UNIT – I

INDUSTRY 4.0 and DIGITAL TRANSFORMATION.

Meaning and Nature of Industry 4.0 and Latest Trends.

→ The integration of intelligent digital technologies into mfg^n & industrial processes. It encompasses a set of tech^s that include industrial IoT networks, AI, Big Data, robotics & automation.

→ allows for smart mfg^n & the creation of intelligent factories.

→ aims to enhance — productivity
efficiency
flexibility

→ also Fourth Industrial Revolution.

→ term was coined by Klaus Schwab.

→ Technologies :-

Internet of Things (IoT)
Cloud computing
AI & machine learning
Edge computing
Cybersecurity
Digital twin

Evolution :-

FIRST INDUSTRIAL REVOLUTION — INDUSTRY 1.0
marked the shift from manual labour to mechanization, driven by inventions like the steam engine & textile machinery, revolutionizing mfg & leading the rise of factories.

SECOND INDUSTRIAL REVOLUTION — INDUSTRY 2.0
introduced electricity & assembly line pdtn, fueling rapid industrial growth, particularly in the automotive and consumer goods sectors.

THIRD INDUSTRIAL REVOLUTION — INDUSTRY 3.0
aka Digital Revolution
brought widespread computerization & automation, enabling data-driven decision-making & the early development of the internet

FOURTH INDUSTRIAL REVOLUTION — INDUSTRY 4.0
defined by the integration of digital tech like IoT, AI, ML & big data into mfg
creating smart factories & systems where machines communicate, analyze data, & make autonomous decisions.

Industry 1.0 - The Genesis of IR
2.0 - The Age of Electricity
3.0 - Digital Transformation
4.0 - The Techvolution

The four foundational types of disruptive tech^{n} (examples) that can be applied all along the value chain :-

→ connectivity, data, computational power
- cloud tech^{n}
- the Internet
- blockchain
- sensors

→ analytics, intelligence
- advanced analytics
- machine learning
- AI

→ human machine interact^{n}
- virtual reality VR
- augmented " AR
- robotics & automat^{n}
- autonomous guided vehicles

→ advanced engineering
- additive mfg^{n}
- renewable energy
- nanoparticles

The end-to-end skill transformat^{n} has THREE broad phases :-

scout
shape
shift

Applications :-

1. IoT
2. AI & machine learning
3. Big data analytics
4. Additive mfg^{n} (3D printing)
5. Cyber-Physical Systems (CPS)
6. AR and VR

Benefits :-

1. competitive advantage
2. enhanced appeal
3. efficiency
4. addresses threats
5. cut costs

Challenges :-

1. legacy IT systems
2. interoperability
3. cost and resource limitations
4. workforce skills gap
5. change mngmnt.
6. cybersecurity

Realignment in Political, Economic, Socio-Cultural,

Technological Factors that are driving change in

International Business Management :-

Political :-
- geopolitical shifts (Brexit altered trade dynamics b/w UK & EU)
- legal framework

Economic :-
- global economic cycles
- currency fluctuations
- avg. income levels of the population
- tax structures
- interest rates

Socio-cultural :-
- cultural diversity
- social trends

Technologies :-
- digital transformation
- innovation

Consumer safety in marketplace

The changing nature of Globalization :-

Industerial Business — the trade of Goods & services, technology, capital & / or knowledge across national boarders and at a global or transactional scale. It involves cross-boarder transact^{n} of goods & services b/w 2 or > countries.

Globalization — term used to describe how trade tech^{n} have made the world into a more connected & interdependent place. It also captures the economic & social changes that have come as a result.

Free Trade — a trade policy that does not restrict imports or exports

goods & services can be bought & sold across the international boarders c little or no govt. tariffs, quotas, subsidies or prohibitions to inhibit their exchange.

Nature :-

1. accurate info^{n}
2. info^{n} should be timely
3. size of IB should be large
4. market segmentat^{n} based on geographic segmentat^{n}
5. international markets have > potential than domestic markets

Scope :-

1. international mktng.
2. international finance & investments
3. global HR
4. foreign exchange

Need :-

1. to achieve higher rate of profits
2. expanding pdtn capacity beyond demand of domestic country
3. severe competitn in home country
4. ltd home market
5. political condn
6. availability of techn
7. cost of manpower, transportatn
8. nearness to raw material
9. liberalizatn, privatizatn & globalizatn (LPG)
10. ↑ in market share

Reasons :-

1. expansion of techn
2. quicker transportatn
3. transportatn & commn costs are more cond-ucive
4. lower govt. barriers
5. commn enable control from afar.

Problems :-

1. political factors
2. ↑ foreign investment & ↑ cost
3. exchange instability
4. entry requirement
5. corruptn & bureaucracy
6. techn policy

The changing nature of regulatory environment, natural environment, new age ethics :-

Regulatory env.ⁿ :-

↑sed scrutiny — govt. worldwide tightening regulatⁿ on various aspects of business operatⁿ including
- data privacy
- environmental stds.
- labour practices
- taxation

Compliance challenges — MNCs must navigate diverse & often conflicting regulatory requirements across diff. countries & robust compliance frameworks & legal expertise.

Impact on strategy — regulatory changes influence strategic decision-making, such as market entry strategies, pdt. localizatⁿ & SCM.

Natural env.ⁿ :-

Sustainability imperatives — growing awareness of environmental issues (climate change & resource depletⁿ)

Green regulations — govts. are enacting stricter env.ⁿ laws & incentivizing eco-friendly initiatives.

Consumer expectations — eco-conscious consumers are increasingly favoring brands ō transparent sustainability practices.

New Age Ethics :-

CSR — stakeholders, including consumers, investors & employees, place greater emphasis on ethical business conduct & social responsibility.

Ethical supply chains — heightened scrutiny on supply chain ethics, including labor practices, human rights & fair trade affecting sourcing decisions & supplier relationships.

Diversity & inclusion — ethical considerations extend to promoting diversity, equity & inclusion ōin hiring.

Overview of Digital Transformation :-

integrat^{n} of digital tech^{n} into all areas of business, changing how you operate & delivers value to customers.

process of adoption & implementat^{n} of digital tech^{n} by an org^{n} in core areas to create new or modify existing pdts, services & operations by the means of translating business processes & services or creating new ones, to meet & the evolving market & customer expectat^{n}

The transformat^{n} stage means that digital usages enable new types of innovation & creativity in a particular domain.

Impact :-

business activities / functions
- processes
- models
- ecosystems
- assets

- organizational cultures
- partnerships / ecosystems
- people empowerment

3 core capabilities :-
- Hyper-awareness
- Informed decision-making
- Fast execution.

UNIT - II

EMERGING TECHNOLOGIES AS DRIVERS OF GLOBAL BUSINESS :-

Artificial Intelligence (AI)

→ intelligence exhibited by machines.

→ the project of developing systems endowed ~~c~~ the intelligent processes characteristics of humans, such as the ability to ~~rea~~ reason, discover meaning, generalize or learn from past experience.

