class Incharge Student Mentor PRC Member UG&PG ISO files-16,21,22,35,75	
4	Mr. B. Ravi	ECA II-A&B	ECE	ECA-A EWS-I/IV	ECE	6+6+6	II/IV Sec-A Class Incharge Student Mentor PRC Member UG&PG Robotics club member ISO Dept. Incharge NAAC Criteria-4 Dept.Coordinator ISO files-14,25,70,83 LICA lab Incharge	

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Department of Electronics and Communication Engineering

SRKIT / ECE / 09

RECORD OF SUBJECT WISE ALLOTMENT & RESPONSIBILITIES

S. No	Name of the Faculty	Theory subjects		Labs		Work Load / week (Periods)	Other responsibilities	Signature
		Subject Title	Branch	Lab Title	Branch			
5	Mr. P. Ratna Bhaskar	CMC IV-A&B	ECE	DC-A	ECE	6+6	IV/IV Sec-A Class Incharge Student Mentor PRC Member UG & PG NAAC Criteria-2 Dept.coordinator OCBE coordinator ISO files 17,23,24,76,77,78 Communication lab Incharge	
6	Mr. P. Raveendra	EMI IV-A&B	ECE	ECA-B	ECE	6+6	IV/IV Sec-A Student Mentor PRC Member UG NAACCriteria-3 Dept.Coordinator ISO files-5,26,34,83 DICA lab Incharge	
7	Mr. P. Koteswara Rao	EMTL II-A&B	ECE	MPMC-A	ECE	6+6	II/IV Sec-B Student Mentor PRC Member UG NAAC Criteria-1&7,IIC coordinator VLSI club facilitator ISO files- 8,9,10,73,82 MW&OC lab Incharge	
8	Mr. D. Ravi Tej	VLSID III-A&B	ECE	VLSI-A EDC	ECE EEE	6+6+6	III/IV Sec-B Class Incharge Student Mentor PRC Member UG NAAC Criteria-1 Dept. coordinator EDC coordinator VLSI club facilitator ISO files-37,61,74,81,82,95	

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	SRK INSTITUTE OF TECHNOLOGY Enikepadu, Vijayawada 521108 Department of Electronics and Communication Engineering RECORD OF SUBJECT WISE ALLOTMENT & RESPONSIBILITIES	SRKIT / ECE / 09

S. No	Name of the Faculty	Theory subjects		Labs		Work Load / week (Periods)	Other responsibilities	Signature
		Subject Title	Branch	Lab Title	Branch			
9	Mr. K.Venkateswara Rao	SC IV-A&B	ECE	-	-	6	IV/IV Sec-B Class Incharge Student Mentor PRC Member UG NAAC Criteria-5 Dept.coordinator	
10	Ms. N.V.K.Malu Lakshmi	-	-	MPMC-A&B VLSI-A	ECE	12+6	PRC Member UG &PG NAAC Criteria-1 IQAC coordinator	
11	Ms. A.V.P.Sarvari	CAO II-A&B	ECE	AC-B	ECE	6+6	III/IV Sec-B Class Incharge Student Mentor PRC Member UG &PG VLSI club facilitator NAAC Criteria-2 APSSDC coordinator M. Tech lab Incharge ISO files-6,7,19,20,33	
12	Ms. V. Sri Lakshmi	-	-	AC-A&B DC-A&B	ECE	12+9	IV/IV Sec-A Student Mentor PRC Member UG NAAC Criteria-2 ISO files-12,13,18,65	
13	Mr. Ch. Siva Rajesh	JAVA III-A&B JAVA I-A&B DS (I EEE)	ECE ECE EEE	DS	EEE	6+5+5+6	III/IV Sec-B Class Incharge, Student Mentor, PRC Member NAAC Criteria-6 NL& Journal coordinator ISO files-2,3,4,31,92	

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S. No	Name of the Faculty	Theory subjects		Labs		Work Load / week (Periods)	Other responsibilities	Signature
		Subject Title	Branch	Lab Title	Branch			
14	Mr. V. Sekhara Babu	DSP III-A&B	ECE	EDC	EEE	6+6	III/IV Sec-A Class Incharge Student Mentor PRC Member UG NAAC Criteria-5 ISO files-36,66,85,86,89,90,91	
15	Mr. G Surya Prakash	WSN IV-A&B	ECE	DC-B	ECE	6+6+ Placement work	IV/IV Sec-B Student Mentor NAAC Criteria-5 PRC Member UG Website information coordinator Placement cell dept. PDC lab Incharge ISO files-62,63,84,87,88,94	
16	Mr. B.S.S.Tejesh	MPMC III-A&B CAO I-A&B	ECE IT	MPMC-B	ECE	6+5+6	III/IV Sec-A Student Mentor PRC Member UG IOT club facilitator NAAC Criteria-6 ISO files-27,28,29,30,32,93 MP&MC lab Incharge	
17	Ms. T.Manogna	MWE III-A&B	ECE	VLSI-B	ECE	6+6	III/IV Sec-A Student Mentor PRC Member UG NAAC Criteria-2 ISO files-1,15,69,79	

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	SRK INSTITUTE OF TECHNOLOGY Enikepadu, Vijayawada 521108 Department of Electronics and Communication Engineering RECORD OF SUBJECT WISE ALLOTMENT & RESPONSIBILITIES	SRKIT / ECE / 09

S. No	Name of the Faculty	Theory subjects		Labs		Work Load / week (Periods)	Other responsibilities	Signature
		Subject Title	Branch	Lab Title	Branch			
18	Ms. Ch. Jnana Gayathri	MPMC III DE II	EEE EEE	MPMC	EEE	6+5+6	IV/IV Sec-B Student Mentor PRC Member UG NAAC Criteria-2 ISO files-11,69,72,80	
19	Ms. B. Sunitha	-	-	ECA-A&B VLSI -B	ECE	12+6	PRC Member UG	
20	Mr. A Siva Nageswara Rao	Training and Placement Activity						

S. Sri Gowri
HOD/ Date
30/3/21

Principal / Date 30/3/21

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	SRK INSTITUTE OF TECHNOLOGY **Enikepadu, Vijayawada 521108** **Department of Electronics and Communication Engineering** **CLASS TIME TABLE**	**SRKIT / ECE / 10.1**

Academic Year: 2020-21 **Class: IV /IV ECE SEC - I & II** **Semester: II**

Day	9:00 to 9:50	9:50 to 10:40	10:40 to 10:50	10:50 to 11:40	11:40 to 12:30
MON	EMI	CMC	B R E A K	E-III	SC
TUE	CMC	E-III		SC	EMI
WED	E-III	SC		EMI	CMC
THU	SC	EMI		CMC	E-III
FRI	EMI	CMC		E-III	SC
SAT	CMC	E-III		SC	EMI

Faculty:

Cellular Mobile Communications	**: Mr. P.Ratna Bhaskar**
Electronic Measurements and Instrumentation	: Mr. P.Raveendra
Satellite Communications	: Mr.K.Venkateswara Rao
Wireless Sensors & Networks (E-III)	: Mr.G.Surya Prakash

HOD/Date
31/8/21

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Mr. P. Ratna Bhaskar					
Time	9:00 to 9:50	9:50 to 10:40	10:40 to 10:50	10:50 to 11:40	11:40 to 12:30
Period	1	2		3	4
MON		CMC			
TUE	CMC				
WED			B R E A K		CMC
THU				CMC	
FRI		CMC			
SAT	CMC				

Signature of Faculty: Bhal

Signature of HOD: 8

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SRK INSTITUTE OF TECHNOLOGY VIJAYAWADA	**SRK INSTITUTE OF TECHNOLOGY** **Enikepadu, Vijayawada 521108** **Department of Electronics and Communication Engineering** **TEACHING PLAN CUM REALIZATION**	**SRKIT / ECE /12**

Department: ECE Name of faculty: P. RATNA BHASKAR Designation: ASSISTANT PROFESSOR A.Y 2020-21

Semester / Year: II/IV SEC I & II Name of the subject: CELLULAR AND MOBILE COMMUNICATIONS

S. No	Unit / Topic	Teaching Planned	Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
1	**UNIT -I CELLULAR MOBILE RADIO SYSTEMS**				
2	Introduction of cellular mobile systems		6/4/21	1	
3	Spectrum efficiency considerations		6/4/21	1	
4	Why 800 MHz and history of 800MHz		6/4/21		
5	Trunking Efficiency and Basic cellular systems		7/4/21	1	
6	Performance Criteria		9/4/21	1	
7	Uniqueness of Mobile radio environment		10/4/21	1	
8	Delay Spread, Coherence Bandwidth, direct wave path, line of sight path	From: 6-4-2021	15/4/21	1	
9	Noise level in cellular system	To: 22-4-2021	16/4/21	1	
10	Operation of cellular systems		17/4/21	1	
11	Hexagonal shaped cells		17/4/21		
12	Analog and Digital cellular systems		20/4/21	1	
13	General description of the problem		22/4/21	1	
14	Concept of frequency reuse channels		20/4/21	1	
15	Consideration of the components of cellular systems		20/4/21		
16	Co-channel interference reduction factor		22/4/21	1 (12)	

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S. No	Unit / Topic	Teaching Planned	Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	UNIT II ELEMENTS OF CELLULAR RADIO SYSTEMS DESIGN				
17	Desired C/I from a normal case in an Omnidirectional antenna systems	From: 26-4-21 To: 4-5-21	26/4/21	1	
18	Introduction of Cochannel Interference		26/4/21		
19	Handoff mechanism and cell splitting		27/4/21	1	
20	Real time cochannel interference measurement at mobile radio transceivers		28/4/21	1	
21	Design of Omnidirectional antenna in a worst case		29/4/21	1	
22	Design of a directional antenna system		30/4/21	1	
23	Lowering the antenna height		30/4/21		
24	Notch in a tilted antenna pattern		1/5/21	1	
25	Umbrella pattern effect				
26	Use of parasitic elements		3/5/21	1	
27	Diversity receiver		4/5/21	1(8)	
28	Types of non-Cochannel interference				
29	Adjacent channel interference		4/5/21		
30	Near-end-Far-end interference				
31	Interference between systems, UHF and long distance interference				

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S. No	Unit / Topic		Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	UNIT –III FREQUENCY MANAGEMENT AND CHANNEL ASSIGNMENT				
32	Frequency management: Numbering and grouping		4/5/21	1	
33	Setup, access channels		4/5/21		
34	Paging channels		4/5/21		
35	Channel assignment to the cell site		5/5/21	1	
36	Fixed channel assignment, adjacent, channel sharing and borrowing				
37	Sectorization and overlaid cells		6/5/21	1	
38	Non-fixed channel assignment				
39	**CELL COVERAGE FOR SIGNAL AND TRAFFIC**				
	General introduction and problems	**From: 4-5-21**	6/5/21	1	
40	Mobile point –to-point model (LEE model)	**To: 8-5-21**	7/5/21	1	
41	Phase difference between a direct path and reflected path		7/5/21	1	
42	Constant standard deviation along apath loss slope and general formula for mobile radio propagation		8/5/21	1	
43	Propagation over water or flat open area		8/5/21	1	
44	Land to mobile transmission over water and problems				
45	Foliage loss and propagation in Near –in distance		10/5/21	1 (9)	
46	Long distance propagation and form of a point –		10/5/21		

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	to-point model				

S. No	Unit / Topic	Teaching Planned	Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	UNIT –IVCELLSITE AND MOBILE ANTENNAS				
47	Sum and difference patterns and their synthesis		10/5/21	1	
48	Omni directional antennas at cellsite		11/5/21	1	
49	Directional antennas for interference reduction	From:10-5-21	11/5/21		
50	Space diversity antennas		12/5/21	1	
51	Umbrella pattern antennas		12/5/21		
52	Unique situation at cellsite antennas	To: 15-5-21	13/5/21	1	
53	Mobile roof mounted and glass mounted antennas and high gain antennas				
54	Horizontally and vertically oriented space diversity antennas		15/5/21	1	
55	Tutorial on Unit IV		15/5/21	1 (6)	
	UNIT –V HANDOFF AND DROPPED CALLS				
56	Why handoffs, types of Handoffs and handoff initiation		18/5/21	1	
57	Delaying handoff and forced handoff		18/5/21		
58	Mobile assisted handoff(MAHO)		18/5/21	1	
59	Cellsite handoffs and Intersystem handoff	From: 18-5-21	18/5/21		
60	Introduction to dropped call rate		20/5/21	1	
61	Formula of dropped call rate	To: 20-5-21	20/5/21		
62	Finding the values of Ω and μ				

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S. No	Unit / Topic	Teaching Planned	Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
64	Microcells		19/5/21	1(5)	
65	Vehicle- locating methods				
66	problems				
	UNIT –VI DIGITAL CELLULAR NETWORKS				
67	GSM Architecture	From: 22-5-21	22,26/5/21	2	
68	GSM Channels		27/5/21	2	
69	Multiple access scheme of GSM		28/5/21	1	
70	TDMA Architecture		27/5/21	1	
71	TDMA channels		31/5/21	1	
72	TDMA Frame structure	To: 5-6-21	31/5/21		
73	CDMA		1,2/6/21	2	
74	Comparison of multiple access scheme		1/6/21	1	
75	Third generation (3G) Architecture		4/6/21	2	
76	OFDMA Block diagram			1 (13)	

Faculty/ Date

HOD/Date

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UNIT: I

CELLULAR MOBILE RADIO SYSTEMS.

