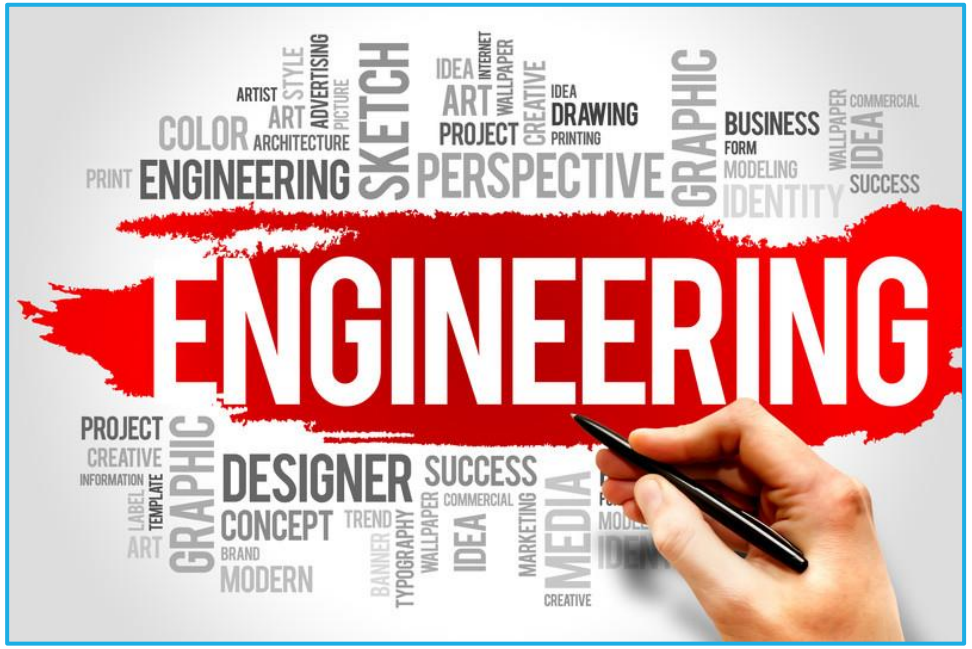
COMPUTER ENGINEERING

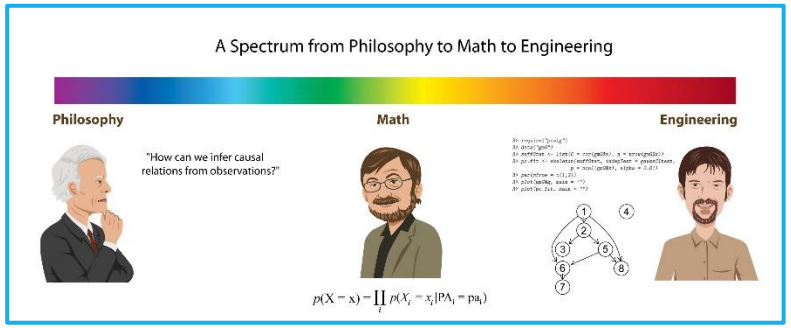
Er. Shiva K. Shrestha
Head, Computer Department
Khwopa College of Engineering

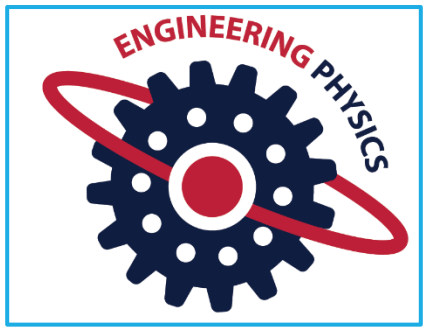
ENGINEERING

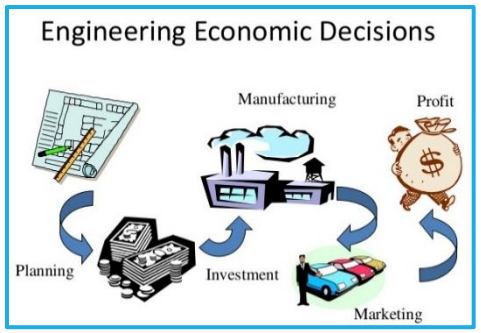


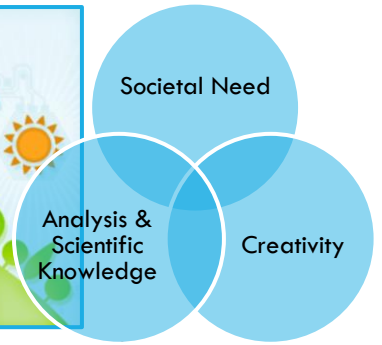
Engineering

- Civil Engineering
- Computer Engineering
- Electrical Engineering
- Electronics, Communication & Information Engineering
- Agriculture Engineering
- Aerospace Engineering
- Mechanical Engineering, etc.

