MODULE- 11 DIGITAL STRATEGY – SUMMARY NOTES

Q52. DIGITAL STRATEGY

Meaning:

Digital Strategy means using digital technology (apps, software, data, AI, automation) to improve business performance and create competitive advantage.

Example: A retail shop launching an online shopping app to increase sales.

Common Elements of Digital Strategy

1 Choose a Leader

The company must appoint someone (CEO/Chief Digital Officer) to lead digital initiatives.

👉 ***Example:*** **A company appoints a "Digital Head" to manage online sales and automation.**

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2 Attack vs Defend

Companies must decide whether to use digital technology to *attack* new opportunities or *defend* against competitors.

👉 ***Example:***

- ***Attack:*** **A bank launches a digital wallet before competitors.**
- ***Defend:*** **A bank upgrades its app because competitors already did.**

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3 Take a Measured Approach

Avoid rushing into new technologies. Evaluate whether they fit business needs.

👉 ***Example:***

A school checks whether online classes software is really needed before purchasing it.

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4 Future Proof

Create systems that can change with future technology.

👉 ***Example:***

A company uses cloud storage so it can easily upgrade to AI tools later.

Q53. DIGITAL TRANSFORMATION & COMPETITIVE ADVANTAGE

Meaning:

Digital Transformation means applying technology to all areas of a business to improve processes, reduce costs, and enhance customer experience.

👉 ***Example:*** **Hospitals shifting from paper files to digital patient records.**

Competitive Advantages

1 Reduce Costs

Automation lowers labour and paperwork expenses.

👉 ***Example:*** **Billing software reduces manual accounting work.**

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2 Faster Customer Response

Technology enables quicker communication and service delivery.

👉 ***Example:*** **Chatbots handle customer queries instantly.**

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3 Higher Production & Quality

Smart machines and sensors reduce human errors.

👉 ***Example:*** **Automated quality-check machines in factories.**

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4 Attract & Retain Talent

Modern tools make work easier and attract skilled employees.

👉 ***Example:*** **Employees prefer companies with digital work processes over manual ones.**

Q54. MAJOR TASKS FOR DIGITAL TRANSFORMATION

1 Innovations

Finding new ways to solve customer problems using technology.

👉 ***Example:*** **UPI payments replaced cash payments.**

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2 Digitization

Converting physical/analogue data into digital form.

👉 ***Example:*** **Scanning paper documents and saving as PDFs.**

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3 Digitalization

Using digital technologies to change business models.

👉 ***Example:*** **A coaching class moving from offline batches to online subscription classes.**

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4 Digital Transformation Task

Training employees, using new technologies, and staying agile.

👉 ***Example:*** **A company trains staff to use CRM software.**

Layers of Digital Transformation

1 Data Aggregation

Collecting and summarizing large data sets.

👉 ***Example:*** **Amazon collects your browsing history.**

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2 Data Management

Storing, organizing, and protecting data.

👉 ***Example:*** **Banks store customers' KYC data securely.**

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3 Workflow Automation

Using software to reduce manual work.

👉 ***Example:*** **Auto-generated salary slips at month end.**

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4 Process Component

Using algorithms and analytics to support business decisions.

👉 ***Example:*** **Netflix recommending movies based on data.**

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5 Platform Integration

Connecting digital systems for smoother operations.

☞ *Example:* Linking online order app with warehouse management system.

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6 End-to-End Processing

Automating entire processes without errors.

☞ *Example:* Booking a flight online → Payment → E-ticket issued automatically.

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7 Front-End Software

Applications used directly by customers.

☞ *Example:* Zomato/Swiggy customer app.

Q55. BIG DATA – TYPES & CHARACTERISTICS

Meaning:

Big Data refers to extremely large and complex data that traditional tools cannot handle.

☞ *Examples:*

- **Stock exchange data**
- **Facebook data**
- **Jet engine sensor readings**

Types of Big Data

1 Structured Data

Data in fixed rows and columns.

☞ *Example:* Excel sheets, database tables.

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2 Unstructured Data

No fixed format.

☞ *Example:* Videos, photos, tweets, emails.

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3 Semi-Structured Data

Partly structured.

☞ *Example:* XML, JSON files.

Characteristics (4 Vs)

1 Volume – Large size of data

☞ *Example:* YouTube uploads thousands of hours of video per minute.

2 Variety – Different types of data

☞ *Example:* Images, videos, text, audio.

