

Total No. of Questions :12]

SEAT No. :

P1546

[Total No. of Pages :3

[5061] - 31

S.Y.M.C.A. (Engineering)

OPERATING SYSTEMS

(2008 Pattern) (Semester - III) (610901)

Time : 3 Hours]

[Max. Marks :70

Instructions to the candidates:

- 1) *Answers to the two sections should be written in separate answer books.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume Suitable data if necessary.*

SECTION - I

- Q1)** a) Differentiate between lexical analysis and syntax analysis. [6]
- b) What is a Macro? Explain Macro processor with the help of suitable diagram. [6]

OR

- Q2)** a) Explain fundamentals of language processing with necessary diagram. [6]
- b) Enlist the different types of errors that are handled by PASS-I and PASS-II Assembler. [6]

OR

- Q3)** a) Explain the functioning of compile and go loader scheme. What are the advantages and disadvantages of this scheme. [6]
- b) Explain the relocating loader with its advantages and disadvantages. [6]
- Q4)** a) What is a compiler? Explain lexical analyzer and parsing. [6]
- b) What is an object module? What information does the object module contain? [6]

P.T.O.

- Q5)** a) What are system calls? Enlist major category of system calls. [6]
b) What is process? What is process control block (PCB)? Explain in detail. [5]

OR

- Q6)** a) Explain the working of following scheduling algorithms with example. [6]
i) Shortest-job-first
ii) Priority
b) Explain functions of Operating System in detail. [5]

SECTION - II

- Q7)** a) What is contiguous memory allocation? Explain the terms first, fit, Best fit, Worst fit. [6]
b) Write short note on Demand Paging. [6]

OR

- Q8)** a) For the following reference string, 5 6 7 8 5 6 9 5 6 7 8 9 count the no of page faults that occur with 3 frames and 4 frames using FIFO page replacement method. [6]
b) What is segmentation? Explain with suitable example. [6]

- Q9)** a) Explain the concept of file protection. What are the different accesses rights given to a file? [6]
b) What are the different disk space allocation methods? Explain. [6]

OR

- Q10)**a) Explain in brief: [6]
i) Programmed I/O
ii) Interrupted driven I/O
b) Discuss in detail FCFS and SCAN disk scheduling algorithms. [6]

Q11)a) Explain the user, kernel and hardware interface of Linux operating system. [6]

b) Explain Inode assignment to new file. [5]

OR

Q12)a) Explain the basic Linux file system organization. [5]

b) Explain any three process management system calls used in Linux. [6]



Total No. of Questions :12]

P1547

SEAT No. :

[Total No. of Pages : 2

[5061]-32

S.Y.M.C.A. (Engg)

DATABASES: CONCEPTS AND SYSTEMS (610902)

(2008) (Course) (Semester - III)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answers to the two sections should be written in separate answer books.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data if necessary.*

SECTION-I

- Q1)** a) Define the term data model. Explain relational data models and hierarchical data model. [6]
- b) Explain three schema architecture of database in detail. [5]

OR

- Q2)** a) Explain the various functional components of a DBMS with the help of a suitable diagram. [6]
- b) Explain the difference between physical and logical data independence with example. [5]
- Q3)** a) What ERD? Explain in detail stored and derived attributes and composite attributes. [6]
- b) Construct ER model student administration system. Student who apply for a courses are registered in the system. Short listed candidates are called for interview and their marks are recorded. Selected candidates are admitted. [6]

OR

P.T.O.

- Q4)** a) What is mapping cardinality? Explain types of mapping cardinality with example. [6]
b) A Musical company has decided to store information about musicians who perform in their album. Each musician is defined with unique identifier. The instruments are used in. Songs. Song has title and an author. Each musician may play several instruments and a given instrument may be played by several musicians. Each album has exactly one musician' who acts as its producer. A musician may produce several albums. Draw an E-R diagram. [6]

- Q5)** a) What is a view? Explain insert, update and delete operations with respect to views. [6]
b) Explain with suitable example primary key, super key and foreign key. [6]

OR

- Q6)** a) What is integrity constraint? Explain referential integrity constraints using on delete cascade clause with suitable example. [6]
b) List and explain 4 codd's rule in detail. [6]

SECTION-II

- Q7)** a) What is the difference between implicit cursor and explicit cursor? Explain % not found, %rowcount in explicit cursor. [6]
b) What are the different types join? Explain outer join with example. [6]

OR

- Q8)** a) What is procedure? Explain parameter mode in procedure with example. [6]
b) What is PL/SQL? Give the advantages of PL/SQL. [6]

- Q9)** a) What is function dependency? Explain full functional dependency and partial functional dependency. [6]
b) Define BCNF. How does it differ from 3NF? Why it is considered a stronger form of 3 NF? [6]

OR

- Q10)** a) Explain transitivity function dependency with example. [6]
b) What are advantages of normalization? Explain in detail first and second normal form.

