| NBGSM College |
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| Lesson Plan July 2019- Nov 2020 |



| 7th week | 1 | 26-Aug-19 | Basic Gates and Logic |
| :---: | :---: | :---: | :---: |
|  | 2 | 27-Aug-19 | Universal Gates |
|  | 3 | 28-Aug-19 | Circuit and Boolean Algebraic Equation |
|  | 4 | 29-Aug-19 | Forms of Boolean Algebra |
|  | 5 | 30-Aug-19 | Boolean theorem |
|  | 6 | 31-Aug-19 | D-Morgan Law |
|  | Sunday | 1-Sep-19 |  |
|  |  |  |  |
| 8th week | 1 | 2-Sep-19 | Boolean Functions and Truth Tables |
|  | 2 | 3-Sep-19 | Canonical and Standard forms of Boolean functions |
|  | 3 | 4-Sep-19 | Minimize a Boolean Function |
|  | 4 | 5-Sep-19 | Venn Diagram |
|  | 5 | 6-Sep-19 | Karnaugh Map |
|  | 6 | 7-Sep-19 | Different Forms Of K-Map |
|  | Sunday | 8-Sep-19 |  |
|  |  |  |  |
| 9th week | 1 | 9-Sep-19 | Minimizing using K-Map |
|  | 2 | 10-Sep-19 | K-Map with Don't Care |
|  | 3 | 11-Sep-19 | Solution K-Map, POS and SOP Forms |
|  | 4 | 12-Sep-19 | Maximization Boolean Expression |
|  | 5 | 13-Sep-19 | Minimization Boolean Expression |
|  | 6 | 14-Sep-19 | Solve Boolean Exp. Using Standard Law |
|  | Sunday | 15-Sep-19 |  |
|  |  |  |  |
| 10th week | 1 | 16-Sep-19 | Solve Boolean Exp. Using Standard Law |
|  | 2 | 17-Sep-19 | Introduction to digital signals, |
|  | 3 | 18-Sep-19 | Analog Signal, Diff. between Analog and Digital Signal |
|  | 4 | 19-Sep-19 | Basic Gates - AND, OR, NOT |
|  | 5 | 20-Sep-19 | Venn Diagram Of AND,OR,NOT |
|  | 6 | 21-Sep-19 | Universal Gates NOR,NAND, XOR,XNOR |
|  | Sunday | 22-Sep-19 |  |
|  |  |  |  |
| 11th week | 1 | 23-Sep-19 | Holiday |
|  | 2 | 24-Sep-19 | Circuit and Implementation of Gates |
|  | 3 | 25-Sep-19 | Implementation of Basic gates using NOR |
|  | 4 | 26-Sep-19 | Implementation of Basic gates using NAND |
|  | 5 | 27-Sep-19 | Implementation of XOR using NAND,NOR |
|  | 6 | 28-Sep-19 | AND-OR-INVERT |
|  | Sunday | 29-Sep-19 |  |
|  |  |  |  |
| 12th week | 1 | 30-Sep-19 | Multilevel Implementation |
|  | 2 | 1-Oct-19 | OR-AND-INVERT |
|  | 3 | 2-Oct-19 | Holiday |
|  | 4 | 3-Oct-19 | Multilevel NAND circuit |
|  | 5 | 4-Oct-19 | Multilevel NOR circuit |
|  | 6 | 5-Oct-19 | Combinational Logic |
|  | Sunday | 6-Oct-19 |  |
|  |  |  |  |
| 13th week | 1 | 7-Oct-19 | Characteristics Combinational circuit |
|  | 2 | 8-Oct-19 | Holiday |
|  | 3 | 9-Oct-19 | Procedures, analysis procedures |
|  | 4 | 10-Oct-19 | Half adder |
|  | 5 | 11-Oct-19 | Full adder |
|  | 6 | 12-Oct-19 | Parallel binary adder |
|  | Sunday | 13-Oct-19 |  |
|  |  |  |  |
| 14th week | 1 | 14-Oct-19 | Half subtractor |
|  | 2 | 15-Oct-19 | Full subtractor |


|  | 3 | 16-Oct-19 | 4 bit binary adder subtractor |
| :---: | :---: | :---: | :---: |