Introduction to Cellular Mobile System, Performance Crite Uniqueness of mobile radio environment, operation of cellular systems, Hexagonal shaped cells, Analog & Digital cellular systems.

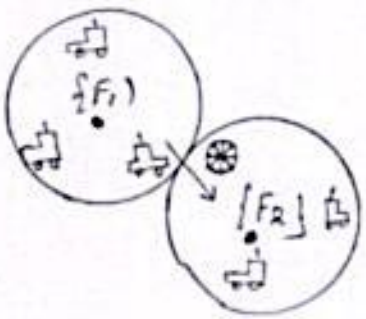
Introduction to cellular Mobile Systems:

One of many reasons for developing a cellular Mobil telephone system is because of operational limitations of Conventi mobile telephone systems. There are three important limitations present in Conventional mobile telephone system, they are

(i) Limited service capability
(ii) Poor service performance
(iii) Inefficient frequency spectrum utilization.

(i) Limited Service Capability:

- Reinitiating Calls
- Cell site



In a Conventional mobile syste
- High power
- Larger cell

Conventional Mobile System

A Conventional mobile telephone system is usually desig by selecting one or more channels from a specific frequency allocatio for use in autonomous geographic zones as shown in above figure The Communications Coverage area of each zone is normally planned to be as large as possible, which means that tx'ed power should at high as federal specification allows.

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The user who starts a call in one zone has to reinitiate + ... dropped.

Handoff is a process of automatically changing freq the mobile unit moves into a different frequency zone w/o rediali

Another disadvantage of the Conventional system is t no. of active users is limited to the no. of channels assigned Particular freq. zone.

(ii) Poor Service Performance:

A total of 33 channels were allocated to three telephone systems: a. Mobile Telephone Service (MTS)
b. Improved mobile telephone Service (IMTS)
c. Improved mobile telephone Service (IMTS)

MTS operates around 40MHz } both provide 11 chc
MJ " " 150MHz }
MK " " 450MHz & provide 12 channels

These 33 channels must cover an area 50miles diar

* In 1976, New york city had 6 channels of MJ Serving with another 2400 Customers on a waiting list.

* 111y for same Newyork city had 6 channels of MK Serving 22 with another 1300 customers on a waiting list.

The large no. of subscribers created a high blocking f during busy hours. Although the service performance was under the demand was still great. So a high Capacity Systems for mo telephones was needed.

(iii) Inefficient frequency Spectrum utilization:

In a Conventional mobile telephone system, the freq measurement Mo is defined as the maximum no. of Customers that served by one channel at the busy hour.

$$Mo = \frac{\text{no. of Customers}}{\text{Channels}}$$

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Assume an average calling time of 1.76 min & apply the Erlang B model (lost-calls cleared condition). Calculate the blocking probability as follows: Use 6 channels, with each channel serving the two different no. of customers shown in Mo.

The offered load can be obtained by

$$A = \frac{\text{Avg. Calling time (minutes)} \times \text{total customers} \Rightarrow (\text{No} \times \text{channel})}{60 \text{ mins}} \text{ erlangs}$$

$$A_1 = \frac{1.76 \times 53 \times 6}{60} = 9.33 \text{ erlangs} \quad (\text{MJ system})$$

$$A_2 = \frac{1.76 \times 37 \times 6}{60} = 6.51 \text{ erlangs} \quad (\text{MK system})$$

Given that the no. of channels is 6 & offered loads are $A_1 = 9.33$ & $A_2 = 6.51$ by using table appendix 1.1 to obtain the blocking probabilities $B_1 = 50$ Percent (MJ system) & $B_2 = 30$ percent (MK system) It is likely that half the initiating calls will be blocked in the MJ system, a very high blocking probability.

If the actual average calling time is greater than 1.76 min the blocking probability can be even higher. To reduce the blocking probability, we must decrease the value of the freq spectrum utilization measurement Mo. As far as freq spectrum utilization is concerned, the conventional system does not utilize the spectrum efficiently since each channel can only serve one customer at a time in a whole area.

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Spectrum efficiency consideration:

A major problem facing the radio communication industry is the limitation of the available radio freq. spectrum. In letting allocation policy, the Federal Communications Commission (FCC) seeks systems which need minimal bandwidth but provide high usage & consumer satisfaction.

The ideal mobile telephone system would operate within limited assigned freq band & would serve an almost unlimited no. of users. Three major approaches to achieve the ideal are

Spread Spectrum: Coo freq-hopped, which generates many
over a wide freq band.

Why 800 MHz ?

The FCC's decision to choose 800 MHz was made b/cz
· Spectrum limitations at lower freq. bands → FM broadcasting Servic
in the vicinity of 100 MHz.
→ The Television broadcasting service starts at 41 MHz & extends upto
→ Air to ground systems use 118 to 136 MHz
→ Military aircraft use 225 - 400 MHz
→ Maritime mobile service is located in the vicinity of 160 MHz.
→ Fixed station Services are allocated portions of the 30 - 100 MHz.

∴ It was hard for the FCC to allocate a spectrum in
lower portions of the 30 - 400 MHz band since the services of
band had become so crowded. On the otherhand, mobile radio t
cannot be applied at 10 GHz or above b/cz severe Propagatio
multipath fading & rain activity make the medium improper f
communication.

Fortunately 800 MHz was originally assigned to educati
Channels, Cable TV service became a big factor in the mid 70's
shared the load of providing TV channels. This situation opened
the 800 MHz band to some extent & the FCC allocated a 40-MHz
at 800 MHz to mobile radio cellular systems

History of 800 MHz Spectrum allocation

→ In 1958, the Bell System proposed a 75 MHz system at 800 MHz
a broadband proposal.
→ 1970, the FCC tentatively decided to allocate 75 MHz fo

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→ In 1974, the FCC allocated 40MHz of the Spectrum, with one cellular system to be licensed per market. However, the FCC strategically placed spectrum reserves totaling 20MHz in proximity to the cellular allocation.

→ In 1980, the FCC reconsidered its one-system-per-market strategy and studied the possibility of introducing competition into the previous one-carrier markets. Although cost saving make one cellular system per market attractive, balancing the benefits of economies of scale against the benefits of competition, two licensed per service area was more in line with emerging FCC policies

The frequencies will be assigned in 20MHz groups identified as block A & block B or called band A & band B. Two bands serve two different groups in the standard situation: one for wire-line (telephone) companies & one for non-wire line (non-telephone) company. Each company designs its own system & divides the area into geographical areas, or cells. Each cell operates within its own band

Band	Mobile	Base	Two systems/market
A	824-835, 845-846.5	869-880, 890-891.5	Non-wire line
B	835-845, 846.5-849	880-890, 891.5-894	wire-line.

Since 30KHz is the specified bandwidth, each band operating now-a-days consists of 333 channels.

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Trunking efficiency:

The trunking efficiency degradation inherent in licensing of more carriers rather than one, Compare the trunking efficiency of cellular system per market operating 666 channels & two cellular systems per market operating 333 channels each

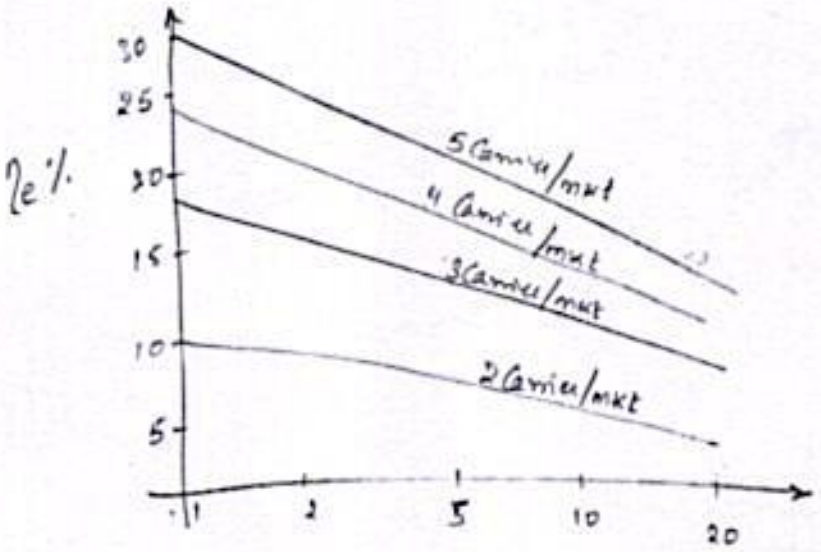
From the appendix table with $N_1 = 666/7 = 95$ & B=
& obtain the offered load $A_1 = 83.1$ & with $N_2 = 333/7 = 47$
B=0.02 to obtain $A_2 = 38$. Since two carriers each operating 333 ch
are considered, the total offered load is $2A_2$. we realise

$$A_1 \geq 2A_2.$$

By converting of to the no. of users who can be served in a
the average calling time of 1.76min is introduced. The no. of cal
hour served in a call can be expressed as

$$Q_i = \frac{A \times 60}{1.96} \text{ Calls/h}$$

$$Q_i = \begin{cases} 2832.95 \text{ Calls/h} & 1 \text{ Carrier/market} \\ 1295.45 \times 2 = 2590.9 \text{ Calls/h} & 2 \text{ Carrier/market} \end{cases}$$



