



Subject Name: Microprocessor And Microcontroller
Subject Code:2173203

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Sr. No	CHAPTER NO- 1 : Introduction of Microprocessor of 8085 :	Marks
	TOPIC:1 Introduction	
	SHORT QUESTIONS	
1	State application of Microprocessor [LJIET]	01
2	State application of Microcontroller [LJIET]	01
	DESCRIPTIVE QUESTIONS	
1	Differentiate Microprocessor and Microcontroller describing minimum any seven major differences. (Nov-2017) [LJIET]	07
	What is difference between microprocessor and microcontroller?(Apr-2018) [LJIET]	03
	Differentiate Microprocessor and Microcontroller(Nov-2019) [LJIET]	04
2	How Microcontrollers are differing than Microprocessor? Explain with technical justification and application [LJIET]	07
	How Microcontrollers are differing than Microprocessor?(Nov-2018) [LJIET]	04
3	Compare Microprocessor 8085 with Microcontroller 8051. [LJIET]	07
4	Write a short note on microprocessors(Nov-2018) [LJIET]	03
5	Write a short note on Microcomputer System [LJIET]	07
	CHAPTER NO- 2 : Architecture of Microprocessor of 8085 & 8051 Microcontroller:	
	TOPIC:1 Microprocessor 8085	
	SHORT QUESTIONS	
1	Define: Microprocessor [LJIET]	01
2	Define: SP [LJIET]	01
3	Define: PC [LJIET]	01
4	Which are general purposes registers in 8085 Microprocessors? [LJIET]	01
5	Which are temporary Registers in 8085 Microprocessor? [LJIET]	01
6	State the name of Special purpose Registers in 8085 Microprocessors [LJIET]	01
7	Define: Bus [LJIET]	01
8	What is System Bus? [LJIET]	01
9	State function of Address Bus in 8085 [LJIET]	01
11	State function of Data Bus in 8085 [LJIET]	01
12	State the name of Control Bus Signals in 8085 [LJIET]	01
13	What is ALE? Why it is used? [LJIET]	01
14	State the name of Interrupt Signals in 8085 [LJIET]	01
15	What is the purpose of HOLD and HLDA pin in 8085 Microprocessors? [LJIET]	01
	DESCRIPTIVE QUESTIONS	
1	Explain the Pin Diagram of the 8085 microprocessor. (Nov-2016)(Nov-2018) [LJIET]	07,07
2	Explain De-multiplexing of the AD ₀ -AD ₇ for the microprocessor 8085. (Nov-2016) [LJIET]	07
3	Explain Generation of the Control signal of the 8085 microprocessor. (Nov-2016) [LJIET]	07
4	Draw the functional block diagram of internal architecture of IC 8085 and explain its	07



	working.(Nov-2017) [LJIET] Draw and Explain architecture of the 8085 microprocessor.(Nov-2019) [LJIET]	07
5	List out the general-purpose register available in 8085 (Nov-2017) [LJIET]	03
6	Explain the flag register and flag bits of 8085.(Nov-2017) [LJIET]	04
7	What is interrupt in 8085 Microprocessor? List out the hardware and software interrupts used in 8085 Microprocessor (Nov-2017) [LJIET]	03
8	Explain the functions of following instructions of 8085 – state its number of bytes occupied, number of Machine cycle required and T-states. 1. MOV A,M 2. LXI H,2500H 3. DAA 4. STA 9100H (Nov-2017) [LJIET]	04
9	Design a microprocessor memory interfacing system for 4Kbyte RAM with starting address 0000H.Immediately connect 2Kbyte EEPROM. Use 3-8 decoder and if gate is required. (Nov-2016) (Nov-2019) [LJIET]	07
10	Design 16X8 register using 4X4 register chips for the microprocessor 8085. [LJIET]	07
11	Explain generation of control signals IOR, IOW, MEMW, MEMR. [LJIET] Explain generation of control signals of 8085 Microprocessor.(Nov-2018) [LJIET]	07 04
12	Explain Flag register PSW of 8085 Microprocessor. (Nov-2019) [LJIET]	03
13	Explain circuit diagram to de-multiplex AD0-AD7 bus of 8085 microprocessor to separate out data bus and low order address bus. [LJIET]	07
14	Discuss 8085 Bus organization and Programming model [LJIET]	07
15	Explain and Draw the control signal generation in 8085 Microprocessor. (Nov-2019)[LJIET]	07
16	Draw and Explain Pin Diagram and Architecture of microprocessor 8085.(Apr-2018) [LJIET]	07
