Total Pages: SET-Y Reg No.: Name: APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY FIRST SEMESTER (R) M Tech DEGREE EXAMINATION, MARCH 2023 Discipline: MECHANICAL ENGINEERING Course Code & Name: 221EME036 COMPOSITE MATERIALS Max. Marks: 60 Duration: 2.5 Hours **PART A** Answer all questions. Each question carries 5 marks Marks Describe the classification of composites and give two examples for each. (5) 1 Differentiate between continuous and discontinuous types of fibers. (5) Discuss the properties of carbo fibers and explain their influence in the (5) composites. 4 Discuss the different liquid-state manufacturing methods (5)Explain the synthesis and properties of Nanocomposites. (5) 5 **PART B** Answer any 5 questions. Each question carries 7 marks Explain the dispersion strengthening in composites (7) 6 7 Discuss the importance of hybrid composites over nano composites (7)Explain the process of rotational moulding with neat sketch. (7)8 Explain the liquid infiltration method for the manufacturing of composites (7) (7) 10 Discuss the importance of green composites. Explain the synthesis and properties of nano composites with neat sketch. (7)11 Explain with neat sketch the manufacturing of a surface metal matrix composite. (7)12