The trunking efficiency degradation factor can be calculated

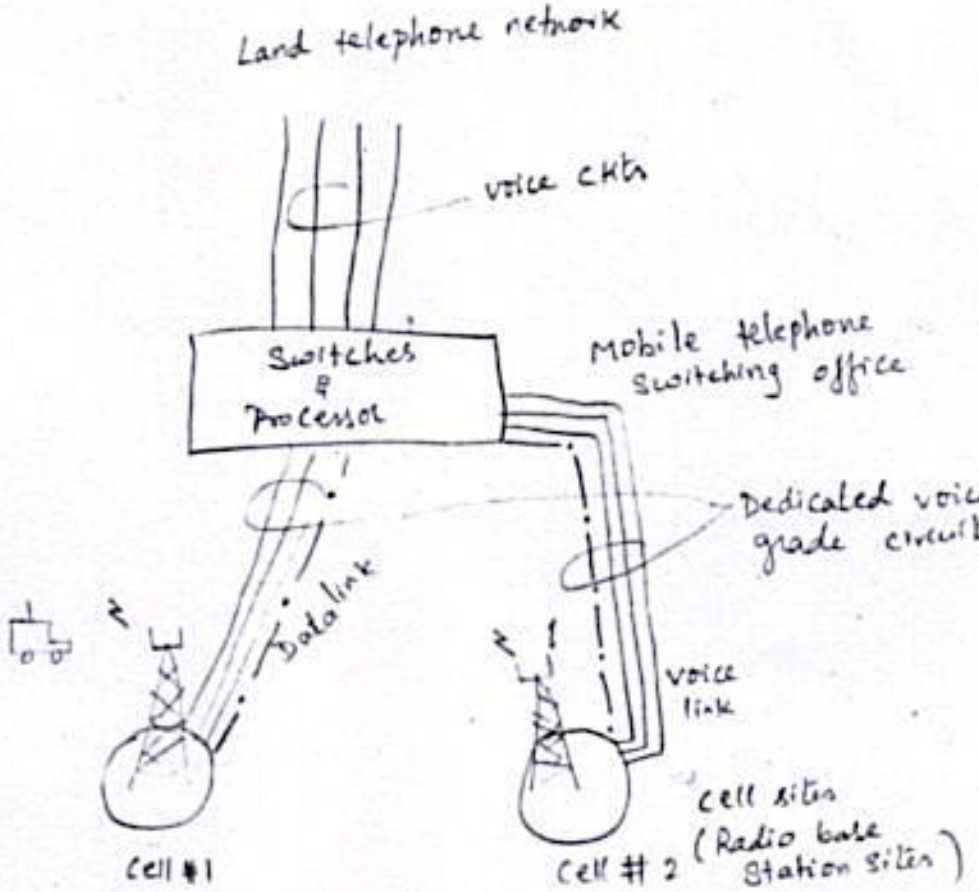
$$\eta_e = \frac{2832.95 - 2590.9}{2832.95} = 8.5\%$$

for a blocking probability of 2%. From above graph the %
comparing one carrier per market situations with different blocking pro
conditions. The degradation of trunking efficiency decreases as the blo
increases

already so poor that further degradation becomes insignificant.

For a 2% blocking probability, the trunking efficiency of on Comm per market does show a greater advantage when compared to other scenarios.

A Basic cellular System:



A basic cellular system consists of three parts: a mobile un a cell site, & a mobile telephone switching office (MTSO)

1. Mobile unit: A mobile telephone unit contains a control unit, a transce & an antenna system
2. cell site: The cell site provides interface between the MTSO & the mobile u It has a control unit, radio cabinets, antennas, a power plant & data terminals.
3. MTSO: The switching office, the central coordination link to all cell sites, contains the cellular processor & cellular switch.

The function of cellular processor is coordination of different ce The important functioning of MTSO is it interfaces with telephone compan ... handles billing activities

PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

Name of Teacher (s) 1. 2. P. Palna Bhaskar

IV Year II Semester B.Tech Course ECE Branch CMC Subject

Academic Year 2020-21

Sl. No.	Periods			Topic Covered	Sl. No.	Periods			Topic Covered
	Day	Time	Date			Day	Time	Date	
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
1	Tuesday	5	6/4/21	CMC Introduction	21	Tuesday	5	4/5/21	UNIT-III Frequency Hand
2	Tuesday	8	6/4/21	UNIT-I Basic Cellular System	22	Tuesday	6	4/5/21	paging channel, Allocat
3	Wednesday	1	7/4/21	Performance Criteria	23	Wednesday	4	5/5/21	Fixed Channel assign
4	Friday	8	9/4/21	limitations of Cellular, GROWTH	24	Wednesday	7	5/5/21	Non-fixed channel
5	Saturday	5	10/4/21	Sharing efficiency & operation of Cellular System	25	Thursday	8	6/5/21	Problems of PART-II
6	Thursday	3	15/4/21	Hexa shaped cells & Analog & Digital cellular syst	26	Friday	2	7/5/21	Lee Model Point-to-
7	Friday	6	16/4/21	Uniformity of mobile radio System	27	Friday	5	7/5/21	Propagation over wa
8	Saturday	6	17/4/21	Noises in mobile radio System	28	Saturday	1	8/5/21	Foliage loss & Near-gr
9	Tuesday	8	20/4/21	Amplifier noise, PART-B Problems	29	Saturday	6	8/5/21	Long distance propag
10	Tuesday	4	20/4/21	Cochannel Interference reduction factor	30	Monday	3	10/5/21	UNIT-IV Sum & differe
11	Friday	2	22/4/21	Analytic Solution, Simulation & Call splitting	31	Tuesday	1	11/5/21	Antennas at Cell site
12	Friday	4	23/4/21	Components of Cellular System & problems	32	Wednesday	2	12/5/21	Space diversity & antenn
13	Monday	2	26/4/21	UNIT-II Interference Introduction	33	Thursday	3	13/5/21	Umbrella Pattern, antenn
14	Tuesday	1	27/4/21	Real time measurement Omni directional antenna System	34	Friday	1	15/5/21	Mobile antennas, Hyb g
15	Wednesday	4	28/4/21	Directional antenna System	35	Tuesday	1	18/5/21	UNIT-V Hand off Ini
16	Thursday	3	29/4/21	Lowering height of the antenna	36	Tuesday	2	18/5/21	Cell site MO, MATSO, Tele
17	Friday	2	30/4/21	Notch & tilting antenna, Parasitic Elements	37	Wednesday	4	19/5/21	Micro cells, Vehicle locati
18	Saturday	1	1/5/21	Umbrella Pattern, Diversity Rules	38	Thursday	3	20/5/21	Dropped Call rate & g
19	Monday	2	3/5/21	Non-Cochannel Interference	39	Friday	2	21/5/21	Dropped Call rate he
20	Tuesday	1	4/5/21	Types of Non Cochannel Interferences	40	Saturday		22/5/21	UNIT-VI GSM Arc

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PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

Name of Teacher (s) 1. IV Year II Semester B.Tech Course ECE Branch CMC Subject

2. P. Ratna Bhaskar Academic Year 2020-21

Sl. No.	Periods			Topic Covered	Sl. No.	Periods			Topic Covered
	Day	Time	Date			Day	Time	Date	
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
41	Wednesday	4	26/5/21	GSM Architecture	61	Wednesday	4	16/6/21	Directional antenna Syste
42	Thursday	3	27/5/21	GSM Channels	62	Thursday	3	17/6/21	positive elements, Directi
43	Thursday	4	27/5/21	TDMA Architecture & Channels	63	Friday	2	18/6/21	type of non-directional a
44	Friday	2	28/5/21	Multiple access scheme GSM	64	Saturday	1	19/6/21	UNIT-III Power Control
45	Monday	2	31/5/21	Bursts & training sequence.	65	Monday	2	21/6/21	paging channel & differ
46	Monday	3	31/5/21	Channel Coding, RR, HHFCH	66	Tuesday	1	22/6/21	Fixed channel assignme
47	Tuesday	1	1/6/21	CDMA	67	Wednesday	4	23/6/21	PARS-II Lee Model Point
48	Wednesday	4	2/6/21	CDMA adv & disadv	68	Thursday	3	24/6/21	propagation over water
49	Thursday	3	8/6/21	CDMA O/L power Control	69	Friday	2	25/6/21	Foliage loss, long distance
50	Friday	2	4/6/21	3G Architecture	70	Saturday	1	26/6/21	UNIT-IV Sum & difference
51	Friday	3	4/6/21	3G Architecture	71	Monday	2	28/6/21	cellsite antennas
52	Saturday	1	5/6/21	OFDMA	72	Tuesday	1	29/6/21	MOBILE antennas
53	Monday	2	7/6/21	UNIT-I Revision Limitations	73	Wednesday	4	30/6/21	cell density & umbrella
54	Tuesday	4	8/6/21	Basic Cellular System & Performance criteria	74	Thursday	3	1/7/21	UNIT: V Handoff mi
55	Wednesday	3	9/6/21	operation of Cellular System	75	Friday	2	2/7/21	Different types of Hand
56	Thursday	2	10/6/21	Hexagonal shaped cells	76	Saturday	1	3/7/21	vehicle locating met
57	Friday	1	11/6/21	Engineering of Mobile Radio Environ	77	Monday	2	5/7/21	Dropped call rate & bo
58	Saturday	3	12/6/21	fading, the type of notes.	78	Tuesday	1	6/7/21	UNIT: IV GSM Archi
59	Monday	2	14/6/21	Revision UNIT-II Real time	79	Wednesday	4	7/7/21	TDMA & Channels.
60	Tuesday	1	15/6/21	Omni directional antenna System	80	Thursday	3	8/7/21	CDMA & Channels
					81	Friday	2	9/7/21	3G Architecture
					82	Saturday	1	10/7/21	OFDMA

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ENIKEPADU, VIJAYAWADA

PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

Name of Teacher (s) 1. 2. P. Ratna Bhaskar — IV Year II Semester B-Tech Course ECE Branch CMC Subject — Academic Year 2020-21

Sl. No.	Periods			Topic Covered	Sl. No.	Periods			Topic Covered
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41	Thursday	3	27/5/21	GSM channels	61	Thursday	3	17/6/21	Parameter elements, DD
42	Thursday	4	27/5/21	TDMA Architecture & channels	62	Friday	2	18/6/21	Types of non-Cochannel
43	Friday	2	28/5/21	Multiple access scheme GSM	63	Saturday	1	19/6/21	UNIT-III Revision. Freq H
44	Mon Saturday	2	31/5/21	Bursts & training Sequence	64	Monday	2	21/6/21	prime channel and diffe
45	Mon Saturday	3	31/5/21	channel Codings, BR, MM & CM	65	Tuesday	1	22/6/21	Fixed channel assign
46	Tuesday	1	1/6/21	CDMA	66	Wednesday	4	23/6/21	PART-II Lee Model Pro
47	Wednesday	4	2/6/21	CDMA adv & disadv	67	Thursday	3	24/6/21	propagation over water
48	Thursday	3	3/6/21	CDMA output power Control	68	Friday	2	25/6/21	Path loss, long distan
49	Friday	2	4/6/21	3G Architecture	69	Saturday	1	26/6/21	UNIT-IV Sum & Differen
50	Friday	3	4/6/21	3G Architecture	70	Monday	2	28/6/21	Cellular antennas
51	Saturday	1	5/6/21	OFDMA	71	Tuesday	1	29/6/21	Mobile antennas
52	Monday	2	7/6/21	Revision UNIT-I Process Conventions	72	Wednesday	4	30/6/21	Space diversity & control
53	Tuesday	4	8/6/21	Basic Cellular & Performance Criteria	73	Thursday	3	1/7/21	UNIT-V Handoff initi
54	Wednesday	3	9/6/21	Operation of Cellular System	74	Friday	2	2/7/21	Different types of Ha
55	Thursday	2	10/6/21	Hexagonal & Components of CMC	75	Saturday	1	3/7/21	Vehicle locating methods
56	Friday	3	11/6/21	Urban Situation of Mobile System	76	Monday	2	5/7/21	Dropped Call rate & Ha
57	Saturday	1	12/6/21	Fading, Amplifier noise	77	Tuesday	1	6/7/21	UNIT: VI GSM Archite
58	Monday	2	14/6/21	Revision UNIT-II Real time	78	Wednesday	4	7/7/21	TDMA & channels
59	Tuesday	1	15/6/21	Omni directional antenna System	79	Thursday	3	8/7/21	CDMA & channels
60	Wednesday	4	16/6/21	Directional antenna System	80	Friday	2	9/7/21	3G Architecture
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PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