17	Interface 4KB EPROM using 2KB EPROM with 8085 Microprocessor.(Apr-2018) [LJIET]	03
18	Explain the Demultiplexing of Address and Data Bus and generation of Control signals.(Apr-2018) [LJIET]	04
19	Explain the following instruction with example. (Nov-2018) [LJIET] 1. ORI 32H 2. INX D 3. SBB B.	03
20	Design a microprocessor memory interfacing system for 8Kbyte RAM with starting address 0000H.Immediately connect 4Kbyte EEPROM. (Nov-2018) [LJIET]	04
21	Why bus demultiplexing is required in processors and controllers. Explain bus demultiplexing with neat sketch. (Nov-2019) [LJIET]	03
TOPIC:2 Microcontroller 8051		
SHORT QUESTIONS		
1	Define: Microcontroller [LJIET]	01
2	Name three features of the 8051 [LJIET]	01
3	Give the size of RAM in 8051[LJIET]	01
4	Give the size of on-chip ROM in 8051 [LJIET]	01
5	State the function of any four pins used in 8051 [LJIET]	01
DESCRIPTIVE QUESTIONS		
1	Explain architecture of the 8051 microcontroller. (Nov-2016).(Nov-2018) [LJIET]	07,07
2	Explain the functionality of port 0 in 8051 in short. (Nov-2017) [LJIET]	03
3	What are the addressing modes for 8051? Explain in brief giving suitable example. (Nov-2017) [LJIET]	07
4	Draw pin configuration of 8051 and explain functions of EA, T0 and PSEN pins.[LJIET]	07



5	Explain criteria to select a Microcontroller. [LJIET]	07
6	Why bus demultiplexing is required in processors and controllers. Explain bus demultiplexing with neat sketch along with its benefits of it. [LJIET]	07
7	Write a brief note on IO Ports of 8051. Discuss multiplexed port pin functionalities. [LJIET]	07
8	Explain the organization and functioning of Stack for 8051 with neat sketch and proper examples. How the stack space can be managed for large programs so that it will not over write register space. [LJIET]	07
9	Draw and explain the generation of Control Signal of Microcontroller. [LJIET]	07
10	Draw and Explain Reset and Clock Circuit of 8051 Microcontroller. What is the Purpose of capacitor in RESET circuit? [LJIET]	07
11	Draw and Explain Pin Diagram and Architecture of microcontroller 8051.(Apr-2018) [LJIET]	07
	Explain the Pin Diagram of the 8051 microprocessor.(Nov-2019) [LJIET]	07
CHAPTER NO- 3 : Introduction to 8-bit AVR Microcontroller:		
TOPIC:1 AVR Microcontroller		
SHORT QUESTIONS		
1	The AVR is _____ - bit Microcontroller [LJIET] → 8 bit	01
2	Define: AVR family [LJIET]	01
3	State the function of AVR Status Registers [LJIET]	01
4	What do you mean by ATmega32? [LJIET]	01
5	State the function of any four pins used in ATmega32 [LJIET]	01
6	What is the size of the flag register in the AVR? [LJIET]	01
DESCRIPTIVE QUESTIONS		
1	Write a short note on AVR Family (Nov-2017) (Nov-2018)(Nov-2019) [LJIET]	07,07,03
2	With diagram explain architecture of AVR microcontroller [LJIET]	07
3	Explain AVR status register in detail. (Nov-2019)[LJIET]	04
	Discuss AVR flag register in detail.(Nov-2018)[LJIET]	04
4	Explain following terms related to AVR: [LJIET] i) Harvard Architecture ii) RISC iii) DDR iv) I2C	07
5	List the features of ADC peripheral of the ATmega32. [LJIET]	07
6	Identify which register of AVR ATmega32 is responsible to perform following function. [LJIET] 1. To select power management and sleep mode 2. To decide prescaler value for timer 3. To control status of input/output ports 4. Analog Comparator Multiplexer Enable 5. To store result of Analog to Digital conversion 6. To enable timer interrupts 7. To identify status of conditional flag to be used to perform conditional branch	07
7	With diagram explain internal architecture of AVR ATmega32 microcontroller. (Nov-2017) [LJIET]	07
8	Draw pin configuration of ATmega32 and Explain function of each pin [LJIET]	07
9	Discuss 5 sources of reset mechanism for ATmega32 microcontroller and explain reset logic with diagram. [LJIET]	07
