



# **BACHELOR OF COMPUTER APPLICATIONS**

## **SEMESTER 5**

**DCA3143**  
**E-COMMERCE**

# Unit 9

## Electronic Payment Systems

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## 1. INTRODUCTION

After the beginning of online shopping and E-Commerce applications the requirement of electronic payment systems has been grown rapidly. This is a system used to pay for the online purchases at anywhere/anytime basis. In this system there is no need to use cheque or cash to pay for online bills etc.

In the era of digitization, Electronic-Payment system makes the recognition of digital technologies worldwide. This makes the customers to feel comfortable while purchasing products online and from anywhere (i.e. from entire world). Nowadays, Electronic payment system is getting widespread popularity due to its easy and comfortable usage.

Recently, in pandemic situation (due to covid-19), the electronic payment system has played vital role in the survival of many businesses. This allows the bussiness to operate smoothly from work from home basis. As a result, now most of the companies opting Internet for their bussiness are also offering Electronic-Payment systems for accepting and doing payments conveniently (i.e., online).

### 1.1 Learning Objectives

*After studying this unit, you should be able to:*

- ❖ *Define the concept of electronic payment system*
- ❖ *Illustrate the usage of online payment system*
- ❖ *Explain about the pre-paid and postpaid electronic system payment*

*So, let us start by understanding the on-line payment systems.*

## 2. ON-LINE PAYMENT SYSTEMS

While making online payments one needs to know about the working of online-payment systems (i.e., another name for Electronic Payment systems).

Some major components of online-payment systems are as follows:

- **Merchant:** The person or company who initiates the trade or business. He buys the goods or products and sells them after getting a reasonable profit on that.
- **Customer:** The person who buys/purchase the products.
- **Issuer Bank:** The financial Institution whose services are used by customer to pay a requisite fee or a specific amount to the merchant from whom the product has been purchased.
- **Receiver Bank:** Same as above, but this financial institution is holding the operations of merchant instead of customer. It is a acceptor who accepts the payment received from Issuer bank i.e. from customer account.
- **Payment Process:** The activity of making the payments from customer to merchant. In this an Ecommerce platform is required which integrates the customer, merchant, issuer bank and receiver bank.
- **Gateway:** Especially used by payment systems. This is an intermediate component which connects the Ecommerce platform with bank or financial Institution.

### Working of Online Payment System

There are three basic steps associated with online payment system are as follows:

#### Step 1: Initiate Payment

After selecting the product/service the customer needs to pay the requisite amount. For this the customer needs to select the appropriate payment method for .e.g. selecting payment mode etc. After this the customer will be redirected to payment page of respective banks.

## Step 2: Authentication

Here, the information (card number, cvv, pin etc) submitted by the customer will be authenticated by the bank and continue with payment process. Mostly payment gateway component is required to do this task.

## Step 3: Payment Settlement

After successful payment from customer banker the amount will get transferred to merchants' bank account.

Some common methods used under online payment system are as follows:

- ***Credit Cards***

A plastic card issued by bank to their customers. Same as of ATM/Debit, but this is a kind of short term loan given under certain terms and conditions.

- ***Debit Cards***

A plastic card through which one can operates our saving bank account. Some common service offered under this are as follows:

- Withdraw cash
- Deposit cash
- Online payments
- View balance
- Miscellaneous services like (getting bank balance, mini bank account statement etc)

- ***Google Pay***

This is a UPI (Unified Payment Interface) payment system. The service is offered by google. This is also known as gpay. In this one need to install app from google play store to our smart phones and connect it with our saving bank account through OTP based system. After this one can use it to pay respective amount to any other bank accounts. A bar code scanner facility is provided in this to resolve the issues of incorrect data



entry of banking credentials. Nowadays this app is very popular among all the places where shopping is allowed.

This app can also be used to make all the online payments through various Ecommerce platforms. The popularity of this app is very high among pan (presence across nation) India level due to its fast and simple working procedures.