IV Year II Semester B.Tech Course ECE Branch CMC Subject

Name of Teacher (s) 1. 2. P. Ratna Bhaskar Academic Year 2020-21

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2	Tuesday	8	6/4/21	UNIT-I Basic Cellular System	22	Wednesday	4	5/5/21	Fixed channel assignment
3	Wednesday	1	7/4/21	Performance Criteria	23	Wednesday	7	5/5/21	Non-fixed channel as
4	Friday	8	9/4/21	Limitations of cellular, FDMA?	24	Thursday	3	6/5/21	Problems of PART-II
5	Saturday	5	10/4/21	Trunking Efficiency & Operation of Cellular System	25	Friday	2	7/5/21	Lee Model Point-to-
6	Thursday	3	15/4/21	Hexagon, Analog & Digital Syst	26	Friday	5	7/5/21	Propagation over wate
7	Friday	6	16/4/21	Uniqueness of mobile radio Systems	27	Saturday	1	8/5/21	Foliage loss & Near-r
8	Saturday	6	17/4/21	Noise level in Cellular System	28	Saturday	6	8/5/21	Long distance propaga
9	Tuesday	3	20/4/21	Amplifier noise, PART II Frequency reuse	29	Monday	3	10/5/21	UNIT-IV Sum & diff
10	Tuesday	4	20/4/21	Co-channel interference reduction factor	30	Tuesday	1	11/5/21	Antennas at Cellsite C
11	Friday	2	22/4/21	Analytic, Simulation Solution & Cell Splitting	31	Wednesday	2	12/5/21	Space diversity, Umbr
12	Monday	2	26/4/21	UNIT-II Interference Tno tests	32	Thursday	3	13/5/21	Unique Situation, mi
13	Tuesday	1	27/4/21	Real time Co-channel I measurement	33	Friday	1	15/5/21	Mobile antennas, Highg
14	Wednesday	4	28/4/21	Omni directional antenna system	34	Tuesday	1	18/5/21	UNIT: V Handoff Tni
15	Thursday	3	29/4/21	Directional & Location of antenna height	35	Tuesday	2	18/5/21	Cellsite Ho, MAHO, Dat
16	Friday	2	30/4/21	Notch & tilted antenna, pan handle	36	Wednesday	4	19/5/21	micro cells, vehicle
17	Saturday	1	1/5/21	Umbrella pattern, Diversity Rules	37	Thursday	3	20/5/21	Dropped call rate &
18	Monday	2	3/5/21	Non-Co channel Interference & types	38	Friday	2	21/5/21	Dropped call rate ha
19	Tuesday	1	4/5/21	Types of Non-Co channel Interfere	39	Saturday	1	22/5/21	UNIT: VI GSM Arc
20	Tuesday	5	4/5/21	UNIT-III Frequency Management chart	40	Wednesday	4	26/5/21	GSM Architecture

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Directorate of Academic Planning

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
KAKINADA-533003, Andhra Pradesh, INDIA
(Established by AP Government Act No. 30 of 2008)

Lr. No. 01-08/ JNTUK/DAP/AC/B. Tech-B. Pharmacy/I-II-III-IV Year/2020-21 *Date: 29-12-2020*

Dr. R. Srinivasa Rao,
Director, Academic Planning
JNTUK, Kakinada

To
All the Principals of Affiliated Colleges.
JNTUK, Kakinada.

Academic Calendar for II, III and IV - B. Tech & B. Pharmacy
Academic year 2020-21

I SEMESTER			
Description	**From**	**To**	**Weeks**
Commencement of Class Work	**02.11.2020**		
I Unit of Instruction	02.11.2020	19.12.2020	7W
II Unit of Instructions	21.12.2020	23.01.2021	5W
I Mid Examinations	25.01.2021	30.01.2021	1W
II Unit of Instructions(Continued)	01.02.2021	20.02.2021	3W
II Mid Examinations	22.02.2021	27.02.2021	1W
Preparation & Practicals	01.03.2021	06.03.2021	1W
End Examinations	08.03.2021	20.03.2021	2W
Commencement of II Semester Class Work	**22.03.2021**		
II SEMESTER			
I Unit of Instructions	**22.03.2021**	08.05.2021	7W
I Mid Examinations	10.05.2021	12.05.2021	1/2W
II Unit of Instructions	13.05.2021	30.06.2021	7W
II Mid Examinations	01.07.2021	03.07.2021	1/2W
Preparation & Practicals	05.07.2021	10.07.2021	1W
End Examinations	12.07.2021	24.07.2021	2W
Commencement of next Year Class Work			
Note: Calendar is prepared with 8 hrs/day hence 7 weeks per instruction period			

Director Academic Planning

Director
Academic Planning
JNTUK Kakinada

Copy to the Secretary to the Hon'ble Vice Chancellor, JNTUK
Copy to Rector, JNTUK
Copy to Registrar, JNTUK
Copy to Director Academic Audit, JNTUK
Copy to Director of Evaluation, JNTUK

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Enikepadu, Vijayawada 521108

Department of Computer Science and Engineering

SRKIT / CSE / 09

RECORD OF SUBJECT WISE ALLOTMENT & RESPONSIBILITIES

FACULTY WORKLOAD: 2020-2021 / Semester-I

SNO	Faculty Name	Theory Subjects		Labs		Work Load/ Week (Periods)	Other Responsibilities	Signature
		Subject Title	Branch	Lab Title	Branch			
1	Dr. M.Ekambharam Naidu	ADS	I M.TECH	ADS	I M.TECH	4+4	Principal	
2	Dr.D.Haritha	DS	II-I (CSE)	DS	II-I (CSE)	10+6	Head of the Dept., NAAC C5	
3	Dr.B.Asha Latha	CP, CD	I-I (CSM), III-I (CSE)	CP	I-I (CSM)	18+3	ISO I/C, NAAC C2	
4	D.V.Subbarao	CNS, AOS	IV-I (CSE), I M.TECH	ADV. COMPUTING		17+3	Examination Cell I/C	
5	Dr.A.Radhika	SADP, DEV NET	IV-I (CSE), III-I (CSE)	SADP	IV-I (CSE)	15+12	Dept. Examination I/C	
6	Dr.N.Neelima Priyanka	CP, WT	I-I (CSD), IV-I (CSE)	CP, WT	I-I (CSD), IV-I (CSE)	12+13	APSSDC Lab I/C	

HOD/ Date

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SRK INSTITUTE OF TECHNOLOGY
ENIKEPADU, VIJAYAWADA

Principal / Date

	SRK INSTITUTE OF TECHNOLOGY Enikepadu, Vijayawada 521108 Department of Computer Science and Engineering RECORD OF SUBJECT WISE ALLOTMENT & RESPONSIBILITIES	SRKIT / CSE / 09

7	Dr.B.Srikanth	CP	I-I (CSE)	CP	I-I (CSE)	7+3	NAAC C6	
8	N.Sudhakar Reddy	DBMS	III-I (CSE)	DBMS, PYTHON	III-I (CSE), II-I (CSE)	13+9	NPTEL & BLC4-2 I/C	
9	Ch.Ambedkar	SE	II-I (CSE)			12	Dept. Timetables & Disciplinary	
10	M.V.Sumanth	CP	I-I (CSE)	CP	I-I (CSE)	7+3	Media Coordinator	
11	M.Naresh Babu	IOT, CPP	I M.TECH, II-I (CSE)	CPP, ADV COMPUTING	II-I (CSE)	15+10	Dept. Library I/C	
12	T.Bindu Madhavi	Study Leave	-	-	-	-	-	
13	A.Kalyan Kumar	CO	II-I (CSE)			12	BLC-2 Lab I/C	
14	K.Srilakshmi	UNIX	III-I (CSE)	LINUX	III-I (CSE)	13+7	NAAC C1	

HOD/ Date

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Principal / Date

SRK INSTITUTE OF TECHNOLOGY

Enikepadu, Vijayawada 521108

Department of Computer Science and Engineering

SRKIT / CSE / 09

RECORD OF SUBJECT WISE ALLOTMENT & RESPONSIBILITIES

15	P.Ushasri	OS	III-I (CSE)	OS	III-I (CSE)	12+7	NAAC C2	
16	N.V.Madhu Bindhu	BDA	V MCA, IV-I (CSE)			12	APSSDC Lab I/C 2	
17	P.Bhagya Lakshmi	CN	III MCA	CN	III MCA	6+4	Floor Discipline	
18	B.Kalikabai			CP	I-I (CSE)	12	Floor Discipline	
19	Hameeda Khatoon	FOC	I-I MBA			6	Anti Ragging	
20	D.Anusha			WT	IV-I (CSE A,B)	12	Anti Ragging	
21	D.Madhavi			SADP	IV-I (CSE A,B)	12	Anti Ragging	
22	M.Venkata Lakshmi			DS, OS	II-I (CSE A,B), III-I (CSE A,B)	13	Floor Discipline	

HOD/ Date

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ENIKEPADU, VIJAYAWADA

Principal / Date

SRK INSTITUTE OF TECHNOLOGY VIJAYAWADA	**SRK INSTITUTE OF TECHNOLOGY** **Enikepadu, Vijayawada 521108** **Approved by AICTE, Affiliated to JNTUK, Kakinada** **(ISO 9001:2015 Certified Institution)** **Department of Computer Science and Engineering** **CLASS TIME TABLE**	**SRKIT / CSE / 10.1**

Academic Year: 2020-2021 **Class: II** **Semester: I** **Wef: 17-8-2020**

Section : A & B						
Time	**9:30 To 10:30**	**10:30 To 11:30**	**11:30 To 12:30**		**2:00 To 3:00**	**3:00 To 4:00**
Period	**1**	**2**	**3**		**5**	**6**
MON	CO	DS	C ++		PYTHON PRO	MFCS
TUE	CO	DS	C ++		PYTHON PRO	SE
WED	MFCS	DS	C ++	**LUNCH**	PYTHON PRO	SE
THU	MFCS	DS	CO		PYTHON PRO	SE
FRI	C ++	DS	CO		MFCS	SE
SAT	C ++	MFCS	CO		PYTHON PRO	SE

SUBJECTS		**FACULTY**
Mathematical Foundations of Computer Science	--	G. Koteswaramma
Software Engineering	--	Ch.Ambedkar
Python Programming	--	J. Niranjani
Data Structures	--	Dr.D. Haritha
Object Oriented Programming through C++	--	M.V. Sumanth
Computer Organization	--	A. Kalyan Kumar
Oops C++ Lab	--	M.V. Sumanth/ T.Ganesh Kumar
Python Programming Lab	--	J. Niranjani/ Ch.Satyanarayana

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Academic Year: 2020-2021 **Semester: I**

Faculty Name: M.NARESH BABU

Time	9:30 To 10:30	10:30 To 11:30	11:30 To 12:30		2:00 To 3:00	3:00 To 4:00
Period	1	2	3		5	6
MON			IOT (V SEM MCA)	LUNCH		
TUE			IOT (V SEM MCA)			
WED			IOT (V SEM MCA)			
THU			IOT (V SEM MCA)			
FRI			IOT (V SEM MCA)			
SAT	IOT (V SEM MCA)					

Signature of Faculty: Signature of HOD:

Faculty Name: A.KALYAN KUMAR

Time	9:30 To 10:30	10:30 To 11:30	11:30 To 12:30		2:00 To 3:00	3:00 To 4:00
Period	1	2	3		5	6
MON	CO (II-I CSE A&B)			LUNCH		
TUE	CO (II-I CSE A&B)					
WED						
THU			CO (II-I CSE A&B)			
FRI			CO (II-I CSE A&B)			
SAT			CO (II-I CSE A&B)			

Signature of Faculty: Signature of HOD:

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	SRK INSTITUTE OF TECHNOLOGY Enikepadu, Vijayawada 521108 Department of Computer Science Engineering TEACHING PLAN CUM REALIZATION	SRKIT / CSE /12