|  | 4 | 17-Oct-19 | Holiday |
|  | 5 | 18-Oct-19 | Decoder combinational logic |
|  | 6 | 19-Oct-19 | $3 \times 8$ line decoder |
|  | Sunday | 20-Oct-19 |  |
|  |  |  |  |
| 15th week | 1 | 21-Oct-19 | BCD to decimal decoder |
|  | 2 | 22-Oct-19 | Encoder combinational logic |
|  | 3 | 23-Oct-19 | Decimal to BCD Encoder |
|  | 4 | 24-Oct-19 |  |
|  | 5 | 25-Oct-19 |  |
|  | 6 | 26-Oct-19 |  |
|  | Sunday | 27-Oct-19 |  |
|  |  |  |  |
| 16th week | 1 | 28-Oct-19 |  |
|  | 2 | 29-Oct-19 |  |
|  | 3 | 30-Oct-19 | Vacations |
|  | 4 | 31-Oct-19 | Octal to BCD Encoder |
|  | 5 | 1-Nov-19 | Holiday |
|  | 6 | 2-Nov-19 | Multiplexer logic |
|  | Sunday | 3-Nov-19 |  |
|  |  |  |  |
| 17th week | 1 | 4-Nov-19 | $4 \times 1$ line Multiplexer |
|  | 2 | 5-Nov-19 | $8 \times 1$ line Multiplexer |
|  | 3 | 6-Nov-19 | Demultiplexer |
|  | 4 | 7-Nov-19 | 1x4 Demultiplexer |
|  | 5 | 8-Nov-19 | 1x8 Demultiplexer |
|  | 6 | 9-Nov-19 | Comparators |
|  | Sunday | 10-Nov-19 |  |
|  |  |  |  |
| 18th week | 1 | 11-Nov-19 | 7 segment display |
|  | 2 | 12-Nov-19 | BCD to 7 segment display |
|  | 3 | 13-Nov-19 | Code converter |
|  | 4 | 14-Nov-19 | Error Detecting And Correcting Codes |
|  | 5 | 15-Nov-19 | Problem solve |
|  | 6 | 16-Nov-19 |  |
|  | Sunday | 17-Nov-19 |  |


| Name of assistant Professor: | RAJNISH KUMAR |  |  |
| :---: | :---: | :---: | :---: |
| Class : | BCA |  |  |
| Semester: | THIRD |  |  |
| Subject: | DATA STRUCTURE-I |  |  |
|  | Day | Date | Topic |
| 1st Week | 1 | 16-Jul-19 | Introduction to data structure |
|  | 2 | 17-Jul-19 | Elementary data organization |
|  | 3 | 18-Jul-19 | Data types in c |
|  | 4 | 19-Jul-19 | Derived data types |
|  | 5 | 20-Jul-19 | Data type vs. data structure |
|  | Sunday | 21-Jul-19 |  |
|  |  |  |  |
| 2nd Week | 1 | 22-Jul-19 | Structure in c |
|  | 2 | 23-Jul-19 | Implementation of structure |
|  | 3 | 24-Jul-19 | Structure and pointer |
|  | 4 | 25-Jul-19 | Union in c |


|  | 5 | 26-Jul-19 | Categories of data structures |
| :---: | :---: | :---: | :---: |
|  | 6 | 27-Jul-19 | Categories of data structures |
|  | Sunday | 28-Jul-19 |  |
| 3rd week | 1 | 29-Jul-19 | Operations Data structure, Insert, Delete |
|  | 2 | 30-Jul-19 | Operations Traversing, Merging, Sorting |
|  | 3 | 31-Jul-19 | Holiday |
|  | 4 | 1-Aug-19 | Operations Traversing, Merging, Sorting |
|  | 5 | 2-Aug-19 | Applications of data structures |
|  | 6 | 3-Aug-19 | Algorithm |
|  | Sunday | 4-Aug-19 |  |
|  |  |  |  |
| 4th week | 1 | 5-Aug-19 | Rules for making an algorithm |
|  | 2 | 6-Aug-19 | Complexity of an algorithm |
|  | 3 | 7-Aug-19 | Algorithm time-space tradeoff |
|  | 4 | 8-Aug-19 | Big-O notataion. |
|  | 5 | 9-Aug-19 | Introduction to a String |
