MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL

(A constituent institution of MAHE, Manipal)

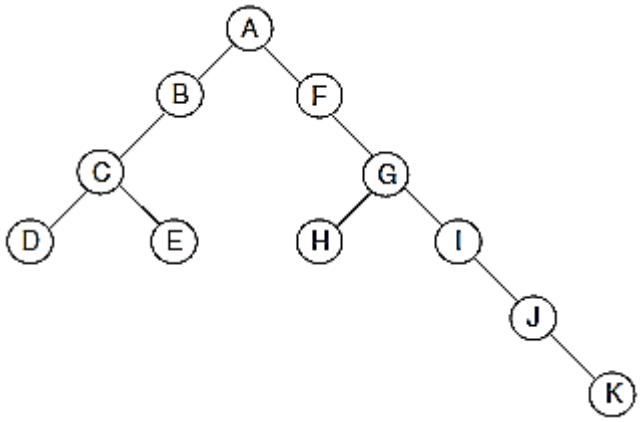
II SEMESTER M.C.A

SUBJECT: DATA STRUCTURES & ALGORITHMS [MCA 4252]

Assignment 2 (21/05/2021)

Time: 15 minutes **MAX. MARKS: 05**

Instructions to Candidates: Hand written answers with Name, Registration number, Page number (in case of more than one sheet) & Signature on every sheet.

1.	Show the ***Breadth-first traversal*** of the tree (Refer figure below). Write the algorithm used and show status of the *data structure used* for this operation in each step. 	**1**
2.	A binary tree has 10 nodes. The preorder and inorder traversals of the tree are shown below. Draw the tree. **Preorder: JCBADEFIGH** **Inorder : ABCEDFJGIH**	**1**
3.	A binary tree has eight nodes. The postorder and inorder traversals of the tree are given below. Draw the tree. **Postorder: FECHGDBA** **Inorder: FCEABHDG**	**1**
4.	Draw the expression tree and find the infix and postfix expressions for the following prefix expression: *** - A B + * C D / E F**	**1**
5.	Draw the expression tree and find the infix and prefix expressions for the following postfix expression: **A B * C D / + E F - ***	**1**

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