- ***Amazon Pay***

This is an online payment processing system owned by amazon. It's a kind of E-wallet (electronic wallet) which can be used to pay amount to multiple channels. One important thing about this app is its international acceptability. It is accepted around the world i.e. in all major countries of the world for making payments of online shopping.

One can use this service of amazon by using amazon mobile app or amazon website. In this we can load cash through our saving bank account or by using credit card. This is one of the best solutions to be used while doing online shopping through amazon mobile app or website. Now as a recent development amazon connected its payment services to alexa (i.e. by talking to the system one can pay bills).

- ***Paytm***

Stands for pay through mobile. An Indian promoter company used to pay all online services and products. The services of Paytm can be used by downloading the app or by using Paytm website. We can also use the banking services provided by Paytm where one can deposit or withdraw amount also. Paytm also provides the payment gateway service to various subscribers and resolve their online payment issues.

- ***PayPal***

One of the fastest medium to pay and receive online payments. This is connected to our bank account for receiving or paying the amount while online shopping. This is like as a middle man between merchant and the customer. Security and easy to use are the main characteristics which promotes the use of PayPal.

- ***NACH (i.e., National Automated Clearing House)***

This is a network used by banking system for transferring and receiving money between them. This system is used for bank-to-bank transactions.

- ***Prepaid Cards***

This is card stored with some value. These cards are not linked to any specific bank accounts instead they are used for promotional activities by the organizations or companies.

- ***Gift cards***

It is used to pay gift to our near ones. Most of the banks are providing this service of paying online.

- ***Buy Now Pay Later***

The latest trend of doing online payments. This service is started by few recognized companies. Through this one can buy the products and pay it later. For example amazon pay later and flipkart pay later etc are the products launched under this scheme.

- ***COD (Cash on Delivery)***

A payment system where a customer can do online shopping and pay amount while receiving the product. In this a customer can pay cash or use its debit or credit card for making the payments.

- ***Bank Transfer (NEFT/IMPS/RTGS)***

These are the popular techniques of making online payments. These services can be used by customers through bank website or banking apps.

**SELF-ASSESSMENT QUESTIONS - 1**

1. Which of the following are the components of electronic payment system?
  - a. Issuer Bank
  - b. Consumer
  - c. Receiver Bank
  - d. All the above
2. Which of the following is the intermediate player while doing any online payment?
  - a. Issuer Bank
  - b. Consumer
  - c. Gateway
  - d. Receiver bank





### 3. BENEFITS OF USING ONLINE PAYMENT SYSTEMS

After discussing above points now we are discussing the benefits of using online payment systems:

**Reach to global market:** Online payment systems allow us to buy the products or services from the entire globe. Presently most of the companies or organizations are started selling and purchasing through Ecommerce platforms which inturn is a best practice for the customers to get latest and updated products in their doorsteps.

**Easy for Customers:** Online payment system allows the customers to buy or sell the products conveniently. This promotes the rapid growth in their bussiness inturn. Only one needs to open Ecommerce platforms and all work is done; how easy it is.

**Time Saver:** One important benefit associated with online payment system is time saver approach. By using this system most of the tasks are done automatically which helps in saving the time.

**Sales get Raised:** Due to easy and comfort behaviour of entire online process it attracts the customer towards it, which helps in raising sales of companies.

**Reduces the need of Cash:** Online payment system reduces the need of paying cash while doing shopping. This characteristic allows the easy transaction management (i.e. online tools are available for management of transactions)

**Secure and Trustworthy:** All the financial institutions are using various security measures like encryption, firewall, antivirus etc to make their operations secure and reliable. This generates the trust of peoples to use online payment services to accomplish their tasks. Multiple facilitates are provided by the financial institutions like email, OTP, and SMS system for payment verification, this encourages the reliability of online payment system among the customers.