Department: **CSE - B** Name of faculty: **ANGATI KALYAN KUMAR** Designation: **ASSISTANT PROFESSOR**

Semester / Year: **I/II** Name of the subject: **COMPUTER ORGANIZATION**

S. No	Unit / Topic	Teaching Planned	Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	UNIT - 1				
1	BASIC STRUCTURE OF COMPUTERS: BASIC ORGANIZATION OF COMPUTERS	From: 17/8/2020	17/8/2020	1	
2	HISTORICAL PERSPECTIVE		18/8/2020	1	
3	BUS STRUCTURES		20/8/2020	1	
4	DATA REPRESENTATION: DATA TYPES		21/8/2020	1	
5	COMPLEMENTS	To: 29/8/2020	24/8/2020	1	
6	FIXED POINT REPRESENTATION		25/8/2020	1	
7	FLOATING POINT REPRESENTATION		27/8/2020	1	
8	OTHER BINARY CODES		28,29/8/2020	2	
9	ERROR DETECTION CODES		31/8/2020	1	
10	COMPUTER ARITHMETIC: ADDITION AND SUBTRACTION		1,3/9/2020	2	
11	MULTIPLICATION ALGORITHMS		4,5/9/2020	2	
12	DIVISION ALGORITHMS		7,8/9/2020	2	

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S. No	Unit / Topic	Teaching Planned	Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	UNIT – 2				
13	REGISTER TRANSFER LANGUAGE AND MICROOPERATIONS: REGISTER TRANSFER LANGUAGE		10/9/2020	1	
14	REGISTER TRANFER BUS AND MEMORY TRANSFERS	From: 31/8/2020	11/9/2020	1	
15	ARITHMETIC MICROOPERATIONS		21/9/2020	1	
16	LOGIC MICROOPERATIONS		22/9/2020	1	
17	SHIFT MICROOPERATIONS	To: 14/9/2020	24/9/2020	1	
18	ARITMETIC LOGIC SHIFT UNIT		25,26/9/2020	2	
19	BASIC COMPUTER ORGANIZATION AND DESIGN: INSTRUCTION CODES		28,29/9/2020	2	
20	COMPUTER REGISTER		1,3/10/2020	2	
21	COMPUTER INSTRUCTIONS		5,6/10/2020	2	
22	INSTRUCTION CYCLE		8,9/10/2020	2	
23	MEMORY-REFERENCE INSTRUCTIONS		12,13,15/10/2020	3	
24	INPUT-OUTPUT AND INTERRUPT		17,19/10/2020	2	
25	COMPLETE COMPUTER DESCRIPTION		19/10/2020	1	

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S. No	Unit / Topic		Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	UNIT - 3				
26	CENTRAL PROCESSING UNIT: GENERAL REGISTER ORGANIZATION		20/10/2020	1	
27	STACK ORGANIZATION		21,22/10/2020	2	
28	INSTRUCTION FORMATS		23/10/2020	1	
29	ADDRESSING MODES	From: 15/9/2020	23,26/10/2020	2	
30	DATA TRANSFER AND MANIPULATION		27/10/2020	1	
31	PROGRAM CONTROL		28,29/10/2020	2	
32	REDUCED INSTRUCTION SET COMPUTER	To: 30/9/2020	31/10/2020	2	
33	MICRO PROGRAMMED CONTROL: CONTROL MEMORY		2/11/2020	1	
34	ADDRESS SEQUENCING		3/11/2020	1	
35	MICRO PROGRAM EXAMPLE		4/11/2020 29/12/2020	2	
36	DESIGN OF CONTROL UNIT		30/12/2020	1	
	UNIT - 4	From: 1/10/2020			
37	MEMORY ORGANIZATION: MEMORY HIERARCHY		31/12/2020	1	
38	MAIN MEMORY	To: 20/10/2020	18,19/1/2021	2	
39	AUXILIARY MEMORY		21/1/2021	1	
S. No	Unit / Topic		Taught on	No of Periods	Remarks

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			(Date)	(actual taken)	(if any deviation)
40	ASSOCIATIVE MEMORY	From: 1/10/2020	22,23/1/2021	2	
41	CACHE MEMORY		25/1/2021	1	
42	VIRTUAL MEMORY		4,5/2/2021	2	
43	INPUT-OUTPUT ORGANIZATION: PERIPHERAL DEVICES		6/2/2021	1	
44	INPUT-OUTPUT INTERFACE	To: 20/10/2020	8/2/2021	1	
45	ASYNCHRONOUS DATA TRANSFER		10,11/2/2021	2	
46	MODES OF TRANSFER		12/2/2021	1	
47	PRIORITY INTERRUPTS		13,15/2/2021	2	
48	DIRECT MEMORY ACCESS		17/2/2021	1	
	UNIT – 5				
49	MULTI PROCESSORS: INTRODUCTION	From: 21/10/2020	17/2/2021	1	
50	CHARACTERISTICS OF MUTLIPROCESSORS		17/2/2021	1	
51	INTERCONNECTION STRUCTURES		18,19/2/2021	2	
52	INTER PROCESSOR ORBITRATION	To: 20/11/2020	20,22/2/2021	2	
54	PIPELINE: PARALLEL PROCESSING		24/2/2021	1	
55	PIPELINIG		24,25/2/2021	2	
57	INSTRUCTION PIPELINE		25/2/2021	1	
58	RISC PIPELINE		26,27/2/2021	2	

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S. No	Unit / Topic		Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
56	ARRAY PROCESSOR		27/2/2021	1	

Text Books:

1) Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.
2) Computer Organization, Carl Hamacher, Zvonko Vranesic, Safwat Zaky, 5/e, McGraw Hill, 2002.

Faculty/ Date

HOD/Date 13/8/20

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SRK INSTITUTE OF TECHNOLOGY VIJAYAWADA	**SRK INSTITUTE OF TECHNOLOGY** **Enikepadu, Vijayawada 521108** **Department of Computer Science Engineering** **TEACHING PLAN CUM REALIZATION**	**SRKIT / CSE /12**

Department: **CSE - A** Name of faculty: **ANGATI KALYAN KUMAR** Designation: **ASSISTANT PROFESSOR**

Semester / Year: **I/II** Name of the subject: **COMPUTER ORGANIZATION**

S. No	Unit / Topic	Teaching Planned	Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	UNIT - 1	From: 17/8/2020 To: 29/8/2020	17/8/2020	1	
1	BASIC STRUCTURE OF COMPUTERS: BASIC ORGANIZATION OF COMPUTERS		17/8/2020	1	
2	HISTORICAL PERSPECTIVE		18/8/2020	1	
3	BUS STRUCTURES		20/8/2020	1	
4	DATA REPRESENTATION: DATA TYPES		21/8/2020	1	
5	COMPLEMENTS		24/8/2020	1	
6	FIXED POINT REPRESENTATION		25/8/2020	1	
7	FLOATING POINT REPRESENTATION		27/8/2020	1	
8	OTHER BINARY CODES		28,29/8/2020	2	
9	ERROR DETECTION CODES		29/8/2020	1	
10	COMPUTER ARITHMETIC: ADDITION AND SUBTRACTION		31/8/2020 1/9/2020	2	
11	MULTIPLICATION ALGORITHMS		2,7/9/2020	2	
12	DIVISION ALGORITHMS		7/9/2020 8/9/2020	2	

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	SRK INSTITUTE OF TECHNOLOGY Enikepadu, Vijayawada 521108 Department of Computer Science Engineering TEACHING PLAN CUM REALIZATION	SRKIT / CSE /12

S. No	Unit / Topic	Teaching Planned	Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	UNIT – 2				
13	REGISTER TRANSFER LANGUAGE AND MICROOPERATIONS: REGISTER TRANSFER LANGUAGE	From: 31/8/2020	9/9/2020	1	
14	REGISTER TRANFER BUS AND MEMORY TRANSFERS		10/9/2020	1	
15	ARITHMETIC MICROOPERATIONS		11/9/2020	1	
16	LOGIC MICROOPERATIONS		21/9/2020	1	
17	SHIFT MICROOPERATIONS	To: 14/9/2020	22/9/2020	1	
18	ARITMETIC LOGIC SHIFT UNIT		24,25/9/2020	2	
19	BASIC COMPUTER ORGANIZATION AND DESIGN: INSTRUCTION CODES		26/9/2020 28/9/2020	2	
20	COMPUTER REGISTER		29/9/2020 1/10/2020	2	
21	COMPUTER INSTRUCTIONS		3,5/10/2020	2	
22	INSTRUCTION CYCLE		6/8/10/2020	2	
23	MEMORY-REFERENCE INSTRUCTIONS		9,12,13/10/2020	3	
24	INPUT-OUTPUT AND INTERRUPT		15/10/2020 17/10/2020	2	
25	COMPLETE COMPUTER DESCRIPTION		17/10/2020	1	

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S. No	Unit / Topic		Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	UNIT - 3				
26	CENTRAL PROCESSING UNIT: GENERAL REGISTER ORGANIZATION		19/10/2020	2	
27	STACK ORGANIZATION		20/10/2020	2	
28	INSTRUCTION FORMATS		21/10/2020	1	
29	ADDRESSING MODES		22,23/10/2020	2	
30	DATA TRANSFER AND MANIPULATION	From: 15/9/2020	23/10/2020	1	
31	PROGRAM CONTROL		26,27/10/2020	2	
32	REDUCED INSTRUCTION SET COMPUTER	To: 30/9/2020	28,29/10/2020	2	
33	MICRO PROGRAMMED CONTROL: CONTROL MEMORY		31/10/2020	1	
34	ADDRESS SEQUENCING		31/10/2020	1	
35	MICRO PROGRAM EXAMPLE		2,3/11/2020	2	
36	DESIGN OF CONTROL UNIT		4/11/2020	1	
	UNIT - 4				
37	MEMORY ORGANIZATION: MEMORY HIERARCHY	From: 1/10/2020	29/12/2020	1	
38	MAIN MEMORY	To: 20/12/2020	29,30/12/2020	2	
39	AUXILIARY MEMORY		31/12/2020	1	
S. No	Unit / Topic		Taught on	No of Periods	Remarks

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S.No	Unit / Topic	Planned	(Date)	(actual taken)	(if any deviation)
40	ASSOCIATIVE MEMORY	From: 1/10/2020 To: 20/10/2020	18,19/1/2021	2	
41	CACHE MEMORY		21/1/2021	1	
42	VIRTUAL MEMORY		22,23/1/2021	2	
43	INPUT-OUTPUT ORGANIZATION: PERIPHERAL DEVICES		25/1/2021	1	
44	INPUT-OUTPUT INTERFACE		4/2/2021	1	
45	ASYNCHRONOUS DATA TRANSFER		5,6/2/2021	2	
46	MODES OF TRANSFER		8/2/2021	1	
47	PRIORITY INTERRUPTS		10,11/2/2021	2	
48	DIRECT MEMORY ACCESS		12/2/2021	1	
	UNIT – 5				
49	MULTI PROCESSORS: INTRODUCTION	From: 21/10/2020 To: 20/11/2020	13/2/2021	1	
50	CHARACTERISTICS OF MUTLIPROCESSORS				
51	INTERCONNECTION STRUCTURES		15,16/2/2021	2	
52	INTER PROCESSOR ORBITRATION		16,18/2/2021	2	
54	PIPELINE: PARALLEL PROCESSING		19/2/2021	1	
55	PIPELINIG		19,22/2/2021	2	
57	INSTRUCTION PIPELINE		23/2/2021	1	
58	RISC PIPELINE		25,26/2/2021	2	

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S. No	Unit / Topic		Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
56	ARRAY PROCESSOR		26/2/2021	1	

Text Books:

1) Computer System Architecture, M. Morris Mano, Third Edition, Pearson, 2008.
2) Computer Organization, Carl Hamacher, Zvonko Vranesic, Safwat Zaky, 5/e, McGraw Hill, 2002.