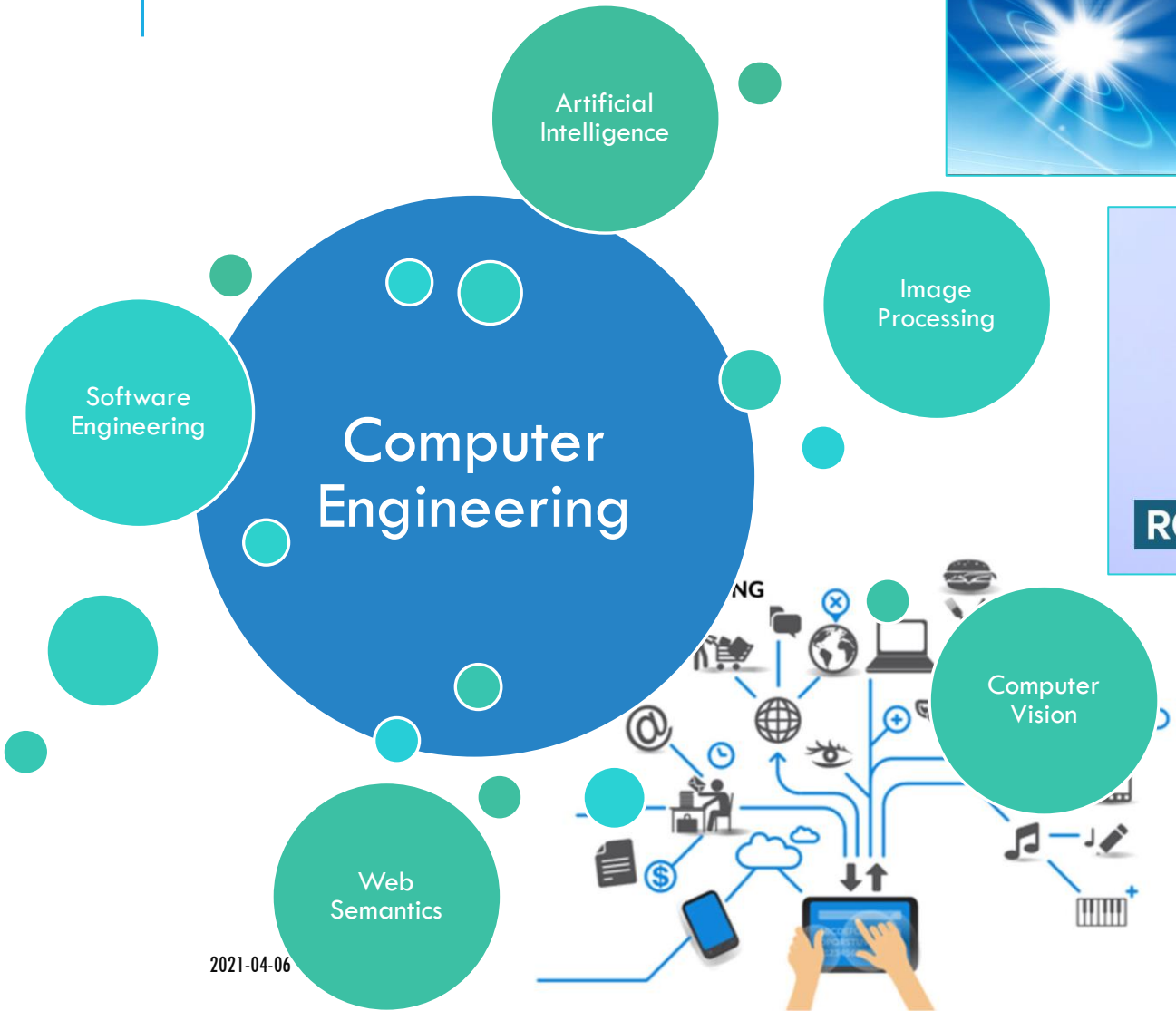


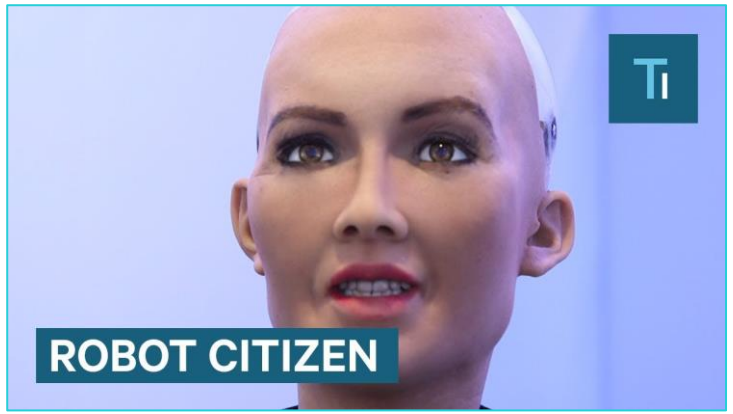


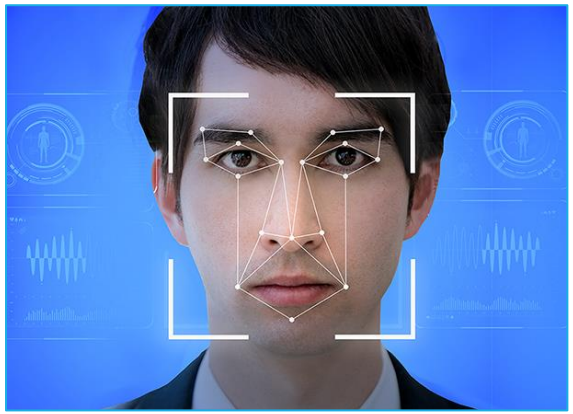


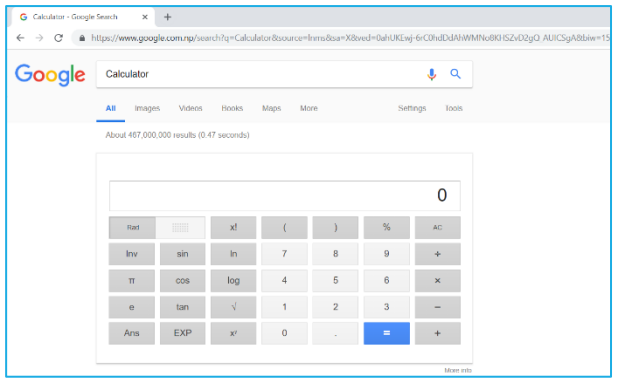


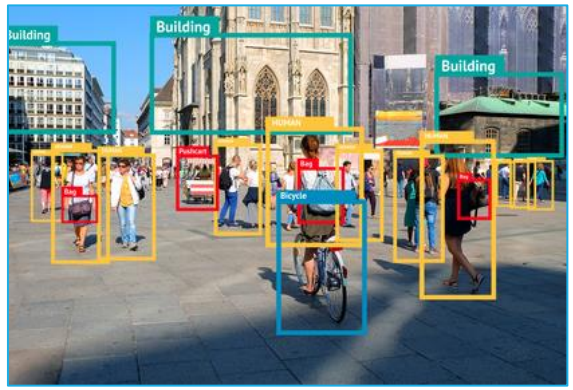
BCT


Artificial Intelligence
Image Processing
Software Engineering
Computer Engineering
Computer Vision
Web Semantics