**Environment Friendly:** Online payment system also supports us in carrying our social responsibility. It aid in reducing the paper based currency system which helps in reducing the cutting of trees and saves our environment.

Nowadays, all the financial institutions are preferring email for all types of communications (bank statements, issue, or close loan agreements etc) with their customer, this is again a best example which shows the reduction in usage of paper.

**Reduced Manpower:** By using online payment system most of the jobs are done automatically i.e., through software, this again helps us in reducing human held services while doing basic financial operations.

Some common operations handled by machine or software are:

- Attending customer problems (i.e., chat bot system is used by banks nowadays is best example)
- Counting currency (i.e., can be done by machine, earlier this requires a huge manpower)
- Online Customer verification (i.e no human intervention is required) can be done by Aadhar or OTP

**Best Customer Experience:** Another benefit which attracts our customer i.e., customer feels very good while using online payment system. This system allows to do shopping or any other financial transactions by just sitting on the chair. This makes the customer to save time, money and especially efforts.

### **Wider Payment Options**

While using online payment system, we have a variety of payment options to do. In this scheme one can use options like credit card, debit card etc to make the payments.

As per the above benefits the online payment systems is also having some demerits as discussed below:

- **Online Fraud:** One important concern while using online payment system is unauthorized payment or transaction. While making online payment customer needs

to be very attentive as slight mistake during online payments may get turned into heavy losses.

- **Internet Required:** High speed internet is one major requirement while making any online payments. While doing any online transaction the three different modules are working. One is with customer another one with merchant and last one is bank or financial institution. Therefore, one needs a good speed of internet for making online payments.
- **IT Knowledge:** While using the online payment system knowledge of IT (Information Technology) is required. As we already know customer, merchant and banker are three main components in this process, therefore one needs good IT skills to manage the system. The customer must be aware of banking system i.e. how to identify credit card/debit card number, cvv and password (i.e. sign and transaction).
- **Good IT support:** Another measure that needs to be taken care of by bank and merchant, i.e., during transaction failure the strength of this system is required. As good IT support can help in resolving the issues at the earliest.

Thus, after discussing the above facts now, we can classify the online payment system under the following heads:

- Pre-paid E-Payment System
- Post-paid E-Payment System

**SELF-ASSESSMENT QUESTIONS - 2**

3. Which of the following are the demerits of online payment system?
  - a. Online fraud
  - b. Internet requirement
  - c. IT knowledge
  - d. All the above
4. Which of the following are the merits of online payment system?
  - a. Environment friendly
  - b. Online fraud
  - c. Both a & b
  - d. Public usage



#### 4. PRE-PAID E-PAYMENT SYSTEMS

The introduction of Payment and Settlement System Act -2007 by RBI (Reserve Bank of India) for achieving the targets of making India a digital economy. In this the RBI was trying to introduce some new methods for online payment known as Pre-Paid E-Payment system. Here, the RBI is trying to overlook the existing payment systems like net banking, credit card, debit card etc. The RBI is working on the concept of finding some innovative system for making the online payments and moreover this system should be more capable of existing payment system.

Prepaid E-Payment system is a concept of prepaid cards where the card is stored with some fix amount, and later the card can be use to buy products online up to the stored value (amount) of the card. Here, the stored amount is the amount paid by the bank account of the customer to the company providing the facility of prepaid cards.

In continuation to above now we will discuss the types of prepaid card available for online payments as mentioned below:

- ***E-Vouchers (electronic vouchers)***

These are awarded by companies or banking institutions to their employees or customers as a reward. It motivates customers and employees to achieve the targets assigned by companies for them.

As per the usage, it is a 12 digit code mentioned on a paper provided electronically. This code is used by customers or employees at any merchant site to perform shopping or any other buying of products. Some common examples of this prepaid system are online vouchers by big bazaar, Jio mart etc.