- Q11)** a) ACID properties of transaction with example. [6]
b) What is shadow paging? What are the disadvantages of shadow paging? [5]

OR

- Q12)** a) Explain in details logs based recovery technique. [6]
b) What is schedule? Explain serializable schedule with example. [5]



Total No. of Questions : 12]

SEAT No. :

P1548

[5061]-33

[Total No. of Pages : 3

S.Y.M.C.A.(Engineering faculty)

FINANCIAL ACCOUNTING AND MANAGEMENT

(2008 Course)(Semester-III)(610903)

Time :3Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer any three questions from each section.*
- 2) *Answers to the two sections should be written in separate books.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Figures to the right indicate full marks.*
- 5) *Assume suitable data if necessary.*

SECTION-I

Q1) a) Define Financial Accounting. Differentiate Book Keeping and Accounting? **[6]**

b) Explain the use of Cash Book. Explain the types of Cash Book? **[6]**

OR

Q2) a) Journalize the following transaction in the books of Mr. Joshi: **[8]**

2015, April 1	Mr. Joshi started business with cash Rs. 80,000
2	Purchased goods from Rakesh Rs. 25,000 on credit.
4	Sold goods to Nitin of Rs. 25,000 on credit.
5	Deposited cash into Bank of India Rs. 20,000
9	Purchased Machinery of Rs. 10, 000 for cash
11	Received a bearer cheque for Rs. 15,000 from Nitin.
15	Paid to Rakesh by Cheque of Bank of India Rs.15,000
20	Paid Salary by cheque Rs. 4,000

b) Explain the rules of Debit and Credit? **[4]**

Q3) a) What are different elements of Cost? Explain in brief? **[6]**

b) Explain the importance of ratio analysis in brief? **[6]**

OR

P.T.O.

- Q4) a)** A Co, producing a single products has budgeted the following costs to make and sell over its normal operating ranges.

Sales price=Rs. 10 per unit

[8]

	Unit Sold	Total Cost Rs.
I year	10,000	80,000
II year	8,000	68,000

Determine the B.E. P and P/V ratio

- b) Explain breakeven point with example? [4]

- Q5) a)** What is working capital? Explain the importance of working capital?[6]

- b) Distinguish between current assets and fixed assets with example? [5]

OR

- Q6) a)** Explain the factors affecting the working capital Requirement. Also explain Working Capital requirement for a seasonal fruit shop. [6]

- b) What are the types of working capital? Explain in brief? [5]

SECTION-II

- Q7) a)** What is capital budgeting? Sate the factors affecting capital budgeting?[6]

- b) A firm whose cost of capital is considering two mutually exclusive proposals X and Y, the details of which are as follows. [6]

Year	Project X	Project Y
1	Rs. 1,50,000	Rs. 1,50,000
2	Rs. 10,000	Rs. 65,000
3	Rs. 25,000	Rs. 60,000
4	Rs. 55,000	Rs. 57,500
5	Rs. 75,000	Rs. 52,500

Calculate: Pay-back period for each project and advice which of the two projects is profitable.

OR

- Q8) a)** Explain different limitations of capital budgeting? [6]

- b) Compute the present value of an investment outlay of Rs.10,000/- in the present and Rs. 10,000/- after one year. The scrap value of the equipment after 5 years, is Rs. 1,000/-. The discount rate is 10% [6]

Q9) a) What are the various approaches to the estimate of overall cost of capital? Explain in brief? [6]

- b) A share holder purchased a share of Rs.500/-. For 5 years he received dividend at the rate of 10% per year. At the end of 5 years, he sold his share for Rs. 650/- What is his rate of return? [6]

OR

Q10) a) What is cost of capital? Why should a financial manager know the cost of capital of his firm? [6]

- b) A company has issued 20 year bonds of Rs.1000/- face value at Rs. 900/- each. Rate of interest is 10% and the tax rate for the company is 52%. The company has taxable profit. What is the cost of bond capital. [6]

Q11) Explain the features or characteristics of any financial software/tool which should be useful or important to finance manager of any organization. [11]

OR

Q12)a) Explain the process in Tally 9.0 for preparation financial statements. [6]

- b) What are the advantages and Disadvantages of computerized accounting system? [5]



Total No. of Questions :12]

SEAT No. :

P1549

[5061]-34

[Total No. of Pages : 2

S.Y.M.C.A. (Faculty of Engineering)
COMPUTER COMMUNICATIONS AND NETWORKS
(2008 Course) (Semester - III) (610904)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answers to the two sections should be written in separate answer books.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data, if necessary.*

SECTION - I

- Q1)** a) Justify “Statical TDM is better than Synchronous TDM”. [6]
b) Write a major components of Computer Communication with neat diagram. [6]

OR

- Q2)** Explain transmission media. Explain about any two Guided & Unguided transmission media. [12]

- Q3)** a) Give details of the components mention [8]
i) NIC
ii) Repeater
b) Write which topology is better Mesh or Star, justify why. [4]

OR

- Q4)** a) Explain circuit switching technique with neat diagram. [6]
b) Write a short note on LAN, MAN and WAN. [6]

P.T.O.