- designed for more complex, non-repetitive tasks
- to analyze & react to its environmental data
- evolves or learns based on previous & current data
- helps ~~org~~ to analyze data
- can identify patterns

Benefits :-

1. more effective decision-making
2. ↑ profitability
3. enhanced analytics
4. holistic view of the customer

Application :-

1. Agriculture

improve yield
↑ R&D of growing crops
predict time it takes for a crop to be ripe & ready (eg: tomato)
↑ efficiency of farming
Crop & soil monitoring
Agricultural robots
Predictive Analysis
Greenhouse automatn.
simulatn.
modeling
optimizatn.

2. Market analysis & data mining

eg: Blackrock's AI engine — Aladdin
used both in the co. & clients
to help c investment decisions

use of NLP to read text such as news, broker reports & social media feeds.

UBS & Deutsche Bank use AI engine 'Sqreem' — mine data to develop customer profiles & match them c wealth mngmnt. pdts

Goldman Sachs uses Kensho — market analytics platform — combines statistical computing c big data & NLP.

Information extractn

3. Personal finance

eg: Digit — helps consumers optimize their spending & savings based on their own personal habits & goals.

Wallet. AI — builds agents that analyze data that a consumer would leave behind

4. Portfolio management

Robo-advisors — provide financial advice & portfolio mngmnt w minimal human intervention

can adjust to real-time changes in market.

5. HR and recruiting

to screen resumes & rank candidates acc. to their level of qualification

to predict candidate success in given roles

rolling out recruiting chat bots

6. Media & e-commerce

analysis of audiovisual content — movies, TV prog., advertisement videos or user-generated content.

* 4. Reinforcement Learning
AI component takes stock of surrounding by Hit & Trial method, takes action, learns from exp. & improves performance.

Machine Learning :-

→ Machine Learning (ML) is a branch of AI and computer science that focuses on using data & algorithms to enable AI to imitate the way that humans learn, gradually improving its accuracy.

→ A machine learning algorithm has THREE main parts :-

1. A decision process
2. An error function
3. A model optimizat^n process

Methods :-

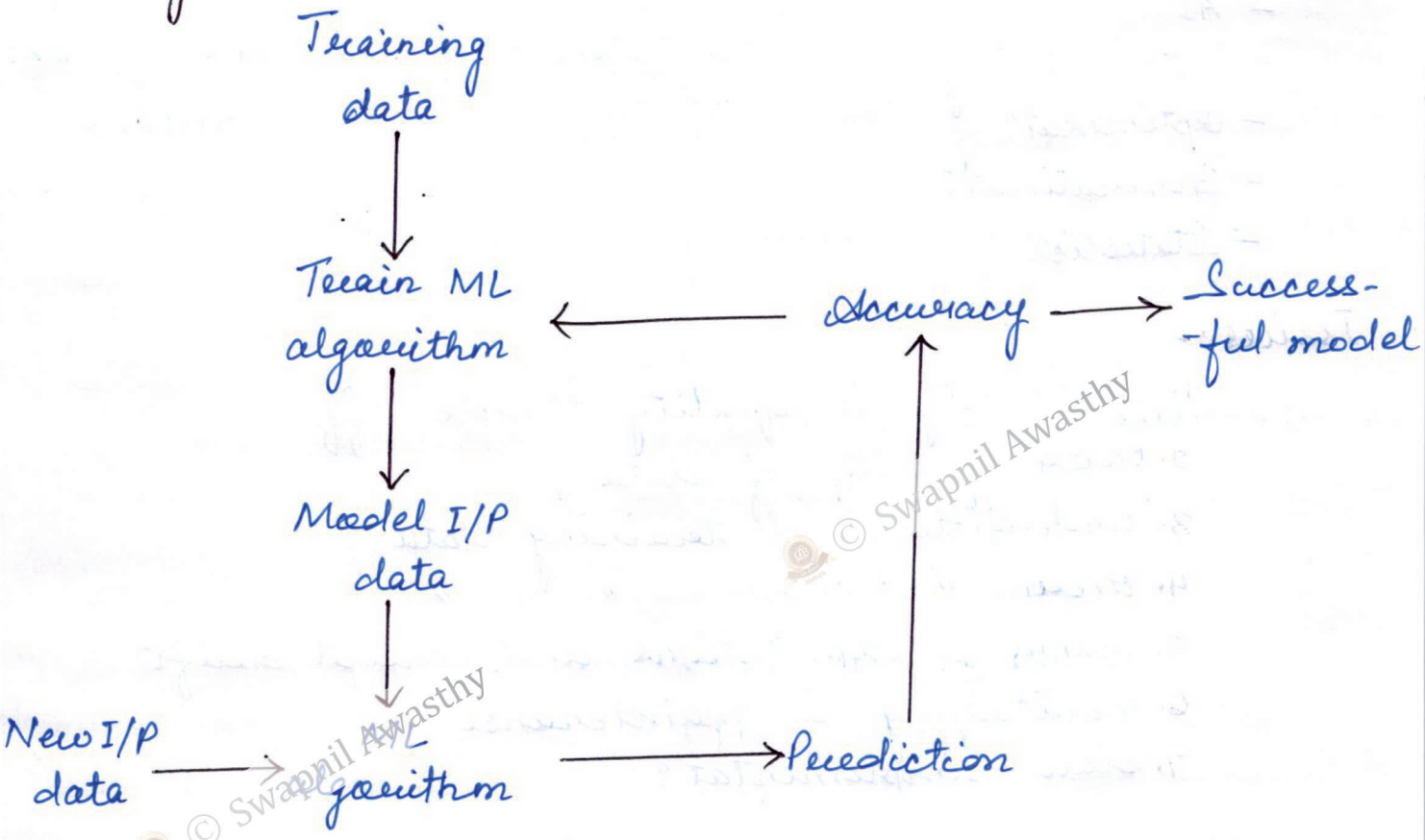
1. Supervised ML – aka supervised learning
use of labeled datasets to train algorithms to classify data or predict outcomes.

2. Unsupervised ML – aka unsupervised learning
uses ML algorithms to analyze & cluster unlabeled datasets (subsets called clusters).

3. Semi-supervised Learning – offers a happy medium b/w supervised & ~~semi~~ unsupervised learning. It uses smaller labeled dataset. *

Areas used :-
- computational finance
- computer vision
- computational biology
- automotive, aerospace, mfg^n
- NLP

Working :-



History :-

coined by Arthur Samuel in 1959, in the field of computer gaming & AI.

self-teaching computers

1960s — Nilsson's book on Learning Machines

1970s — interest related to pattern recognition described by Duda & Hart in 1973.

Tom M. Mitchell — gave more formal defn of the algorithms studied in ML.

1950 — Alan Turing created the Turing Test to determine if a computer has real intelligence.

1949 — the book "The Organization of Behaviour" by Donald Hebb.