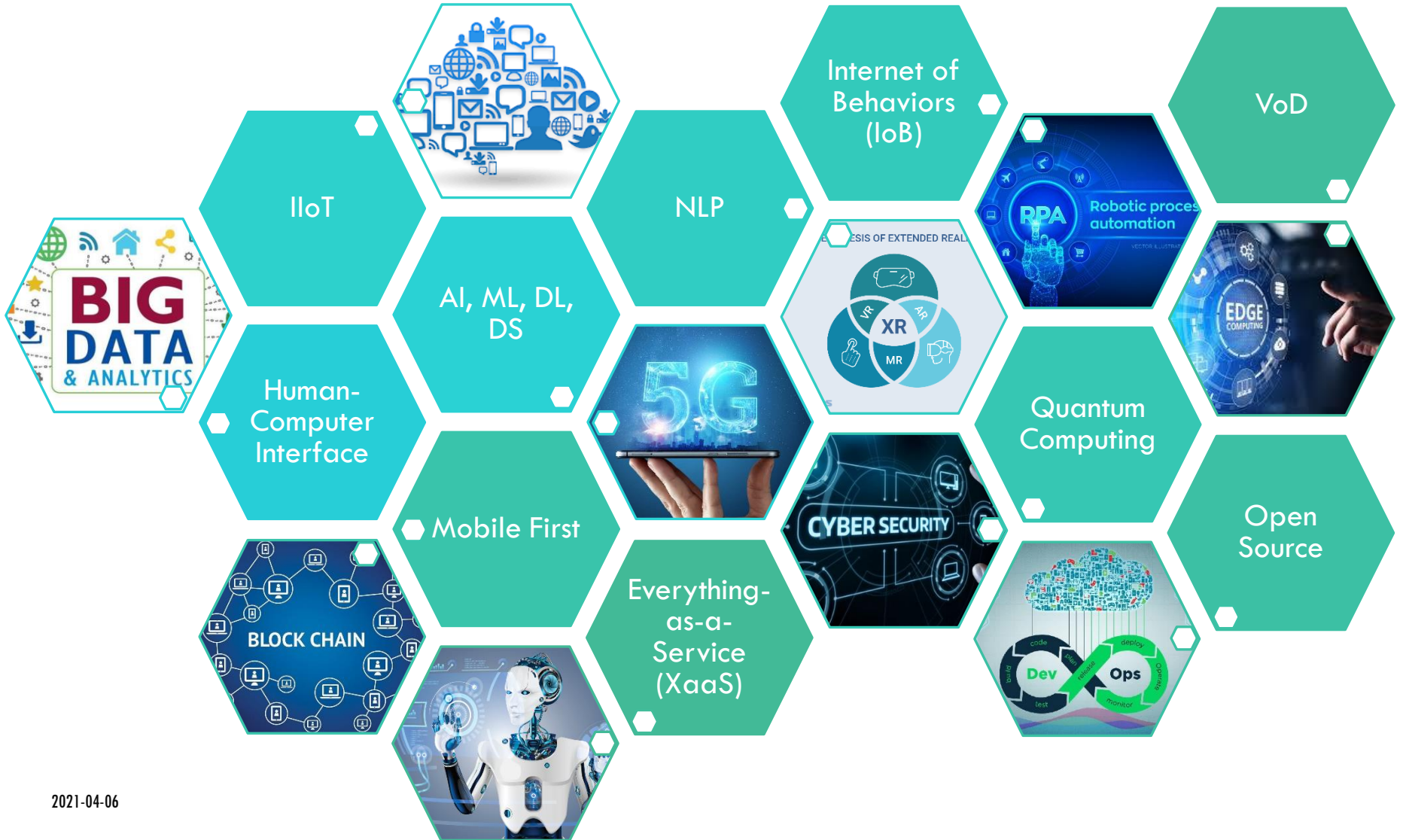

ROBOT CITIZEN




Google
Calculator


Building
Building
Building

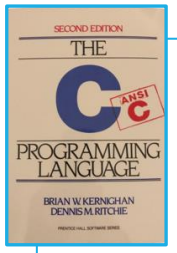
HOT TOPICS


IIoT
Internet of Behaviors (IoB)
VoD
NLP
AI, ML, DL, DS
Human-Computer Interface
Quantum Computing
Mobile First
Open Source
Everything-as-a-Service (XaaS)
BIG DATA & ANALYTICS
RPA
Robotic proces automation
EDGE COMPUTING
XR
VR
AR
MR
5G
CYBER SECURITY
BLOCK CHAIN
Dev
Ops

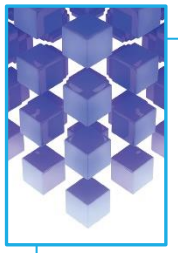
CURRICULUM

1. Introduction
   - Duration: 4 Years
   - Parts: 8 Semesters
   - Working Days: Min 90 (15 Weeks)
   - Subjects: 55
2. Internal Assessment
   - 20% of Total Marks
   - 80% Attendance
3. Final Examination
   - 80 or 40 Marks
4. Pass Marks
   - At least 40% required in both Internal Assessment & Final Examination
   - Provision of NQ
5. Evaluation System
   a. Weight to Percentage
      - 1st Year: 20%
      - 2nd Year: 20%
      - 3rd Year: 30%
      - 4th Year: 30%
   b. Division Awarded
      - Distinction – 80% & Above
      - First – 65%+ & Below 80%
      - Second – 50%+ & Below 65%
      - Pass – 40%+ & Below 50%

I SEMESTER (1ST YEAR/1ST PART)

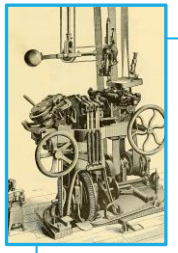


C-Programming



Math-I

Physics



Applied

Basic Electrical

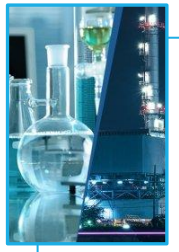
Drawing-I

I SEMESTER (1ST YEAR/1ST PART)

