[4875]-1001

M.C.A. Management Faculty
IT 11: FUNDAMENTALS OF COMPUTER
(2015 Pattern) (Semester - I)

Time : 3 Hours]   *[Max. Marks : 70*

Instructions to the candidates:
1) *Question No.1 and 7 are compulsory.*
2) *Answer any four From Q.No. 2 to 6.*
3) *Figures to the right indicate full marks.*
4) *Draw neat diagrams wherever necessary.*

Q1) a) What is DMA? Explain DMA transfer modes in detail. **[8]**

     b) What is pipelining? Explain instruction pipelining in detail. **[7]**

Q2) Convert the following. **[5×2=10]**
     a) $(150.125)_{10} = (?)_{16}$
     b) $(11010011)_2 = (?)_8$
     c) $(3234)_8 = (?)_{16}$
     d) $(27.625)_{10} = (?)_2$
     e) $(AFED.15)_{16} = (?)_2$

Q3) Draw and Explain Block Diagram of computer. **[10]**

Q4) Differentiate between RISC and CISC. **[10]**

Q5) What is counter? Draw and explain any counter in detail. **[10]**

Q6) Explain Encoder and Decoder in detail. **[10]**

Q7) Write short notes on (any three) **[3×5=15]**
     a) Compiler is interpreter.
     b) Addressing Modes.
     c) Master - slave JK Flip - Flop.
     d) Half Adder.
     e) Universal Gates.

ζ ζ ζ

[4875]-1002

M.C.A. (Management)
IT-12 : C-PROGRAMMING WITH DATA STRUCTURE
(2015 Course) (Semester-I)

Time : 3 Hours]
[Max. Marks : 70
Instructions to the candidates:
  1)   Que no.1 is compulsory.
  2)   Attempt any five from remaining.

Q1) a)   Write a program in c to check parenthesis of an expression are balanced
         or not.   **[10]**

    b)   Write a program in C to reverse stack integer element using queue. **[10]**

Q2) Write a program in C to implement Bubble Sort for integer element.   **[10]**

Q3) Write a program in 'C' to perform string copy & string reverse without using
      string functions.   **[10]**

Q4) Accept file write a program in C to count the total number of words and
      spaces in a file and display count.   **[10]**

Q5) Create a structure with rollno, sub-mark 1, sub-mark2,sub-mark3.Find their
      average and display result for 20 students.   **[10]**

Q6) Write a function to perform addition of two polynomials (make necessary
      assumptions)   **[10]**

Q7) Write a short note (any two).   **[2 × 5 = 10]**
    a)   Compiler vs interpreter.   b) Dynamic memory allocation.
    c)   Built in I/O functions   d) Priority queue

◆▶ ◆▶ ◆▶

[4875]-1003

M.C.A - I (Management)
IT - 13 : SOFTWARE ENGINEERING
(2015 Pattern) (Semester - I)

Time : 3 Hours]   *[Max. Marks : 70*

Instructions to the candidates:

1) *Q.1 and Q.7 are compulsory.*

2) *Attempt any three from Q.2 to Q.6.*

3) *Figures to right indicate full marks.*

4) *Write assumptions whenever necessary.*

Q1) ABC manufacturing Ltd. is going to implement the inventory management system. Following activities are taken into the consideration.

- Every day maintain the raw material availability report

- Report to purchase department for minimum availability of raw material

- Get the request from production department to issue the material

- Calculate the average material consumption report everyday and weekly basis.

- Calculate the ratio of consumption and stock availability of material

    i)   Write the SRS for the above given case study   **[15]**
    ii)   Write the IEEE format for SRS   **[5]**

Q2) Roshan communication provides internet connection to general public. While allocating the connection, it requires following requirements from the applicants.

