

Management Information systems

N.B: 1) Q.1 is compulsory, attempt **any four** questions from Q.2 to 7.

2) Figures to the right indicate full marks.

3) Draw a neat labeled diagram wherever necessary.

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|------|---|---|
| Q.1) | a) What is system? What are its types? | 5 |
| | b) What are the dimensions of planning? | 5 |
| | c) What are the parameters of the quality product? | 5 |
| | d) What is MIS? What are uses of computer in MIS? | 5 |
| Q.2) | a) Describe Functional model of an organization structure. Compare it with Matrix Organization. | 8 |
| | b) List & explain organization behavioral factors. | 8 |
| | c) Write a short note on Spiral model. | 4 |
| Q.3) | a) Short note on TQM of management. | 8 |
| | b) Explain: Input design, Process design. | 8 |
| | c) What are the different types of CASE tools in MIS? | 4 |
| Q.4) | a) Explain Payoff analysis. | 8 |
| | b) What are the steps of Transaction Processing in information system application? | 8 |
| | c) What are the characteristics of programming languages? | 4 |
| Q.5) | a) What are the functions of manager? Explain. | 8 |
| | b) Explain the scope of Economical environment. | 8 |
| | c) Explain Product Strategy. | 4 |
| Q.6) | a) "The choice of IT is a strategic decision but not a financial decision." Explain. | 8 |
| | b) What is system control? | 8 |
| | c) What are the types of system? | 4 |
| Q.7) | a) What is rational decision? Why is it difficult to take? | 8 |
| | b) What are the sources of collecting data? | 8 |
| | c) What are the characteristics of information? | 4 |

B.Sc (I.T) (Sem. II) (Old Course)
Elective-II
(OLD COURSE)

(3 Hours)

ERP Systems

[Total Marks] 100
6-4

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- Note: 1. Question No.1 is COMPULSORY.
2. Attempt any FOUR from the remaining questions.

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|---|---|---|----|
| 1 | A | Explain the terms Enterprise Resource Planning and give the advantages of ERP. | 10 |
| | B | Sainath Enterprises is a manufacturing company wants to implement an ERP package. How will you evaluate the ERP package if you are playing a role of leader in implementation team? | 10 |
| 2 | A | What is reengineering? How is it important in ERP implementation process? | 7 |
| | B | Explain the Financial Accounting Module. | 7 |
| | C | Describe the reasons of growth of ERP Market. | 6 |
| 3 | A | Explain the Plant Maintenance Module with its importance. | 7 |
| | B | Describe the functions of Material Management. | 7 |
| | C | What is business modeling? | 6 |
| 4 | A | How Data Mining differs from Data Warehousing? | 7 |
| | B | Explain investment management module. | 7 |
| | C | Write a note on OLAP. | 6 |
| 5 | A | Explain the Personnel Management System of HR. | 7 |
| | B | Give the differences between EIS and DSS. | 7 |
| | C | What do you mean by Integrated Management Information? | 6 |
| 6 | A | What is the impact of Internet and World Wide Web on the ERP products? | 7 |
| | B | Explain the importance of End User Training in the ERP implementation life cycle. | 7 |
| | C | Describe any three modules of Oracle Applications. | 6 |
| 7 | A | Give the importance of Package Evaluation in the ERP implementation life cycle. | 7 |
| | B | Discuss the sales order management process. | 7 |
| | C | What is the purpose of GAP Analysis and how the gaps are fixed? | 6 |

B.Sc (I.T) (Sem. II) (Old)
Elective I - web Design and
(OLD COURSE)
based Applications (3 Hours) [Total 100]

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- N. B.: (1) Question No. 1 is compulsory.
(2) Attempt any four from Question Nos. 2 to 7.
(3) Make suitable assumptions wherever necessary and state the assumptions made.
(4) Answers to the same question must be written together.
(5) Numbers to the right indicate marks.
(6) Draw neat labelled diagrams and give examples wherever necessary.