|  | 6 | 10-Aug-19 | Storing strings in memory |
|  | Sunday | 11-Aug-19 |  |
|  |  |  |  |
| 5th week | 1 | 12-Aug-19 | Holiday |
|  | 2 | 13-Aug-19 | Implementation of a string |
|  | 3 | 14-Aug-19 | Operation on a string, input, display |
|  | 4 | 15-Aug-19 | Holiday |
|  | 5 | 16-Aug-19 | Length finding, copying, reverse |
|  | 6 | 17-Aug-19 | Concate a string, convert lower and upper case |
|  | Sunday | 18-Aug-19 |  |
|  |  |  |  |
| 6th week | 1 | 19-Aug-19 | String Pattern matching |
|  | 2 | 20-Aug-19 | Boyer moore algo. string matching |
|  | 3 | 21-Aug-19 | Introduction to an array |
|  | 4 | 22-Aug-19 | Types of array |
|  | 5 | 23-Aug-19 | Memory representation of linear array |
|  | 6 | 24-Aug-19 | Holiday |
|  | Sunday | 25-Aug-19 |  |
|  |  |  |  |
| 7th week | 1 | 26-Aug-19 | Memory representation of 2-D array |
|  | 2 | 27-Aug-19 | Address calculation in 1-D array |
|  | 3 | 28-Aug-19 | Address calculation in 2-D array |
|  | 4 | 29-Aug-19 | Address calculation in multi dimension array |
|  | 5 | 30-Aug-19 | Operation performed on array |
|  | 6 | 31-Aug-19 | Insert, Delete |
|  | Sunday | 1-Sep-19 |  |
|  |  |  |  |
| 8th week | 1 | 2-Sep-19 | Traversing, Sorting, Merging |
|  | 2 | 3-Sep-19 | Selection Sort, Bubble Sort |
|  | 3 | 4-Sep-19 | Merge Sort |
|  | 4 | 5-Sep-19 | Insertion Sort |
|  | 5 | 6-Sep-19 | Searching in an array, Sequential search |
|  | 6 | 7-Sep-19 | Binary Search |
|  | Sunday | 8-Sep-19 |  |
|  |  |  |  |
| 9th week | 1 | 9-Sep-19 | Parallel Array, Sparse array |
|  | 2 | 10-Sep-19 | Array and pointer |
|  | 3 | 11-Sep-19 | Introduction to a linked list |
|  | 4 | 12-Sep-19 | Representation of a linked list in memory |
|  | 5 | 13-Sep-19 | Stack: Introduction |
|  | 6 | 14-Sep-19 | Array and linked representation of stacks |


|  | Sunday | 15-Sep-19 |  |
| :---: | :---: | :---: | :---: |
| 10th week | 1 | 16-Sep-19 | Operations on stacks, |
|  | 2 | 17-Sep-19 | Implement of PUSH operation |
|  | 3 | 18-Sep-19 | Implement of POP, Traverse operation |
|  | 4 | 19-Sep-19 | Applications of stacks |
|  | 5 | 20-Sep-19 | Polish notation, prefix, postfix, infix |
|  | 6 | 21-Sep-19 | Recursion |
|  | Sunday | 22-Sep-19 |  |
|  |  |  |  |
| 11th week | 1 | 23-Sep-19 | Holiday |
|  | 2 | 24-Sep-19 | Stack implement infix to postfix |
|  | 3 | 25-Sep-19 | Stack implement infix to prefix |
|  | 4 | 26-Sep-19 | Neumeric solve prefix postfix conversion |
|  | 5 | 27-Sep-19 | Queues: Introduction |
|  | 6 | 28-Sep-19 | Array and linked representation of queues |
|  | Sunday | 29-Sep-19 |  |
|  |  |  |  |
| 12th week | 1 | 30-Sep-19 | Operations on queues |
|  | 2 | 1-Oct-19 | Types of Queue |
|  | 3 | 2-Oct-19 | Holiday |
|  | 4 | 3-Oct-19 | Double Ended Queue |