- Details about the Applicant

- Hardware details available at the proposed site

- Types of connection requested

- Proposed usage of the connection and

- Method of remitting charges

    Prepare proper Roshan Communication Application GUI.   **[10]**

Q3) What is Software Maintenance and its techniques.   **[10]**

Q4) Explain prototype and spiral model.   **[10]**

Q5) Explain the Case Tools and types of case tool.   **[10]**

Q6) Suryakul University has computerized its examination system which includes Procedure like:

- Receiving Examination for filled by students from different institutes and Validate them.

- Sending time tables and admit cards to different institutes which are also examination centers and

- Entering Marks after assessment of answer sheets and printing mark sheets.

Draw Context level and first level DFD for above case.   **[10]**

Q7) Write short notes: **[20]**

   a)   Agile process.

   b)   Reverse Engineering.

   c)   Role of System Analyst.

   d)   Legasy System.

✦   ✦   ✦   ✦

M.C.A. (Mgmt. Faculty)
IT-14: DATABASE MANAGEMENT SYSTEM (New)
(2015 Pattern) (Semester-I)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

1) *Q.1 is compulosry.*
2) *Solve any five from the remaining.*
3) *Mention assumption wherever necessary.*

Q1) The management of Prabodh group of schools conducts a competition for their schools every year to improve the quality of education in schools & to motivate the school staff. The competition is conducted amongst various branches of Prabodh school in different states. The Judging is done by the judges, who are renowned educationist. Evary school has to choose 5 teachers who would represent their school at the time of inspection and Interact with Judges. There are few criteria decided by the school mgt committee. After inspecting the schools, the judges would give criteria wise points to each school. As per the performance in respective scriteria, following awards would be declared for the school every year. **[20]**

a) Best ICT enabled school

b) The cleanest school

c) The most Innovative school.

d) Overall Best school

For the above scenario draw ER diagram and design the normalised (3NF) file layout.

Q2) Explain three tier architechture of database. **[10]**

Q3) Explain log based recovery? What is check point. **[10]**

Q4) Explain different types of Access controls in database security? **[10]**

Q5) What is meant by lock? Explain two phase locking protocol for concurrency control? **[10]**

Q6) Write a short note (any two). **[10]**

    a)   States of transaction.

    b)   Any four relational operators

    c)   NO SQL databases

    d)   Any 4 codd's rules.

Q7) Consider the following schema & solve following querries (any five). **[10]**

    Student (snum, sname, contact, Email)

    Course (cnum, cname, fid)

    Enrolled (Snum, cnum, Ayear)

    Faculty (fid, fname, contact)

    a)   Select all the students whose name starting with lether 'A'

    b)   Select all the students who opt course 'MCA'

    c)   Find all faculty names with their course name.

    d)   Find count of all the students enrolled in academic year '2015'.

    e)   Find student count group by their course.

    f)   Find faculty details belonging courses: 'MCA', 'MBA' & 'PGDBA'

    g)   Find list of all courses.

<div align="center">ఞఞఞ</div>

[4875]-1005

M.C.A. (Management Faculty)
BM - 11 : PRINCIPLES AND PRACTICES OF MANAGEMENT AND ORGANIZATIONAL BEHAVIOUR
(2015 Pattern) (Semester-I)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) Question No. 1 is compulsory.

2) Attempt any 3 from the remaining.

3) Figures to the right indicates full marks.

Q1) a) Explain the concept of planning in details. How it is inportant for organization. Explain with an examples.

b) "Study of organizational behaviour is inportant for the success of organization". Discuss.

[25]

Q2) Explain different types of groups with an examples. **[15]**

Q3) Explain the contribution of Henry Fayol in the field of Management. **[15]**

Q4) Which types of decision making tools you will suggest to small scale industries. Why? **[15]**

Q5) "Team building is an important for success of an organization". Discuss.**[15]**

Q6) Write Short Notes (Any THREE):   **[15]**

    a)   Structure Decisions.

    b)   Transaction Analysis.

    c)   Functional organizational structure.

    d)   Problem Solving Team.

    e)   Organizing.

ی ی ی