BRACH: CSE

IES COLLEGE OF TECHNOLOGY, BHOPAL

M.E./ M.Tech.(1th SEM) Assignment -1

Advanced Mathematics (MCSE-101)

Date of Assignment: 18/09/14 **Date of Submission: 17/10/2014**

Note: 1.Question should be written in plain A-4 Size Paper.
2. Minimum 300 Word Limit for each Question.
3. Assignment will submit in stick file.

1	Show that the mapping T : R^2 -> R^3 defined by T(x,y) = (x-y, y-x, -x) for all x, y is subset of R is a linear transformation from R^2 into R^3. [JUNE 2014]	UNIT 1
2	Define orthogonality of hermite polynomial and prove that: $H_{n+1}(x) = 2x\ H_n(x) – 2n\ H_{n-1}(x)$. DEC 2013	UNIT 1
3	Solve the heat equation be the method of separation of variable. DEC-2013	UNIT 2
4	Find the mean and standard deviation of Poisson distribution. JUNE 2014	UNIT 2
5	Short Notes: Wavelet Transform, Haar Transform. DEC-2012, JUNE 2014	UNIT 3

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M.E./ M.Tech.(1th SEM) Assignment -1

Advance Data Structure (MCSE-102)

Date of Assignment: 18/09/14 **Date of Submission:17/10/2014**

Note: 1.Minimum 300 Word Limit for each Question

1	Explain time and space complexity related to algorithms and also state their importance. JUNE-2014	UNIT 1
2	Distinguish between static memory allocation and dynamic memory allocation. DEC-2013	UNIT 1
3	How sets can be represented by trees? Represent union and find operations by taking suitable example, Also write weighting rule for union of two trees with roots i and j. DEC-2013	UNIT 2
4	What do you understand by doubly linked list. Write a function that removes all duplicate elements from a list. JUNE-2014	UNIT 2
5	Write an algorithm to delete the node with identifier X from an AVL tree T. The resulting tree should be reconstructed if necessary. Show that the time required for this o(log n) when there are n nodes in T. DEC-2012	UNIT 3

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M.E. / M.Tech (1th SEM) Assignment -1

OOT (MCSE-103)

Date of Assignment: 18/09/14 **Date of Submission:17/10/2014**

Note: 1.Minimum 300 Word Limit for each Question.

1	Describe the concept of aggregation and generalization be giving suitable example. DEC-2012	UNIT 1
2	Example the limitation of procedural programming. Also show these are overcome by object oriented programming g with example. JUNE-2013	UNIT 1
3	Explain object oriented development life cycle. DEC-2013	UNIT 2
4	What is meant by association of objects? Describe about recursive and named association. JUNE-2014	UNIT 2
5	How translation is performed from the analysis model into design model during object design? Describe the object design process in detail. DEC-2013	UNIT 3

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M.E./ M.Tech.(1th SEM) Assignment -1

Advance Computer Network (MCSE-104)

Date of Assignment: 18/09/14 **Date of Submission:17/10/2014**

Note: 1.Minimum 300 Word Limit for each Question

1	Explain the working of ISO-OSI model. Explain the function of different layers in the model. JUNE-2014	UNIT 1
2	Discuss briefly about LAN, MAN and WAN. DEC -2013	UNIT 1
3	Discuss the basic concept and architecture of TCP/IP protocols. DEC-2013	UNIT 2
4	Explain briefly about TELNET and POPL. DEC-2013	UNIT 2
5	How is interior and exterior routing done? JUNE-2014	UNIT 3

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M.E./ M.Tech.(1th SEM) Assignment -1

Advance Computer Architecture (MCSE-105)

Date of Assignment: 18/09/14 **Date of Submission:17/10/2014**

Note: 1.Minimum 300 Word Limit for each Question

1	Explain Flynn's Classification of computer architecture. DEC-2013	UNIT 1
2	Discuss the concept of Branch Handling Techniques and effect of branching and desire the performance degradation factor. JUNE-2014	UNIT 1
3	Explain internal data forwarding and possible hazards between read and write operations with respect to mechanism for instruction pipeline. DEC-2012	UNIT 2
4	Explain the implements two models of SIMD computers. DEC-2013	UNIT 2
5	Differentiate between structural parallelism and instruction level parallelism. DEC-2012	UNIT 3