Use :-

- AI
- Data mining
- Optimizat°
- Generalizat°
- Statistics

Issues :-

1. complexity & quality trade-off
2. poor quality of data
3. underfitting of training data
4. overfitting " " " "
5. changing expectations and concept drift
6. monitoring & maintenance
7. slow implementat°

Deep Learning :-

→ aka deep structured learning

→ subset of ML that uses multilayered neural networks, called deep neural networks, to simulate the complex decision-making power of the human brain.

→ eg:- Image recognition — to identify objects & features in images

NLP — to help understand the meaning of text

Architecture :-

- deep neural networks
- deep reinforcement learning
- recurrent neural networks
- convolutional neural networks

Applications :-

- computer vision
- speed recognition
- NLP
- machine translation
- bioinformatics
- drug design
- medical image analysis
- material inspection
- board game programs

Artificial Neural Networks (ANNs) — contain artificial neurons called units, arranged in a series of layers that together constitute the whole ANN in a system.

THREE layers — I/P
— O/P
— hidden

→ Convolutional neural networks (CNNs) — type of ANN used primarily for image recognit^{n} & processing, due to its ability to recognize patterns in images.

→ Credit Assignment Path (CAP) — chain of transformations from I/P to O/P.

→ interpreted in terms of universal approximation theorem or probabilistic inference.

Universal Approximation Theorem

concerns of feedforward neural networks ~ a single hidden layer of finite size to approximate continuous fun^{n}

conc: capacity of networks ~ bounded width but the depth is allowed to grow.

Probabilistic Interpretation

features inference, optimizat^{n} concepts of learning & testing, related to fitting & generalization.

Benefits :-

1. ↓ need for feature eng^{n}
2. best-in-class performance on problems
3. eliminates unnecessary costs
4. identifies defects that are difficult to detect

Disadvantages :-

1. computationally expensive to train
2. large amt. of data required
3. no strong theoretical foundat^{n}

Singularity : Time lines & Implication :-

↳ a hypothetical point in time at ⊆ tech^n growth becomes uncontrollable & irreversible, resulting in unforeseeable changes to human civilization.

Hypothesis :- Intelligence Explosion,
an upgradable intelligent agent will eventually enter a 'Runaway reaction' of self-improvement cycles, each new & more intelligent generation appearing rapidly, causing an 'explosion'.

→ first used by John von Neumann.

Technological Singularity — reflects the idea that such changes may happen suddenly & difficult to predict how the resulting new world would operate

→ The rate of technological innovation is declining — because rise in computer clock rates is slowing due to excessive heat build-up from the chip ⊆ cannot be dissipated quickly to prevent chip from melting when operates at higher speeds.

Risks :-
1. loss of control
2. unforeseen consequences

[AI becoming more intelligent than its creators accompanied ⊂ a point of no return].

Time Lines :-

I. Current era (2020-2030s) : Foundational Tech?
   AI & ML
   Quantum computing
   Biotechnology — eg: CRISPR

II. Near future (2040-2050s) : Advanced AI
   Artifical General Intelligence (AGI)
   Automat? & employment

III. Mid-future (2060-2070s) : Exponential Growth
   Superintelligent AI
   Human enhancement

IV. Far future (2080s-beyond) : Singularity
   Technological singularity

Implications :-

1. Economic & employment skills
   - job displacement
   - new industries

2. Ethical & societal challenges
   - AI ethics
   - privacy & security

3. Human enhancement
   - extended lifespan
   - cognitive enhancement

4. Existential risks
   - superintelligent AI
   - biotechnological risks

Cultural & philosophical skills
- redefining humanity
- tech? dependence.

Augmented Reality & it's applications :-

↳ an interactive experience that enhances the real world c computer-generated perceptual info?

→ Goals :-
- highlight specific features of the physical world
- ↑ understanding of more features
- derive smart & accessible insight

→ 1st functional AR system — early 1990s
Virtual Fixtures system — developed at U.S. Air Force's Armstrong Laboratory — in 1992.

→ 1st commercial AR experience — in entertainment & gaming businesses

→ term coined in 1990 by Thomas Caudell and David Mizell.

→ Working :- take data from the real world and virtual objects to create the experience & store it on the cloud to view later.

→ Steps :-
1. Choose an image as a marker on a surface
2. Overlaying videos, animations, images & 3D objects on images
3. Publish & share the experience.

→ Applications :-

1. Archaeology — allows archaeologists to formu-
-late possible site configurat^n from extant structures by augmenting archaelogical features.

2. Architecture — computer generated images of a structure can be superimposed onto a real-life local view.

3. Commerce — integrate print & video mktng. design printed mktng. material c 'triggers' images that when scanned by an AR-enabled device using image recognition, activate a video version of promotional material.

4. Urban design & planning

5. Industrial mfg^n

6. Education

Virtual Reality and it's Applications :-

↔

↳ simulated 3D environment that lets users explore & interact c a virtual surrounding in a way that approximates reality as it's perceived through the user's senses.

→ Standard virtual reality systems use either virtual reality headsets or multi-projected env^n to generate realistic images, sounds & other sensations that simulate a user's physical presence in a virtual env^n

→ Applications :-

- education
- architectural & urban design
- digital mktng. & creation
- engineering & robotics
- entertainment
- virtual communities
- fine arts
- healthcare (Parkinson's, PTSD, phobias)
- clinical therapies
- heritage & archaeology
- occupational safety
- social science & psychology

Mixed Reality and it's Applications :-

↔

→ an emergent tech.ⁿ that blends VR & AR, i.e., merging of a real-world envⁿ & a computer generated one.

→ Applications :-

1. education
2. entertainment
3. military training
4. remote working

AR	VR
overlays computer generated 3D content onto the real world.	visually immerse the user ē simulated objects & envⁿ
user is able to interact ē real world & virtual world	completely shut down the real world & make user think that they are really in the virtual world.
user can clearly distinguish b/w both the worlds.	user finds it harder to differentiate b/w virtual & real world.
achieved by smartphones, tablets, AR wearables	achieved by VR headsets.

BlockChain : Concepts and Industrial Applications

↔ → a distributed database or ledger shared among a computer network's nodes.

→ play a crucial role in ~~sup~~ cryptocurrency systems for maintaining a secure & decentralized record of transactions.
eg: Bitcoin — introduced 2009.

→ it is a growing list of records, called blocks, that are linked together using cryptography.

→ Each block contains :-
- a cryptographic hash of the previous block
- a timestamp
- transaction data

↔ A database is a collection of info that is stored electronically on a computer system.

Working :-

A transaction is requested

↓

A block representing the transaction is created

↓

The block is sent to every node in the network

↓

- - -

↓

nodes validate the transaction & receive a reward for proof of work

↓

the block is added to the existing blockchain & the transactn is complete

→ Layers of blockchain :-

Infrastructure (hardware)

Networking (node discovery, info^n propagatn & verificatn)

Consensus (proof of work, proof of stake)

Data (blocks, transactions)

Application

→ Uses :-

distributed ledger for cryptocurrencies — bitcoin

→ Features :-

- decentralized
- open ledger
- data stored is ~~block~~ immutable
- cannot be changed easily
- secure transactions
- peer-to-peer network
- removes requirement of 'third party transactions'

open ledger — ledger is the record of the transac-tions done & is visible to everyone, ∴ is open ledger.

miners — one's who validate the transactions & add them in block.

senders and receivers — two parties involved in a transaction.