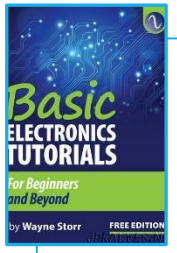
S.N.	Code	Course Title	Internal Marks		Final Marks	
			Th.	Pr.	Th.	Pr.
1	SH 401	Engineering Mathematics I	20	-	80	-
2	CT 401	Computer Programming	20	50	80	-
3	ME 401	Engineering Drawing I	-	60	-	40
4	SH 402	Engineering Physics	20	20	80	30
5	CE 401	Applied Mechanics	20	-	80	-
6	EE 401	Basic Electrical Engineering	20	25	80	-

II SEMESTER (1ST YEAR/2ND PART)

Math-II

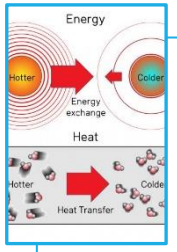


Chemistry



Basic Electronics

Drawing-II

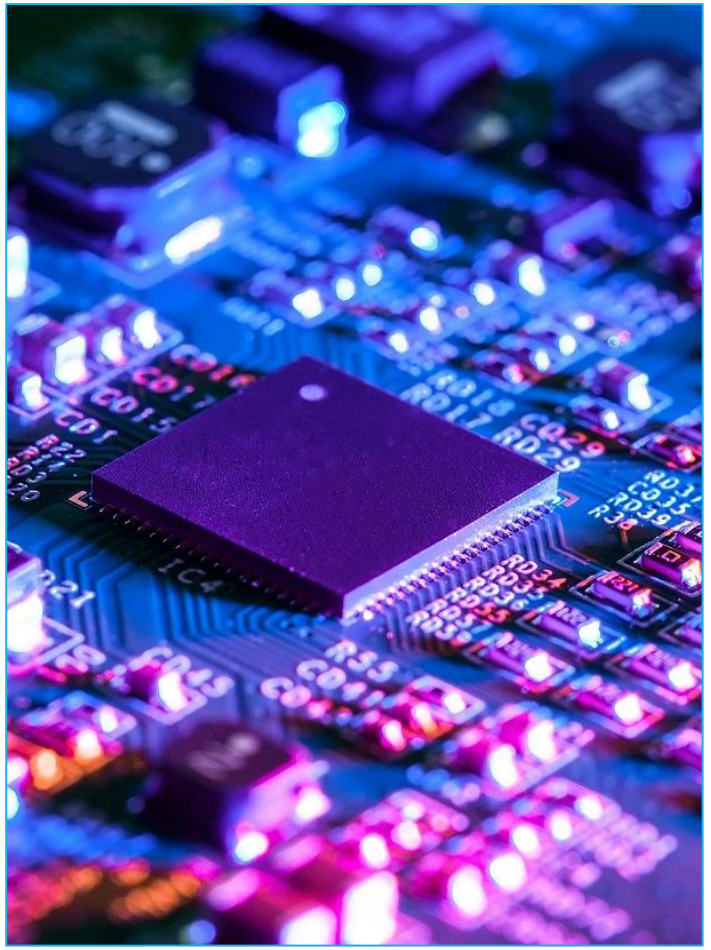


Thermo

Workshop

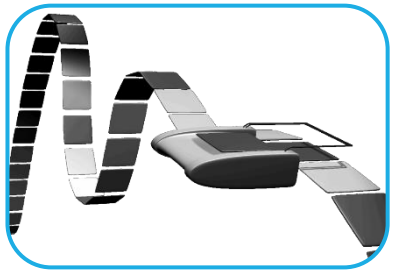
II SEMESTER (1ST YEAR/2ND PART)

S.N.	Code	Course Title	Internal Marks		Final Marks	
			Th.	Pr.	Th.	Pr.
1	SH 451	Engineering Mathematics - II	20	-	80	-
2	ME 451	Engineering Drawing II	-	60	-	40
3	EX 451	Baisc Electronics Engineering	20	25	80	-
4	SH 453	Engineering Chemistry	20	20	80	30
5	ME 452	Fundamental of Thermodynamics & Heat Transfer	20	25	80	-
6	ME 453	Workshop Technology	10	40	-	-



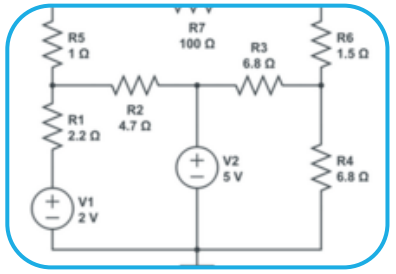
III SEMESTER (2ND YEAR/1ST PART)

OOP C++

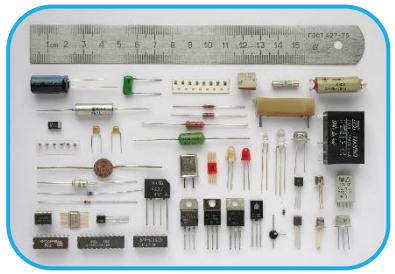


TOC

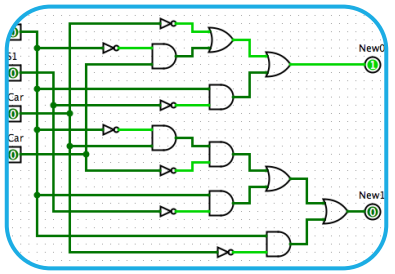
Math-II



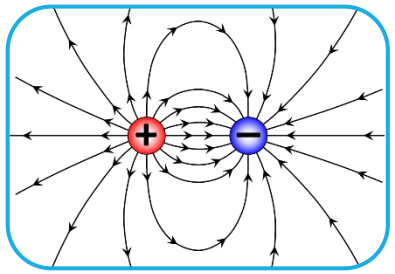
Electric Circuit Theory



Electronics Devices & Circuits



Digital Logic

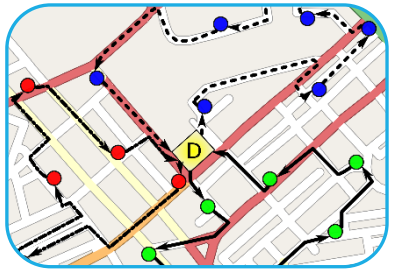


Electromagnetics

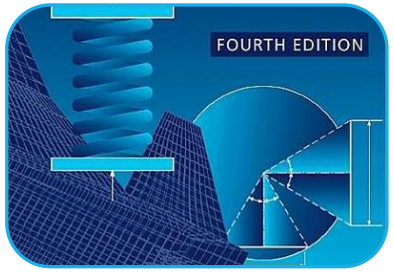
III SEMESTER (2ND YEAR/1ST PART)

