



**B.Sc. (Information Technology) (Part III)**  
**Examination, 2011**  
**E-COMMERCE**  
(B.Sc. I.T-33 Paper)  
Time allowed: Three Hours  
Maximum Marks : 50

**Attempt Five questions out of ten.**  
**All questions carry equal marks.**

1. What do you mean by E-Commerce? Define how it is integrated with mobile commerce? Define the essential components for mobile computing?
2. Define the application of e-commerce with proper example? Explain the anatomy of e-commerce?
3. What is the message data security? Define the various threads that effect the client-server computing?
4. Is it possible to customize the security concept? Define the possible solution to ignore the reason that effect the security?
5. What is the relation between internet and e-commerce? Define the architectural framework of e-commerce?
6. Define the customer oriented e-commerce? Define the differences between customer to business and business to business model?
7. Define the purpose of EDI? Explain all it's security components? Define the trade cycle of e-commerce?
8. Define the following:
  - a. Encryption
  - b. Document Management and Digital Library
  - c. World wide Web Architecture
  - d. MDI
9. Define the mercantile model for customer with help of complete diagram and working representation?

**B.Sc. (Information Technology) (Part III)  
Examination, 2011**

**RELATIONAL DATABASE  
MANAGEMENT SYSTEM**

(B.Sc. I.T-36 Paper)

Time allowed: Three Hours

Maximum Marks : 50

**Attempt Five questions out of ten.**

**All questions carry equal marks.**

1. What do you understand by DBMS? Explain its advantages over conventional file system. (3, 7)
2. Explain three level architecture of DBMS. How is it different from two level architecture? (10)
3. Write short notes on: (2<sub>1/2</sub> \* 4)
  - a. Different types of Keys
  - b. Data Dictionary in Oracle
  - c. Database Users
  - d. DDL, DML, DCL
4. What do you understand by data mining? What kind of data can be mined. (2, 8)
5. Explain all rules of Codd's for RDBMS? (10)
6. Explain the following (Any two) (5 \* 2)
  - a. Data types in oracle
  - b. Views in oracle
  - c. COMMIT, ROLLBACK
7. (a) Explain advantages and disadvantages of PL/SQL.  
(b) Explain cursor in oracle with example. (5, 5)
8. What do you understand by JOINS, explain all its types. (10)
9. What do you understand by triggers, Explain different types of triggers. (2, 8)
10. Write a note on concurrency control. (10)

**B.Sc. (Information Technology) (Part III)**  
**Examination, 2011**  
**COMPUTER ELECTRIC AND ANALYSIS**

(B.Sc. I.T-31 Paper)

Time allowed: Three Hours

Maximum Marks : 50

**Attempt Five questions out of ten.**

**All questions carry equal marks.**

1. (a) On what factors the resistance offered by a conduction depends? Give relation between conductivity and resistivity. (5)  
(b) Three resistors are connected in series across a 12V battery. The first resistor has the value of 1ohm, second has a voltage drop of 4v and third has a power dissipation of 12W. Calculate the value of each resistance and circuit current. (5)
2. (a) Explain what is meant by self inductance and mutual inductance. Define the units in which each is measured. (5)  
(b) Derive an expression for the electrodynamic force on a current carrying conductor and lying in the magnetic field. (5)
3. (a) State kirchhoff's current and voltage laws. Explain them with suitable circuits (5)  
(b) Explain the charging and discharging of capacitor. Also define the time constant for RC circuit. (5)
4. (a) Explain the working principle of DC machine. Also differentiate between motors and generators. (5)  
(b) Explain the principle of a transformer. Discuss the constructional details. (5)
5. (a) Explain the phenomenon of resonance in an R-L-C circuit. Derive the condition for resonance in a series RLC circuit. (5)  
(b) A supply of 400v, 50Hz is applied to a series RC circuit. Find the value of C if the power absorbed by the resistor be 500w at 150V. What is the energy stored in capacitor? (5)
6. (a) Explain the classification of materials on the basis of magnetic properties of materials. (5)  
(b) State Biot Savart's law of magnetic field. Evaluate the expression of magnetic field inside solenoid? (5)
7. (a) State Thevni's theorem. Illustrate the application of this theorem with reference to an appropriate electric network. (5)  
(b) State and explain superpositions theorem. Mention its limitations. (5)
8. (a) Derive expressions for average value and rms value of a sinusoidally varying as voltage. (5)  
(b) Explain the construction and working of single phase induction motor with suitable diagram (5)
9. (a) Explain the Z-parameters of two port network. Why it is called open circuit impedance parameters. (5)  
(b) What are the functions of multi meter? How the voltage and current is measured by multi meter? (5)
10. Write short notes on the following: (5+5)

- a. Three phase induction motor
- b. Reciprocity theorem
- c. Measuring instruments