Immutability — something that can't be changed or altered
tech? will remain a permanent or unalterable network.

→ Scope:
- user control
- less failure
- less prone to breakdown
- zero scams
- no third party
- authentic nature
- transparency

Challenges in adopting Block Chain :-

1. Low scalability
2. Can be slow — Bc is complex
   ∴ takes more time to proc-ess any transactions
   encrypt: of the system makes it even slower
   but, faster than traditional payment methods.
3. High energy consumption
4. Lack of privacy

Additive Manufacturing : Advantages, Disadvantages,

New Applications :-

→ Additive mfg. (AM) or additive layer mfg: (ALM) is the industrial pdt: name for 3D printing, a computer controlled process that creates a 3D object by depositing materials, usually in layers.

→ Technologies :-

Sintering — the material is heated (not being liquified to create complex high-resolut: objects.

(ii) Direct metal laser sintering — uses metal powders
(iii) Selective " " — uses a laser on thermoplastic powders.

Second AM tech^n — fully melts the materials
uses direct laser metal sintering & e$^-$ beam melting

Third AM tech^n — stereolithography
uses photopolymerisat^n — where an UV laser is fired into a vat of photopolymer resin to create tough-resistant ceramic parts

→ Advantages :-
1. material waste reduction
2. mfg^n and assembly
3. part flexibility
4. legacy parts
5. inventory stock reduct^n
6. energy savings
7. customisation

→ Disadvantages :-
1. pdt^n costs
2. cost of entry
3. additional materials
4. post-processing
5. it's slow

→ New Appl^{n}:-

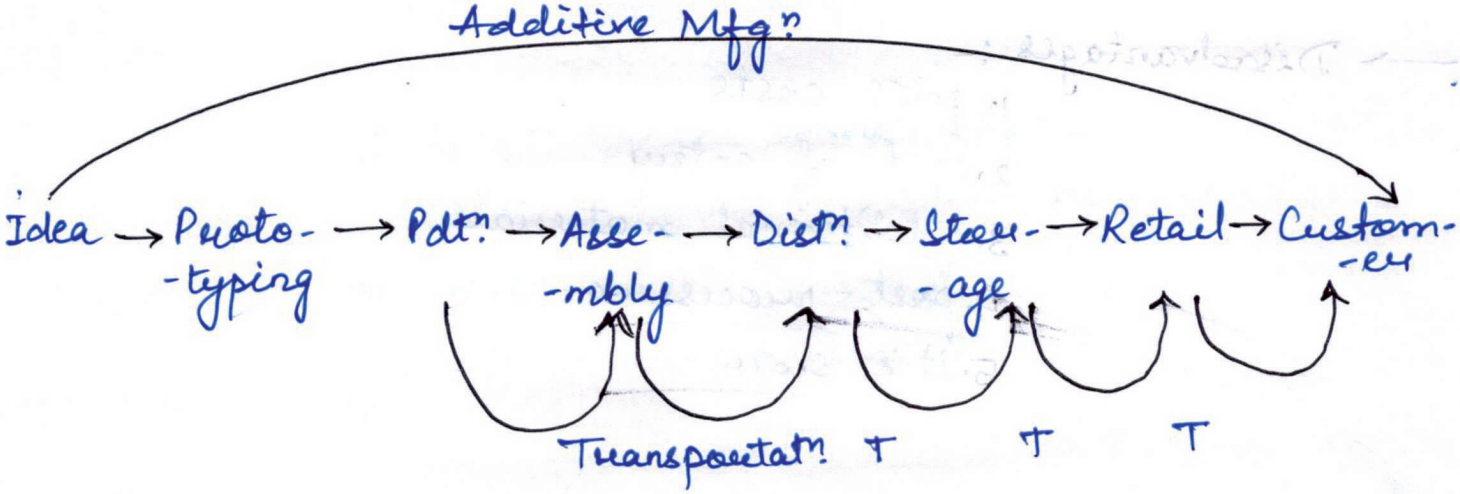
1. medical
2. transportat^{n}
3. consumer pdts.
4. aerospace
5. energy

Impact of AM on SCM :-

→ Transportat^{n} industry requires parts that stand extreme speeds and heats, while still being lightweight components enough to avoid preventable decay. The benefit of additive mfg^{n} is ability to develop lightweight components has led to more efficient vehicles.

evolve - pdt design
- on-demand mfg^{n}

Living in a material world
From virtuality to reality



impact :- cost savings
speed responsiveness
quality improvement
environmental impact

Conventional Supply Chain	AM Influenced Supply Chain
High transport costs	lesser
High level of required inventory	
long lead times	shorter
Push supply chain	Pull
Complex distribut^n networks	Reduced inventory
Challenging mngmnt of demand uncertainity	Easier mngmnt.
Using intermediates in global supply chain	Supply chain disintermediat^n
Dependency on economies of scale	economies of scope
Lengthy response to customer demand	Quick response
Mfg^n far away from point of use	closer to

Mass Customization :-

→ a mfg? steategy that combines the flexibiliety & personalizat?n of custom-made pdts ē the efficiency & scale of mass pdt?n

→ allows customers to tailor certain aspects of a pdt to their preferences or needs while still benefiting from cost a'tages of mass pdt?n

→ tech? used :- flexible mfg? systems
computer aided design
automated pdt?n processes

→ Goals :-
enhances customer satisfact?n
fosters beand loyalty
enables cos. to respond quic'ly to changing market demands

→ Reasons :-
personalizat?n
market differentiat?n
↑ customer engagement
↓ inventory costs
↑ supply chain efficiency
better market insights
improved profit margins
sustainability

→ Methods :-

1. Modular design
2. Configuration
3. Collaborative design
4. Mass personalization
5. Postponement strategies
6. Data - driven customization
7. Flexible mfg system
8. Supply chain integration

→ Challenges :-

Complexity in pdt
Cost mngmnt.
Tech requirements
Data security & privacy
Supply chain coordination
Customer expectations

Customer Experience :-

→ a totality of cognitive, effective, sensory & behavioural ~~customer~~ consumer responses during all stages of the consumptn process including pre-purchase, consumptn & post-purchase stages.

→ FOUR realms of experience :-
- thetic
- escapist
- entertainment
- educational components

→ dimensions :- includes
- senses
- emotions
- feelings
- perceptions
- cognitive evaluatn
- involvement
- memories
- spiritual components
- behavioural intentions

→ Pre-consumptn anticipatn experience :-
amount of pleasure or displeasure received from savouring future events

→ Remembered experience :-
~~amount of pleasure or displeasure~~ related to a recollectn of memories about previous events & experiences of a pdt or service.