- ***Plastic cards***

These are the plastic cards issued by the bank to their customers to perform online shopping or cash withdrawal. A process called KYC is needed to get these cards. These cards consist of magnetic strip in which customer information has been stored and one needs to swipe these cards at different POS to make purchase of products. One can also



use these cards to do online shopping of products by using OTP based mechanism to make the payments.

One noticeable point about this product is that they are directly linked to customers saving bank account and money transactions done under this are mentioned in our respective accounts. Some common examples of this approach are gift or travel cards issued by banks to their customers as per their requests.

- ***E-Wallets (electronic wallets)***

This is also known as digital wallet. As in case of normal wallets where one can place their money physically, in E-Wallets one can place money digitally. This is a kind of prepaid system where one needs to store money from our saving accounts. This can be used to make purchase of products nationally as well as internationally.

Some major companies providing E-Wallet systems are Amazon, Flipkart, Paytm, Google Pay etc.

- ***Virtual cards***

These are same as of e-coupons, but it needs a proper KYC before issuance. Also, it can be accepted in limited POS terminals for use. One common example of using this approach is virtual gift cards.



**SELF-ASSESSMENT QUESTIONS - 3**

5. Which of the following are the types of prepaid payment cards?
  - a. Plastic cards
  - b. E-Wallets
  - c. Virtual cards
  - d. All the above
6. Which of the following classify pre-paid E-payment cards?
  - a. Open system
  - b. Closed system
  - c. Both a & b
  - d. None of the above



## 5. CLASSIFICATIONS OF PRE-PAID E-PAYMENT CARDS

Based upon the working efficiency the Pre-paid E-Payment cards can also be classified under the following heads.

- Open System
- Semi-Open System
- Closed System
- Semi-Closed System

**Open System:** This payment system is used by the bank to make payment to all kinds of merchant. The category of this card is travel card i.e. especially issued by the bank to their customers who want to travel around the world. Main objective behind this is to resolve the issues of currency exchange while travelling to different locations. This can also be use to withdraw cash from ATM's.

**Semi-Open System:** In this we will talk about the special card designed to use with POS (Point of Sale) terminals at any merchant locations. One noticeable thing about these types of card is that they would not allow cash withdrawal. One best example belong to this category is gift cards issued by financial institutions for some specific purposes.

**Closed System:** This category of cards is issued by the companies for specific organisation with some defined objectives. These cannot be reloadable i.e. values can be loaded only once in this category of cards. The example of this category is e-vouchers issued by banks for specific vendors or as per the demands of merchants. These categories of cards will not be allowed to withdraw cash.

**Semi-Closed:** Under this card are designed for specially recognized merchants where a agreement is done between issuer and merchant for issuance of such cards. The noticeable point is that these are not allowed to withdraw cash, but they can be reloadable.

## Benefits of Using Prepaid E-Payment System

**Less Requirement:** Issuance of pre-paid cards needs very less requirements or minimal requirements. Important thing about these cards is that they only need a valid customer email id or mobile number to get subscribed. There is not any specific reasons for issuance of these cards, they can be used and issued without any specific reasons or tasks.

A KYC is required while one needs to pay amount more than the prescribed limit raised by RBI.

**Easy to Use:** Mostly these cards are issued in electronic form (in few cases the plastic cards can also be demanded by banks). Most of the merchants are accepting these cards while making the payments. These cards can be in form of wallets or virtual prepaid cards.

**Time Saver:** These cards are time-saver i.e., in these cards' money has been already stored therefore while using these cards at merchant site due to less verification these cards are operated in faster manner.

**No concern Debt:** While using these cards there is no chance for debt i.e., due to prepaid payment concept there are no chances to get debt while paying money.

**Allows paying in predefined manner:** Using of prepaid cards allows us to control our spending habits because in this one can only spend up to the amount loaded in the card, which helps managing our expenses.

**No need of Cash:** While using this payment system there is no need to carry cash while making any purchase.

**Currency Exchange issue:** This helps in resolving currency exchange issues which we are going to face while travelling from one location to another location.