**B.Sc. (Information Technology) (Part III)**

**Examination, 2011**

**OPERATING SYSTEM**

(B.Sc. I.T-32 Paper)

Time allowed: Three Hours

Maximum Marks : 50

**Attempt Five questions out of ten.**

**All questions carry equal marks.**

1. Define the essential properties of the following types of operating system:
  - a. Time Sharing
  - b. Real Time
  - c. Network
  - d. Batch
  - e. Distributed

2. Consider the following set of processes, with the length of the CPU-burst time given in milliseconds:

Process	Burst Time	Priority
P1	10	3
P2	1	1
P3	2	3
P4	1	4
P5	5	2

The processes are assumed to have arrived in the order, P1, P2, P3, P4, P5 all at time 0.

- 1) Draw four gantt charts illustrating the execution of these processes using FCFS, SJF, a nonpreemptive priority (a smaller priority number implies a higher priority) and RR (quantum = 1) scheduling.
  - 2) What is the turnaround time of each process for each of the scheduling algorithm in part a?
  - 3) What is the waiting time of each process for each of the scheduling algorithm in part a?]
  - 4) Which of the schedules in a part a results in the minimal.
3. List the services of an operating system.
  4. Explain different multithreading models and list out the benefits of multithreading.
  5. Explain the critical section problem. And write the algorithms for solution of this problem.
  6. Explain the concept of process and various states of a process. Draw the structure of PCB (Process Control Block) and explain the types of information it contains.
  7. What is process scheduling? Explain different process schedulers.
  8. Explain the process management in UNIX?
  9. Explain the following commands:
    - a. cat
    - b. cp

- c. mv
- d. find
- e. wc
- f. sort
- g. cmp
- h. tr
- i. nice
- j. head

10. Write a program to print fibonacci till 10 terms.



**B.Sc. (Information Technology) (Part III)  
Examination, 2011**

**VISUAL BASIC PROGRAMMING**

(B.Sc. I.T-34 Paper)

Time allowed: Three Hours

Maximum Marks : 50

**Attempt Five questions out of ten.**

**All questions carry equal marks.**

1. (a) Why the visual basic is called IDE? Explain the various features of visual basic IDE. (5)  
(b) Why visual basic is treated as GUI programming language? Explain various features of visual basic. (5)
2. What do you mean by event Driven Programming? Explain the various types of events available in VB? Write a event driven program that only characters in a text box. (10)
3. (a) What is tool bar? Explain the steps to create new tool bar. (5)  
(b) What do you understand by popup menu? How can we create it? Explain in detail. (5)
4. (a) What will the output of the following code.  

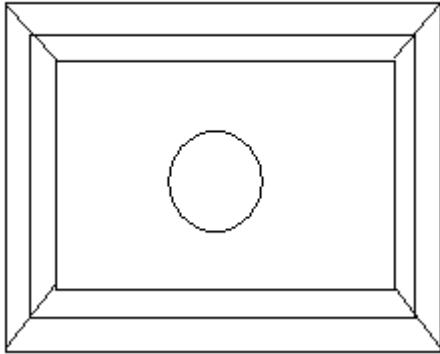
```
for i = 1 to 5  
    for j = 1 to 3  
        print (i + " " + j)  
    next j  
next i
```

  
(b) Convert the following code in for .....next loop  

```
Private sub cmdshow_click()  
    Print "BSC (IT)" + 1  
    Print "BSC (IT)" + 2  
    Print "BSC (IT)" + 3  
End sub
```

  
(c) How a popup menu can have multiple levels? Explain the process of creating popup menu.  
(d) What do you understand by access key and shortcut key? How can you define them while designing menus (2<sub>1/2</sub>+2<sub>1/2</sub>+2<sub>1/2</sub>+2<sub>1/2</sub>)
5. Differentiate the following:
  - a. Entry level loop and Extra level loop
  - b. Scroll bar and Slider Bar
  - c. Picture box and Image box
  - d. Sub procedure and function procedure (2<sub>1/2</sub>+2<sub>1/2</sub>+2<sub>1/2</sub>+2<sub>1/2</sub>)
6. Define the term Array in Visual basic? Explain control's Array, Array of Arrays, Dynamic Array. Also explain the difference between Array and Collections. (10)

7. Explain the various drawing methods available in visual basic. Create a VB project to draw the following shape in picture box control when user click on display button.



(10)

8. (a) What do you mean by common dialog controls? How they are useful? Define all the available common dialogs.  
(b) What is Image List Control? Why it is used? Explain the process to add pictures to it. (5+5)
9. Write short notes on:  
a. Class modules  
b. Timer Control  
c. Win 32 API
10. How can you Access the data base in visual basic? Explain the various data access tools to Access Data Base in visual basic. Create a VB project to connect your application to the database and perform various operations like insert, update, delete etc. (10)