→ Bad customer experience is caused by :-

long wait times
employees who do not understand customer needs
unresolved issues / questions
too much automat^{n} / not enough of a human touch
service that is not personalized
rude / angry employees.

Stages :-

Pdt orientat^{n}
Market "
customer experience
Authenticity

→ Customer experience mngmnt :- (CRM)

Managing the comm^{n}
Persuasion tech^{n} — frames
setting & context
filters
social influence
belief

CRM is the establishment, development, maintenance & optimizat^{n} of long-term mutually valuable relationships b/w consumers & org^{n}

1. Define existing CRM
2. Determine the perceptions
3. Design the ideal CRM
4. Deliver a strategy for implementat^{n}

Introduction of Neuroscience in Business.

↔

↓

scientific study of nervous system.

multidisciplinary science that combines
- physiology
- anatomy
- molecular biology
- developmental "
- cytology
- computer science &
- mathematical modeling

to understand the fundamental & emergent properties of neurons, glia & neural circuits.

The understanding of biological basis of learning, memory, behavior, percept:, & consciousness — epic challenge of biological sciences.

Goals :-
- promote organizational & personal resilience
- leadership development
- business performance
- gain in-depth understanding

promotn & awareness about nervous system.

Internet of Things (IoT) :-

→ describes physical objects that are embedded c sensors, processing ability, software & other tech^n that connect & exchange data c other devices & systems over the Internet or other comm^n netwks.

→ Convergence of multiple tech^n —
- ubiquitous computing
- commodity sensors
- embedded systems
- ML

→ appl^n :-
- concept of 'smart home' (devices & appliances)
- healthcare systems
- consumer appl^n
- elder care
- transportatn.
- building & home automatn
- industrial appl^n
- mfg^n
- agriculture
- Maritime

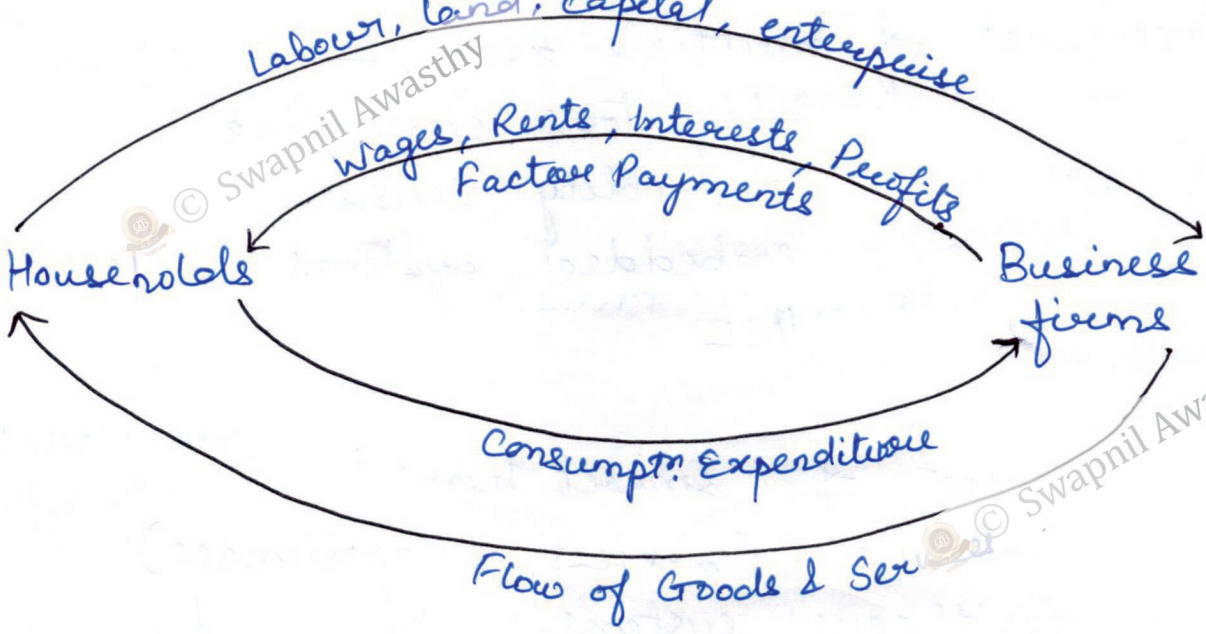
→ eg :- Alexa

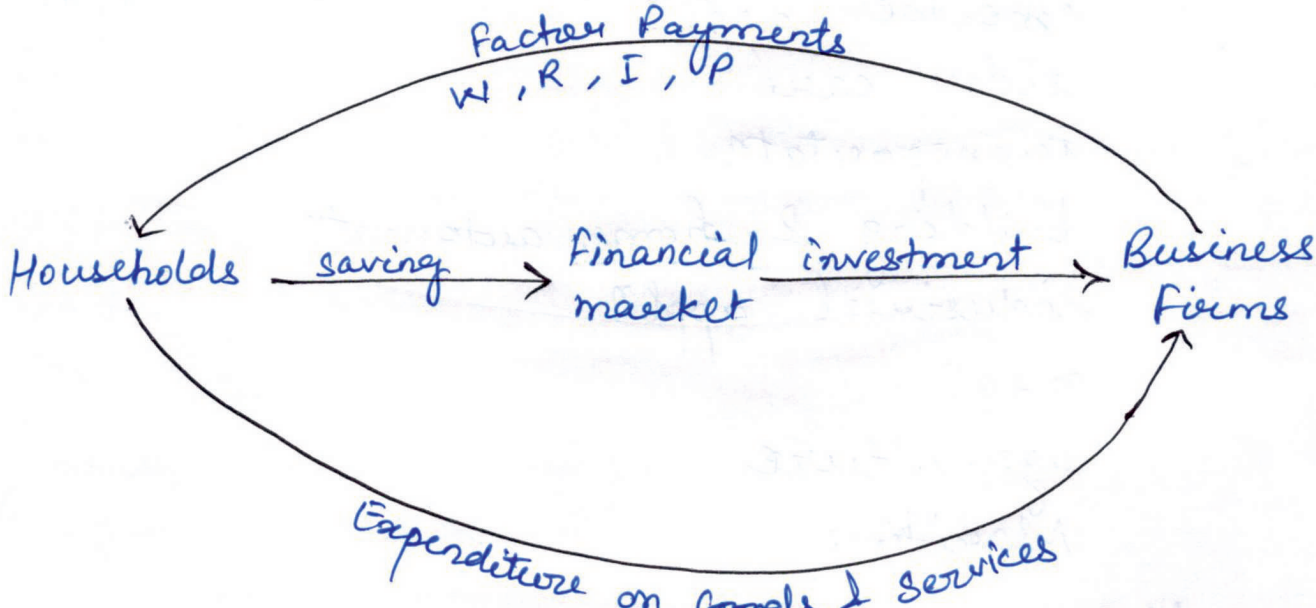
UNIT - III

NEW AGE ECONOMIES

Circular Economy :-

Circular Income Flow in a Two sector Economy





Circular income flow ⇒ saving & investment

Condition for the constancy of circular income flow :-

saving a part of income

saving is withdrawal of money from income flow

investment is injection of money in circular flow of income

means money is spent on buying

withdrawal of money from income stream = injection of money by investment expenditure

