Lesson Plan July-Dec 2018

Name: Preeti Yadav

Class: MCA 1st Sem

Subject: MATHEMATICAL FOUNDATION OF COMPUTER SCIENCE

Paper Code: 16MCA31C1

Month	Syllabus to be covered
1 Aug to 4 Aug	**Unit-1**: Relation: Relations, Properties of Binary relation, representation of relations,
6 Aug to 11 Aug	Closures of relations, Equivalence relations, Partial order relation.
13 Aug to 18 Aug	Function: Domain and Range, Onto, Into and One to One Functions
20 Aug to 25 Aug	Composite and Inverse Functions ,Recursively defined function Algebric Structure: Properties, Semi group, Monoid, Group **Assignment-1**
27 Aug to 1 Sep	Abelian group, Subgroup, Cyclic group, Cosets, Normal Subgroups, Lagrange's Theorem, Permutation groups.
3 Sep to 8 Sep	**Unit-2**: Propositional Logic: Proposition logic, basic logic, Logical Connectives, truth tables tautologies, contradiction,
10 Sep to 15 Sep	Logical implication, Logical equivalence
17 Sep to 22 Sep	Normal forms,Theory of Inference and deduction. Predicate Calculus: Predicates and quantifiers. Mathematical Induction. **Test: Unit 2**
24 Sep to 29 Sep	Predicate Calculus: Predicates and quantifiers. Mathematical Induction **Assignment-2**
1 Oct to 6 Oct	**Unit 3:**Lattices and Boolean Algebra: Introduction, Partially Ordered Set, Hasse diagram
8 Oct to 13 Oct	Well ordered set, Lattices, Properties of lattices, Bounded lattices
15 Oct to 20 Oct	Complemented and Distributive lattices, Boolean Algebra. **Test: Unit 3** **Unit-4:** Introduction to defining language, Kleene Closure, Arithmetic expressions
22 Oct to 27 Oct	Chomsky Hierarchy, Regular expressions. Conversion of regular expression to Finite Automata, NFA, DFA, Conversion of NFA to DFA
29 Oct to 3 Nov & 5 Nov	FA with output: Moore machine, Mealy machine. Revision **Test: Unit 4**
6 Nov to 13 Nov	Vacations

Lesson Plan July-Dec 2018

Name: Preeti Yadav

Class: MCA III Sem

Subject: DATA COMMUNICATION AND COMPUTER NETWORKS

Paper Code: 17MCA33C4

Month	Syllabus to be covered
1 Aug to 4 Aug	**Network Classification:** Local area networks, metropolitan area network, wide area network
6 Aug to 11 Aug	wireless network, Internetworking Devices: Hub, Repeaters
13 Aug to 18 Aug	Bridge, Switch, Router and Gateway.
20 Aug to 25 Aug	Network Reference Models: Layered architectures **Assignment-1**
27 Aug to 1 Sep	interface and services: ISO- OSI reference model,File Transfer Protocol, electronic mail, World Wide Web.
3 Sep to 8 Sep	TCP/IP reference model and its protocols:Transport Layer: UDP, TCP, Frame Format of TCP and UDP.
10 Sep to 15 Sep	internet protocol stacks. **Test: Unit 2**
17 Sep to 22 Sep	Data Communication: Theoretical basis of data communication; analog and digital signals;
24 Sep to 29 Sep	asynchronous and synchronous transmission; data encoding and modulation, techniques,
1 Oct to 6 Oct	broadband and base band transmission; pulse code modulation, bandwidth, channel,
8 Oct to 13 Oct	baud rate of transmission; multiplexing; transmission medium.
15 Oct to 20 Oct	Data link Layer Functions and Protocols: Framing, error-control, flow -control; **Test: Unit 1** sliding window protocol; HDLC, Error detection and correction,Data link layer of internet.
22 Oct to 27 Oct	Medium Access Sub layer: CSMA/CD protocol, IEEE standards for LAN and MAN; satellite networks, X.25, frame relay,
29 Oct to 3 Nov & 5 Nov	narrow band and broad band ISDN, asynchronous transfer modes. UNIT-IV Network functions and protocols: Switching mechanism: Circuit switching, message switching, packet switching, cell switching, routing and congestion control. **Test: Unit 4**
6 Nov to 13 Nov	Vacations