- Q. 1 a Explain the accelerator keys in HTML. 5
b What are core HTML attributes? Explain ID and Class attributes. 5
c Write a VB script program to print first 100 prime numbers. 5
d Explain the buffer property of response object. 5
- Q. 2 a Explain <table> tag. Explain the following tags <th>, <tfoot>, <tr>, <td>, <rowspan> 8
and <colspan> with examples.
b Explain the response object and BinaryWrite, End, Redirect and Write methods of the 6
response object.
c Differentiate between the GET and the POST methods. 6
- Q. 3 a Explain image maps with examples. 8
b Explain server.transfer and server.execute methods with examples. 6
c What is Active Server Pages? What is Internet Information Service? Explain the working 6
of Active Server Pages.
- Q. 4 a Explain the following tags with examples: <i>, , <u>, <sup>, <sub>, <pre>, <s>, 8

b What is global.asa file? Explain its purpose with example. 6
c Explain Expires and ExpiresAbsolute properties of the response object with examples. 6
- Q. 5 a Explain the ordered and unordered list tags with all attributes. Give example for each. 8
b Explain the AdRotator component with example. 6
c What are style sheets? Explain the use of style sheets with examples. 6
- Q. 6 a Explain the <FRAMESET> and <FRAME> tags with examples. 8
b Write a VB Script to accept a number in a text box and display if it is even or odd in a 6
message box.
c What are the different ways to connect to database in ASP? Explain. 6
- Q. 7 a Design student detail form which contains text box to accept the first name, last name, 8
Text Area to accept the Address of the student, Date of Birth three combo boxes one for
day(1 to 31), one for month (January to December), one for year (1985 to 2012). Use
radio button to accept the gender (male, female) and Stream (Science, Commerce,
Arts). Use Check box to accept the hobbies (reading, outdoor games, watching TV,
Internet Surfing) and contains the two button (submit and Reset Button).
b Write the code for validating the first name and last name text boxes to accept only 6
characters. Once the date of birth is entered, display the age in message box.
c Write ASP code so that on click on the submit button, the data should be entered in the 6
database. Create suitable table. Display the details from the database on a new web page.

(OLD COURSE)
Elective II - GIS
 (3 Hours)

[Total Marks]

6-4-1

- N. B.: (1) Question **No. 1** is **compulsory**.
 (2) Attempt **any four** from Question Nos. 2 to 7.
 (3) Make **suitable assumptions** wherever necessary and **state the assumptions made**.
 (4) Answers to the **same question** must be **written together**.
 (5) Numbers to the **right** indicate **marks**.
 (6) Draw **neat labelled diagrams** and give examples wherever **necessary**.

Q. 1 Write short notes on:

- | | | |
|---|--|---|
| a | Coordinate systems and transformations | 5 |
| b | B/W Scanning | 5 |
| c | Digitization Scheme | 5 |
| d | Spatial autocorrelation | 5 |

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|-------------|---|---|----|
| Q. 2 | a | Explain in detail GIS Software. | 10 |
| | b | Distinguish between spatial data and aspatial data. | 10 |

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| Q. 3 | a | Define a Geographic Grid. Explain its characteristics. | 10 |
| | b | 'Implementation of a GIS solution in any organization has its advantages and disadvantages.' Explain. | 10 |

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| Q. 4 | a | Enumerate different types of database design in GIS. | 10 |
| | b | Discuss in detail vector data analysis. | 10 |

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| Q. 5 | a | Explain the concept of neighbourhood in detail. | 10 |
| | b | Explain social and institution context of GIS. | 10 |

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| Q. 6 | a | What is GIS? Explain the significance of scale and the different ways in which it can be represented. | 10 |
| | b | Define zonal operations. Explain its application for census data. | 10 |

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|-------------|---|--|----|
| Q. 7 | a | What are the different types of map projections? Explain in brief. | 10 |
| | b | Explain social and institution context of GIS. | 10 |

Note:

- Q1 is compulsory.
- From Q2 to Q7 attempt any 4.
- All questions carry equal marks.
- Draw diagrams wherever necessary.