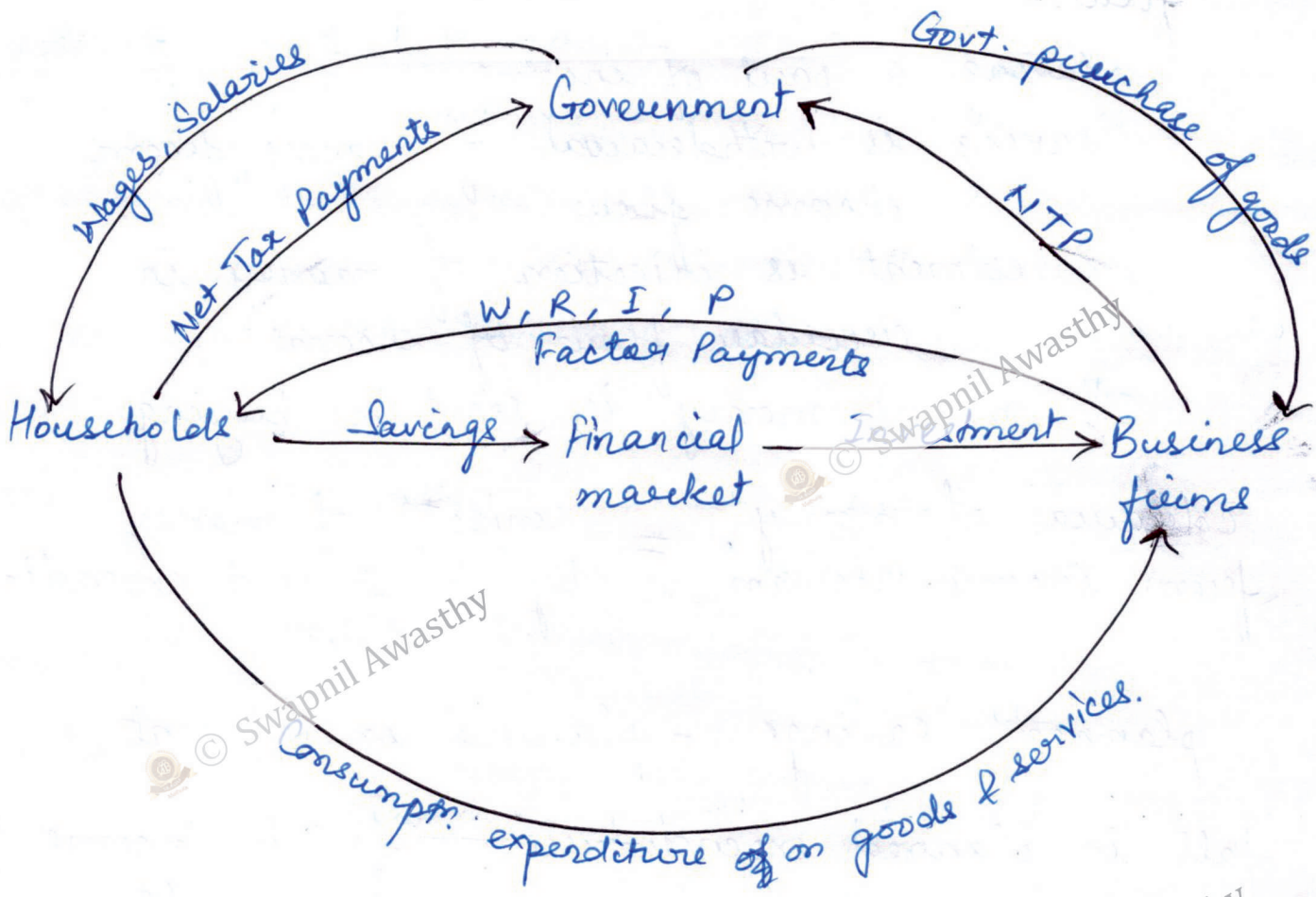
planned savings = planned investment

fall in planned expenditure — fall in income o/p employment

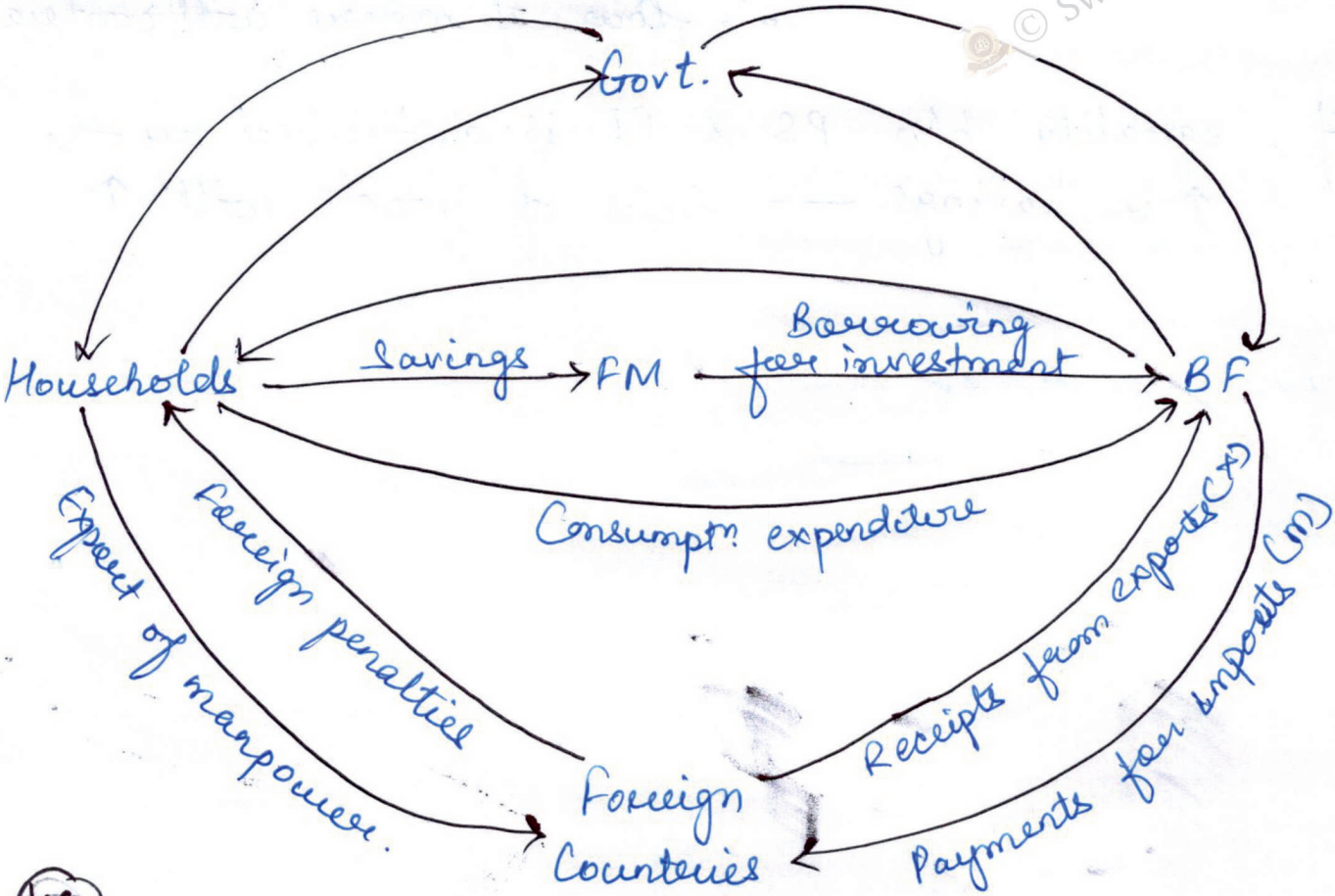
∴ flow of money will contract

if, equality b/w PS & PI is disturbed by the ↑ in savings — stocks of goods will ↑

Three Sector economy



Four-sector



Linear economy	Circular economy
unlimited economic growth	separating economic growth from the consumpt^n of natural resources
non-renewable energy sources	renewable
intensive consumpt^n of natural resources	energy efficiency
greenhouse gas emissions	clean pdtn
destruct^n of biodiversity	protect^n
global social inequalities	intergenerational & interregional justice
unltd. consumpt^n	sustainable
lack of CSR	CSR
weakening of social trust	rising

Role of circular economy :-

Cos. :-

close resource loops
provide ways to align cos: strategic planning & make circular principles
motivates for cos.
sustainable business model
maximise resource efficiency
identify & tackle diff. source of revenues
↓ operational cos — recycling reuse

Cost mngmnt. (cm)
Circular scm (cscm)
Quality mngmnt. (qm)
Innovation —— waste - resource

internet of waste

Behavioural Economics :-

effect of individual psychological processes, inc. emotions, norms & habits on individual decision-making in a variety of economic contexts.

Home economics —

decision making by individuals

economic agents apply rational ~~thought~~ to each & every decision to achieve ~~the~~ maximisatn. of personal benefit (utility) or maximisatn. of profits.

Search heuristics :-

how a person may evaluate their options

- satisficing. some minm. req. once met ⟶ stop
- directed cognition treat each opportunity as last
- eliminatn. by aspects compare & eliminate

Heuristics & cognitive effects

mental accounting

anchoring

herd behaviour

framing effects.

Biases and fallacies :-

confirmatn. bias

familiarity "

~~sb~~ status quo bias

present bias

gambler's fallacy

narrative "

loss aversion

recency bias

Nudge Theory :-

concept in behavioural economics, political theory & behavioural sciences that propo-ses reinforcement & indirect suggestions as ways to influence the behaviour & decision-making of groups or individ-uals.

developed by James Wilk before 1995.

small changes in env^n

easy & inexpensive

tech^n :- defaults

social-proof heuristics

↑ salience of desired option

Choice Architecture of BE :-

scenario in ⊆ env^n in ⊆ someone must make a decision has been carefully designed to try & influence that decis^n

- altering ⊆ default option
- providing immediate feedback
- altering no. of options

Choice architect

who frames info^n & designs the pres-entat^n of choice

Libertarian paternalism

idea that is possible & legitimate for insth. to influence behaviour while also respecting freedom of choice.

Nudge

Reinforcement

Economic Nationalism :-

aka economic patriotism
populism

an ideology that favours state interven-tionism over other mar' mechanisms

economy should secure nationalist goals.

oppose globalizatn
questn benefits of unrestricted free trade
emphasize industrializatn
enhances self-sufficiency & political autono-my of country
crucial for building military power

Nature :-
- integratn & interdependency
- complexity
- greater extensity of world mkt
- redundancy of various models

Sharing Economy :-

a socio-economic system built around the sharing of resources.

a way of purchasing goods & services that differ from traditional business model of cos. hiring employees to produce pdts to sell to consumers.

