

**MAHATMA GANDHI UNIVERSITY**  
**D.D.M.C.A DEGREE EXAMINATION**  
**MODEL QUESTION PAPER**  
**Third Semester**  
**DMCA 302 Operating Systems**

**Time: Three Hours**

**Maximum: 75Marks**

**Part A**

*Answer any ten questions*

*All questions carry equal marks*

1. What are the features of time sharing operating systems.?
2. Explain about system calls.
3. Why do you need threads.
4. Discuss the necessary conditions of deadlock..
5. Explain about swapping.?
6. Explain the terms first-fit, best fit, and worst fit.
7. What is busy waiting?
8. Write a notes on deadlocks
9. What is meant by virtual memory?
10. What is the reason for page fault?
11. Explain about disk structure?
12. What is a directory system.

(10 x 3 = 30 marks)

**Part B**

*All questions carry equal marks*

13. (a) Explain the structure of an operating system..

Or

- (b) Explain about different types of operating system..

14. (a) Discuss busy-wait implementation of semaphore.

Or

- (b) Discuss the various conditions for deadlock. How can you escape from each condition.

15. (a) Describe paging mechanism in memory management.



Or

(b) Discuss the operation principles behind segmentation.

16. (a) Explain the role of virtual memory in memory management.

Or

(b) Explain various Disk Scheduling algorithms.

17. (a) Explain all file allocation methods.

Or

(b) What is a file? Explain its structure. Discuss various file operations.

(5 x 9 = 45 marks)



**DDMCA DEGREE EXAMINATION**

**Third Semester**

**DMCA 303 DATABASE MANGEMENT SYSTEMS**

Part A

Answer any *Ten* Questions  
Each Question carries 3 marks.

1. What are the advantages of Database Management system over File system?
2. Explain the features of E-R Model.
3. What are the main responsibilities of a database administrators?
4. Explain primary key and foreign key with an example.
5. Briefly explain about the relational algebra operators.
6. What are the different DML commands with example?
7. Explain about the aggregate operators in SQL.
8. What is BCNF?
9. What is meant by functional dependency?
10. What are ACID properties?
11. Explain ARIES?
12. What are the different levels of abstraction? (10\*3=30 marks)

Part B

All Questions carry Equal marks.

13. a) Explain the structure of a DBMS with a neat diagram.

*Or*

b) With a neat sketch, explain the E-R Model.

14. a) Explain in detail about relational algebra operators.

*Or*

b) How to translate E-R model to relational model with an example.

15.a) Explain trigger with an example.

*Or*

b) Consider the employee database employee.

(Employee – name, street, city)

Works (Employee-name, company-name, salary)

Company (Company-name, city)

Manager (Employee-name, Manager-name)

Where the primary keys are underlined. Give the SQL expression for the following:

- a) Find the names and cities of residence of all employees who work for the first bank corporation.
- b) Find the names, street address and cities of residence of all employees who work for the first bank corporation and earn more than \$10,000.
- c) Find all the employees in the database who live in the same cities as the companies for which they work.
- d) Find all the employees in the database who live in the same cities and on the same streets as do their managers.

16. a Explain in detail about first and second normal form with example.

*Or*

b) Explain in detail about third and fourth normal form with example.

17. a) Explain in detail about Lock Based protocol.

*Or*

b) How to identify and avoid deadlock.

(5\*9=45)



## MODEL QUESTION

SEMESTER – III

**DMCA 304 Accounting & Financial Management**

Time: 3Hrs.

Max. Marks: 75

**PART –A****(Answer any 10 questions, each question carries 3marks)**

1. Define ratio analysis and mention its characteristics.
2. Explain Role and Activities of an Accountant
3. List the major tools used for financial analysis.
4. Define accounting?
5. Explain the users of accounting information.
6. Briefly explain the accounting process.
7. What do you mean by Common Size Statement?
8. What is posting?
9. Mention the various cash and non-cash transactions.
10. What are the major objectives of preparing trial balance?
11. How is the adjustment of outstanding liabilities treated?
12. Explain the need for calculating profitability ratio.

**PART –B****(Answer all the questions, each question carries 9 marks)****Module I**

13. A) Explain in detail the concepts and conventions of accounting.

**OR**

- B) What do you mean by GAAP? Explain the accounting standards followed in India.

**Module II**

14. A) Explain in detail the types of accounts and the golden rule of double entry.

**OR**

- B) Prepare journal entries, ledger and trial balance for the transactions given below.

Sep: 1<sup>st</sup> Began business by investing cash Rs.10, 000

4<sup>th</sup> Paid two months' rent in advance for shop Rs.2, 000

5<sup>th</sup> Brought equipment for cash Rs.1, 200

7<sup>th</sup> Brought supplies on credit, Rs.700

10<sup>th</sup> Paid for advertisement Rs.1, 400

25<sup>th</sup> Paid wages Rs.1, 500

28<sup>th</sup> Paid electricity charges Rs. 240.

29 Paid dividends Rs.2500

30<sup>th</sup> Purchased office furniture. 11, 200

### Module III

15. A) Explain in detail the format for preparing the Trading, Profit and loss account and Balance sheet. What is the purpose for preparing such statements?

OR

B) Prepare the trading profit and loss account from the following trial balance.

**Trial Balance**

Particulars	Debit (₹)	Credit (₹)
Capital	—	4,00,000
Drawings	50,000	—
Opening Stock	75,000	—
Purchases	4,20,000	—
Sundry Creditors	—	75,000
Sundry Debtors	1,20,000	—
Sales	—	8,10,000
Discounts	16,000	18,000
Commissions	12,000	14,000
Returns	16,000	20,000
Salaries	1,20,000	—
Rent, Rates and Taxes	40,000	—
Postage, Telegrams and Telephones	25,000	—
Loan	—	3,10,000
Interest	20,000	—
Furniture	3,50,000	—
Brand Names and Designs (Patents)	60,000	—
Advertisement	1,00,000	—
Cash in Hand	1,50,000	—
Cash at Bank	63,000	—
Freight Inward	20,000	—
Duty Drawbacks (Income)	—	10,000
	16,57,000	16,57,000

### Module IV

16. A) The Balance Sheet of Sriram Ltd as on 31.12.2002 is as follows:

Liabilities	Rs.	Assets	Rs
Equity share capital (shares of Rs 10 each)	5,00,000	Land and Buildings	6,00,000
10% Preference share capital (Shares of Rs 100 each)	2,00,000	Plant and furniture	5,00,000
Reserves and surplus	3,00,000	Stock in trade	2,40,000
12% Debentures (Rs 100 each)	4,00,000	Sundry Debtors	1,95,000
Sundry Creditors	1,50,000	Cash in hand	60,000
Bank Overdraft	50,000	Prepaid expenses	5,000
	16,00,000		16,00,000

*Handwritten signature*

Calculate current ratio, liquid ratio, debt- equity ratio and capital gearing ratio and proprietary ratio.

**OR**

B) List the various types of ratios. Explain in detail the liquidity ratios and its significations.

**Module V**

17. A) Explain the meaning, importance and the format for preparing cash flow statement.

**OR**

B) Explain the meaning, Concept of Gross and Net Working Capital. How is the Schedule of Changes in Working Capital prepared?