- Q5)** a) Explain CSMA techniques. [6]
b) Explain Gigabit Ethernet with neat diagram. [5]

OR

- Q6)** a) Draw and explain Bluetooth architecture. [6]
b) Explain Bitmap protocol. [5]

SECTION - II

- Q7)** a) Explain difference between connection oriented and connectionless services. [6]
b) Write a short note on Firewall. [5]

OR

- Q8)** a) Explain Multicast routing in detail. [6]
b) Explain Leaky bucket algorithm. [5]

- Q9)** a) Explain in detail Socket primitives with neat diagram. [6]
b) Write a difference between UDP and TCP. [6]

OR

- Q10)**a) Explain connection establishment and release in TCP. [6]
b) Explain timer management in Transport layer. [6]

- Q11)**a) Write a difference between FTP and TFTP. [6]
b) Draw and explain Email architecture. [6]

OR

- Q12)**a) Write a short note on SMTP. [6]
b) Write a difference between Static and Dynamic Pages. [6]



Total No. of Questions : 12]

SEAT No. :

P1550

[5061]-35

[Total No. of Pages : 2

S.Y.M.C.A.(Engg.)

**PRINCIPLES OF MULTIMEDIA
(2008 Course)(Semester-I) (610905)**

Time :3Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer to the two sections should be written in separate answer Books.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks*
- 4) *Assume suitable data if necessary.*

SECTION-I

- Q1)** a) What is streaming? Explain advantages and uses of streaming media.[6]
b) What is Multimedia Authoring? What are the functions of Multimedia Authoring Software? What are it's different types? [6]

OR

- Q2)** a) Explain Multimedia building blocks. [6]
b) Explain storage and retrieval of multimedia data. List any two MM databases. [6]

- Q3)** a) Explain various methods of image acquisition. [6]
b) What is compression rate? Explain Shannon-Fano algorithm with the help of suitable example. [6]

OR

- Q4)** a) What is image enhancement? How image enhancement is done using point processing? [6]
b) Write short note on sampling and quantization [6]

- Q5)** a) List different elements of Audio system. Explain various types of Microphones. [6]
b) State different audio file formats? Compare WAV and AVI file format.[5]

OR

P.T.O.

- Q6)** a) What is MIDI? Explain various components of MIDI system. [6]
b) Explain different characteristics of sound wave. [5]

SECTION-II

- Q7)** a) Compress the string 'PQPQQPQRQPQQP' using LZW compression technique. Calculate the compression ratio. [6]
b) Compare different video transmission standards [5]

OR

- Q8)** a) Explain the steps involved in video editing. [5]
b) Explain Huffman coding algorithm with example. [6]

- Q9)** a) Define virtual reality. Explain different forms of virtual reality. [6]
b) What is VRML? What are its design criteria? What are its characteristics? [6]

OR

- Q10)** a) Why does it take four nodes to make simple object in VRML and which are those? [6]
b) What are the factors which affect the quality and usability of a virtual reality applications. Explain Briefly. [6]

- Q11)** a) Describe different tools to create animation [6]
b) Explain following techniques of animation. [6]
i) rotoscoping and blue screening
ii) morphing
iii) masking

OR

- Q12)** a) Explain method of motion control in animation. [6]
b) Explain the principles of animation with an example. [6]



Total No. of Questions :12]

SEAT No. :

P1551

[Total No. of Pages :3

[5061] - 41

S.Y.M.C.A. (Engineering Faculty)

SOFTWARE ENGINEERING

(2008 Pattern) (Semester - IV) (610909)

Time : 3 Hours]

[Max. Marks :70

Instructions to the candidates:

- 1) *From section I, answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.*
- 2) *From section II, answer Q.7 or Q.8, Q.9 or Q.10, Q.11 or Q.12.*
- 3) *Answers to the two sections should be written in separate books.*
- 4) *Neat diagrams must be drawn wherever necessary.*
- 5) *Figures to the right indicate full marks.*
- 6) *Assume suitable data, if necessary.*

SECTION - I

- Q1)** a) What do you understand by Evolutionary model? Draw and explain the Spiral model with its advantage and disadvantage? [8]
- b) What are the process framework activities? [4]

OR

- Q2)** a) Explain the phases of unified process. [8]
- b) Write short notes on. [2]
- i) Personal Process Model
- ii) Team Process Model [2]

- Q3)** a) Explain the principles used in the planning practices? [6]
- b) Explain the Communication Principles that guide Framework Activity?[6]

OR

P.T.O.

- Q4)** a) Write Elements of the Requirement Model. [6]
b) What do I need to know in order to develop an effective use case? [6]

- Q5)** a) Describe the Class Responsibility Collaboration model with example? [8]
b) Draw the Use-Case diagram for Flight reservation system? [3]

OR

- Q6)** a) What are the goals of Requirement Engineering? Justify why requirement Engineering Works as a bridge between Design and Construction? [8]
b) Write the Elements of analysis model. [3]

SECTION - II

- Q7)** a) What is the importance of Software design? What is the relation between analysis and Design? [6]
b) What are the golden rules of Interface design? Explain in detail all the rules. [6]

OR

- Q8)** a) Explain in brief Design Concepts. [8]
b) Write short notes on Design Model. [4]

- Q9)** a) Explain the difference between White box testing and black box testing. [6]
b) What are the strategic issues in Software Testing? [6]

OR

Q10)a) What are the Objectives of Testing? What are the testing strategies for conventional And object oriented software? [6]

b) Explain Condition testing and loop testing with reference to White box testing [6]

Q11)a) What are the attributes of effective software metric? Explain measure, measurement and Metrics. [5]

b) What are the objectives of software maintenance? Explain in detail maintenance metric [6]

OR

Q12)a) What is software quality? What are the factors affecting the software quality? How The software quality can be addressed? [5]

b) Explain the metric for source code. What are the factors affecting source code metrics investigation. [6]



Total No. of Questions :12]

SEAT No. :

P1552

[Total No. of Pages :3

[5061] - 42

S.Y. M.C.A. (Engg.)

