RGPV (DIPLOMA WING) BHOPAL	OBE CURRICULUM FOR THE COURSE	FORMAT-3	Sheet No. 1/3

Branch	CHM	Semester	IV

Course Code	7201	Course Name	Microprocessor and Interface

Course Outcome 1	Explain 8085 Microprocessor and its architecture	Teach Hrs	Marks
Learning Outcome 01	List out different microprocessors and their application.**(Cognitive)**		10
Contents	Introduction to Microprocessors: Evolution of microprocessors, Specific features of microprocessors, Application of microprocessors. Introduction to Intel family of microprocessor		
Method of Assessment	Internal assessment		
Learning Outcome 02	Illustrate the architecture of 8085 Microprocessor. **(Cognitive)**		10
Contents	**Architecture of 8085:** Explanation of each Functional Block Diagram and Internal Architecture of 8085 – ALU, Registers, Control unit, Clocks, Bus Structure: Address,Data and Control Bus, Control and Status signals of 8085 pin diagram of 8085		
Method of Assessment	External assessment-End semester theory exam		

COURSE Outcome 2	Identify memory mapping andinterfacing techniques of 8085.	Teach Hrs	Marks
Learning Outcome 03	Model the memory mapping of 8085. **(Cognitive)**		10
Contents	Memory map & addresses, input & output device,peripherals mapped I/O & memory mapped I/O.8085 m/c cycle & bus timings, control signals, memory read & writes. Simple problems on memory mapping.		
Method of Assessment	External assessment-End semester theory exam		
Learning Outcome 04	Illustrate the interfacing of I/O devices of 8085. **(Cognitive)**		10
Contents	**Memory Interfacing:** Memory structure and its requirement, concept of memory interfacing, Address decoding, Memory addresses and Interfacing circuit. Interfacing of 8155 memory segment.		
Method of Assessment	Internal assessment-End semester theory exam		
Learning Outcome 05	Demonstrate the mapping and interfacing of memory with 8085**(Psychomotor)**		15
Contents	Interfacing of 8155 memory segment. Interfacing Output LED display for binary data		
Method of Assessment	External assessment – End semester practical exam		

Course Outcome 3	Develop and execute the program using Assembly Language of 8085.	Teach Hrs	Marks
Learning Outcome 06	Identify different instructions formats and sets of Microprocessor 8085. **(Cognitive)**		10
Contents	**8085 Instructions set:** Instruction classification, Data Transfer operation, Arithmetic Operation, Logic operation, Branch Operation, Machine Cycle, Instruction word size, Opcode format and Data format. Stack, Subroutine and related instruction		
Method of Assessment	External assessment-End semester theory exam		
Learning Outcome 07	Utilize different logics and operations in programming of 8085.**(Cognitive)**		10
Contents	**Assembly Language Programming:** 8085 programming Model, how to write, assemble and execute a simple Program. Programming techniques: Looping, Counting and Indexing. Arithmetic operation related to memory, Rotate and Compare, Stacks and Subroutine related programming. (Writing and Hand Assembling a Program)		
Method of Assessment	External assessment-End semester theory exam		
Learning Outcome 08	Execute simple programs in 8085.**(Psychomotor)**		10
Contents	**Write and execute simple 8085 assembly language programs on** – Data transfer, Arithmetic operation(8 & 16-bit), Rotation and comparison, Logic operation, Branch operation, Stacks and Subroutine using assembler software/ Kit.		
Method of Assessment	Internal assessment-Practical		

COURSE Outcome 4	Compare different interrupts and code conversion of 8085.	Teach Hrs	Marks
Learning Outcome09	Classify the interrupts of 8085. **(Cognitive)**		10
Contents	Interrupts: Classification of 8085 Interrupts, EI, DI, Vectored Interrupts, Restart Software Instruction and their priorities. Implementation of Interrupt driven clock. Direct Memory Access (DMA)		
Method of Assessment	External assessment-End semester theory exam		
Learning Outcome10	Define different types of code conversion. **(Cognitive)**		10
Contents	Code conversion- BCD to Binary, Binary to BCD, BCD to Seven Segment, BCD Addition and Subtraction. Program for 2-Digit BCD to Binary Conversion and 2-digit Binary to BCD.		
Method of Assessment	External assessment-End semester theory exam		
Learning Outcome11	Demonstrate the interfacing of interrupt and code conversion of 8085.**(Psychomotor)**		10
Contents	Interfacing and Implementation of Interrupt driven clock. Write and execute program for 2-Digit BCD to Binary Conversion and 2-digit Binary to BCD.		
Method of Assessment	Internal assessment-Practical		

COURSE Outcome5	Describe different communication and peripherals interfacing with 8085	Teach Hrs	Marks
Learning Outcome12	Define serial I/O and data communication. **(Cognitive)**		10
Contents	Serial I/O and Data Communication: Basic concepts of Serial I/O, Software controlled Asynchronous Serial I/O, 8085- SOD and SID lines.		
Method of Assessment	Internal assessment		
Learning Outcome13	Illustrate Pin diagram and block diagram with interfacing of various peripherals **(Cognitive)**		10
	Peripherals: Pin diagram, block diagram, Interfacing with 8085- 8255 Programmable Peripheral Interface 8259A Programmable Interrupt Controller 8279 Programmable Keyboard Interface		
Method of Assessment	External assessment-End semester theory exam		
Learning Outcome14	Develop assembly language program to use peripherals with 8085**.** **(Psychomotor)**		15
Contents	Write and execute assembly language program to interface 8255 programmable peripheral interface, 8259A Programmable Interrupt Controller and 8279 programmable key board interface peripherals with 8085.(Any one)		
Method of Assessment	External assessment – End semester practical exam		