Faculty/Date 13/8/2020

HOD/Date 13/8/20

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PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

Name of Teacher (s) 1. A.kalyan kumar 2. Year II Semester I Course B.Tech Branch CSE-B Subject CO

Academic Year 2020-2021

Theory ✓ Drawing Practical

Sl. No.	Periods			Topic Covered	Sl. No.	Periods			Topic Covered
	Day	Time	Date			Day	Time	Date	
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
1	MON	1	17/8/20	Basic organization of Computers	21	THU	3	24/9/20	Shift microoperation
2	TUE	1	18/8/20	Historical purspective	22	FRI	3	25/9/20	Arithmetic Logic shift unit
3	THU	3	20/8/20	Bus Structures	23	SAT	3	26/9/20	Arithmetic Logic shift unit
4	FRI	3	21/8/20	Data Types	24	MON	1	28/9/20	Instruction Codes
5	MON	1	24/8/20	Complements	25	TUE	1	29/9/20	Instruction Codes
6	TUE	1	25/8/20	fixed point Representation	26	THU	3	1/10/20	Computer Registers
7	THU	3	27/8/20	Floating point Representation	27	SAT	3	3/10/20	Computer Registers
8	FRI	3	28/8/20	other Binary Codes	28	MON	1	5/10/20	Computer Instructions
9	SAT	3	29/8/20	other Binary codes	29	TUE	1	6/10/20	Computer Instructions
10	MON	1	31/8/20	Error detection Codes	30	THU	3	8/10/20	Instruction Cycle
11	TUE	1	1/9/20	Addition Algorithm	31	FRI	3	9/10/20	Instruction Cycle
12	THU	3	3/9/20	Subtraction Algorithm	32	MON	1	12/10/20	Memory-Reference Instructions
13	FRI	3	4/9/20	Multiplication Algorithm	33	TUE	1	13/10/20	Memory-Reference Instructions
14	SAT	3	5/9/20	Multiplication Algorithm	34	THU	3	15/10/20	Memory-Reference Instructions
15	MON	1	7/9/20	Division Algorithm	35	SAT	3	17/10/20	Input-Output
16	TUE	1	8/9/20	Division Algorithm	36	MON	1	19/10/20	Interrupt
17	THU	3	10/9/20	Register Transfer Language	37	MON	4	19/10/20	Computer Description
18	FRI	3	11/9/20	Register Transfer and memory transfers	38	TUE	1	20/10/20	General Register organization
19	MON	1	14/9/20	Arithmetic microoperations	39	WED	2	21/10/20	Register Stack organization
20	TUE	1	15/9/20	Logic micro operations	40	THU	3	22/10/20	Memory Stack organization

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PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

Theory ✓

20	TUE	1	27/9/20	Logic micro operations	40	THU	3	22/10/20	Memory Stack organization

PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

Name of Teacher (s) 1. D Akalyan kumar Year I Semester B.Tech Course CSE-B Branch CO Subject

2. Academic Year 2020-2021

Theory ✓ Drawing Practical

Sl. No.	Periods			Topic Covered	Sl. No.	Periods			Topic Covered
	Day	Time	Date			Day	Time	Date	
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
41	FRI	3	23/10/20	Instruction formats	61	FRI	3	5/2/21	Virtual memory
42	FRI	5	23/10/20	Addressing modes	62	SAT	3	6/2/21	Peripheral Devices
43	MON	1	26/10/20	Addressing Modes	63	MON	1	8/2/21	Input-Output Devices
44	TUE	1	27/10/20	Data Transfer & manipulation	64	WED	2	10/2/21	Asynchronous Data Transfer
45	WED	2	28/10/20	Program Control.	65	THU	3	11/2/21	Asynchronous Data Transfer
46	THU	3	29/10/20	program control.	66	FRI	3	12/2/21	Modes of Transfer
47	SAT	3	31/10/20	RISC Computer	67	SAT	3	13/2/21	priority Interrupts
48	MON	1	1/11/20	Control Memory	68	MON	1	15/2/21	priority Interrupts
49	TUE	1	3/11/20	Address Sequencing	69	WED	2	17/2/21	Direct memory Access
50	WED	2	4/11/20	Micro program Example	70	WED	2	17/2/2021	Introduction Multiprocessors
51	TUE	1	29/12/20	Micro program Example	71	THU/FRI	3,3	18,19/2/21	Instruction Structures
52	WED	2	30/12/20	Design of Control unit	72	SAT, MON	3, 1	20/22/2021	Interprocessor Arbitration
53	THU	3	31/12/20	Memory Hierarchy	73	WED	2	24/2/21	parallel processing
54	MON	1	18/1/21	Main Memory	74	WED/THU	2,3	24,25/2/21	pipelining
55	TUE	1	19/1/21	Main Memory.	75	THU	3	25/2/21	Instruction pipeline
56	THU	3	21/1/21	Auxiliary Memory	76	FRI	3	26/2/21	RISC pipe line
57	FRI	3	22/1/21	Associative Memory	77	SAT	3	27/2/21	RISC pipeline
58	SAT	3	23/1/21	Associative Memory.	78	SAT	5	27/2/21	Array processor
59	MON	1	25/1/21	cache memory	79				
60	THU	1	4/2/21	virtual Memory	80				

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PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

Theory ✓
Drawing
Practical

Name of Teacher (s) 1. 2. A.kalyan kumar

II Year I Semester BTECH Course CSE Branch CO Subject

Academic Year 2020-21

Sl. No.	Periods			Topic Covered	Sl. No.	Periods			Topic Covered
	Day	Time	Date			Day	Time	Date	
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
1	MON	1	17-8-20	Basic Organization of Computer	21	THUR	3	24/9/20	Arithmetic logic unit
2	TUE	1	18-8-20	Historical perspective	22	FRI	3	25/9/20	Arithmetic logic unit
3	THUR	3	20-8-20	Bus Structures.	23	SAT	3	26/9/20	Instruction Codes
4	FRI	3	21-8-20	Data Types	24	MON	1	28/9/20	Indirect Address
5	MON	1	24-8-20	Complements.	25	TUE	1	29/9/20	Computer Registers.
6	TUE	1	25-8-20	fixed point representation	26	THUR	3	01/10/20	Common Bus System
7	THUR	3	27-8-20	Floating point representation	27	SAT	3	3/10/20	Computer Instructions
8	FRI	3	28/8/20	other Binary Codes	28	MON	1	5/10/20	Instruction Set Completeness
9	SAT	3	29/8/20	other Binary Codes, Error detection codes	29	TUE	1	6/10/20	Instruction Cycle
10	MON	1	31/8/20	Addition Algorithm	30	THUR	3	8/10/20	Register-Reference Instructions
11	TUE	1	1/9/20	Subtraction Algorithm	31	FRI	3	9/10/20	Memory-Reference Instructions
12	WED	5	2/9/20	Multiplication Algorithm	32	MON	1	12/10/20	Load to AC, Store to AC
13	THUR	3	3/9/20	Multiplication Algorithms	33	TUE	1	13/10/20	BUN, BSA, ISZ. DH 12/10/20
14	MON	1	7/9/20	Division Algorithms	34	THU	3	15/10/20	Input-Output
15	THE	1	8/9/20	Division Algorithms.	35	SAT	3	17/10/20	Interrupt
16	WED	1	9/9/20	Register Transfer language	36	SAT	5	17/10/20	Complete Computer Description
17	THUR	3	10/9/20	Register Transfer Bus & Memory Transfers	37	MON	1	19/10/20	General Register organization
18	FRI	3	11/9/20	Arithmetic Microoperations	38	TUE	1	20/10/20	Stack Organization
19	MON	1	21/9/20	Logic Micro operations	39	WED	2	21/10/20	Instruction formats
20	TUE	1	22/9/20	Shift Micro operations	40	THU	3	22/10/20	Addressing Modes.

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20	TUE	1	22/9/20	Shift Micro operations	40	THU	3	[illegible]

PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

Theory ✓
Drawing
Practical

Name of Teacher (s) 1. II Year I Semester BTECH Course CSE Branch CO Subject
2. A. Kalyan Kumar Academic Year 2020-21

Sl. No.	Periods			Topic Covered	Sl. No.	Periods			Topic Covered
	Day	Time	Date			Day	Time	Date	
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
41	FRI	3	23/10/20	Addressing modes	61	THU	1	4/2/21	Input-output Interface
42	FRI	4	23/10/20	Data Transfer & Manipulation	62	FRI	3	5/2/21	Asynchronous Data Transfer
43	MON	1	26/10/20	Program Control	63	SAT	3	6/2/21	Asynchronous Data Transfer
44	TUE	1	27/10/20	Program Control.	64	MON	1	8/2/21	modes of Transfer
45	WED	2	28/10/20	RISC Computer	65	WED	2	10/2/21	Priority Interrupts.
46	THU	3	29/10/20	RISC Computer	66	THU	3	11/2/21	Priority Interrupts
47	SAT	3	31/10/20	Control Memory	67	FRI	2	12/2/21	Direct Memory Access
48	SAT	5	31/10/20	Address Sequencing.	68	SAT	3	13/2/21	Introduction to multiprocessor
49	MON, TUE	1,1	2,3/11/20	Micro Program Example	69	MON	1	15/2/21	Interconnection Structures.
50	WED	2	4/11/20	Design of Control Unit	70	TUE	1	16/2/21	Interconnection Structures
51	TUE	1	24/12/20	Memory Hierarchy	71	THU	3	18/2/21	Interprocessor arbitration
52	TUE	2	29/12/20	Main Memory	72	FRI	3	19/2/21	parallel processing
53	WED	2	30/12/20	Main memory.	73	FRI	4	19/2/21	pipelining.
54	THU	3	31/12/20	Auxiliary Memory	74	MON	1	22/2/21	pipelining.
55	MON	1	18/1/21	Associative Memory	75	TUE	1	23/2/21	Instruction pipeline
56	TUE	1	19/1/21	Associative Memory	76	THU	3	25/2/21	RISC pipeline
57	THU	3	21/1/21	Cache Memory	77	FRI	3	26/2/21	RISC pipeline
58	FRI	3	22/1/21	Virtual Memory	78	FRI	4	26/2/21	Array processor
59	SAT	3	23/1/21	Virtual Memory.	79				
60	MON	1	25/1/21	Peripheral Devices	80				

31/1

10/3

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RECORD OF SUBJECT WISE ALLOTMENT & RESPONSIBILITIES

SRKIT / IT / 09

Academic year:2020-2021

Semester:II

S. No	Name of the Faculty	Theory subjects		Labs		Work Load / week (Periods)	Other responsibilities	Signature
		Subject Title	Branch	Lab Title	Branch			
1.	Mr. M. Ram Bhupal	TOC	IT	-	-	6	HoD, NAAC-Criteria-3 Co-8dinato8	
		CS	IT	-	-	6		
2.	Mr. G.D.K. Kishore	Java	IT	Java Lab	IT	6+3	Incharge HoD, Attendence Register Incharge, Maintain Minutes of Meeting	
		WT	IT	WT Lab	IT	6+3		
3.	Mrs. G. Sri Lakshmi	DS	IT	-	-	6	Time Tables, ISO Incharge, & Internal Exam Cell	
		DM	IT	DM Lab	IT	6+3		
4.	Mr. M. Suresh Babu	MIS	IT	-	-	6	Placement Co-8dinato8, Tally Cisco Instructo8	
		CN	IT	STM Lab	IT	6+3		