### Demerits of Using prepaid E-Payment system

- **Not Linked with Bank:** Prepaid E-payment system is directly not connected with our bank account; therefore, one cannot get cash directly from it. In most cases the Accessor of card needs to do online purchase or shopping from it.
- **Security concern:** Security is one important parameter in prepaid cards. Here, we need to secure the card details (i.e. card number, cvv, date of expiry etc). One more important concern while using this card is, these cards are generated and used electronically (i.e. no physical cards), therefore more prone to hack.
- **Charges:** In some prepaid cards like travel or gift, the issuer may charge some fees from the users on behalf of processing.
- **No credit limit:** While using these cards the customer needs to maintain the usage of amount. As these are prepaid cards so limit is fixed. Therefore, one cannot make the purchases beyond the stored amount.

### SELF-ASSESSMENT QUESTIONS - 4

7. What are the merits of prepaid E-payment system?
  - a. Minimum requirement
  - b. Time saver
  - c. Both a & b
  - d. None of the above
8. Which of the following are the demerits of E-payment system?
  - a. Security Concern
  - b. Charges
  - c. Limited amount
  - d. All the above

## 6. POST PAID E-PAYMENTS SYSTEMS

Post Paid E-Payment system is also a means of paying dues or purchases payments online. But as we have already discussed pre-paid system so before continuing this we must know the difference between post paid and pre paid system of payments.

In post paid payment system first we pay to the merchant and after that we need to settle the bill with our bank or financial institution. Whereas in prepaid system first we get money from our bank then we pay. Post payment system is kind of loan we are offered by our bank with certain terms and conditions.

Some common methods of post payment system area as follows:

### ***Credit Card***

One of the best mechanisms to attain post payment concept. These are issued by the banks or financial institutions to our customers having valid KYC and strong financial balance sheet. In this system the banks will provide a certain limit to their customers for making payments at POS or online. After this bank will give a certain day's free credit to their customers and allow them to use this credit for any purpose (specially shopping and paying bills etc). In lieu of this sometimes bank will charge a nominal amount from their customers.

Customers can use these credit card services through various modes like through POS, through online payments etc.

### ***Banker's e-Cheque***

As most of us know about cheque payment system, here a physical paper (in form of cheque) signed by a bank account holder is given to merchant etc by the customer in response of purchase done by him/her. The merchant will produce this cheque to his bank physically and received the said amount of cash from the bank. Thus, the mentioned process is manual and time consuming.

But due to the inception of digital economy the e-Cheques are come into effects where the customer will issue a digitally signed cheque to the receiver and it makes the payment



process very fast. Thus, due to the usage of cryptographic technique the system is very fast while doing the payments.

In continuation to above now we are discussing the merits of post-paid E-Payment system as follows:

- **No Need of Immediate amount in bank:** While using the post-paid payment service one can do the online shopping by without having any amount in saving bank. i.e this is a kind of credit line offered by the bank to their customers. Therefore, one can settle the payment after generation of the bill from respective bank.
- **Good bank record:** The bank will offer these services to the customers having good financial track record. If a customer want to use post paid system of payment then customers' needs to be a good proven financial record with the bank like no emi (equated monthly instalment) are overdue, customer have paid all charges of the banks etc.
- **Emergency fund:** Using of post payment system also leads this as an emergency fund i.e., it can be use during medical emergency etc in case if one is running short of cash.
- **Reward Programme:** Most of the banks are promoting to use these services, in lieu of that they are also offering reward as per our usage.

Thus, as per the above merits we have few demerits also for the post-paid system as discussed below:

- **Allows to spend more than our income:** The system of post payment, sometimes make us to make our expenditure out of budget. In this system we are free to use the amount thus it moves ourselves in a system of bad debt or loan.
- **Online fraud:** One major problem while using any online payment service. Here also customers need to be very attentive and sincere while using their card credentials. As per the survey, this system is highly prone in case of online frauds. Therefore one needs to use cards (i.e. credit card etc) very confidentially while making online payments to merchants. In some cases, banks are managing the security of post payment system also.