Q1. Explain the concept of following: (Any 4) (20)

- Beans API
- JSAPI
- JScrollPane
- Scopes of JSP pages
- Prepared Statement of JDBC
- Redirection of Server pages in Servlet

Q2. a) Explain different types of JDBC Driver Managers. (8)

b) Write a servlet to print the Armstrong numbers which are in the range of 101-999. (for Example 153 is an Armstrong number. $1^3 + 5^3 + 3^3 = 153$) (6)

c) Write an exhaustive note on "Design pattern of Java Beans" (6)

Q3. a) Create a table project having fields' such as proj_id, description of the project, status and Team_leader. Insert minimum 2 records. Show a menu choice to the users to perform the following operations. (8)

- Delete a user.(according to the user's selection)
- Display the number of active projects.

Write a program in java to achieve the same.

b) According to JSP terminology, how do you forward a page request? (6)

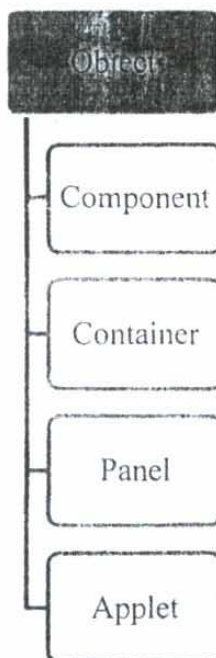
c) Explain the synchronization issues of servlet. (6)

Q4. a) Write a JSP page that accepts a number n from the user; calculates the sum of n integers and displays the result in the next page "Result.jsp" (8)

b) Explain the 4 ways of session tracking in servlet.

c) Explain the significance of java beans. (6)

Q5. a) Write a swing program that displays the following hierarchy. (8)



- c) Write an exhaustive note on "ResultSetMetaData".
- Q6. a) Explain the jsp syntax basics of markup tags. (8)
 b) Write a servlet to print the cube root of a given number. Accept number from user through HTML. (6)
 c) Compare swing and AWT. (6)
- Q7. a) Write a swing program that creates 3 tabs. Tab1 should accept professional experience of the user; tab2 should accept the educational qualification and the tab3 should accept personal details of the user. (8)
 b) Explain the protocol dependent and protocol independent servlet. (6)
 c) Compare JSP and ASP. (6)
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- N. B.: (1) Question **No. 1** is **compulsory**.
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 (3) Make **suitable assumptions** wherever necessary and **state the assumptions made**.
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 (5) Numbers to the **right** indicate **marks**.
 (6) Draw **neat labelled diagrams** and give examples wherever **necessary**.

- Q. 1**
- Explain ORDER BY clause in the SELECT statement with examples. 5
 - Differentiate between DDL and DML statements. 5
 - Enumerate and explain the Codd's rules for relational database. 5
 - Write the SQL statements to create the EMP and DEPT tables shown after Q. No. 7. 5
- With all the constraints.
- Q. 2**
- Define and explain Primary Key and Foreign Key with examples. 6
 - What is a trigger? Discuss the advantages and disadvantages of triggers. 6
 - Write SQL statements for the following (Refer table structures given after Q7). 8
- List employees without any manager.
 - List all employees sorted department-wise in ascending order and within each department salary-wise in descending order for deptno 10 and 20.
 - List the empno as Employee Number, ename as Employee Name and deptno as Department from the emp table.
 - List the empno, ename concatenated with salary from the emp table.
E.g. empno : ename's salary is \$ XXXX
- Q. 3**
- What are correlated subqueries? Explain with examples. 6
 - What are the basic privileges for table and views? Explain 6
 - Write SQL statements for the following (Refer table structures given after Q7). 8
- List the employees whose salary is between 1000 and 3500.
 - List the empno, ename and salary of the employees whose name ends with h or t.
 - List the employees in the descending order of departments and within that in ascending order of salary.
 - List the empno, ename, salary and deptno of the employees whose deptno is more than 10 and salary is more than 1500.
- Q. 4**
- What are joins? Explain Non-equi joins with examples. 6
 - Explain the Network database model. 6
 - Write SQL statements for the following (Refer table structures given after Q7). 8
- List the empno, ename and salary of employees who are managers.
 - List the empno, ename, and the position of alphabet 'e' in ename for the employees.
 - List the empno, ename, sal and job for all the employees whose job contains 'er'
 - List the ename, mgr, comm. from emp. If the mgr is NULL, then display comm., if comm. is also null, then display salary.
- Q. 5**
- What is a transaction? What are the problems that occur due to concurrency? Explain any one. 6
 - State and explain various data types available in SQL2 standard. 6
 - Write SQL statements for the following (Refer table structures given after Q7). 8
- List the ename, job and salary of the employees. If the job is 'CLERK' the salary displayed must be 1.2 times the original value. For 'SALESMAN' 1.3 times the original value, for 'ANALYST' 1.4 times the original value and original value for the remaining. Write the query using CASE.
 - List the empno, ename and grade of the employees by joining the emp and the salgrade tables.
 - List the department numbers where the sum of the salaries of employees is greater 5000.
 - List the names and hiredate of the employees in the same department as Scott.

