IES COLLEGE OF TECHNOLOGY, BHOPAL

B.E. (5th SEM) Assignment -1

Data Communication (CS-501)

Date of Assign: 24/07/2014 **Date of Submission:01/08/2014**

Q.1	Explain various encoding schemes briefly.	
Q.2	Discuss about the various modes of transmission.	
Q.3	What is Data Compression? Explain the various techniques of data compressions.	
Q.4	Explain the basic components of data communication & their characteristics.	
Q.5	Differentiate between Serial and Parallel transmission.	

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B.E. (5th SEM) Assignment -1

Operating System (CS-502)

Date of Assign: 24/07/2014 **Date of Submission:01/08/2014**

Q.1	Define operating system. Also Discuss various functions performed by it.	
Q.2	. Differentiate between spooling and buffering.	
Q.3	Explain the following term:- (i) Multiprogramming (ii) Multitasking (iii) Time sharing (iv) Multiprocessing	
Q.4	Explain the following terms:- long term scheduler , Short term scheduler, Medium scheduler , Dispatcher	
Q.5	Distinguish between multiprogramming and multiprocessing.	

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B.E. (5th SEM) Assignment -1

Database Management System (CS-503)

Date of Assign: 24/07/2014 **Date of Submission:01/08/2014**

Q.1	What is DBMS? Explain briefly advantages of DBMS?
Q.2	List the differences between a File processing system and a DBMS.
Q.3	With the help of neat diagram describe the structure of a DBMS?
Q.4	Explain three levels of abstraction in DBMS?
Q.5	What is Data model and explain the different types of data models?

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B.E. (5th SEM) Assignment -1

Database Management System (CS-504)

Date of Assign: 24/07/2014 **Date of Submission:01/08/2014**

1	What are raster and vector scan display with example
2	What size is frame buffer (in bytes) for each of these systems to store 12 bits per pixel?
3	How many pixels could be accessed per second in each of these systems by a display controller
4	How Many k bytes does a frame buffer nees in a 600 x 400 pixel ?
5	Find out the aspect ratio of the raster system using 8 x 10 inches screen and 100 pixel/inch.

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B.E. (5th SEM) Assignment -1

Theory of Computation(CSE-505)

Date of Assign:24/07/2014 **Date of Submission:01/08/2014**

Q.1	What is Finite State Machine (FSM)? Explain deterministic and non-deterministic FSM's with any suitable example.	
Q.2	Write different operations on the closure of any relation.	
Q.3	Describe Mealy & Moore machines with example.	
Q.4	Consider the following DFA over the binary alphabet: Q = {p, q, r, s}, start state p, accepting state p. With the following transition table: d (p,0) = s, d (p,1) = p d (q,0) = p, d (q,1) = s d (r,0) = r, d (r,1) = q d (s,0) = q, d (s,1) = r Write the regular expression recognized by this DFA.	
Q.5	Write short note on the followings(with example): a) Alphabets b) String c) Prefix and Suffix of string	