S.N.	Code	Course Title	Internal Marks		Final Marks	
			Th.	Pr.	Th.	Pr.
1	SH 501	Engineering Mathematics III	20	-	80	-
2	CT 501	Object Oriented Progaraminng	20	50	80	-
3	CT 502	Theory of Computation	20	-	80	-
4	EE 501	Electric Circuit Theory	20	25	80	-
5	EX 501	Electronic Device & Circuits	20	25	80	-
6	EX 502	Digital Logic	20	50	80	-
7	EX 503	Electromagnetics	20	25	80	-

IV SEMESTER (2ND YEAR/1ST PART)

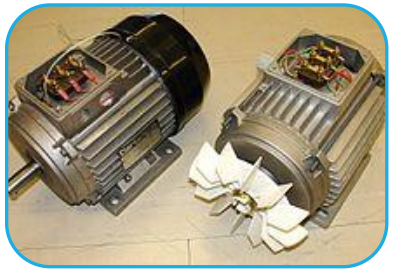


Applied Mathematics

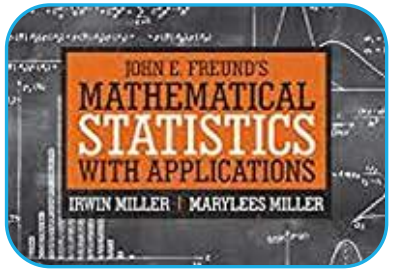


Numerical Methods

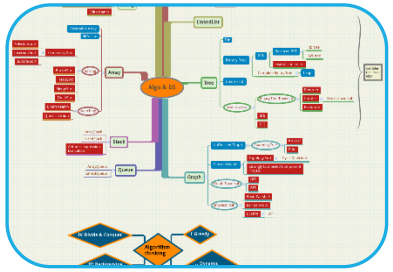
Instrumentation – I



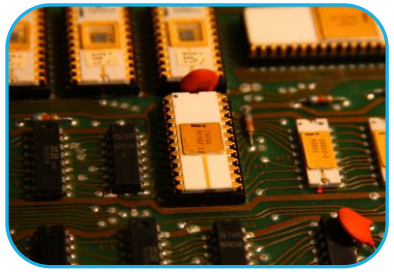
Electrical Machines



Discrete Structure



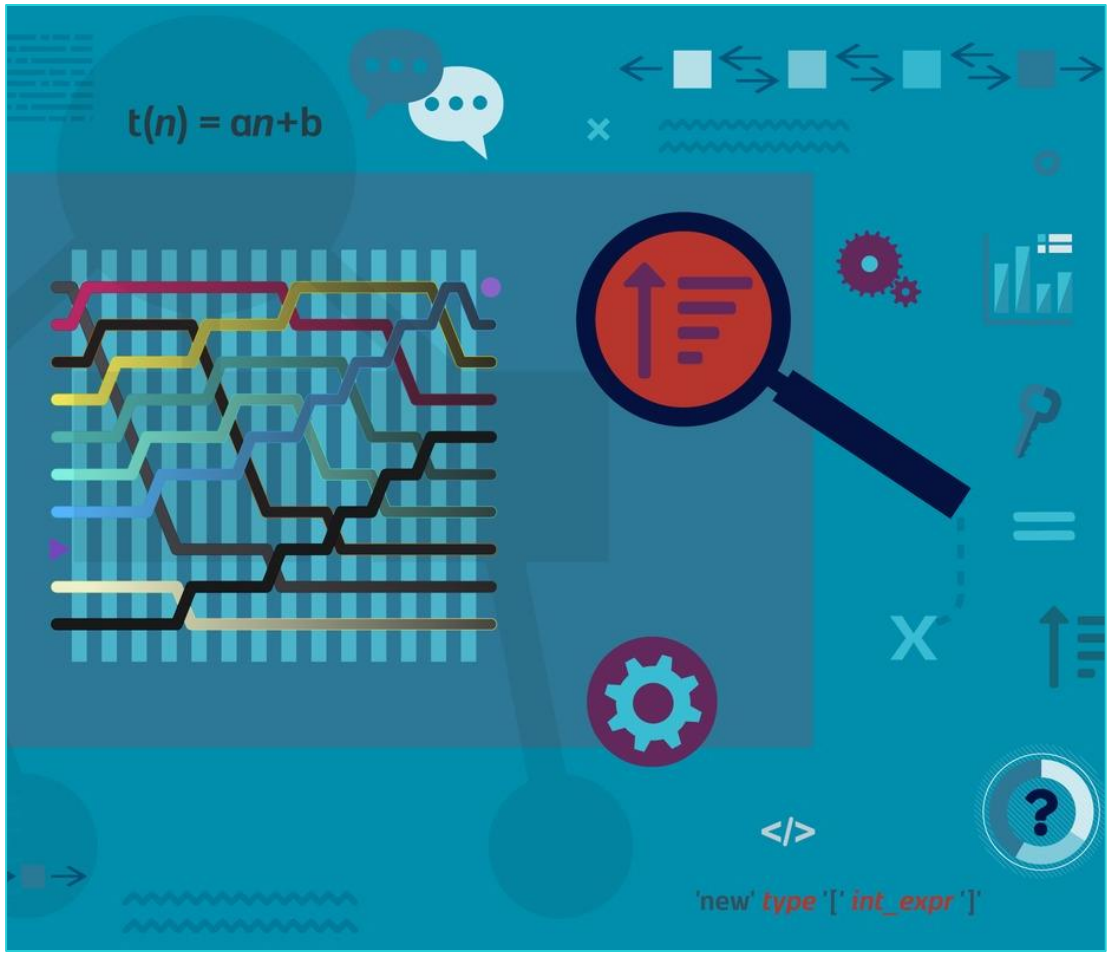
Data Structure & Algorithm



Microprocessor

IV SEMESTER (2ND YEAR/2ND PART)