- Q. 6
- Explain IN, ANY and ALL in SQL 2.
 - What are escape characters? Why are they required? Explain with examples.
 - Write SQL statements for the following (Refer table structures given after Q7).
 - List the ename, deptno and job of all the employees whose department is located in 'Dallas'
 - List the department number and the lowest salary of the department with the highest average salary.
 - List the empno and ename of all the employees who work in a department with any employee whose last name contains n.
 - List the deptno, ename, number of employees and average salary of all departments together with the names, salaries and jobs of employees working in each department.
- Q. 7
- State and explain the four delete and update rules in SQL2.
 - What is Data Integrity? Explain Entity Integrity and Referential Integrity.
 - Write SQL statements for the following (Refer table structures given after Q7).
 - List the deptno, dname and number of employees working in each department that has lowest number of employees
 - List the department number and the lowest salary of the department with the highest average salary.
 - List all ename, manager name, salary who have managers with salary higher than 3500.
 - List the ename, deptno and dname of the employees by joining the emp and dept tables. The extra department name (dname) from the dept table must also be listed. (Use outer join)

6
6
8

Table: EMP

COLUMN NAME	DATA TYPE	CONSTRAINT
EMPNO	NUMBER(4)	PRIMARY KEY
ENAME	VARCHAR(10)	NOT NULL
JOB	VARCHAR(9)	
MGR	NUMBER(4)	FOREIGN KEY REFERRING EMP(EMPNO)
HIREDATE	DATE	
SAL	NUMBER(7,2)	
COMM	NUMBER(7,2)	
DEPTNO	NUMBER(7,2)	FOREIGN KEY REFERRING DEPT(DEPTNO)

Table: DEPT

COLUMN NAME	DATA TYPE	CONSTRAINT
DEPTNO	NUMBER	PRIMARY KEY
DNAME	VARCHAR(14)	NOT NULL
LOC	VARCHAR(13)	
MANAGER	NUMBER(4)	FOREIGN KEY REFERRING EMP(EMPNO)

Table: SALGRADE

COLUMN NAME	DATA TYPE	CONSTRAINT
GRADE	VARCHAR	
LOSAL	NUMBER	
HISAL	NUMBER	

Embedded systems and Programming

(3 Hours)

[Total Marks : 100]

5-4-13

- N.B. :**
- (1) Question No. 1 is **compulsory**.
 - (2) Attempt any **four** questions from question Nos. 2 to 7.
 - (3) Make **suitable** assumptions wherever **necessary** and state the assumption made.
 - (4) Numbers to the **right** indicate maximum **marks**.
 - (5) Draw **neat** labelled diagrams wherever **necessary**.

