NT&A Assignment-1 (Units-1 & 2)

1. (a) Define Euclid's algorithm?

   (b) Find the G.C.D of 108 and 243

   (c) Define Linear Congruence?

   (d)Write statement of Chinese Remainder Theorem?

   (e) Show that 41 Divides $2^{20}-1$?

2a). Show that the product of any three consecutive integers is divisible by 3!

 b). Find the general solution of $170x - 455y = 625$.

3a). Show that the Fermat number F_5 is divisible by 641.

4a). If $a \equiv b \pmod m$ and $c \equiv d \pmod m$ then $(a+b) \equiv (b+d) \pmod m$

 and $ac \equiv bd \pmod m$?

 b). Find the remainder when 5^{48} is divided by 24?

5. Solve the systems $x \equiv 4 \pmod{11}$

 $x \equiv 5 \pmod 7$

 $x \equiv 6 \pmod{13}$ by using Chinese Remainder theorem?

NT&A Assignment-2 (Units-3, 4 & 5)

1. a). Which day of the week was 2 may 1921?

   b). Find the last two digits of 3^{123}?

   c). Define Perfect number?

   d). Define finite field?

   e).Define Encryption and Decryption?

2a). Solve 3^{202} mod 13 by using Euler's function?

   b). State and prove Fermat's little theorem?

3a). Compute the remainder when 30^{2020} divided by 19?

   b). Show that 561 is a pseudo prime?

4a). Solve the congruence $3x^2+5x+9\equiv 0 \pmod{11}$?

   b). Use Fermat's factorization method to factorize n=119143?

5a). Write RSA Algorithm?

   b). Explain about Block Cipher modes?

Mid-II

1, What is Bus Structure ? What is software?

2, What is the Multiprocessors and Multicomputers?

3, Discass the different types of addressing modes

4, Describe Additional Instruction?

5, Explain about the Subroutines and Subroutiere Nesting and the processor Stack ?

6, Design and Explain 4 bit adder- Subtractor & 4-bit arithmetic Circuit to perform addition and subtraction using full Adder.

7, illustrate Bit pair recoding of Multiplier derived from Booth's recording with Exp. Example?

8, Assuming 6 bit 2's Complement number representation multiply the multiplicand A=110101 by the multiplier B=011011 Using Booth's algorithm

9, what is Branching and also explain Conditional Codes?

10, Explain about Hardwired Control?

11, Explain about Multiple Bus organization?

12. Describe A Complete processor?

Mid-II

1. Explain about Semi Condutor RAM?
2. Explain briefly Read only Memories?
3. Define the virtual memory organization & Explain it?
4. Explain Cache Memory to reduce the ~~Exple~~ execution time?
5. Define Interrupt? Illustrate the transfer of Control through the use of Interrupt?
6. Write a neat diagram & Describe DMA transfer in Computer System?
7. Describe ~~brief~~ Buses?
8. ~~Explain detail about parallel port~~ & difference between parallel port and Serial port?
9. Explain detail about SCSI BUS & USB?
10. What is Data Hazards & Instruction Hazard
11. Explain all Inter Connection Networks?

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ASSIGNMENT 1

1. Draw and explain incremental process model?
2. Explain about Spiral model?
3. What is Agility and Explain about Extreme programming (XP)?
4. Explain about Characteristics of a Good SRS Document?
5. Describe software myths? Discuss on various types of software myths and trust aspects of these myths?

ASSIGNMENT 2

1. Explain about Cohesion and coupling?
2. Explain about white box testing?
3. Explain about Testing Object Oriented Programs?
4. Describe SEI capability maturity model (CMM)?
5. Explain about CASE environment?

ENTREPRENEURSHIP

- **Below listed questions are important for forthcoming examination.**
- **All yellow highlighted questions are for assignment** (Unit- 1&2 for first assignment and Unit- 3,4 &5 for second assignment).
- **Note:** *The following important questions are prepared for student convenience purpose. The questions are prepared on the bases of previous experience of the faculty. You may receive beyond these questions in the examination. So, all are requested to cover entire topics in the syllabus.*

UNIT - 1

1. Define entrepreneurship. Briefly explain about the evolution and revolution of entrepreneurship.
2. Explain about the Approaches to Entrepreneurship.
3. Briefly explain about the dark side of entrepreneurship.
4. Discuss in detail the entrepreneur's confrontation with risk.
5. What are climate change effects for entrepreneurs? Briefly explain climate chance economics for entrepreneurs.
6. Write a short note on:
   a. Stress and the entrepreneur
   b. The entrepreneurial ego
   c. Pathways to your entrepreneurial career
   d. Entrepreneurial ecology