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RECORD OF SUBJECT WISE ALLOTMENT & RESPONSIBILITIES

SRKIT / IT / 09

Academic year:2020-2021

Semester:II

S. No	Name of the Faculty	Theory subjects		Labs		Work Load / week (Periods)	Other responsibilities	Signature
		Subject Title	Branch	Lab Title	Branch			
5.	Mrs. A. veda Sri	STM	IT	-	-	6	APSSDC Co-Ordinator, Apila, III year class Teacher, Cricket-I dept Member	
		DBMS	IT	DBMS lab	IT	6+3		
6.	Mrs Amritha Mishra	OS	IT	OS & UNIX lab	IT	6+3	Seminar, Workshop, FDP Co-Ordinator	
		Python	IT	Python lab	IT	6+3		
7.	Mrs. Y. V. Nandini	OR	IT	-	-	6	Result Analysis, Student Feedback class Teacher - II	
		DS	IT	DS lab	IT	6+3		
8.	Mrs. P. Sai Charitha	SEMINAR	IT	-	-	9	Notice Board Incharge	
		-	-	WT Lab	-	3		

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RECORD OF SUBJECT WISE ALLOTMENT & RESPONSIBILITIES

SRKIT / IT / 09

S. No	Name of the Faculty	Theory subjects		Labs		Work Load / week (Periods)	Other responsibilities	Signature
		Subject Title	Branch	Lab Title	Branch			
		-	-	Java Lab	IT	3		
9.	Mr. S. Moshe Dayan	-	-	Projects	IT	3	Lab Incharge	
10.	Mr. Md Shafi	MS	IT	-	-	6	-	
11.	Ms. Indraja	IPR	IT	-	-	2	-	
		PE&HV	IT	-	-	2	-	
12.	Mrs. G. Kotaiahamma	P&S	IT	-	-	6	-	

HOD / Date

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Principal / Date

	SRK INSTITUTE OF TECHNOLOGY **Enikepadu, Vijayawada 521108** **(ISO 9001:2015 Certified Institution)** **DEPARTMENT OF INFORMATION TECHNOLOGY** **CLASS TIME TABLE**	**SRKIT / IT / 10.1**

II/IV B. Tech – II SEM Time Table (2020 – 21) **W.E.F.: 05/04/2021**

PERIOD	1	2	3	4		5	6	7	8
TIME/ DAY	9:00A.M to 09.50 A.M	09.50A.M to 10.40A.M	10.45 A.M to 11.35 A.M	11.35 A.M to 12.25P.M		01.10P.M to 02.00P.M	02.00 P.M to 02.45 P.M	02.50P.M to 03.35 P.M	03.35P.M to 04.20 P.M
MON	UNIX OS LAB			COUNSELING	12.25P.M to 01.10 P.M Lunch Break	TOC	P&S	DBMS	OS(T)
TUE	TOC	JAVA	DBMS	P&S		SRP		TOC(T)	JAVA
WED	JAVA	OS	TOC	DBMS		JAVA LAB/DBMS LAB			SPORTS
THU	DBMS LAB/JAVA LAB			LIBRARY		P&S	JAVA(T)	OS	PEHV
FRI	DBMS	OS	JAVA	TOC		DBMS	OS	PEHV	P&S(T)
SAT	P&S	TOC	OS	JAVA		DBMS(T)	P&S	COUNSELING	-

NAME OF THE SUBJECT	NAME OF THE FACULTY
O S	Mrs.Amritha Mishra
JAVA	Mr.G.D.K.Kishore
P&S	Mrs.G.Koteswaramma
DBMS	Mrs.A.Veda Sri
TOC	Mr.M.Ram Bhupal
PE&HV	Ms.Indraja(Mba)
UNIX OS LAB	Mrs.Amritha Mishra/ Mrs.Y.V.Nandini
JAVA LAB	Mr.G.D.K.Kishore/ Mrs.A.Vedasri/ P.Sai Charitha
DBMS LAB	Mrs.A.Veda Sri/ Mr.G.D.K.Kishore
SRP	Mrs.Y.V.Nandini/S.Moshe Dayan

IT HOD

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SRK INSTITUTE OF TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY **II/IV**

B.TECH II - SEMESTER TIME TABLE (A.Y 2020-2021)

Time	9:00 to 9:50	9:50 to 10:40	10:45 to 11:35	11: 35 to 12:25		1:10 to 2:00	2:00 to 2:45	2:50 to 3:35	3:35 to 4:20
Period	1	2	3	4		5	6	7	8
MON								**DBMS**	
TUE			**DBMS**						
WED				**DBMS**					
THU	**DBMS LAB**								
FRI	**DBMS**					**DBMS**			
SAT						**DBMS(T)**			-

LUNCH

Data Base Management System(RT22054) - A.VEDA SRI

HOD IT

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SRK INSTITUTE OF TECHNOLOGY VIJAYAWADA	**SRK INSTITUTE OF TECHNOLOGY** **Enikepadu, Vijayawada 521108** **Department of Information Technology** **TEACHING PLAN CUM REALIZATION**	**SRKIT / IT /12**

Department: IT
Semester / Year: II/II

Name of faculty: **A.Veda Sri**
Name of the subject: **Data Base Management System(R1922054)**

Designation: **Asst.Professor**
AY:2020-2021

S. No	Unit / Topic	Teaching Planned	Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	Unit - 1				
1.	Introduction		07/04/21	1	
2.	What is Database System, What is Database		07/04/21	1	
3.	Why Database		09/04/21	1	
4.	Data Independence		09/04/21	1	
5.	Relation Systems and Others	**From:** 06/04/21	12/04/21	1	
6	Schema and Instance	**To:** 22/04/21	16/04/21	1	
7	The Three Levels of Architecture- The External Level, The Conceptual Level, the Internal Level		16/04/21	1	
8	Mapping of levels		17/4/21	1	
9	Database Administrator		19/04/21	1	
10	The Database Management Systems		20/04/21	1	
11	Client/Server Architecture		23/04/21	1	

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12	Tutorial		23/04/21	1	
	Unit - 2				
13	Relational Model: Introduction to relational model		24/04/21	1	
14	concepts of domain, attribute		26/04/21	1	
15	tuple, relation,null values		27/04/21	1	
16	constraints (Domain, Key constraints, integrity constraints)	**From:** 23/04/21	28/04/21	1	
17	BASIC SQL: Simple Database schema		29/04/21	1	
18	data types, table definitions (create, alter)	**To:** 15/05/21	30/04/21	1	
19	different DML operations (insert, delete, update)		30/04/21	1	
20	basic SQL querying (select and project) using where clause		01/05/21	1	
21	Arithmetic& logical operations		03/05/21	1	
22	SQL functions: Date and Time Numeric, String conversion		04/05/21	1	
23	constraints (Domain, Key constraints, integrity constraints)		05/05/21	1	

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24	Tutorial		06/05/21	1	
S. No	Unit / Topic	Teaching Planned	Taught on (Date)	No of Periods (actual taken)	Remarks (if any deviation)
	Unit - 3				
25	constraints (Domain, Key constraints, integrity constraints)		07/05/21	1	
26	BASIC SQL: Simple Database schema		08/05/21	1	
27	data types, table definitions (create, alter)		10/05/21	1	
28	different DML operations (insert, delete, update)		11/05/21	1	
29	basic SQL querying (select and project) using where clause	From: 17/05/21	12/05/21	1	
30	Arithmetic& logical operations	To: 28/05/21	13/05/21	1	
31	SQL functions: Date and Time Numeric, String conversion		15/05/21	1	
32	implementation of key and integrity constraints		17/05/21	1	
33	nested queries, sub queries		18/05/21	1	
34	grouping, aggregation, ordering		19/05/21	1	

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35	Implementation of different types of joins		20/05/21	1	
36	view(updatable and non-updatable)		21/05/21	1	
37	relational set operations		21/05/21	1	
38	Tutorial		22/05/21	1	
	Unit - 4				
39	Introduction to Normalization or	From: 29/05/21 To: 15/06/21	24/05/21	1	
40	schema refinement		25/05/21	1	
41	Purpose of Normalization		26/05/21	1	
42	Advantages of Normalization		27/05/21	1	
43	functional dependency		28/05/21	1	
44	First normal form		28/05/21	1	
45	Second normal form		29/05/21	1	
46	Third normal form		31/05/21	1	
47	Concept of surrogate key		01/06/21	1	
48	Boyce-codc normal form(BCNF)		02/06/21	1	

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49	Lossless join		03/06/21	1	
50	dependency preserving decomposition		04/06/21	1	
51	Example of dependency preserving		04/06/21	1	
52	Fourth normal form(4NF)		05/06/21	1	
53	Fifth normal form(5NF)		07/06/21	1	
54	Tutorial		08/06/21	1	
	Unit - 5				
55	Transaction Concept: Transaction State	**From: 17/06/21**	09/06/21	1	
56	Implementation of Atomicity and Durability		09/06/21	1	
57	Concurrent Executions	**To: 30/06/21**	10/06/21	1	
58	Serializability		11/06/21	1	
59	Recoverability		14/06/21	1	
60	Implementation of Isolation		15/06/21	1	
61	Testing for Serializability		16/06/21	1	
62	Failure Classification, Storage		17/06/21	1	
63	Recovery and Atomicity		18/06/21	1	

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64	Recovery algorithm.		18/06/21	1	
65	Indexing Techniques: B+ Trees, Search		19/06/21	1	
66	Insert, Delete algorithms		21/06/21	1	
67	File Organization and Indexing		22/06/21	1	
68	Cluster Indexes		23/06/21	1	
69	Primary and Secondary Indexes		25/06/21	1	
70	Index data Structures Hash Based Indexing:		29/06/21	1	
71,72	Tree base Indexing		02/07/21	2	
73	Comparison of File Organizations		05/07/21	1	
74	Types of file Structure		07/07/21	1	
75	Indexes and Performance Tuning		09/07/21	1	
76	Tutorial		12/07/21	1	

Faculty: Dt: 7/12/21

HOD: Dt: 7/12/21

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22/7/21

Q) What is database system?

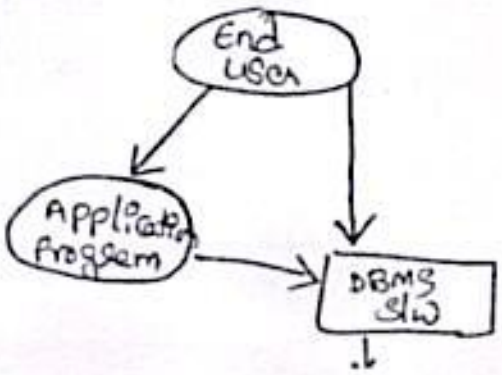
A) **Database** :- Database is a collection of "related" data that represents some real world Entity

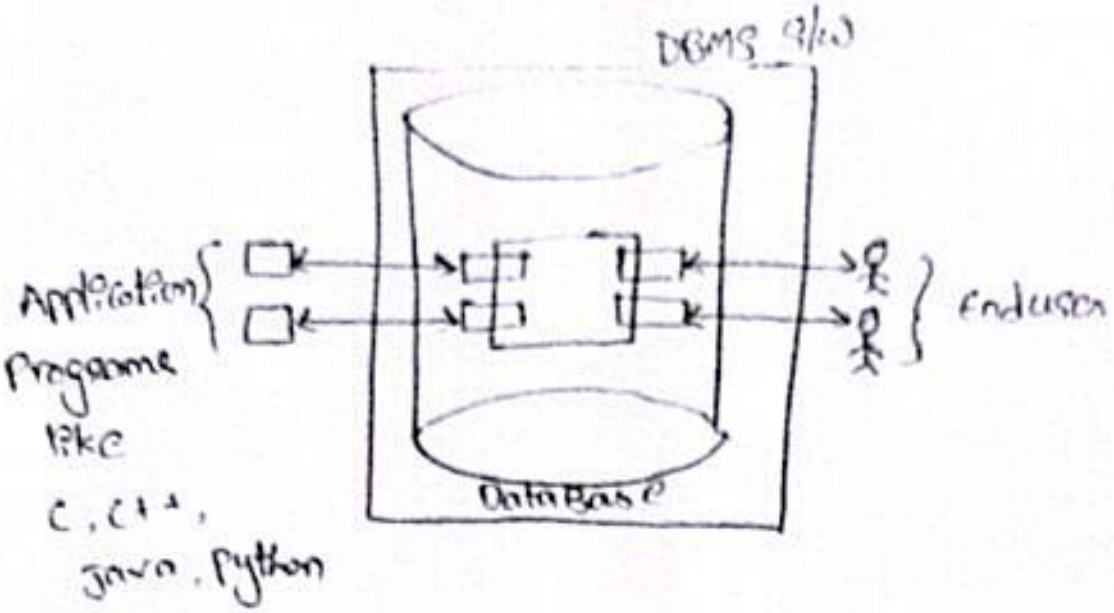
DBMS :- It is a software which is used to manage Store and retrieve the data in an Easy and Efficient manner

Ex:- Oracle, mysql, sql, db_2 Etc.