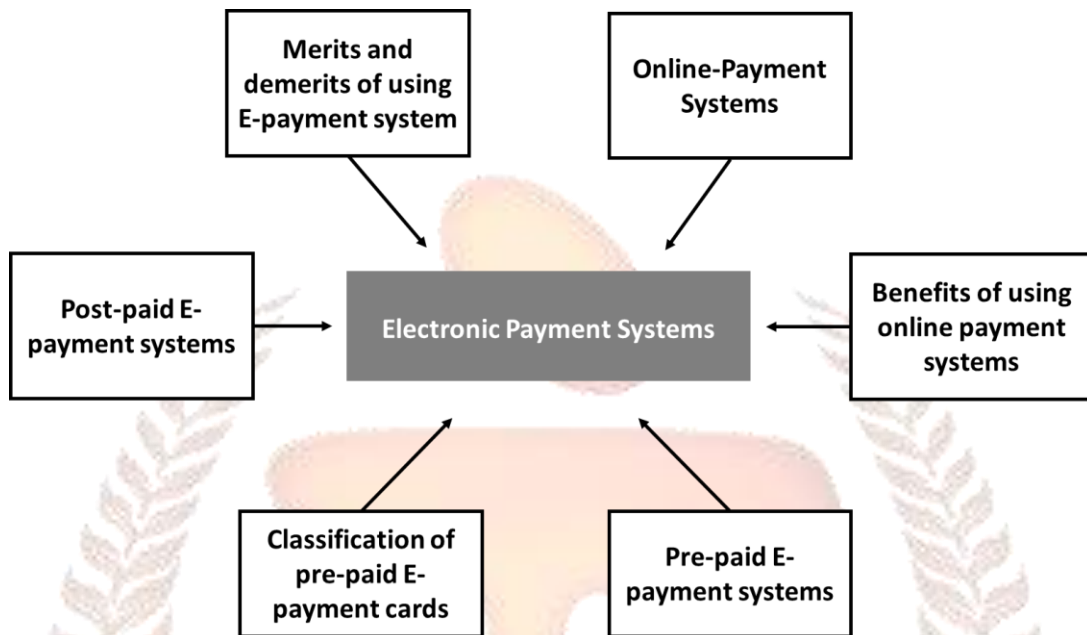


**SELF-ASSESSMENT QUESTIONS - 5**

9. Which of the following belongs to post-paid system?
- a. Banker e-Cheque
  - b. Credit card
  - c. Both a and b
  - d. Debit card
10. Which of the following can be used to withdraw cash?
- a. Debit card
  - b. Credit card
  - c. Both a and b
  - d. Amazon pay



## 7. CONCEPT MAP



## 8. SUMMARY

- E-Payment is a system used to pay for the online purchases at anywhere/anytime basis. In this system there is no need to use cheque or cash to pay for online bills etc.
- Gateway is an intermediate component which connects the Ecommerce platform with bank or financial Institution.
- The three basic steps associated with online payment system are
  - Initiate
  - Authenticate
  - Settle
- E-wallet (electronic wallet) can be used to pay amount to multiple channels.
- Paytm is an Indian promoter company used to pay all online services and products.
- we can classify the online payment system under the following heads:
  - Prepaid E-Payment System
  - Post paid E-Payment System
- Payment and Settlement System Act -2007 by RBI (Reserve Bank of India) for achieving the targets of making India a digital economy.
- Prepaid E-Payment system is a concept of prepaid cards where the card is stored with some fix amount.
- Virtual cards are same as of e-coupons, but it needs a proper KYC before issuance.
- Pre-paid E-Payment cards can also be classified under the following heads.
  - Open System
  - Semi-Open System
  - Closed System
  - Semi-Closed System
- In post paid payment system first we pay to the merchant and after that we need to settle the bill with our bank or financial institution.