1. (a) What is the importance of "Infinite Loop" in embedded system ? 5
 (b) Distinguish between PROM and EPROM. 5
 (c) What is Deadlock ? Explain. 5
 (d) What is Cyclic Redundancy Check ? Explain. 5
2. (a) Why 'C' programming language is preferred for embedded system programs ? 8
 What are the advantages and disadvantages of JAVA for embedded system programming.
 (b) What are Emulators ? How are they different from remote debuggers ? 6
 (c) Write note on Watch Dog Timers. 6
3. (a) Discuss the use of control and status registers as interface between embedded processor and peripheral devices. Comment on their advantages and limitations. 8
 (b) Explain any two scheduling points in brief. What is their advantage ? 6
 (c) Write note on DRAM controllers. 6
4. (a) Discuss the common design requirements for embedded systems. 8
 (b) Explain the importance of embedded system in digital watch. 6
 (c) Write note on Data Bus Test. 6
5. (a) Discuss the roles of Compiler, Linker and Locator. 8
 (b) Draw a diagram to represent the embedded software development process. 6
 Explain in brief the functions of the various blocks present therein.
 (c) Explain the concept of Flash Memory. 6
6. (a) What are Mutexes ? Discuss the role played by mutexes in Task synchronization with relevant example. 8
 (b) What is DMA ? Describe its working in brief. 6
 (c) What is Device Driver ? Explain its role. What are the benefits of good device driver design. 6
7. Write short notes on :- 20
 (a) Context Switch
 (b) Electrical Wiring problems on Circuit boards
 (c) Real Time Operating system
 (d) Memory Map.

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 (6) Draw **neat labeled diagrams** and give examples wherever **necessary**.

- Q. 1 a Define and explain Business process re-engineering. 5
 b Explain the steps involved in implementation of BPR in organization. 5
 c Explain the role of project manager. 5
 d Write a short note on GAP Analysis. 5
- Q. 2 a Explain in detail the project development life cycle. 10
 b How is the budget for a software project decided? Explain in detail. 10
- Q. 3 a Explain the difficulties and risks in BPR. 10
 b Design and explain a template for project planning. 10
- Q. 4 a Discuss in detail the role of Information Technology in BPR. 10
 b Why is it necessary to define project scope? How is it defined? Explain in detail. 10
- Q. 5 a Explain the problem solving sequence for Total Quality Management process management 10
 b Enumerate the principles of Total Quality Management (TQM) 10
- Q. 6 a Discuss the role of consultants in BPR. 10
 b Discuss in detail CAD/CAM. What are its advantages? 10
- Q. 7 a Discuss the general activities of HR module of ERP. 10
 b How is the budget for a software project decided? Explain in detail. 10

B.Sc (I.T) (sem. II)
Elective-I
Multimedia
(OLD COURSE)

ws-Con-2012

Con. 2504-13.

(3 Hours)

[Total Marks : 5-4-13]

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- N. B.: (1) Question No. 1 is compulsory.
(2) Attempt any four from Question Nos. 2 to 7.
(3) Make suitable assumptions wherever necessary and state the assumptions made.
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Q. 1 Write short notes on:

- | | | |
|---|----------------------------|---|
| a | Huffman coding algorithm | 5 |
| b | Interpolation | 5 |
| c | JPEG image coding standard | 5 |
| d | Lossy Compression | 5 |

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|------|---|--|----|
| Q. 2 | a | Explain RGB and CMYK colour models. What is device dependency? | 10 |
| | b | Explain the effects of compression on picture quality. | 10 |

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| Q. 3 | a | Discuss in detail Content analysis. | 10 |
| | b | Explain the issues concerned with transfer of multimedia data on networks. | 10 |

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| Q. 4 | a | List the main attributes, benefits and drawbacks of three types of authoring systems. | 10 |
| | b | State advantages and disadvantages of MIDI file over digital audio. | 10 |

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|------|---|--|----|
| Q. 5 | a | Differentiate between BMP, JPG, GIF and TIFF image file formats. | 10 |
| | b | What is graphics? What is the difference between vector and raster graphics? | 10 |

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|------|---|---|----|
| Q. 6 | a | How does a colour video camera represent colour information? | 10 |
| | b | Explain any two tools required to create multimedia presentation. | 10 |

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|------|---|---|----|
| Q. 7 | a | What is Storyboard? Explain with an example. | 10 |
| | b | List and explain different types of audio file formats. | 10 |