WEB TECHNOLOGY

(Semester - IV) (2008 Course) (610910)

Time : 3 Hours]

[Max. Marks :70

Instructions to the candidates:

- 1) *Figures to the right indicates full marks.*
- 2) *Answers to the two sections should be written in two separate answer books.*
- 3) *From Section - I solve (Q.1 or Q.2) and (Q.3 or Q.4) and (Q.5 or Q.6).*
- 4) *From Section - II solve (Q.7 or Q.8) and (Q.9 or Q.10) and (Q.11 or Q.12).*
- 5) *Make suitable assumptions wherever appropriate and relevant.*

SECTION - I

- Q1) a)** State whether the following are true or false: **[2]**
- i) The IP Address consists of two parts Network number and host number.
 - ii) All web servers use port 80 to listen for server response.
- b)** Comment on and explain **[6]**
- i) Telnet can actually be used to send HTTP commands to a web server.
 - ii) To improve the performance of HTTP Byte serving is used in it.
- c)** Explain the role of middleware in the web development models. **[4]**

OR

- Q2) a)** Differentiate between static & Dynamic web sites with a suitable example. **[6]**
- b)** Explain the execution of dynamic web pages stepwise in details with a suitable diagram. **[6]**

P.T.O.

Q3) a) Design an HTML form to generate an E-book. First the user should be the registered user of that web site. Then check whether the book is free to download. If not then proceed to purchase that book online. [7]

b) Explain the syntax of a rule in CSS with a suitable example. [4]

OR

Q4) a) Explain how a web server can be made dynamic? [5]

b) Explain the concept of classes in CSS with a suitable example. [6]

Q5) a) What is the Error object in VBScript? Explain its properties and methods. [4]

b) Write a program in VBScript of designing a simple calculator. Assume appropriate data for the design. [8]

OR

Q6) a) Compare: [6]

i) VBScript and JavaScript.

ii) ASP and JSP

iii) For...Next and For...Each...Next statements in VBScript.

b) Explain two kinds of procedures in VBScript. [6]

SECTION - II

Q7) a) Explain the concept of DOM with all objects & their important properties and methods in JavaScript with a suitable diagram. [8]

b) Write a short note on Event handling in JavaScript. [4]

OR

Q8) a) What is cookie? How it is created and read? Describe difference between Cookie and session? [6]

b) Explain Alert, confirm, and prompt dialogue boxes in JavaScript with a suitable example. [6]

- Q9)** a) Explain the client server communication of AJAX Technology. [6]
b) Explain the various stages of Life cycle of JSP page. [5]

OR

- Q10)** a) What is JSP Directives? Explain the types of Directives. [6]
b) What is AJAX? Explain the AJAX model & explain how it works. [5]

- Q11)** a) Explain the Framework of ASP.net. [6]
b) Short note on: [6]
i) View state
ii) Compare ASP and ASP.net

OR

- Q12)** a) Explain the types of ASP.net validation controls. [6]
b) Explain the architecture of ADO.net. [6]



Total No. of Questions : 12]

SEAT No. :

P1553

[5061]-43

[Total No. of Pages : 2

S.Y.M.C.A.(Engineering)

OBJECT ORIENTED ANALYSIS AND DESIGN

(2008 Course)(Semester-II)(610911)

Time :3Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Neat diagrams must be drawn wherever necessary.*
- 2) *Figures to the right side indicate full marks.*
- 3) *Assume suitable data if necessary.*
- 4) *Write section-I and section-II on separate answer sheets.*

SECTION-I

Q1) a) Elaborate Rational unified process. [6]

b) Explain Use case driven approach. [6]

OR

Q2) a) In brief give UML history, what were the goals, objectives of UML team? [6]

b) Write a short note on MDA [6]

Q3) a) Write a short note on: Extensibility Mechanism [6]

b) Explain OCL with example. [5]

OR

Q4) Which are the two entirely NEW interaction diagrams in UML2.0 and what are their purpose. Give simple sample diagrams for the new diagrams and explain what your sample diagram is trying to Communicate. [11]

Q5) a) Compare with concepts and examples. [6]

i) Association and Generalization in class diagrams.

ii) Aggregation and Composition.

b) Explain with example Composite Structure Diagram. [6]

OR

P.T.O.