S.N.	Code	Course Title	Internal Marks		Final Marks	
			Th.	Pr.	Th.	Pr.
1	SH 551	Applied Mathematics	20	-	80	-
2	SH 553	Numerical Methods	20	50	80	-
3	EE 552	Instrumentation I	20	25	80	-
4	EE 554	Electrical Mechines	20	25	80	-
5	CT 551	Discrete Structure	20	-	80	-
6	CT 552	Data structure and algorithm	20	50	80	-
7	EX 551	Microprocessor	20	50	80	-

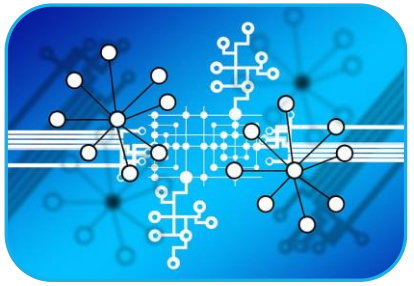


V SEMESTER (3RD YEAR/1ST PART)

Communication English

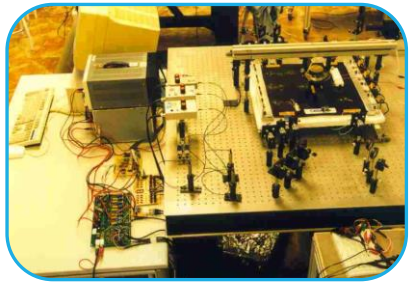
Probability & Statistics

Software Engineering

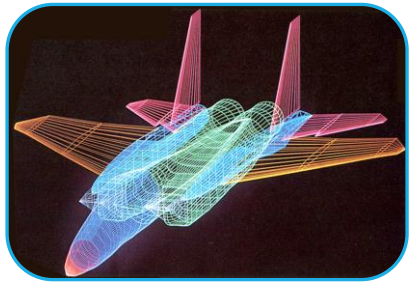


Data Communication

Computer Organization & Architecture



Instrumentation – II

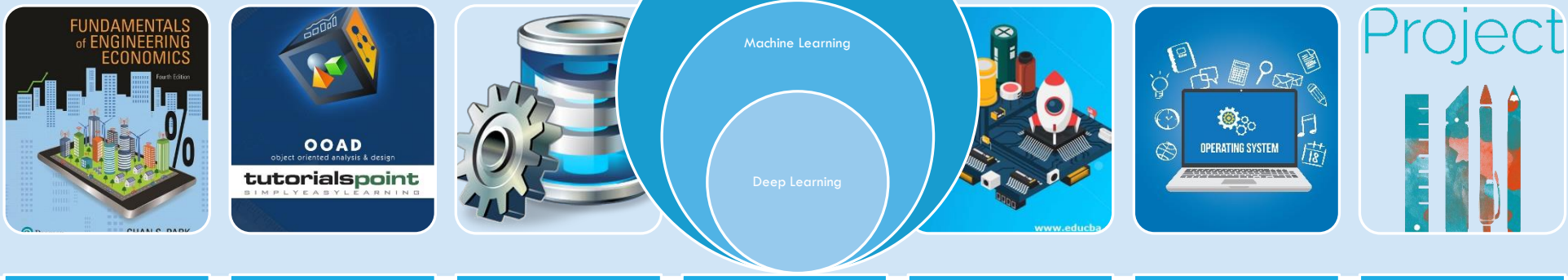


Computer Graphics

V SEMESTER (3RD YEAR/1ST PART)

S.N.	Code	Course Title	Internal Marks		Final Marks	
			Th.	Pr.	Th.	Pr.
1	SH 601	Communication English	20	25	80	-
2	SH 602	Probability and Statistics	20	-	80	-
3	CT 601	Software Engineering	20	25	80	-
4	CT 602	Data Communication	20	25	80	-
5	CT 603	Computer Origanication & Architecture	20	25	80	-
6	EX 602	Instrumentation II	20	25	80	-
7	EX 603	Computer Graphics	20	50	80	-

VI SEMESTER (3RD YEAR/1ST PART)

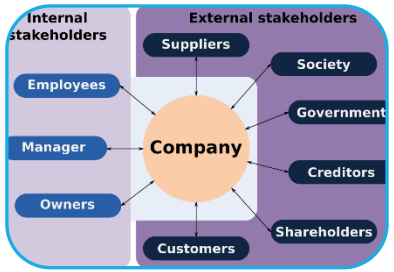


Engineering Economics	Object Oriented Analysis & Design	Database Management System	Artificial Intelligence	Embedded System	Operating System	Minor Project

VI SEMESTER (3RD YEAR/2ND PART)

S.N.	Code	Course Title	Internal Marks		Final Marks	
			Th.	Pr.	Th.	Pr.
1	CE 655	Engineering Economics	20	-	80	-
2	CT 651	Object Oriented Analysis & Design	20	25	80	-
3	CT 652	Database Management System	20	50	80	-
4	CT 653	Artificial Intelligence	20	25	80	-
5	CT 655	Embedded System	20	25	80	-
6	CT 656	Operating System	20	25	80	-
7	CT 654	Minor Project	-	50	-	25

VII SEMESTER (4TH YEAR/1ST PART)