10	With diagram explain principal clock systems in the AVR microcontroller and their distribution. [LJIET]	07



11	Draw and explain the Harvard architecture in the AVR. [LJIET]	07
	Explain the Harvard architecture in the AVR.(Nov-2018) [LJIET]	07
12	What is RISC and CISC microcontroller?(Apr-2018) [LJIET]	04
13	Draw and Explain Pin Diagram and Architecture of microprocessor AVR.(Apr-2018) [LJIET]	07
14	Explain PORTA functionality of ATMEGA32.(Nov-2018)[LJIET]	04
15	Compare RISC and CISC.(Nov-2018)[LJIET]	03
16	Draw pin configuration of ATmega32 and Explain function of any four pin. (Nov-2019) [LJIET]	07
CHAPTER NO- 4 : AVR Assembly Language Programming :		
TOPIC:1 Assembly Language Programming		
SHORT QUESTIONS		
1	How many LSR instructions are needed to divide a number by 32? [LJIET]	01
2	Which register is the low byte of x register? [LJIET]	01
3	Classify addressing modes of AVR [LJIET]	01
4	Write instruction to move the value 0x34 into R29 Register [LJIET]	01
5	Write a instruction to add 2 to the contents of R18 [LJIET]	01
6	What is the largest hex value that can be moved into a location in the data memory? What is the decimal equivalent of the hex value? [LJIET]	01
7	What does "OUT OCR0, R23" do? [LJIET]	01
8	What is wrong with "STS OCR0, R23"? What does it do? [LJIET]	01
9	Give two ways for hex data representation in the AVR assembler. [LJIET]	01
10	What is the advantage in using the .EQU directive to define a constant value?[LJIET]	01
11	In the ADD instruction. When are C and H raised? [LJIET]	01
DESCRIPTIVE QUESTIONS		
1	Explain the addressing mode for the AVR Controller. (Nov-2016)(Apr-2018)(Nov-2018)[LJIET]	07,03,07
2	Show how the AVR would represent -128 (Nov-2017) [LJIET]	03
3	Show how flag registers is affected by following instructions (Nov-2017) [LJIET]	04
4	Explain CALL, IJMP and RET Instruction with example for the AVR Controller (Nov-2017) [LJIET]	07
5	What is the role of DDR register in inputting data for AVR Controller (Nov-2017) (Nov-2018) [LJIET]	03,03
6	What is the difference between interrupts and poling (Nov-2017) [LJIET]	03
7	Explain CALL and JUMP Instruction with example for the AVR Controller. (Nov-2016) [LJIET] Explain CALL instruction of ATMEGA32 microcontroller.(Apr-2018)[LJIET]	07,04
8	Explain Logical & Rotate Instruction with example for the AVR Controller. (Nov-2016) [LJIET] Explain Rotate instructions of AVR controller with Example.(Nov-2018)(Nov-2019) [LJIET]	07 03
	Explain Data Transfer and Arithmetic Instructions with example for the AVR controller. [LJIET]	07
9	Which way branching is useful in programming? Differentiate the Short, Long and Absolute Jump instructions with its sample use and possible length of jumping. [LJIET]	07
10	Why it becomes necessary to make different segments of one program? Explain the use of subroutines with suitable example. [LJIET]	07
11	Write a short note on AVR Data type .(Nov-2018) [LJIET]	04,03



	Explain the Data types of AVR Microcontroller. (Apr-2018)[LJIET]	
12	Explain following instructions with example: [LJIET] i) CP ii) POP iii) LDS iv) SBRS v) SWAP vi)CBI vii)ASR	07
13	Explain following instruction with example: [LJIET] SBIC, TST, ST	03
14	Explain following instruction with appropriate example. [LJIET] 1. LPM 2. SBRS	04
15	Explain following instruction with appropriate example. [LJIET] 1. MULS 2. STS	04
16	Explain register indirect addressing mode with example. [LJIET]	03
17	Draw and explain the Data memory for the AVR with Extended I/O Memory. [LJIET]	07
18	Explain following instruction with example: SBI, SEZ, LDS.(Nov-2019) [LJIET]	03
19	What is Assembler directive? Explain following assembler directive with example (Nov-2019)[LJIET] 1 .EQU 2 .SET	03
20	Explain the Branch Instruction of Atmega32 Microcontroller.(Apr-2018) [LJIET]	04