- Q6)** a) Explain with example interface & ports [6]
b) Draw a class diagram for a online railway reservation system. Make suitable assumption, scope and functioning of it. [6]

SECTION-II

- Q7)** a) Describe use of frame and lifeline in UML Sequence diagram [5]
b) Draw an Interaction overview diagram for ATM system. Write your assumptions and Scope clearly. [6]

OR

- Q8)** a) Compare sequence and communication diagram in four counts namely visual emphasis freedom to represent objects information, the way sequencing is shown, The way iteration/looping is shown. [6]
b) Explain signals and exception with an exception. [5]

- Q9)** a) Draw state machine diagram for purchase order. Write your assumptions clearly. [6]
b) Explain concept of partitions & regions with example. [6]

OR

- Q10)** a) Explain concepts and notation through simple examples for following Terms in UML: [6]
i) Activity
ii) Object flow
iii) Concurrent states.

- b) Explain common uses of timing diagram with example. [6]

- Q11)**a) Describe commercial application of UML. [6]
b) What is the use of package diagram? Explain with an example. [6]

OR

- Q12)**a) Write a short note on component diagram. [6]
b) Describe embedded system application of UML. [6]



Total No. of Questions : 12]

SEAT No. :

P1554

[5061]-44

[Total No. of Pages : 2

S.Y.M.C.A.(Engg.)

HUMAN COMPUTER INTERFACE

(Elective-I)(2008 Course)(Semester-IV) (610913A)

Time :3Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answers to the two sections should be written in separate answer books.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data if necessary.*

SECTION-I

Q1) a) Briefly identify some areas of user(human) diversity that challenges the developers of interactive system. **[12]**

OR

Q2) a) Explain any 4 primary sources of motivation for human factors in design. **[12]**

Q3) a) Comment on “any Microsoft product implements or not implements the Eight golden rules of interface design”. Explain with example. **[11]**

OR

Q4) a) Explain GOMS and Keystroke level model? **[6]**

b) With help of Norman’s Model of interaction explain the process of execution evaluation cycle. **[5]**

Q5) a) Write a short note on **[8]**

i) Participatory design

ii) Interface Design tools

b) What do you mean LUCID? State steps of LUCID. **[4]**

OR

Q6) a) Comment on ‘scenarios help in the design process of interactive systems’ explain with example **[8]**

b) What is Design process and its characteristics. **[4]**

P.T.O.

SECTION-II

- Q7)** a) Explain dialog box design guidelines with example. [8]
b) Should menus be narrow & deep or broad & shallow? why? [3]

OR

- Q8)** a) Compare & contrast expert reviews with usability testing. [6]
b) Write a short note on single window design [5]

- Q9)** a) How many styles of help available. Explain any one in detail with example. [6]

- b) Explain Applications of Hypermedia [6]

OR

- Q10)** a) Explain how following CSCW systems are useful for co-operative working [8]

i) Meeting rooms

ii) Shared Drawing Surfaces.

- b) Explain O-AI model for Web-site designing. [4]

- Q11)** Write a short note on: [12]

a) Information Visualization

b) Role of HCI in animation industry.

c) Touch screen devices.

OR

- Q12)** You are supposed to design user interface for college web site. Discuss important design issues that to be considered in designing the web page. [12]



Total No. of Questions : 6]

SEAT No. :

P1555

[5061]-45

[Total No. of Pages : 2

S.Y.M.C.A.(Engineering Faculty)
ORGANIZATIONAL BEHAVIOR
(Elective-I)(2008 Course)(Semester-IV) (610913B)

Time :3Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Answer to the two sections must be written on separate answer books.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Figures to the right indicate full marks.*
- 5) *Assume suitable data if necessary.*

SECTION-I

Q1) a) i) Explain various perceptual biases. What are the ways to avoid them? [6]

ii) Compare Autocratic model, Custodial model, Supportive model, SOBC model of Organization Behavior. [6]

OR

b) i) What are determinants of OB? Explain with neat diagram. [6]

ii) Discuss the attribution theory with suitable example. [6]

Q2) a) i) Explain the relationship of Morale to Productivity. [6]

ii) Explain Fredrick Herzberg's two factor theory of motivation. [6]

OR

b) i) What is meant by Stress? What are the Sources of stress? [6]

ii) Explain different types of motives in detail. [6]

Q3) a) i) How team effectiveness helps in overall development of an employee and Organization. [5]

ii) Describe Human Resource practices in Selection and Training. [6]

OR

b) i) Which factors influence the human resource planning in an organization. [5]

ii) Explain how to handle levels of conflicts in an organization. [6]

P.T.O.

SECTION-II

- Q4)** a) i) Explain various organizational structure. [6]
ii) Explain importance of leadership to the organization. [6]

OR

- b) i) State Black and Moutan's theory of leadership. [6]
ii) Write short note on Organizational Design. [6]
- Q5)** a) i) What are the forces responsible for change? [6]
ii) Explain how the change within an organization leads to Organization effectiveness with suitable e.g. [6]

OR

- b) i) What are the strategies for conflict resolution? [6]
ii) Write short note on: [6]
1) Constructive conflicts.
2) Destructive conflicts.