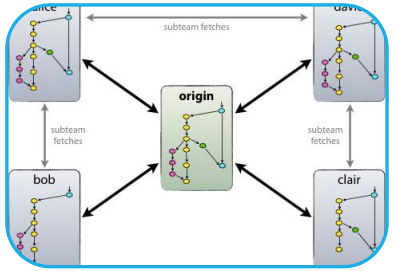


Organization & Management

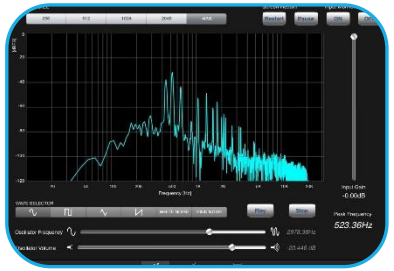
Energy Environment & Society

Project Management

Computer Network



Distributed System



Digital Signal Analysis & Processing

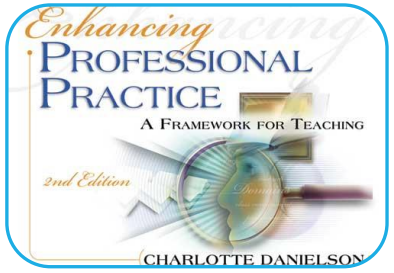
Elective – I

Project (Part A)

VII SEMESTER (4TH YEAR/1ST PART)

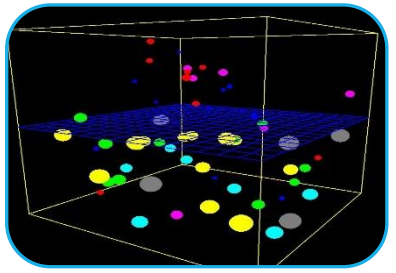
S.N.	Code	Course Title	Internal Marks		Final Marks	
			Th.	Pr.	Th.	Pr.
1	ME 708	Organization and Management	20	-	80	-
2	EX 701	Energy Enviroment and Society	10	-	40	-
3	CT 701	Project Management	20	-	80	-
4	CT 702	Computer Network	20	50	80	-
5	CT 703	Distributed System	20	25	80	-
6	CT 704	Digital Signal Analysis and Processing	20	25	80	-
7	CT 725	Elective I	20	25	80	-
8	CT 707	Project (Part A)	-	50	-	-

VIII SEMESTER (4TH YEAR/2ND PART)