|  | 5 | 4-Oct-19 | Circular Queue and its implementation |
|  | 6 | 5-Oct-19 | Deques, Priority Queues |
|  | Sunday | 6-Oct-19 |  |
|  |  |  |  |
| 13th week | 1 | 7-Oct-19 | Applications of queues |
|  | 2 | 8-Oct-19 | Holiday |
|  | 3 | 9-Oct-19 | Linked List: Introduction |
|  | 4 | 10-Oct-19 | Array vs. linked list |
|  | 5 | 11-Oct-19 | Operation performed on linked list |
|  | 6 | 12-Oct-19 | Insertion, Deletion |
|  | Sunday | 13-Oct-19 |  |
|  |  |  |  |
| 14th week | 1 | 14-Oct-19 | Traversal |
|  | 2 | 15-Oct-19 | Types of linked list |
|  | 3 | 16-Oct-19 | Insertion into beginning, into end |
|  | 4 | 17-Oct-19 | Holiday |
|  | 5 | 18-Oct-19 | Deletion from beginning, from end |
|  | 6 | 19-Oct-19 | Circular linked list |
|  | Sunday | 20-Oct-19 |  |
|  |  |  |  |
| 15th week | 1 | 21-Oct-19 | Two-way linked list |
|  | 2 | 22-Oct-19 | Garbage collection |
|  | 3 | 23-Oct-19 | Threaded lists, Applications of linked lists |
|  | 4 | 24-Oct-19 |  |
|  | 5 | 25-Oct-19 |  |
|  | 6 | 26-Oct-19 |  |
|  | Sunday | 27-Oct-19 |  |
|  |  |  |  |
| 16th week | 1 | 28-Oct-19 |  |
|  | 2 | 29-Oct-19 |  |
|  | 3 | 30-Oct-19 |  |
|  | 4 | 31-Oct-19 | Tree: Introduction, Basic terminology |
|  | 5 | 1-Nov-19 | Holiday |
|  | 6 | 2-Nov-19 | Representing Binary tree in memory |
|  | Sunday | 3-Nov-19 |  |
|  |  |  |  |


| 17th week | 1 | 4-Nov-19 | Operation on a tree, |
| :--- | :---: | :---: | :--- |
|  | 2 | 5-Nov-19 | Insert and Delete a node |
|  | 3 | 6-Nov-19 | Types of binary tree |
|  | 4 | 7-Nov-19 | Inorder,Preorder,Postorder Traversing |
|  | 5 | 8-Nov-19 | Binary Search Tree |
|  | 6 | 9-Nov-19 | Traversal algorithms using stacks. |
|  | Sunday | 10-Nov-19 |  |
| 18th week | 1 | 11-Nov-19 | Linked list view of a binary tree |
|  | 2 | 12-Nov-19 | Tree making example |
|  | 3 | 13-Nov-19 | Graph: Introduction |
|  | 4 | 14-Nov-19 | Graph theory terminology |
|  | 5 | 15-Nov-19 | Types of graph |
|  | 6 | 16-Nov-19 | Sequential and linked representation of graphs |
|  | Sunday | 17-Nov-19 |  |
|  |  |  | Topic |
|  |  |  |  |


| Name of assistant Professor : | RAJNISH KUMAR |
| :--- | :---: |
| Class : | BCA |
| Semester: | FIFTH |
| Subject: | COMPUTER GRAPHICS |


|  | Day | Date | Topic |
| :---: | :---: | :---: | :---: |
| 1st Week | 1 | 16-Jul-19 | Introduction to computer graphics |
|  | 2 | 17-Jul-19 | Basics of Graphics systems |
|  | 3 | 18-Jul-19 | CUI and GUI |
|  | 4 | 19-Jul-19 | Interactive and non- Interactive graphics |
|  | 5 | 20-Jul-19 | Application areas of Computer Graphics |
|  | Sunday | 21-Jul-19 |  |
|  |  |  |  |
| 2nd Week | 1 | 22-Jul-19 | video-display devices |
|  | 2 | 23-Jul-19 | Properties of video display device |