- Q6)** a) i) What are benefits of TQM. [5]
ii) What is the relation if re-engineering with empowerment? [6]

OR

- b) i) Write short note on: [6]
1) Learning organization
2) Downsizing
ii) What is TQM? Explain in detail. [5]



Total No. of Questions : 12]

SEAT No :

P1556

[5061]-46

[Total No. of Pages :2

S.Y.M.C.A. (Engineering)

JAVA PROGRAMMING

(2008 Course)(Semester - II) (610912)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answers to the two sections should be written in separate answer books.*
- 2) *Answer any three questions from each section.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Figures to the right side indicates full marks.*
- 5) *Use of calculator is allowed.*
- 6) *Assume suitable data if necessary.*

SECTION I

Q1) a) Explain how interfaces are implemented in java. [6]

b) Write a short note on 'Multithreading'. [6]

OR

Q2) a) Explain List and Vector classes java? [6]

b) Explain the use of try, catch, throw and finally keyword. [6]

Q3) a) Explain the Box Layout in detail with example. [6]

b) Write a short note on Containers in java. [6]

OR

Q4) a) Write a short note on JTable. [6]

b) Compare and Contrast AWT and Swing. [6]

Q5) a) Write an applet to display create a moving ball application. [6]

b) Explain argument passing to an applet with example. [5]

OR

Q6) a) Explain the life cycle of an applet in detail. [6]

b) Explain the use of paint(), update and repaint() in applets. [5]

P.T.O.

SECTION II

- Q7)** a) List and explain print and error classes in java. [6]
b) Write a short note on Serialization. [6]

OR

- Q8)** a) Write a short note on Error Handling in File Operations. [6]
b) Explain with example how input from keyboard can be written into a text file. [6]

- Q9)** a) Explain the use of connection class in Java with functions and example. [6]
b) Write a short note on Type 2 and Type 3 drivers. [6]

OR

- Q10)** a) Write a program which inserts student record into a table from MS access Database and display it. [6]
b) What is the use of rollback and commit in transaction management. [6]

- Q11)** a) What is Socket Programming? How it is implemented in java? [6]
b) Write how TCP is implemented in java. [5]

OR

- Q12)** a) Write a program to create time displaying server. [6]
b) What is internet addressing? Explain InetAddress class. [5]

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Total No. of Questions : 12]

SEAT No. :

P1557

[5061]-51

[Total No. of Pages : 2

T.Y.M.C.A.(Engg.)

**PRINCIPLES & PRACTICES FOR IT PROJECT MANAGEMENT
(2008 Course) (Semester-V) (710901)**

Time : 3 Hours]

[Max. Marks : 70

Instructions to candidates:

- 1) *Answers to the two sections should be written in separate answer books.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data if necessary.*

SECTION - I

Q1) a) Explain planning and organizing in detail. [6]

b) What is the social responsibility? [6]

OR

Q2) a) Enlist the functions of management. [6]

b) What is purpose and principle of management. [6]

Q3) a) How IT can be applied in Product design and development. [6]

b) What is pre-project & project approval? [6]

OR

Q4) a) How IT can be employed for Agriculture. [6]

b) Give examples how IT is useful in Health Care. [6]

Q5) a) Write a short note on Work Break Down Structure. [6]

b) Explain Risk Management. [5]

OR

Q6) a) Explain any two types of Budget with example. [6]

b) How project priorities are established? [5]

P.T.O.

SECTION - II

- Q7)** a) Write a short note on ‘Importance of Team’. [6]
b) Write the use of Decision Tree with example. [6]

OR

- Q8)** a) How financial obligations are tackled? [6]
b) How changes in the project are handled? [6]

- Q9)** a) Write a short note on Group Formation. [6]
b) What is Formal Technical Review? [6]

OR

- Q10)**a) How conflicts are resolved? [6]
b) Write a short note on Energy Management. [6]

- Q11)**a) What is Knowledge management in IT? [5]
b) Write note on: [6]
i) PSP
ii) TSP

OR

- Q12)**a) Write a short note on Cyber Laws. [6]
b) Explain in brief “Intellectual Property Rights” [5]



Total No. of Questions :12]

SEAT No. :

P1558

[5061]-52

[Total No. of Pages :3

T.Y.M.C.A. (Engineering Faculty)

COMPUTER GRAPHICS

(2008 Course) (Semester - V) (710902)

Time : 3 Hours]

[Max. Marks :70

Instructions to the candidates:

- 1) *Answers to the two sections should be written in separate books.*
- 2) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6 from section - I & Q7 or Q8, Q9 or Q10, Q11 or Q12 from section - II.*
- 3) *Neat diagrams should be drawn wherever necessary.*
- 4) *Figures to the right indicate full marks.*
- 5) *Assume suitable data, if necessary.*

SECTION-I

- Q1) a)** Explain any 3 graphics primitives. **[6]**
- b) Explain the display file structure and how display file interpreter works. **[6]**

OR

- Q2) a)** Explain the working of **[6]**
- i) Tablet &
 - ii) Light Pen devices
- b) Differentiate between the Bresenham's line drawing algorithm and DDA algorithm in 2 column format. **[6]**
- Q3) a)** Differentiate the 2 methods of Polygon filling Seed fill and Edge fill in 2 column format. **[6]**
- b) Explain the rotation about an arbitrary point. **[6]**

OR

P.T.O.