Database System :-

The endusers can access the data with the help of application programs like C, C++, Java, Python and DBMS s/w, the End-users can access the database "directly" by using dbms s/w. But with the help of application programs we can access the data "indirectly"





Q) Explain Database Applications?

A) DataBase Applications :-

* Banking :- All transactions, Customer details
* Airlines :- Reservations, schedules
* Universities :- Registrations, Grades
* Sales :- Customers, products, purchases
* Manufacturing :- production, inventory, orders, Supplychain
* Human resources :- Employee records, salaries, tax deduction

∴ Data base touches all aspects of our lives

Mapping :-

* Mapping is the process of transforming request, response between various database levels of architecture
* Mapping between Internal and Conceptual levels & Schema is known as I/C mapping
* Mapping between External and Conceptual level is known as E/C mapping
* Programs refers to an External schema, and are mapped by the DBMS to the Internal schema for Execution.
* Mapping - is not good for small database because it takes more time

→ Physical level :-

* It describes how a data is stored
* The another name for physical level is "Internal level"
* This level is very close to physical storage of data
* At in lowest level, the data is stored in the form of bits with physical address on the secondary storage device.
* physical level is the lowest level

* Monitoring performance :- The DBA has to Continuously monitor the performance of the queries in the application

Q) Explain about "three level" of Architecture ?

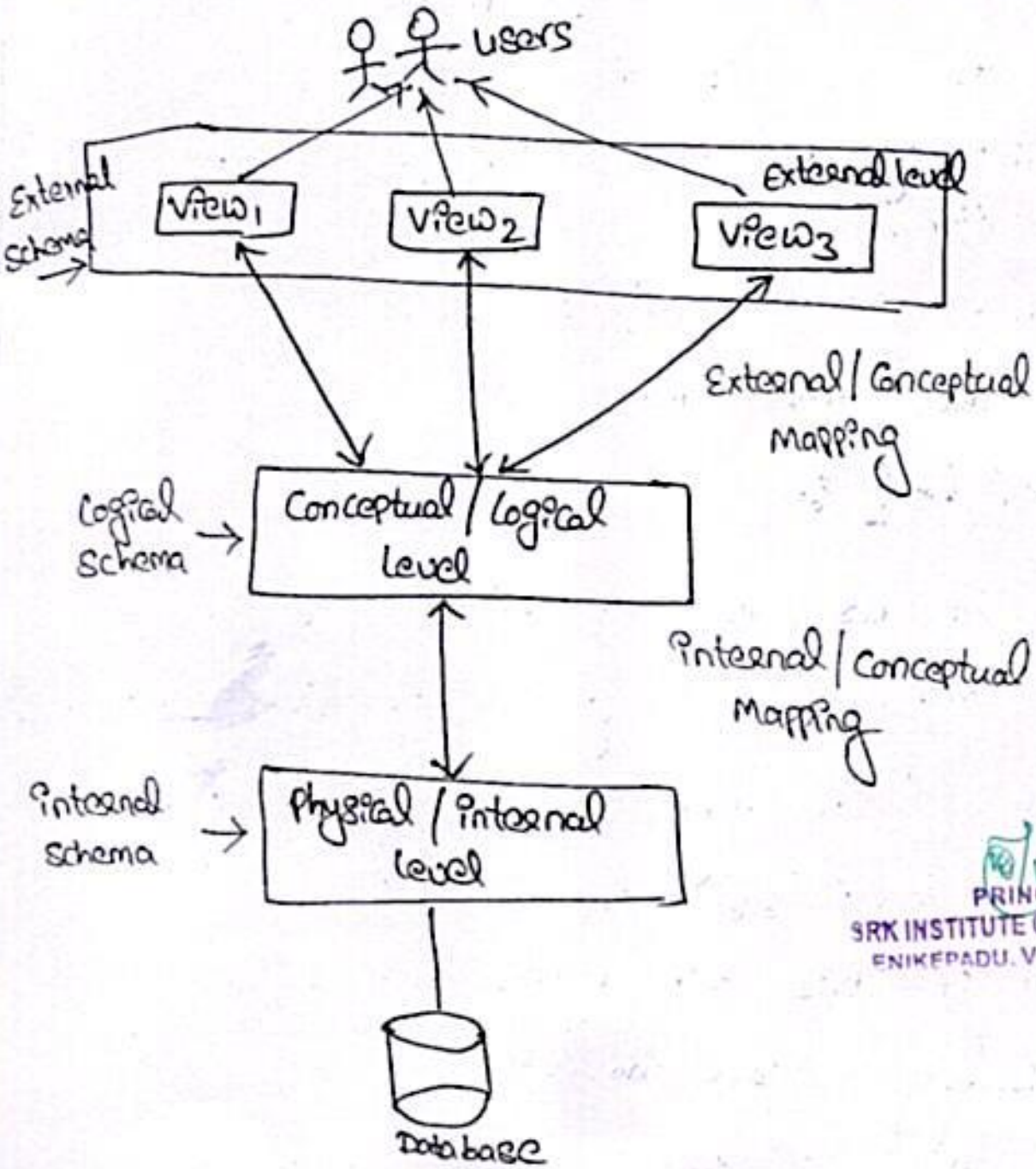
Imp ***

(or)

Explain about three levels of data abstractions ?

(or)

Demonstrate data abstraction implementation in DBMS ?



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* At higher level, this bits are viewed in the form of files

* DBMS supports "multi-level" architecture, so that in one level of changes may not effect the another level
(changes in physical level may not effect the Conceptual level)

→ Conceptual level :-

These levels describes the how data is stored in the particular format and the relationship among them

* The another name for Conceptual level is "logical level"
* This level is the "intermediate" level between External level & Internal level
* It hides the internal details of physical storage.

→ External level

* In the External level the data which is viewed by "single user" or "multiple-users"
* The another name for External level is "view level" & "user level"

PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

II Year II Semester B.TECH Course IT Branch DBMS Subject

Theory / Drawing / Practical

Name of Teacher (s) 1. A Vedavathi

2.

Academic Year 2020-2021

Sl. No.	Periods			Topic Covered	Sl. No.	Periods			Topic Covered
	Day	Time	Date			Day	Time	Date	
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
U-I 1	WED	2	7/4/21	Introduction	21	MON	7	3/5/21	Arithmetic & logical operation
2	WED	4	7/4/21	What is Database System	22	TUE	3	4/5/21	SQL functions: Date & Time
3	FRI	1	9/4/21	Why database	23	WED	4	5/5/21	Key Constraints, Integrity
4	FRI	5	9/4/21	Data Independence	24	THU	1	6/5/21	Tutorial
5	MON	7	12/4/21	Relation System and others	25	FRI	1	7/5/21	Introduction to Entity Relation
6	FRI	1	16/4/21	Schema and others & Instance	26	FRI	5	7/5/21	Representation of Entities, Set
7	FRI	5	16/4/21	3-level of Architecture	27	SAT	5	8/5/21	relationship Set, relations
8	SAT	5	17/4/21	Mapping of levels	28	MON	7	10/5/21	relationships, Subclass, Super
9	MON	7	19/4/21	Database Administrators	29	TUE	3	11/5/21	Inheritance, Specialization
10	TUE	3	20/4/21	The Database Management System	30	WED	4	12/5/21	Generalization using ER Diag
11	FRI	1	23/4/21	client/Server Architecture	31	THU	1	13/5/21	SQL: Creating tables with relation
12	FRI	5	23/4/21	Tutorial	32	SAT	5	15/5/21	Implementation of keys & Constra
U-II 13	SAT	5	24/4/21	Introduction to Relational Model	33	MON	7	17/5/21	nested queries, Sub queries
14	MON	7	26/4/21	Concepts of domain, attributes	34	TUE	3	18/5/21	grouping, aggregation, Order
15	TUE	3	27/4/21	tuples, relation, null values	35	WED	4	19/5/21	Different types of Joins
16	WED	4	28/4/21	Constraints (Domain, Key)	36	THU	1	20/5/21	view, Materialized view
17	THU	1	29/4/21	Basic SQL: querying	37	FRI	1	21/5/21	relational Set operations
18	FRI	1	30/4/21	Arithmetic & logical operation	38	FRI	5	21/5/21	Tutorial
19	FRI	5	30/4/21	SQL DML operations	39	SAT	5	22/5/21	Introduction to Normalization
20	SAT	5	1/5/21	Selection and projection	40	MON	7	24/5/21	Schema Refinement.

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PROGRAMME OF INSTRUCTION ACCORDING TO TIME TABLE AND ALMANC

Name of Teacher (s) 1. A Veda Sri — II Year II Semester B.TECH Course 17 Branch DBMS Subject

2.

Academic Year 2020-2021

Theory / Drawing / Practical

Sl. No.	Periods			Topic Covered	Sl. No.	Periods			Topic Covered
	Day	Time	Date			Day	Time	Date	
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
41	TUE	3	25/5/21	Purpose of Normalization	61	TUE	3	15/6/21	Testing for Serializability
42	WED	4	26/5/21	Advantage of Normalization	62	WED	4	16/6/21	failure classification, Storage
43	THU	1	27/5/21	Functional Dependency	63	THU	1	17/6/21	Recovery and Atomicity
44	FRI	1	28/5/21	first Normal form	64	FRI	1	18/6/21	Recovery Algorithm
45	FRI	5	28/5/21	Second Normal form	65	FRI	5	18/6/21	B+ trees Searching
46	SAT	5	29/5/21	Third Normal form	66	SAT	5	19/6/21	B+ tree Insertion, Deletion
47	MON	3	31/5/21	Concept of Surrogate key	67	MON	7	21/6/21	file Organization and Index
48	MON	7	31/5/21	Boyce-Codd Normal form	68	TUE	3	22/6/21	clustering Indexing
49	TUE	3	1/6/21	lossless join	69	WED	4	23/6/21	Primary Indexing
50	WED	4	2/6/21	Dependency preserving decompo	70	FRI	1	25/6/21	Secondary Indexing
51	THU	1	3/6/21	Example of dependency preservin	71	TUE	3	29/6/21	Index Data Structure Hash ba
52	FRI	1	4/6/21	fourth Normal form	72	FRI	1	2/7/21	Tree base Indexing
53	FRI	5	4/6/21	fifth Normal form	73	MON	7	5/7/21	Comparison of file Organiza
54	SAT	5	5/6/21	Tutorial	74	WED	4	7/7/21	Types of file Structure
55	MON	7	7/6/21	Transaction States	75	FRI	5	9/7/21	Indexes and performance i
56	TUE	3	8/6/21	Implementation of Atomicity	76	MON	7	12/7/21	Tutorial
57	WED	4	9/6/21	Concurrency Executions	77				
58	THU	1	10/6/21	Serialization	78				
59	FRI	1	11/6/21	Recoverability	79				
60	MON	7	14/6/21	Implementation of Isolation	80				

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