21	Why it becomes necessary to make different segments of one program? Explain the use of subroutines with suitable example.(Nov-2019) [LJIET]	03
PROGRAMS		
1	Write an AVR program in which assume that bit PB3 is an input and represents the condition of a door alarm. If it goes LOW, it means that the door is open. Monitor the bit continuously. Whenever it goes LOW, send a High-to-Low pulse to port PC5 to turn on a buzze (Nov-2017) [LJIET]	04
2	Using a prescaler of 64, write a program to generate a delay of 1920 μ s. Assume XTAL = 8 MHz. (Nov-2017) [LJIET]	07
3	Write a program to toggle all the bits of the I/O register PORT B every 1 Second. Assume that the crystal frequency is 8MHz and system is using an ATmega32. (Nov-2016) [LJIET]	07
4	Assuming that program ROM space starting at \$500 contains "WORLD PEACE". Write a program to send all the characters to Port one by one at a time. (Nov-2016) [LJIET]	07
5	Write a Program to get data from the PIN B and send it to the I/O register of PORT C Continuously. (Nov-2019)[LJIET]	04
6	Write a Program to toggle the I/O register of PORT B continuously forever. [LJIET]	04
7	Write a Program to (a) load the PORT B register with value 0x55, and (b) Complement PORT B 700 times. [LJIET]	07
8	Write a program to count up from 00 to \$FF and send the count to PORT B. Use one CALL subroutine for sending the data to PORT B and another one for Time delay. Put a time delay between each issuing of data to PORT B. [LJIET]	07
9	Write a program for the AVR chip to toggle all the bits of PORT B, PORT C and PORT D every 1/4 of a second. Assume a crystal frequency of 1 MHz [LJIET]	07
10	An LED is connected to each pin of PORT D. Write a Program to turn on each LED from pin D0 to pin D7. Call a delay of 1sec subroutine before turning on the next LED.(Apr-2018)[LJIET]	07
11	A switch is connected to pin PB2. Write a program to monitor the status of the SW and perform the following. 1. If SW = 0, send the letter 'N' to PORT D. 2. If SW = 1, send the letter 'Y' to PORT D.(Nov-2018) [LJIET]	07



12	Write a program to toggle all the bits of port B by sending to it the values \$55 and \$AA continuously. Put a time delay of 1sec between each issuing of data to port B.(Apr-2018) [LJIET]	07
CHAPTER NO- 5 : AVR Programming in C :		
TOPIC:1 Programming in C		
SHORT QUESTIONS		
1	Give the magnitude of unsigned and signed char data type. [LJIET]	01
2	Give the magnitude of unsigned and signed int data type. [LJIET]	01
3	How many timers do we have in the ATmega32. [LJIET]	01
4	Give two factors that can affect time delay in the AVR Microcontroller. [LJIET]	01
5	List some of the interrupt sources in the AVR. [LJIET]	01
6	Which registers of the AVR are used to set the Baud rate? [LJIET]	01
DESCRIPTIVE QUESTIONS		
1	Write a short note on C Data types for the AVR C (Nov-2019)[LJIET]	04
2	Draw block diagram of 8bit timer and explain its operation. [LJIET]	07
3	Draw and explain TCCR0 register in AVR.(Nov-2019) [LJIET]	07
4	Draw and explain TIFR register in AVR. [LJIET]	07
5	Explain programming steps to Program Timer 0 in normal mode. (Nov-2019) [LJIET]	04
6	Show the instruction to 1. Enable Timer0 overflow interrupt and Timer2 compare match Interrupt. 2. Disable Timer0 overflow interrupt. [LJIET]	07
7	List various sources of AVR interrupts and their priorities. Explain steps in enabling an interrupt. Also discuss external interrupts in detail. [LJIET]	07
	List various sources of AVR interrupts and their priorities. Explain steps in enabling an interrupt.(Nov-2019) [LJIET]	04
8	Explain different steps in executing an Interrupt.(Nov-2018) [LJIET]	04
9	Write a short note on a serial communication in AVR [LJIET]	07
10	Explain Programming steps to transfer and receive data serially from AVR [LJIET]	07
