12TH COMPUTER APPLICATIONS

Chapter 18: Electronic Data Interchange- EDI

Part - II

webStrake

Short Answers

1. Define EDI.

EDI is "Paperless Trade" and EFT (Electronic Transfer) is "Paperless Payment"

The **Electronic Data Interchange** (EDI) is the exchange of business documents between one trade partner and another electronically.

There are many internationally accepted EDI standard e.g. EDIFACT, XML, ANSI ASC X12, etc.

2. List few types of business documents that are transmitted through EDI.

Thus based on the medium used for transmitting EDI documents the following are the major EDI types. ● Direct EDI ● EDI via VAN ● EDI via FTP/VPN, SFTP, FTPS ● Web EDI ● Mobile EDI

3. What are the 4 major components of EDI?

There are four major components of EDI.They are

1. Standard document format **2.** Translator and Mapper

3. Communication software **4.** Communication network

4. What is meant by directories in EDIFACT?

The versions of EDIFACT are also called as directories.

These EDIFACT directories will be revised twice a year; on 1st April and 1st October to include new or update existing EDIFACT messages. EDIFACT directories have names like D.18B

(D stands for Directory, 18 is the year and A/B indicates the month of release)

5. Write a note on EDIFACT subsets.

Due to the complexity, branch-specific subsets of EDIFACT have developed. These subsets of EDIFACT include only the functions relevant to specific user groups.

Example:

CEFIC - Chemical industry EDIFURN - furniture industry EDIGAS - gas business

Part - III

Explain in Brief Answer

1. Write a short note on EDI.

- The Electronic Data Interchange (EDI) is the exchange of business documents between one trade partner and another electronically. It is transferred through a dedicated channel or through the Internet in a predefined format without much human intervention.
- It is used to transfer documents such as delivery notes, invoices, purchase orders, advance ship notice, functional acknowledgements etc.
- There are many internationally accepted EDI standard e.g. EDIFACT, XML, ANSI ASC X12, etc.
- EDI is "Paperless Trade" and EFT (Electronic Transfer) is "Paperless Payment"

2. List the various layers of EDI.

Electronic data interchange architecture specifies four different layers namely and describes how data flows from one computer to another.

1. Semantic layer - Application level services

2. Standards translation layer - **EDIFACT** business form standards,
ANSI X 12 business form standards

3. Transport layer - Electronic mail - X.435& MIME ,
Point to point - FTP. TELNET,
World Wide Web - HTTP

4. Physical layer - Dial-up line, internet, I-way

3. Write a note on UN/EDIFACT.

United Nations / Electronic Data Interchange for Administration, Commerce and Transport (UN / EDIFACT) is an international EDI - standard developed under the supervision of the United Nations.

In **1987**, the UN / EDIFACT syntax rules were approved as **ISO: ISO9735** standard by the International Organization for Standardization.

Maintenance and further development of this standard goes through the United Nations Center for Trade Facilitation and Electronic Business (**UN/CEFACT**), which is affiliated to the UN Economic Commission for Europe (**UNECE**).

4. Write a note on EDIFACT message.

The basic standardisation concept of EDIFACT is that there are uniform message types called United Nations Standard Message (UNSM). In so-called subsets, the message types can be specified deeper in their characteristics depending on the sector.

The message types, all of which always have exactly **one** nickname consisting of **six uppercase** English alphabets.

The message begins with **UNH** and ends with **UNT**

● **Service messages**
To confirm / reject a message, CONTRL and APERAK messages are sent.
→CONTRL- Syntax Check and Confirmation of Arrival of Message
→ APERAK - Technical error messages and acknowledgment
● **Data exchange**
→CREMUL - multiple credit advice
→ DELFOR- Delivery forecast
→ IFTMBC - Booking confirmation

5. Write about EDIFACT separators

Character	Uses
Apostrophe ’	segment terminator
Plus sign +	segment tag and data element separator
Colon :	component data element separator
Question mark ?	release character
Period .	decimal point

Part - IV

Explain in detail

1. Briefly explain various types of EDI.
1. Direct EDI 2. EDI via VAN 3. EDI via FTP/VPN, SFTP, FTPS 4. Web EDI 5. Mobile EDI

Direct EDI/Point-to-Point
It is also called as Point-to-Point EDI. It establishes a direct connection between various business stakeholders and partners individually. This type of EDI suits to larger businesses with a lot of day to day business transactions.

EDI via VAN
EDI via VAN (Value Added Network) is where EDI documents are transferred with the support of third party network service providers. Many businesses prefer this network model to protect them from the updating ongoing complexities of network technologies.

EDI via FTP/VPN, SFTP, FTPS
When protocols like FTP/VPN, SFTP and FTPS are used for exchange of EDI based documents through the Internet or Intranet it is called as EDI via FTP/VPN, SFTP, FTPS.

Web EDI
Web based EDI conducts EDI using an web browser via the Internet. Here the businesses are allowed to use any browser to transfer data to their business partners. Web based EDI is easy and convenient for small and medium organizations.

Mobile EDI
When smartphones or other such handheld devices are used to transfer EDI documents it is called as mobile EDI.
Mobile EDI applications considerably increase the speed of EDI transactions.

2. What are the advantages of EDI?
EDI was developed to solve the problems inherent in paper-based transaction processing and in other forms of electronic communication.
Implementing EDI system offers a company greater control over its supply chain and allow it to trade more effectively.
It also increases productivity and promotes operational efficiency.
The following are the other advantages of EDI.

- Improving service to end users
- Minimizing errors
- Automation of operations
- Integrating all business and trading Partners
- Optimizing financial ratios
- Increasing productivity
- Slashing response times
- Cutting costs
- Providing information on process status

3. Write about structure of EDIFACT.
EDIFACT is a hierarchical structure where the top level is referred to as an interchange, and lower levels contain multiple messages. The messages consist of segments, which in turn consist of composites. The final iteration is a data element.

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Segment Tables
Segment table lists the message tags. It contains the tags, tag names, requirements designator and repetitation field. The requirement designator may be mandatory (M) or conditional (C). The (M) denotes that the segment must appear atleast once. The (C) denotes that the segment may be used if needed. e.g. C10 indicates repetitions of a segment or group between 0 and 10.

EDI Interchange

Interchange is also called as envelope. The top level of EDIFACT structure is Interchange. An interchange may contain multiple messages. It starts with UNB and ends with UNZ

EDIFACT message

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EDIFACT Segment

It is the subset of message. A segment is a three-character alphanumeric code. These segments are listed in segment tables.

Segments may contain one, or several related user data elements.

EDIFACT Elements

The elements are the piece of actual data.

These data elements may be either simple or composite.

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