Professional Practice

Information Systems



Simulation & Modelling

Intranet & Internet

Elective - II

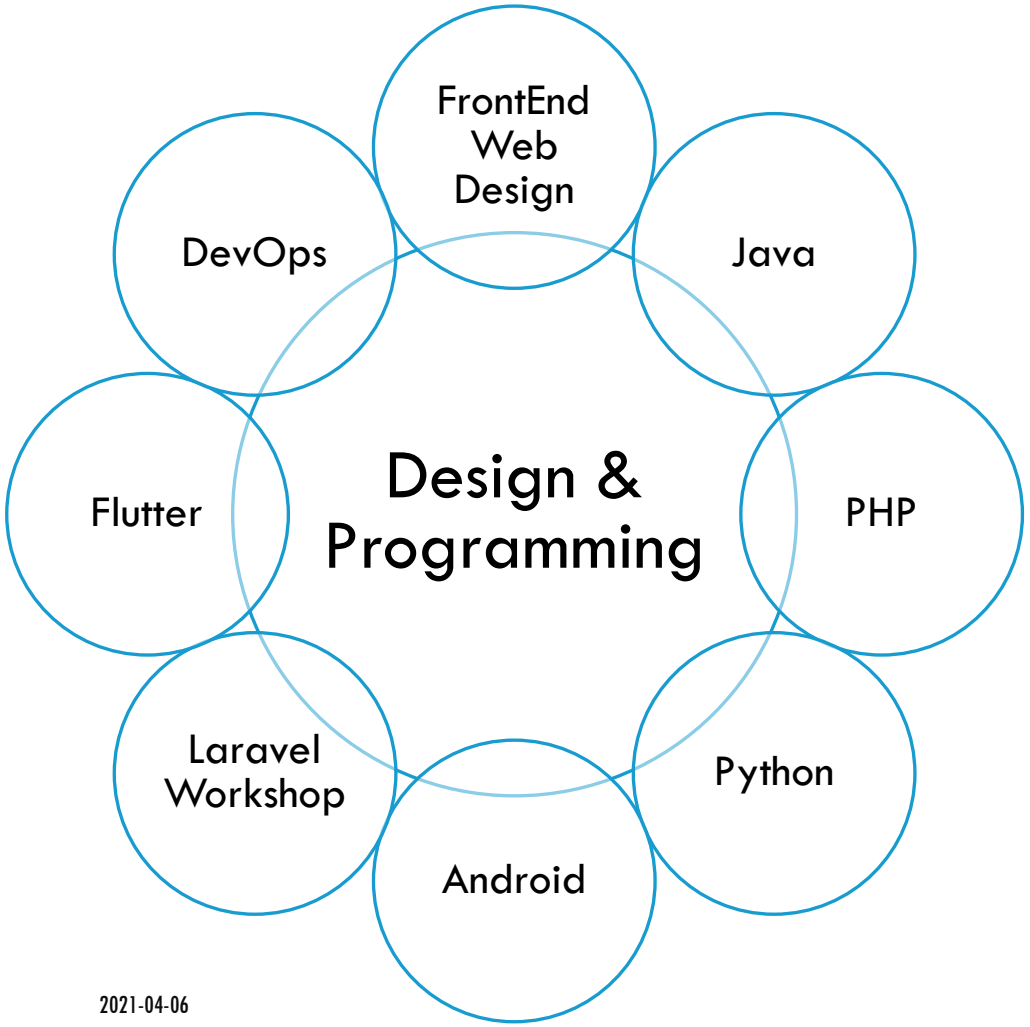
Elective - III

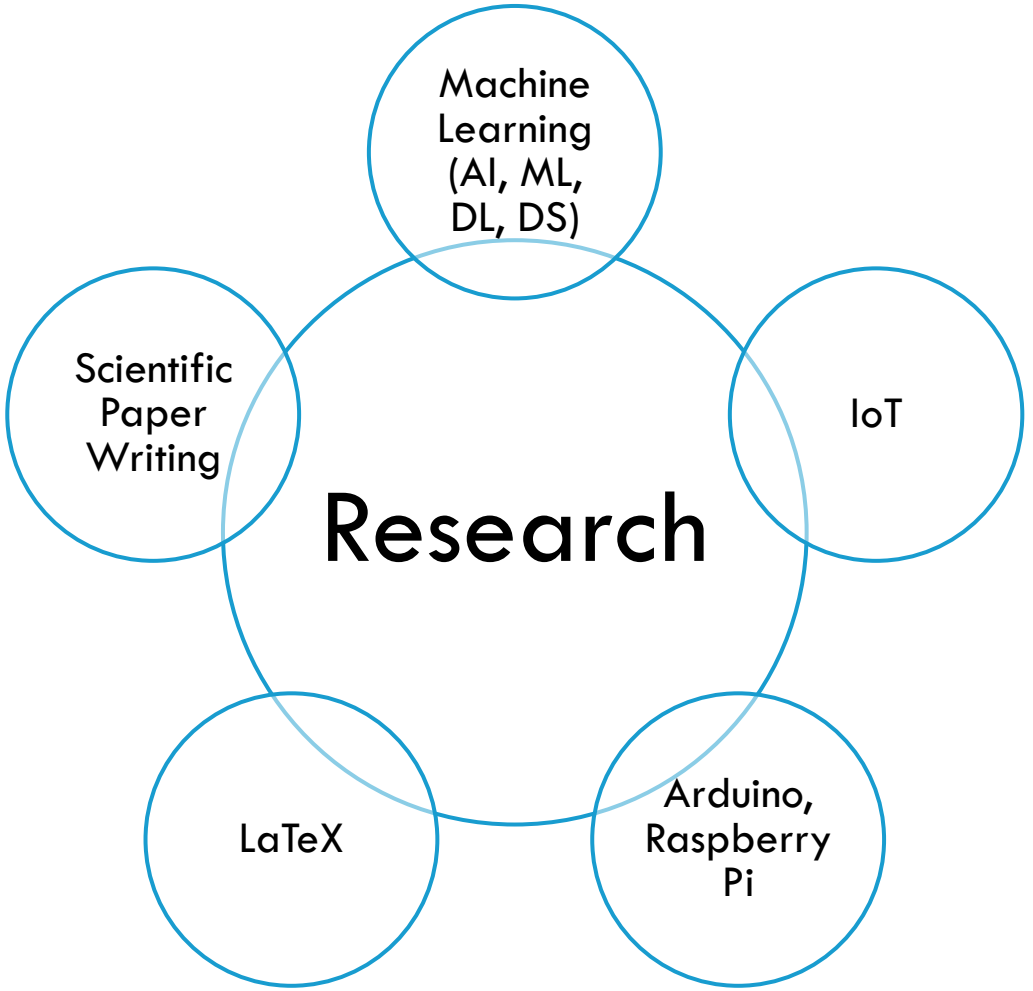
Project (Part B)

VIII SEMESTER (4TH YEAR/2ND PART)

S.N.	Code	Course Title	Internal Marks		Final Marks	
			Th.	Pr.	Th.	Pr.
1	CE 752	Professional Practice	10	-	40	-
2	CT 751	Information Systems	20	-	80	-
3	CT 753	Simulation and Modelling	20	25	80	-
4	CT 754	Internet and Intranet	20	25	80	-
5	CT 765	Elective II	20	25	80	-
5	CT 765	Elective III	20	25	80	-
6	CT 755	Project (Part B)	-	50	-	50

TRAINING/SEMINAR/WORKSHOP





Data Synthesis

राजनीति | नेपाली ब्रान्ड | समाज | विचार | किनमेल | कला | खेलकुद | घुमफिर | ब्लग | साहित्यपाटी | ग्लोबल

अटोमोवायल्स/यातायात | निर्माण सामग्री | बैंक/वित्मा/स्टक | फेसन/गरगहना | स्वास्थ्य | रोजगार | सूचना प्रविधि | घरायसी सामग्री | व्यवसाय | कृषि | अन्य

किनमेल अनुभव

‘रोबटबाट न्युरो सर्जरी’ गर्ने केएमसी अस्पतालको तयारी

सेतोपाटी संवाददाता
काठमाडौं, चैत २१

549 Shares

DATA EXCHANGE

Q. Exchange the value of a & b. Initial: a = 5, b = 7; Goal: a = 7, b = 5.

Introducing Third Variable

```
a = 5
b = 7
// Third Variable c
c = a
a = b
b = c
```

Without Introducing Third Variable

```
a = 5
b = 7
// No Third Variable
a = a + b
b = a – b
a = a - b
```

CRYPTO-ARITHMETIC PROBLEM SOLVING (CSP)

CSP Rules

- Each Letter/Symbol represents only one digit (0-9) throughout the problem.
- Numbers must not begin with zero i.e. 0567 (wrong), 567 (correct).
- After replacing letters by their digits, the resulting arithmetic operations must be correct.
- Aim is to find the value of each letter.

SOLUTIONS

```
long+live=nepal (9 variables)
7513+7294=14807
7213+7594=14807
7812+7495=15307
7412+7895=15307
7612+7485=15097
7412+7685=15097
CPU time = 10 msec

6 solution(s)
```

Tasks

- Q.1 Solve the following CSPs with necessary steps:
  - $NINA + SING = AGAIN$
  - SEND + MORE = MONEY

$$\begin{array}{cccccc} C_4 & C_3 & C_2 & C_1 & & \\ & N & I & N & A & \\ + & S & I & N & G & \\ \hline A & G & A & I & N & \end{array}$$

$$\begin{array}{cccccc} R_4 & R_3 & R_2 & R_1 & & \\ & S & E & N & D & \\ + & M & O & R & E & \\ \hline M & O & N & E & Y & \\ R_4 & R_3 & R_2 & R_1 & & \end{array}$$

Q/A?

Khwopa College of Engineering

Thank You!

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