|  | 3 | 24-Jul-19 | Random scan system |
|  | 4 | 25-Jul-19 | Raster scan system |
|  | 5 | 26-Jul-19 | CRT Monitor |
|  | 6 | 27-Jul-19 | Color CRT techniques Beam Penetration |
|  | Sunday | 28-Jul-19 |  |
|  |  |  |  |
| 3rd week | 1 | 29-Jul-19 | Shadow- mask method |
|  | 2 | 30-Jul-19 | DVST and Flat panel display |
|  | 3 | 31-Jul-19 | Holiday |
|  | 4 | 1-Aug-19 | LCD and LED display |
|  | 5 | 2-Aug-19 | input devices and output devices |
|  | 6 | 3-Aug-19 | Working of display processor |
|  | Sunday | 4-Aug-19 |  |
|  |  |  |  |
| 4th week | 1 | 5-Aug-19 | Point and lines |
|  | 2 | 6-Aug-19 | Program to display a point using graphics in c |
|  | 3 | 7-Aug-19 | Pixel, resolution, persistence |
|  | 4 | 8-Aug-19 | DDA line drawing algorithms |
|  | 5 | 9-Aug-19 | Numerical problem of DDA |
|  | 6 | 10-Aug-19 | Bresenham's line drawing algorithms |
|  | Sunday | 11-Aug-19 |  |
|  |  |  |  |
| 5th week | 1 | 12-Aug-19 | Holiday |


|  | 2 | 13-Aug-19 |  |
| :---: | :---: | :---: | :---: |
|  | 3 | 14-Aug-19 | Numerical problem of Bresenham's |
|  | 4 | 15-Aug-19 | Holiday |
|  | 5 | 16-Aug-19 | Scan converting a circle |
|  | 6 | 17-Aug-19 | Bresenham's circle algorithms |
|  | Sunday | 18-Aug-19 |  |
| 6th week | 1 | 19-Aug-19 | Numerical problem of Bresenham's circle drawing |
|  | 2 | 20-Aug-19 | Scan converting an ellipse |
|  | 3 | 21-Aug-19 | Program to draw a line |
|  | 4 | 22-Aug-19 | Region filling |
|  | 5 | 23-Aug-19 | Area filling |
|  | 6 | 24-Aug-19 | Holiday |
|  | Sunday | 25-Aug-19 |  |
| 7th week | 1 | 26-Aug-19 | Scan line polygon fill algorithm |
|  | 2 | 27-Aug-19 | boundary fill algorithms |
|  | 3 | 28-Aug-19 | Flood fill algorithms |
|  | 4 | 29-Aug-19 | 2-D Geometrical Transforms |
|  | 5 | 30-Aug-19 | Translation and matrix |
|  | 6 | 31-Aug-19 | Scaling and matrix |
|  | Sunday | 1-Sep-19 |  |
| 8th week | 1 | 2-Sep-19 | Rotation and matrix |
|  | 2 | 3-Sep-19 | shear transformations and matrix |
|  | 3 | 4-Sep-19 | homogeneous coordinates system |
|  | 4 | 5-Sep-19 | matrix representations in transformation |
|  | 5 | 6-Sep-19 | composite transforms, transformations |
|  | 6 | 7-Sep-19 | Implementation of translation |
|  | Sunday | 8-Sep-19 |  |
|  |  |  |  |
| 9th week | 1 | 9-Sep-19 | Implementation of Rotation |
|  | 2 | 10-Sep-19 | Rotation about origin |
|  | 3 | 11-Sep-19 | Rotation about fixed point |
|  | 4 | 12-Sep-19 | Scaling with respect to the origin |
|  | 5 | 13-Sep-19 | Reflection transformation |
|  | 6 | 14-Sep-19 | Mirror reflection about an axis |
|  | Sunday | 15-Sep-19 |  |
|  |  |  |  |
| 10th week | 1 | 16-Sep-19 | Inverse geometric transformation |
|  | 2 | 17-Sep-19 | Composite transformation |