includes —— shared creatn.
pdtn
distn
trade
consu

participants —— users
for-profit enterprises
social enterprise or cooperatives
digital platform cos.
local communities
non-profit enterprises
public sector or govt.

Types :- Non-profit
Commercial

Models :-
Real sharing economy
Gift giving
The pseudo sharing economy

Sharing economy business model :-

co-working spaces
peer-to-peer (P2P) lending
crowdfunding
ride sharing & car sharing
freelancing
parking space rental
educat°. sharing
apartment / house renting

Characteristics :-

↓ -ve env°. impacts
strengthen comm
↓ consumer costs
↑ interdependence
↑ participatory democracy
↑ quality of service
↑ flexibility of work hours
accelerate sustainable consumpt°.
low barriers to entry

Platform business model :-

unlocks value for its end users & consumers by enabling them to interact & transact smoothly other side of transactn

to their value from network effects

Traditional

a linear BM creates value by selling pdts or services down the supply chain.

Platform	Trad?
multisided	linear / one-sided
facilitate exchange of values	
value creatn. — network-ked & mutual	linear & one-way
create valuable eco-systems driven by network effect	

Types of platforms :-

from pdts to interactn
from connectn. to transactn.
Network effect — direct (Facebook)
indirect (LinkedIn)

Types :-

(1) Social — core transactn. is a double opt-in model of interactn
- social gaming
commn platforms

(2) Aggregatn — ing together a broad array of relevant resources & help users to connect ā most app. resources.
eg: Amazon
Uber
AirBnb

(3) Mobilizatn. — mobilize people to work together & accomplish something
eg: Upwork

(4) Learning — facilitate learning over time by sharing insights

UNIT - IV

Identity Politics

political approach wherein people of a particular gender, religion, race, social background, social class or other identifying factors develop political agendas that are based upon these identities.

ways to describe phenomenas —

- multiculturalism
- women's movements
- rights
- lesbian & gay movements
- regional separatist movements

Purpose :-

1. understand interplay of racial-economic, sex-based, gender-based oppressions
2. ensure no one is disproportionately affected by political actions.

Critiques and criticism

↳ collectivist-
prejudicial

black feminist identity politics
gender identity politics

The rise of Authoritarianism :-

↳ form of govt. charact-
-erized by the rejection
of political plurality

- use of strong executive power to protect political status quo
- restrictions in rule of law
- separation of powers
- democratic voting

principle of blind submission to authority
concentrates power in the hands of a leader or a small elite that is not constitutionally responsible to the body of people.
stands in fundamental contrast to democracy.

Characteristics :-

highly concentrated & centralized govt. power maintained by political suppression & exclusion of potential challengers.

place informal & unregulated exercise of political power

self-appointed leaders

range of social controls

indefinite political tenure

institutional trappings

authoritarian constitutionalism

Hindrances :-

control of media

electoral fund

violence against opposition

large scale spending

prohibition opposition parties

allowing competition

interference in campaign

Reviving democratic ideals

↳ expression used to refer to personal qualities or standards of govt. behaviour that are felt to be essential for cont. -inuation of a democratic policy.