11	With diagram explain baud rate generation mechanism for serial communication in AVR microcontroller. Also state mechanism for baud rate error calculation [LJIET]	07
12	With Fosc =8 MHz, Find the UBRR value needed to have the following baud rates.(Nov-2018)(Nov-2019) [LJIET] 1. 9600 2. 4800 3. 2400	03,03
13	Compare serial versus parallel data transfer(Nov-2017) [LJIET] Give Comparison between serial versus parallel data transfer(Nov-2018) [LJIET]	03 03
14	Explain Timer/Counter 0 and 1 Prescalers. (Apr-2018) [LJIET]	03
15	Explain different Timer of Atemga32 Microcontroller. (Apr-2018) [LJIET]	04
16	Explain the TIFR (Timer/Counter Interrupt Flag) and TCCR1B (Timer 1 Control) Register. (Apr-2018) [LJIET]	07
17	Explain the TIMSK (Timer Interrupt Mask) Register. (Apr-2018) [LJIET]	03
18	Explain the following Control and Status Register. a) UCSRA b) UCSRB and c) UCSRC. (Apr-2018) [LJIET]	04
19	Explain the Edge and Level Triggered interrupts. (Apr-2018) [LJIET]	07
PROGRAMS		
1	Write an AVR C program to get a byte of data from Port C. If it is less than 100, send it to Port B; otherwise, send it to Port D. (Nov-2017) [LJIET]	04



2	Write an AVR C program to send out the value 44H serially one bit at a time via PORTC, pin 3. The LSB should go out first. (Nov-2017) [LJIET]	07
3	Write a C Program for the AVR to receive bytes of data serially and put them on Port A. Set the baud rate at 9600, 8-bit data, and 1 stop bit (Nov-2017) [LJIET]	07
4	Write a C program to read the keypad and send the results to Port D. Assuming PC0-PC3 connected to columns and PC4-PC7 connected to rows (Nov-2017) [LJIET]	07
5	Write a C program to toggle only the PORT B. 4 bit continuously every 70μs. Use Timer 0, Normal mode and 1:8 prescaler to create the delay. Assume XTAL=8MHz. (Nov-2016) [LJIET] Write an Assembly program to toggle only the PORT B. 4 bit continuously every 70μs. Use Timer 0, Normal mode and 1:8 prescaler to create the delay. Assume XTAL=8MHz. (Nov-2018) [LJIET]	07 07
6	Write an AVR C program to toggle all the pins of Port B continuously by Using the Ex-OR operator. (Nov-2018) [LJIET]	04
7	A switch is connected to pin PA7. Write a C program to monitor for the status of SW and perform the following: (a) If SW=0, the stepper motor moves clockwise. (b) If SW=1, the stepper motor moves counterclockwise. (Nov-2016) [LJIET]	07
8	Write a C program for the AVR to transfer the letter 'G' serially at 9600 baud, continuously. Use 8-bit data and 1 stop bit. Assume XTAL=8MHz. (Nov-2016)(Nov-2018) [LJIET]	07,04
9	Write an AVR C program to convert packed BCD 0X29 to ASCII and display the bytes on PORTB and PORTC. (Nov-2016) [LJIET]	07
10	Write an AVR C program to send values 00-FF to PORT B. [LJIET]	04
11	Write an AVR C program to send values of -4 to +4 to PORT B. [LJIET]	04
12	LEDs are connected to pins of PORT B. Write an AVR C program that shows the count from 00 to FF on the LEDs. [LJIET]	03
13	Write a program (in Assembly or C) that toggles pin PORT B.5 every 40 μs, while at the same time transferring data from PORT C to PORT D. Assume XTAL = 1Mhz and use Timer0 with Interrupt. [LJIET]	07
14	Write a program to generate time delay of 10ms using timer 1 in normal mode. Choose prescaler of 1024. Exclude the instruction overhead due to the instructions in loop. Assume XTAL = 8MHz. [LJIET]	07
15	Write an AVR C program to toggle all the pins of Port B continuously. (a) Use the inverting operator. (b) Use the Ex-OR operator. [LJIET]	07
16	Write a program to transmit the message "YES" serially at 9600 baud, 8 bit data and 1 stop bit. Do this forever. [LJIET] Write a program to transmit the message "GTU" serially at 9600 baud, 8 bit data and 1 stop bit. Do this forever. (Nov-2019) [LJIET]	07 07
