The areas of Computer Science includes the following subjects

1. Artificial Intelligence
2. Database
3. Theory of Computer Science and Automata
4. Computer Architecture
5. Operating System
6. Data Structure
7. Algorithm analysis and Design
8. Software Engineering
9. Concepts of Programming Languages.
10. Mathematics and Statistics (According to BSCS (DCS-UoK) courses)

SAMPLE TEST PAPER

Q.1.   Planning and constraint satisfaction are alike in that they both

(A) are more efficient than A* search
(B) allow for the use of domain-independent heuristics that exploit structure
(C) can be used for game playing as well as problem solving
(D) are a good algorithmic fit for solving crossword puzzles

Q.2.   The process of reading an actual database schema and producing a data model from that schema is called _____ .
(A) data modeling   (B) data engineering   (C) reverse engineering
(D)schema modeling

Q.3.   Which one is a Preemptive Process scheduling policy?
a. FCFS   b. Round Robin
c. Shortest Process Next   d. Shortest Remaining Time

Q.4.   Windows NT can run UNIX programs by using the subsystem.

(A) NTVDM   (B) Virtual DOS Mechanism   (C) POSIX
(D) X-Subsystem

Q.5.   A useful technique for evaluating the overall complexity of a proposed architecture is to look at the component _____.

(A) cohesion   (B) flow dependencies   (C) sharing dependencies
(D) both b and c

Q.6. A tree in which each node ha at most two children is called a binary tree. If each node in a binary tree is a leaf or has exactly two children, then the tree is called

(A) Stepped binary tree   (B) Kaplan Meir's Steadily Tree
(C) Strictly binary tree   (D) Monotonic Binary tree

Q.7. In a nondeterministic finite automata with λ – transitions, the transition function δ is defined as

(A) $\delta: Q \times (\Sigma \cup (\lambda)) \rightarrow 2^Q$ (B) $\delta: Q \times (\Sigma \cup \{\lambda\}) \rightarrow Q$ (C) $\delta: Q \times \Sigma \rightarrow Q$
(D) $\delta: Q \times (\Sigma \cup \{\lambda\}) \rightarrow 2^Q$

Q.8. If three coins are tossed simultaneously, then the probability of having atleast two heads is:

(A) $\dfrac{1}{3}$ (B). $\dfrac{1}{2}$ (C). $\dfrac{1}{4}$

(D). $\dfrac{1}{8}$

Q.9. If $A = \begin{bmatrix} 2 & 1-i \\ 1+i & 2 \end{bmatrix}$, then the Harmitian matrix of A is

(A) $\begin{bmatrix} 2 & 1-i \\ 1+i & 2 \end{bmatrix}$ (B) $\begin{bmatrix} -2 & 1-i \\ 1+i & -2 \end{bmatrix}$ (C) $\begin{bmatrix} 2 & 1-i \\ 1-i & 2 \end{bmatrix}$

(D) $\begin{bmatrix} -2 & -1+i \\ 1-i & -2 \end{bmatrix}$