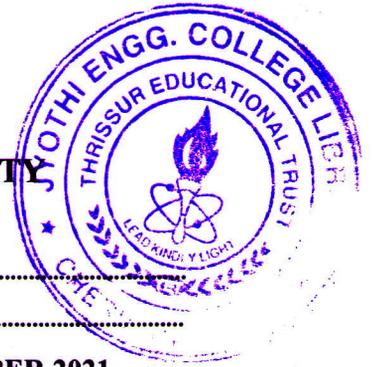


APJ ABDULKALAM TECHNOLOGICAL UNIVERSITY
08 PALAKKAD CLUSTER



Q. P. Code: IAR0821321C-I

(Pages: 2)

Name:

Reg. No:

THIRD SEMESTER M.TECH. DEGREE EXAMINATION DECEMBER 2021

Branch: Mechanical Engineering

Specialization: Industrial Automation and Robotics

08ME7321(C) VIRTUAL INSTRUMENTATION

(Common to Industrial Automation and Robotics)

Time: 3 hours

Max. Marks: 60

Answer all six questions.

Modules 1 to 6: Part 'a' of each question is compulsory and answer either part 'b' or part 'c' of each question.

Q. No.	Module 1	Marks
1. a	Why NI Labview is called as modular programming?	3

Answer b or c

- | | | |
|---|--------------------------------------------------------------------------------------------|---|
| b | What are the advantages of graphical programming over conventional programming techniques? | 6 |
| c | With the help of block diagram, explain the architecture of Virtual Instruments. | 6 |

Q. No.	Module 2	Marks
2. a	What is the difference between a <i>Shift Register</i> and a <i>Feedback Node</i> ? Explain why they are used in loops?	3

Answer b or c

- | | | |
|---|--------------------------------------------------------------------------------------------------------------------------------------------|---|
| b | What is a <i>For Loop</i> ? Under what circumstances are <i>For Loops</i> used? How does a <i>While Loop</i> vary from a <i>For Loop</i> ? | 6 |
| c | Explain how serial and parallel loops are controlled in NI LabVIEW with a suitable example. | 6 |

Q. No.	Module 3	Marks
3. a	What are the major components of a PC-based data acquisition system?	3