UNIT -2

1. What is Social Entrepreneurship? Explain about the mind-set of social entrepreneurs. **(Very Important)**
2. Explain the concept of Ethics of an Entrepreneur. Discuss about Ethics in the cross-cultural business world. **(Very Important)**
3. Explain in detail the concept of Acquiring. **(Very Important)**
4. Discuss in detail about the Franchising. **(Very Important)**
5. Briefly explain about the social venturing. **(Very Important)**
6. Write a short note on:
   a. Entrepreneurship and organized crime
   b. Ecopreneurs.
   c. Environmental criminal entrepreneurs
   d. Entrepreneurship and disadvantaged groups

e. Indigenous entrepreneurs
f. Bootstrapping
g. Disruptive new venture creation

UNTI-3

1. What is Innovation in entrepreneurship? Discuss about the innovation process and Innovation in the era of climate change. **(Very Important)**
2. Write a short note on:
   a. Entrepreneurial mind-set in organisations
   b. Re-engineering organisational thinking
3. Write a short note on:
   a. Four models of market-based opportunities
   b. Entrepreneurial imagination and creativity
   c. Arenas of creativity
   d. Right setting for creativity
4. Write a short note on:
   a. Public sector entrepreneurship
   b. Entrepreneurial strategy
   c. social entrepreneurship by creating shared value

UNIT-4

1. List The elements of an opportunity assessment. How shall we model the entrepreneurial process?
2. How to assess an opportunity? Briefly explain the evaluation process.
3. Define entrepreneurial marketing. Briefly explain the components of effective marketing. **(Very Important)**
4. What is marketing on Internet? Briefly explain about it. **(Very Important)**
5. What is price? Briefly Explain about various Pricing strategies in practice. **(Very Important)**
6. Write a short note on:
   a. Marketing research
   b. Entrepreneurial ecosystems
   c. Green entrepreneurial marketing
   d. Developing a marketing plan

UNIT-5

1. What is entrepreneurial capital? Briefly explain about Sources of financial capital (Debt vs Equity). (Very Important)
2. Briefly explain about International protections for intellectual property (Patents, Copyrights, Trademarks, Domain names, Trade secrets) in detail. (Very Important)
3. Briefly explain about venture capital. (Very Important)
4. Give a brief note about Angel financing. (Very Important)
5. Briefly explain about Various forms of business (Incorporated companies, Unincorporated businesses, Other business forms). (Very Important)
6. Write a short note on:
   a. Insolvency and Bankruptcy
   b. The legal framework regulating climate change
   c. Asia-Pacific regulatory environment

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A1 | Sno

Sno	Unit	Taxonomy	Question
1	I	Remember	What is multiprogramming? What are its advantages?
2	I	Understand	Explain different operating system services that helpful to the user? Explain.
3	I	Understand	Explain the MS-DOS layer structure with a neat diagram.
4	I	Understand	Explain the following: (i) System calls. (ii) Protection and security
5	I	Understand	Explain about Operating system structure
6	I	Remember	Write short notes on Operating system debugging, System Boot
7	II	Understand	Explain various states and transitions between states with the help of a diagram.
8	II	Understand	Explain the following scheduling algorithms with examples: (i) First come First serve. (ii) Shortest job first.
9	II	Remember	What is a semaphore? Give the solution for dining-philosophers problem using semaphores.
10	II	Remember	What are the benefits of multithreaded programming?
11	II	Remember	Give a note on multithreading models.
12	II	Understand	Explain about critical regions

Sno	Unit	Taxonomy	Question
1	III	Remember	What is page fault? Explain the steps involved in handling a page fault.
2	III	Understand	Explain about page replacement algorithms
3	III	Understand	Consider page reference string 1, 3, 0, 3, 5, 6 with 3 page frames.Find number of page faults. Using FIFO,optimal replacement and LRU
4	III	Remember	Mention the purpose of base register and limit register.
5	IV	Understand	Explain the differences between SCAN, C-SCAN, LOOK, and C-LOOK disk scheduling algorithms with an example.
6	IV	Remember	What are the causes of deadlock? Discuss in detail about deadlock prevention.
7	IV	Understand	Explain the layers at which RAID can be implemented
8	IV	Understand	State the necessary conditions for deadlock occurrence.
9	V	Remember	Write short notes on access matrix
10	V	Understand	Explain about Program threats, System and network threats
11	V	Understand	Why revocation of access rights is required? What are the different methods for revocation?
12	V	Understand	What is Authentication? How it is different from authorization? What are the methods for authentication?