3 Velocity – Speed at which data is generated

☞ *Example:* Real-time data from stock markets.

4 Variability – Inconsistent data flow

☞ *Example:* Sudden spikes in social media trends.

Q56 & Q57. CLOUD COMPUTING – TYPES + ADVANTAGES & DISADVANTAGES

Meaning:

Using internet-based servers to store data and run applications.

☞ *Examples:* Google Drive, Microsoft 365, Zoom.

Types of Cloud Computing

1 IaaS (Infrastructure as a Service)

Provides virtual servers and storage.

☞ *Example:* Amazon AWS.

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2 PaaS (Platform as a Service)

Provides tools for developers.

☞ *Example:* Google App Engine.

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3 SaaS (Software as a Service)

Provides software over the internet.

👉 *Example:* Gmail, Google Docs, WhatsApp.

Cloud Types

- Public Cloud: Anyone can use (Google Cloud)
- Private Cloud: Limited users (Company internal cloud)

Advantages

1 Cost Saving

No need to buy servers.

👉 *Example:* Startups using AWS instead of buying hardware.

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2 Mobility

Access data from anywhere.

👉 *Example:* Access Google Photos on any device.

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3 Business Continuity

Data stays safe even if device is lost.

👉 *Example:* Losing a phone doesn't delete Google Drive files.

Disadvantages

1. Lack of Control – Cannot customize fully
2. Security Issues – Data stored by third-party
3. Difficult Migration – Hard to change provider
4. Internet Dependent – Requires stable connection
5. Fixed Contracts – Long-term agreements

Q58. ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

AI Meaning:

AI is the ability of computers to perform tasks requiring human intelligence.

👉 *Example:* Alexa, Siri, face recognition.

Types of AI

1 ANI (Weak AI)

Performs a single task.

👉 ***Examples:*** **Siri, Google Search.**

2 AGI (Strong AI)

Thinks and learns like humans (not yet developed).

3 ASI (Super AI)

More intelligent than humans (hypothetical).

Machine Learning Meaning:

ML is a part of AI where machines learn automatically using data.

👉 ***Example:*** **YouTube recommends videos based on your viewing history.**

Q59. BLOCKCHAIN – COMPONENTS

Meaning:

Blockchain is a secure digital ledger used to record transactions.

👉 ***Example:*** **Bitcoin transactions.**

Important Components

1 Distributed Ledger

All members share the same data.

👉 ***Example:*** **All banks in a network see the same transaction record.**

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2 Immutable Records

Data cannot be changed once entered.

👉 ***Example:*** **Once a Bitcoin transaction is recorded, it cannot be deleted.**

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3 Smart Contracts

Self-executing agreements.

👉 *Example:* Automatic payment upon delivery of goods.

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4 Increased Trust

Only allowed members can access data.

5 Higher Security

Data cannot be modified without consensus.

6 Efficiency

No need for middlemen → Faster transactions.

Q60. INTERNET OF THINGS (IoT)

Meaning:

IoT refers to physical devices connected to the internet that exchange data.

👉 *Example:* Smart AC controlled by mobile app.

Benefits

- Real-time monitoring
- Reduced cost
- Higher efficiency
- Predictive insights
- Better customer experience

Examples of IoT

1 Smart Lighting

Bulbs controlled using mobile/WiFi.

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2 Smart Parking

Sensors track available parking spots.

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3 Medical Fridges

Sensors monitor temperature of vaccines.

Q61. DIGITAL MARKETING STRATEGIES

1 Social Media Marketing

Using Facebook, Instagram, LinkedIn ads.

👉 *Example:* Running an ad on Instagram for coaching classes.

2 Influencer Marketing

Collaborating with influencers.

👉 *Example:* A fitness influencer promoting protein supplements.

3 Email Marketing

Newsletters, promotional offers.

👉 *Example:* Amazon sending sale alerts through email.

4 Content Marketing

Blogs, videos, podcasts.

👉 *Example:* "How to score 90+ in Accounts" YouTube video.

5 SEO (Search Engine Optimization)

Improving ranking on Google.

👉 *Example:* Coaching website appears on first page for "Commerce tuition."

6 PPC (Pay Per Click)

Pay when someone clicks your ad.

👉 *Example:* Google Ads.

7 Affiliate Marketing

Earn commission by promoting products.

👉 *Example:* Amazon Associates.

8 **Mobile Marketing**

SMS, app notifications, mobile ads.

☞ ***Example:*** **Paytm cashback SMS.**