- Q4)** a) Explain the Shear transformations and Reflection transformations. [6]
b) Explain inverse transforms and their application with matrix. [6]
- Q5)** a) Explain the Raster Techniques. [5]
b) Explain the Mid Point Subdivision algorithm with figure. [6]

OR

- Q6)** a) Explain the Image Transformation done using Segment table. [5]
b) Explain with figure the Interior & Exterior Clipping algorithm. [6]

SECTION-II

- Q7)** a) Explain: [6]
i) Parallel projection.
ii) Perspective projection.
- b) Obtain the 3D transformation matrix for rotation about an arbitrary axis. [6]

OR

- Q8)** a) Describe 3D viewing parameters. [6]
b) Write a note on 3-dimensional transformation matrices for: [6]
i) Translation.
ii) Scaling.
iii) Rotation about X, Y, Z axis.

- Q9)** a) Explain binary space partition algorithm for hidden surfaces. [6]
b) Describe Diffuse illumination & Point - source illumination. [6]

OR

- Q10)** a) Explain Warnock's algorithm. [6]
- b) Write short notes on: [6]
- i) Ray tracing.
- ii) Transparency.

- Q11)**a) What are the properties of Bezier curve? Describe the procedure to generate Bezier curve. [6]
- b) Explain real time animation. [5]

OR

- Q12)** a) What is fractal dimension? Explain curve generation in detail. [6]
- b) Explain the methods for controlling animation. [5]

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Total No. of Questions : 12]

SEAT No. :

P1559

[5061]-53

[Total No. of Pages : 2

T.Y.M.C.A.(Engg.)

ADVANCED DATABASES

(2008 Course)(Semester-I)(710903)

Time :3Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answers to the two sections should be written in separate answer books.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data if necessary.*

SECTION-I

- Q1)** a) Explain the different ways of executing pipelines. [6]
b) Explain the external sort merge algorithm with suitable example. [6]

OR

- Q2)** a) Let relations $r_1(A,B,C)$ and $r_2(C,D,E)$ have the following properties:
 r_1 has 20,000 tuples, r_2 has 45000 tuples, 25 tuples of r_1 fit on one block and 30 tuples of r_2 fit on one block. Estimate no of block aesses required, using each of the following join strategies for $r_1 \times r_2$: [8]
i) Nested-loop join
ii) Block nested-loop join
iii) Merge Join
iv) Hash join
b) Explain implementation of complex selections. [4]

- Q3)** a) Explain Transaction Sever Process Structure. [6]
b) What are the implementation issues of distributed systems. [5]

OR

- Q4)** a) Explain Speed up & Scale up. [6]
b) Explain Data server system architecture. [5]
Q5) a) Explain object identity and reference type? [6]
b) Why OODBMS is required? Differentiate between DBMS,RDBMS and OODBMS. [6]

OR

P.T.O.

- Q6)** a) Explain Array and Multiset in SQL with example. [6]
b) Explain persistent C++ system. [6]

SECTION-II

- Q7)** a) While analyzing the data, it was found that many tuples have no recorded values for several attributes. How this problem of missing values can be solved? [6]
b) Explain snowflake schema for multidimensional databases. [6]

OR

- Q8)** a) Explain in brief OLAP. What are the possible operations on cube? [6]
b) Explain star schema for multidimensional databases. [6]
- Q9)** a) Write and explain clustering K-Means algorithm. [8]
b) Explain outlier analysis. [4]

OR

- Q10)** a) Write and explain apriori algorithm. [8]
b) Explain descriptive & predictive data mining. [4]
- Q11)** a) Describe the ranking using TF-IDF. [8]
b) Define the following terms- [3]
i) Hub
ii) Authority
iii) Web crawler

OR

- Q12)** a) Describe the popularity ranking [8]
b) Define the following terms- [3]
i) Ontology
ii) Search engine spamming
iii) Flase positive.



Total No. of Questions : 12]

SEAT No. :

P1560

[5061]-54

[Total No. of Pages : 2

**T.Y.M.C.A. (Engineering Faculty)
ENTERPRISE RESOURCE PLANNING
(2008 Pattern) (Semester - V) (710904)**

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer to the two sections should be written in separate answers books.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume suitable data, if necessary.*

SECTION - I

Q1) a) What is ERP? Explain the importance of integration in ERP. [6]

b) List and explain the tangible benefits of ERP. [6]

OR

Q2) a) Explain the scope of ERP and its business value with one example. [6]

b) List and explain the intangible benefits of ERP. [6]

Q3) a) What are the challenges for ERP implementation? [6]

b) Discuss the Sales and Distribution module of ERP. [6]

OR

Q4) a) List and explain the various people role in ERP implementation. [6]

b) List and explain ERP implementation strategies. [6]

Q5) Explain the importance of training? How training effect on ERP' result? [11]

OR

Q6) Explain the term GAP Analysis. How to prepare organization for ERP implementation? [11]

P.T.O.