17	Using CTC mode write a program to generate a delay of 8ms. Assume XTAL = 8 MHz. [LJIET]	07
18	Write a program to generate a delay of 1920μs. (Consider XTAL= 8 MHz, Timer 2) [LJIET]	07
19	Write a program to generate a delay of 70μs. (Consider XTAL= 8 MHz, Timer 2)(Nov-2019) [LJIET]	07
CHAPTER NO- 6 : Peripheral Interfacing :		
TOPIC:1 Peripheral Interfacing		
SHORT QUESTIONS		
1	Describe the function of pins E, R/W and RS in the LCD. [LJIET]	01
2	What is the difference between the V _{cc} and V _{EE} pins on the LCD? [LJIET]	01



3	Why do we place a driver between the microcontroller and the relay? [LJIET]	01
4	What is an NC Relay? [LJIET]	01
DESCRIPTIVE QUESTIONS		
1	Draw LCD Write timing diagram for 4-bit mode. (Nov-2017) [LJIET]	03
2	For a 10-bit ADC, the reference voltage $V_{ref} = 2.56$ V. Calculate the D0- D9 output if the analog input is (a) 0.2 V and (b) 0 V. How much is the variation between (a) and (b)? (Nov-2017) [LJIET]	04
3	Explain the function of I2C (TWI) and DS1307 registers in AVR. (Nov-2017) [LJIET]	07
4	Explain I2C Bus protocol. (Nov-2016) (Nov-2018) [LJIET]	07,07
5	Explain interfacing of LCD with AVR using sample program. [LJIET]	07
6	With diagram explain LCD interfacing with ATmega32 [LJIET] Draw and Explain LCD interfacing with AVR Microcontroller. (Apr-2018) [LJIET]	07,07
7	Draw the interfacing diagram of keyboard with AVR microcontroller and explain its working. [LJIET] Explain KEYPAD interfacing with AVR Microcontroller. (Apr-2018) [LJIET]	07 07
8	Explain the technique of interfacing multiple keys using matrix key keyboard with its scanning technique and sample program flow. [LJIET]	07
9	Explain the interfacing of 4x4 matrix key board with AVR. (Nov-2019) [LJIET]	04
10	Which are the different features of ADC in AVR? [LJIET]	04
11	State features of ATmega32 ADC and discuss steps in ADC programming. [LJIET]	07
12	Explain the criterion need to be considered in choosing the relay. [LJIET]	03
13	Write a short note on Relay and Opto-isolator [LJIET] Draw the RELAY interfacing with AVR Microcontroller. (Apr-2018) [LJIET]	07,03
14	Explain the connection of Stepper motor with AVR. And write a program to rotate it continuously. [LJIET]	07
15	Explain stepper motor interfacing with ATmega32 microcontroller with appropriate diagram. [LJIET] Draw the Stepper Motor interfacing with AVR Microcontroller. (Apr-2018) [LJIET]	07 03
16	Explain RTC interfacing and Programming. [LJIET] Draw the RTC interfacing diagram with AVR Microcontroller. (Apr-2018) [LJIET]	07 04
17	Draw the ADC interfacing diagram with AVR Microcontroller using LM35. (Apr-2018) [LJIET]	04
18	Explain interfacing of AVR with an optoisolator. (Nov-2019) [LJIET]	04
PROGRAMS		
1	Write a program to see if the internal RAM location \$137 contains an even value. If so, write 55 into location \$200. If not, write 63 into location \$200. (Nov-2017) [LJIET]	07
2	Explain interfacing of 4x4 matrix keyboard with microcontroller. Write program to read key-press event and display key-code on LEDs connected at port P0. (Nov-2016)(Nov-2018) [LJIET]	07,07
3	Interface 4 LEDs and 1 switch with AVR controller and write a program to demonstrate up/down counter with mod control. [LJIET]	07
4	Two strings are given in memory. String s1 = "Hello", String s2 = "World". Write an assembly language program to display string s1 on 1 st row of LCD and string s2 on 2 nd row of LCD. [LJIET]	07
5	A switch is connected to pin PA7(PortA.7). Write a program to monitor the status of the SW and perform the following. 1. If SW = 0, the stepper motor moves clockwise. 2. If SW = 1, the stepper motor moves anti clockwise. (Nov-2019) [LJIET]	07



6	Write a C program to display “GTU EXAM “on LCD for AVR controller. (Nov-2016) [LJIET]	07
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