



MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

FIFTH SEMESTER B. TECH (ELECTRONICS AND INSTRUMENTATION)

PROCTORED ONLINE MAKE-UP EXAMINATION - Feb/March. 2022

SUBJECT: MICROCONTROLLERS (ICE 3152)

TIME: 75 minutes

DATE: 24-02-2022

MAX.MARKS:20

Note: Answer *All* questions.

- 1 A With a neat diagram bring out the differences between Von Neumann 2
 and Harvard Architecture.
 B Write a program with a delay subroutine to generate a square wave of 3
 25% duty cycle on bit 3 of port 1.
 C Write an 8051 ALP to control the stepper motor, by assuming code 5
 sequence, which is stored in a memory location pointed by DPTR. Use
 suitable delay routine and comment on each of instructions used. Also
 draw interfacing diagram.

- 2 A Generate a square wave of 75% duty cycle at the pin no. 9 of LPC 2148 2
 Port0.
 B Explain the importance of PWM control registers of LPC2148. 3
 C With neat diagram explain AMBA and Memory Accelerator Module of 5
 ARM.