## 9. GLOSSARY

ATM:	Automated teller machines
OTP:	One-time password
NEFT	NATIONAL ELECTRONIC FUNDS TRANSFER
IMPS	Immediate Payment Service
RTGS	Real Time Gross Settlement
SMS	Short Message Service
KYC	Know Your Customer
POS	Point of Sale

## 10. TERMINAL QUESTIONS

### SHORT ANSWER QUESTIONS:

- Q1. Define E-Payment system
- Q2. How many steps are associated with online payment system?
- Q3. Explain how online payment is easy for customers
- Q4. What is a good bank record?
- Q5. Explain E-Wallets and its importance

### LONG ANSWER QUESTIONS:

- Q1. Mention the common services offered by debit cards
- Q2. List out the demerits using prepaid E-payment system

## 11. ANSWERS

### SELF-ASSESSMENT QUESTIONS

1. d. All the above
2. c. Gateway
3. d. All the above
4. a. Environment friendly
5. d. All the above
6. c. Both a and b
7. c. Both a and b
8. d. All the above
9. c. Both a and b
10. c. Both a and b

### TERMINAL QUESTIONS

#### SHORT ANSWER QUESTIONS:

**Answer 1:** This is a system used to pay for the online purchases at anywhere/anytime basis. In this system there is no need to use cheque or cash to pay for online bills etc.

For more details, refer 1.1

**Answer 2:** There are three basic steps associated with online payment system.

For more details, refer 1.2

**Answer 3:** Online payment system allows the customers to buy or sell the products conveniently. This promotes the rapid growth in their business intern. Only one needs to open Ecommerce platforms and all work is done; how easy it is.

For more details, refer 1.3

**Answer 4:** The bank will offer these services to the customers having good financial track record. If a customer wants to use post-paid system of payment, then customers' needs to be



a good proven financial record with the bank like no EMI are overdue, customer have paid all charges of the banks etc.

For more details, refer 1.6

**Answer 5:** This is also known as digital wallet. As in case or normal wallets where one can place their money physically, in E-Wallets one can place money digitally.

For more details, refer 1.4

### **LONG ANSWER QUESTIONS:**

#### **Answer 1:**

- Withdraw cash
- Deposit cash
- Online payments
- View balance
- Miscellaneous services like (getting bank balance, mini bank account statement etc.)

For more details, refer 1.2

#### **Answer 2:**

- Not Linked with Bank: Prepaid E-payment system is directly not connected with our bank account; therefore, one cannot get cash directly from it. In most cases the Accessor of card needs to do online purchase or shopping from it.
- Security concern: Security is one important parameter in prepaid cards. Here, we need to secure the card details (i.e. card number, cvv, date of expiry etc). One more important concern while using this card is, these cards are generated and used electronically (i.e., no physical cards), therefore more prone to hack.
- Charges: In some prepaid cards like travel or gift, the issuer may charge some fees from the users on behalf of processing.

- No credit limit: While using these cards the customer needs to maintain the usage of amount. As these are prepaid cards so limit is fixed. Therefore, one cannot make the purchases beyond the stored amount.

For more details, refer 1.5



## 12. SUGGESTED BOOKS AND REFERENCES

- Information Technology for Business, Antony Thomas, Pratibha Publications
- Using Information Technology (6th Edition): Williams & Sawyer Tata McGraw Hill Company
- Operating System Concepts (Windows XP update): AviSilberschatz, Peter Galvin & GregGagne Willey
- Newman, Andrew J. and Peter Cullen, Retailing Environment and Operations, ThomsonLearning, India, 2007.
- Larson, Carl M., Robert E. Wegand and John S. Wright, Basic Retailing, Prentice Hall, NewJersey, 1982.
- Davidson, William R., Alton F. Doody and Daniel J. Sweeney, Retailing Management, TheRonald Press Company, New York, 4th edition, 1975.