- conceived by ancient philosophers.
  eg: Ancient Roman Empire
- 20th century — T. H. Marshall
  3 kinds of rights — civil
  political
  social
- imp. of human rights
  eg: The US Bill of rights in the constitution of the U.S.
- ideals :- (1) voter enfranchisement
  (2) political participation

Features :-

effective participatn
equality in voting
enlightened electorate
citizen control of agenda
inclusion
fundamental rights
free, fair & frequent elections
freedom of expression
independent sources of info
freedom of association

UNIT - V

Impact of global & cultural diversity on OB :-

→ direct existing culture to foster a +ve impact in workplace

→ factors that create impact :-
- staff members
- customers
- location
- economy

→ mngmnt. has cont over culture of workplace throug. policies & documents.

→ organizational structure of business — sets business culture
- cultural backgrounds of those who carry power
- culture is ~~org~~ — culture of staff
  " " workplace

Impact of Diversity

diff traits & backgrounds of the people in a group.

applies to — age
- gender
- educational background
- religion
- language
- culture
- political beliefs
- socio-economic status
- orientatⁿ

diversity of business staff members — depends on
- business' locatⁿ
- size
- industry

Adv :-
- learning
- experience & knowledge
- international skills
- reputatⁿ

Disadv. :-
- discriminatⁿ
- poor interactⁿ

Encouraging cultures & diversity in the workplace :-

- practicing inclusion educatn.
- Commn.

Managing Workforce Diversity

→ creating an inclusive work envt that values & utilizes the differences among employees.

→ recognizing & respecting various — race
gender
age
ethnicity
sexual orientatn.
physical abilities
etc.

→ foster culture of inclusion
— value all employees

(1) enhances — creativity
innovatn.
decisn. making

(2) improve — employee satisfactn.
retentn.

→ achieved through :-
implementing policies
training programs
promote equality
prevent discriminatn.
encourage active participatn.

→ Dimensions :-

demographic diversity
cultural
generational
cognitive (thinking style)
functional (skills, expertise, professional backgrounds)
international
intersectionality
neurodiversity
religious
linguistic

→ Benefits :-

1. ↑ creativity & innovation
2. improved employee performance & satisfaction
3. enhanced co. reputation
4. broader market research
5. better decision making
6. compliance & risk mitigation

→ Challenges :-

1. comm barriers
2. resistance to change
3. stereotypes & bias
4. clashes in values & beliefs
5. retention & turnover
6. lack of inclusive policies & practices.

Issue of inter-generational equity

concept or idea of fairness or justice b/w generations.

— dynamics b/w children, youth, adults & seniors in terms of treatment & interact°

— fairness b/w currently living & future generat°

→ fields of occurrence :-
- public economics
- environmental concerns
- standards of living
- social justice
- elderly care

(1) development of resources by one generat°. to enhance economic sustainability for future gen°

(2) growing imbalance in dist° of resources

(3) imbalance developing & developed countries

(4) economic growth at the cost of env°

Standards of living usage :-
- cross-sectional perspective
- cohort perspective

Elderly care usage

Social justice usage

Migration

→ Human migrat^{n} involves the movement of people from one place to another & the intention of settling permanently or tempo-rarily at a new locat^{n} (geographic region).

→ Types :- (1) intra (one country to other)
(2) inter (in same country)

→ Forms :-
invasion
conquest
colonizat^{n}
emigrat^{n} / immigrat^{n}

→ displaced persons — persons moving from their home due to a forced displacement (natural disaster or civil disturbance).

→ Asylum seeke - person who seeks refuge in another country make a formal appl^{n} to country where refuge is sought
reasons for leaving — political
religious
form of persecut^{n}

→ State retains power of deciding on entry & stay of non-nationals.

→ Nomadic movements — seasonal movements.

Economic impacts

remittances — funds transferred by migrant workers to their home country

→ Migrant Crisis in EU :-

in 2015

1.3 million people — sought asylum most during WW II

Syrians, Afghans, Nigerians, Pakistanis, Iraqis, Eritreans.

due to v. poor living cond^n

Climate Change :-

→ average pattern in ≤ weather varies in time.

→ depends on — +nce or −nce of water
reflectn of solar radiatn
or albedo
evaporatn
capacity to store heat
topography
texture of region

→ Pollutants

→ Avg. temperature — drought
famine
storms, etc.

Global warming

affects :-
freshwater supply
food pdtn
distn of vegetation species
" diseases

Political dimensions of climate change

climate science affects — economy
societies
ecosystems

deciding the right mix of adaptatn to & mitigatn of man-made climate change.

climate —— scientific construct
social "

creates injustice in — who is suffering worst & first
— who is taking action

Sustainable Development Goals

Greenhouse effect
Fossil fuel cos.
Financial instn
Environmental groups
Renewable energy cos.
Nuclear power cos.
Electricity distn cos.
Traditional retailers & marketers
Medics
Infon. & commn

Rising Inequality :-

social inequality occurs when resources in a given society are distributed unevenly that endanger specific patterns & rights ——— source of income
labour market
health care
freedom of speech
educatn
political representatn
partictn

linked to economic inequality
meritocracies

→ Global inequality
→ Social & economic reforms.

Cyber Crime & Privacy Issues :-

cyber crime — use of info^n tech^n to commit crimes.

Types :-

(1) Identity theft — cyber criminal impersonates someone else's identity to practice malfunc^n by accessing someone's personal details

details such — social security no.
DOB
credit card no.
debit " "
passport no., etc.

usually for online purchases — k/a phishing

(2) Copyright infringement — ~~privacy~~ piracy

unauthorized use of copyrighted material

(3) Click fraud — pay per click advertising services.

when a person clicks such a link & no intent^n of knowing more about the click but to make more money.

(4) Advance fee fraud → criminal usually pretends to be a close relative of a very rich person

(5) Hacking

(6) Computer viruses

Basics of GDPR

General Data Protectn. Regulatn

EU 2016/679

regulatn. in EU law on data protectn. & privacy in EU & EEA (European Economic Area).

→ enhance individuals' controls & rights over their personal data & simplify regulatory envt.

→ Data Protectn. Directive 95/46/EC — provisions & requirements related to processing of personal data

→ adopted on 14 April 2016
enforced on 25 May 2018

→ California Consumer Privacy Act (CCPA) — 28 June 2018

7 principles :-

Lawfulness
Fairness & Transparency
Purpose limitatn.
Data minimisatn.
Accuracy
Storage limitatn.
Integrity & confidentiality
Accountability

Existential Risks

risks that threat the destructn. of humanity's long-term potential

sub class of global catastrophic risks

Types :- associated c AI

1. Lack of AI implementatn. traceability
2. introducing program bias into decision making
3. data sourcing & violatn. of personal privacy
4. black box algorithm & lack of transparency
5. unclear legal responsibility