|  | 3 | 18-Sep-19 | Numerical problem solve of transformation |
|  | 4 | 19-Sep-19 | Numerical problem solve of rotation |
|  | 5 | 20-Sep-19 | Numerical problem of scaling, translation |
|  | 6 | 21-Sep-19 | 2-D Viewing, The viewing pipeline |
|  | Sunday | 22-Sep-19 |  |
|  |  |  |  |
| 11th week | 1 | 23-Sep-19 | Holiday |
|  | 2 | 24-Sep-19 | viewing coordinate reference frame |
|  | 3 | 25-Sep-19 | Line clipping algorithm |
|  | 4 | 26-Sep-19 | COHEN-SUTHERLAND algo |
|  | 5 | 27-Sep-19 | Midpoint subdivision algo |
|  | 6 | 28-Sep-19 | Polygon clipping |
|  | Sunday | 29-Sep-19 |  |
|  |  |  |  |
| 12th week | 1 | 30-Sep-19 | SUTHERLAND-HODGMAN algo. |
|  | 2 | 1-Oct-19 | Window and viewport system |
|  | 3 | 2-Oct-19 | Holiday |


|  | 4 | 3-Oct-19 | window to viewport coordinate transformation |
| :---: | :---: | :---: | :---: |
|  | 5 | 4-Oct-19 | Cyrus-beck line clipping algorithms |
|  | 6 | 5-Oct-19 | Numerical solve |
|  | Sunday | 6-Oct-19 |  |
| 13th week | 1 | 7-Oct-19 | 3-D Object Representation |
|  | 2 | 8-Oct-19 | Holiday |
|  | 3 | 9-Oct-19 | Polygon surfaces |
|  | 4 | 10-Oct-19 | quadric surfaces |
|  | 5 | 11-Oct-19 | spline representation |
|  | 6 | 12-Oct-19 | Hermite curve |
|  | Sunday | 13-Oct-19 |  |
|  |  |  |  |
| 14th week | 1 | 14-Oct-19 | Solid modeling |
|  | 2 | 15-Oct-19 | Bezier curve |
|  | 3 | 16-Oct-19 | B-Spline curves |
|  | 4 | 17-Oct-19 | Holiday |
|  | 5 | 18-Oct-19 | Bezier and B-Spline surfaces |
|  | 6 | 19-Oct-19 | Basic illumination models |
|  | Sunday | 20-Oct-19 |  |
|  |  |  |  |
| 15th week | 1 | 21-Oct-19 | polygon-rendering methods |
|  | 2 | 22-Oct-19 | Hidden surface |
|  | 3 | 23-Oct-19 | Depth buffer algo or Z-buffer algo |
|  | 4 | 24-Oct-19 |  |
|  | 5 | 25-Oct-19 |  |
|  | 6 | 26-Oct-19 |  |
|  | Sunday | 27-Oct-19 |  |
|  |  |  |  |
| 16th week | 1 | 28-Oct-19 |  |
|  | 2 | 29-Oct-19 |  |
|  | 3 | 30-Oct-19 | Vacations |
|  | 4 | 31-Oct-19 | 3-D Geometric Transformations |
|  | 5 | 1-Nov-19 | Holiday |
|  | 6 | 2-Nov-19 | 3-D Geometrical Transforms |
|  | Sunday | 3-Nov-19 |  |
|  |  |  |  |
| 17th week | 1 | 4-Nov-19 | Translation and matrix |
|  | 2 | 5-Nov-19 | Scaling and matrix |
|  | 3 | 6-Nov-19 | Rotation and matrix |
|  | 4 | 7-Nov-19 | 3-D reflection and shear transformations |
|  | 5 | 8-Nov-19 | 3-D composite transformations. |
|  | 6 | 9-Nov-19 | 3-D Viewing, Viewing pipeline |
|  | Sunday | 10-Nov-19 |  |
|  |  |  |  |
| 18th week | 1 | 11-Nov-19 | 3-D Viewing: viewing coordinates |
|  | 2 | 12-Nov-19 | Projection in graphics |
|  | 3 | 13-Nov-19 | Types of projection |
|  | 4 | 14-Nov-19 | general projection transforms and clipping |
|  | 5 | 15-Nov-19 | Numerical problems |
|  | 6 | 16-Nov-19 |  |
|  | Sunday | 17-Nov-19 |  |