SECTION - II

- Q7)** a) What should be the criteria to select ERP package? Justify your answer. [6]
b) Can we implement ERP without modification? If Yes How, If No why not? [6]

OR

- Q8)** a) Why do organizations preferred to use readymade package instead of developing in House ERP package? [6]
b) Explain the role of vendor, consultant and end-users in ERP package implementation. [6]

- Q9)** a) Phase rollout of ERP application is a safer alternative to Big Bang implementation' Justify the validity of the above statement in reference to ERP implementation on Multiple sites in a larger corporation. [6]
b) Explain the importance of SCM, CRM, and BPR as a front end tool of ERP package. [6]

OR

- Q10)**a) How you can relate data warehousing and data mining to ERP. [6]
b) List major objectives of Inventory Management. How it is achieved using ERP Store Module. [6]

Q11) Explain in detail the impact of legacy system, third party software, business process On ERP customization. [11]

OR

Q12) List and explain the new trends in ERP. [11]



Total No. of Questions : 12]

SEAT No. :

P1561

[5061]-55

[Total No. of Pages : 3

T.Y.M.C.A.(Engineering Faculty)

SOFTWARE TESTING

(2008 Course)(Semester-V)(710905)(Elective-II)

Time :3Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answer any three questions from section-I and three questions from section-II.*
- 2) *Answer to the two sections should be written in separate books.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Assume suitable data, if necessary.*

SECTION-I

- Q1)** a) What is Software Testing? Discuss four principles of Investigation in details. [6]
- b) What is Good data? How to collect data and define data? [5]

OR

- Q2)** a) Compare measurement scales type: Nominal, Ordinal, Interval, Ratio and Absolute scales. Give examples from software field. [6]
- b) Explain representation theory of software measurement? [5]

- Q3)** a) Write a short note on: [6]
- i) COCOMO-II
 - ii) Albrecht's Approach
 - iii) Morphology
- b) What are the different types of structural Measures? [6]

OR

- Q4)** a) Explain MC-Cabe's Cyclomatic complexity with suitable example? [6]
- b) Explain Object-Oriented metrics in brief? [6]

P.T.O.

- Q5)** a) Define terms: [8]
- i) Defect classes
 - ii) Defect
 - iii) Faults
 - iv) Errors
- b) Explain Organization structure for testing team? [4]

OR

- Q6)** a) What is test plan? What are steps involved in preparation of test? Explain briefly? [8]
- b) Explain Defect Life Cycle in brief? [4]

SECTION-II

- Q7)** a) What is BlackBox Testing? What are the different methods of Black Box testing? [6]
- b) Explain similarities and difference between software inspection and Walkthrough? [5]

OR

- Q8)** a) Explain path, statement, branch and decision coverage in Structural Testing. [6]
- b) Write a note on-"Mutation Testing"? [5]
- Q9)** a) Explain the concept of Validation & Verification in brief? [6]
- b) Write a short note on System Testing? [6]

OR

- Q10)** a) What is Integration Testing? Explain different types of integration testing? [6]
- b) Write short note on Regression Testing? [6]

- Q11)a)** Describe how customer issues in software maintenance get tracked. **[6]**
b) Write note on Logistics and Tooling? **[6]**

OR

- Q12)a)** What is Fix Distribution? What are the methods of fix distribution? **[6]**
b) Explain Challenges, Best practices and Pitfalls in problem solving? **[6]**



Total No. of Questions : 12]

SEAT No. :

P1562

[5061]-56

[Total No. of Pages : 2

T.Y.M.C.A.(Engineering Faculty)
NEURAL NETWORK AND FUZZY LOGIC
(2008 Course)(Semester-V)(Elective-II) (710905)

Time :3Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) *Answers to the two sections should be written in separate answer books.*
- 2) *Answer any three questions from each section.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Figures to the right side indicate full marks.*
- 5) *Assume suitable data if necessary.*

SECTION-I

Q1) a) Explain with neat diagram biological neural network. Compare its performance with artificial Neural Network. [6]

b) Comment on different types of learning in neural network. [6]

OR

Q2) a) Describe McCulloch-Pitts neuron model in detail. [6]

b) What is clustering and what are different methods of clustering? Discuss winner takes all learning network. [6]

Q3) a) Discuss the single discrete perceptron training algorithm steps. [6]

b) Explain how the delta rule is used to adjust the weights of Adaline network. [6]

OR

Q4) a) What is an Activation function? Explain Sigmoidal function in detail. [6]

b) Define Bias, Weight, Learning rate and Momentum factor. [6]

Q5) a) Explain the architecture and training algorithm used in Hopfield network. [7]

b) What are different Expert System applications? [4]

OR

P.T.O.

- Q6)** a) Explain Multilayer Perceptron Network in brief. [7]
b) Explain Back-Propagation algorithm in detail. [4]

SECTION-II

- Q7)** Differentiate fuzzy set from classical set and name the properties of classical set. [12]

OR

- Q8)** Explain the operation of fuzzy set with suitable example. [12]

- Q9)** a) Explain in brief TSK fuzzy rule based model. [6]
b) Discuss conditional fuzzy proposition and unconditional fuzzy proposition. [6]

OR

- Q10)** a) Define DeFuzzification. Explain different methods of DeFuzzification. [6]
b) What are the rules based format used to represent the fuzzy information? [6]

- Q11)** a) What are fuzzy implications? Explain with example. [6]
b) Explain Categorical and Qualitative reasoning in detail. [5]

OR

- Q12)** a) Compare between probability theory and possibility theory. [6]
b) Explain theory of approximate reasoning. [5]

