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PD—27—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (C.S.) (Second Semester) EXAMINATION

APRIL/MAY, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

BCS-204-B

(8085 Microprocessor)

(Friday, 12-4-2024) **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Draw suitable diagram, if necessary.

(*iv*) Assume your data, if necessary.

1. Attempt any *five* of the following (Each of **3** marks) : 15

(*a*) Explain wordlength of Microprocessor.

(*b*) Define and explain operand and opcode.

(*c*) Describe working of S_0 and S_1 status signals in 8085.

(*d*) Describe working of Program Counter.

(*e*) Describe implicit addressing mode of 8085.

P.T.O.

(*f*) Describe working of control unit.

(*g*) Describe any *two* I/O control instructions.

2. Attempt any *three* of the following (Each of **5** marks) : 15

(*a*) What is a Microprocessor ? Give features of 8085 Microprocessor.

(*b*) Draw block diagram of 8085 Microprocessor of (fig. only).

(*c*) Explain general purpose registers used in 8085 Microprocessor.

(*d*) Explain working of stack pointer and HL-pair in the 8085 Microprocessor.

(*e*) Discuss instruction format of 8085 Microprocessor with suitable example.

3. Attempt any *three* of the following (Each of **5** marks) : 15

(*a*) Draw pin configuration of 8085 Microprocessor (fig. only).

(*b*) Explain interrupt signals used in 8085 Microprocessor.

(*c*) What is addressing mode ? Describe Register addressing and Register indirect addressing modes.

(*d*) Describe fetch cycle of 8085 Microprocessor.

(*e*) Describe in brief data transfer group of instructions.

4. Attempt any *three* of the following (Each of **5** marks) : 15

(*a*) Explain working of control signals used in 8085 Microprocessor.

(*b*) Describe arithmetic group of instructions of 8085 Microprocessor.

(*c*) Write an ALP to find largest between two numbers.

(*d*) Write an ALP to find sum of two 8-bit numbers and result is 16-bit.

(*e*) Write an ALP to find 2's complement of a 16-bit number.

5. Write short notes on any *three* (Each of **5** marks) : 15

(*a*) Explain system bus.

(*b*) Execute cycle, machine cycle.

(*c*) Flag register of 8085.

(*d*) Power supply and frequency signals of 8085 Microprocessor.

(*e*) Branch control group of instructions of 8085 Microprocessor.

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PD—18—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (CS) (First Year) (Second Semester) EXAMINATION

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

(BCS–403)

(Database Management System)

(Monday, 08-04-2024) **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. *:—* (*i*) Attempt *all* questions.

(*ii*) Figures to the right indicate full marks.

1. Attempt any *five* of the following : 15

(*a*) Explain various DBMS facilities.

(*b*) What do you mean by client server systems ?

(*c*) Explain concept of shared disk.

(*d*) Explain advantages and disadvantages of DBMS.

P.T.O.

(*e*) Explain concept of DDL in detail.

(*f*) Discuss the concept of attributes in Entity Relationship Model.

(*g*) What is Database ?

2. Attempt any *three* of the following : 15

(*a*) Explain the concept of foreign key with example.

(*b*) Explain various DBMS users in detail.

(*c*) Discuss queries to create and modify the created table.

(*d*) Explain concept of relationship sets.

(*e*) Explain concept of distributed database.

3. Attempt any *three* of the following : 15

(*a*) Explain various data types used in SQL.

(*b*) Explain any *two* multiple row functions used in SQL.

(*c*) What do you mean by participation constraints ?

(*d*) Explain the concept of transaction server in detail.

(*e*) Explain the concept of data server.

4. Attempt any *three* of the following : 15

(*a*) Explain procedure to change table structure in SQL.

(*b*) Explain in detail concept of constraints.

(*c*) Explain types of relationships in detail.

(*d*) How to speedup the parallel systems ?

(*e*) Discuss the concept of views in SQL.

5. Write short notes on any *three* of the following : 15

(*a*) Entity sets

(*b*) Centralized systems

(*c*) DQL

(*d*) Number functions in SQL

(*e*) Altering view.

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PD—26/PM—26—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (CS) (Second Semester) EXAMINATION

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

(BCS–204–A)

(Desktop Publishing)

(Friday, 12-04-2024) **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. *:—* (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

(*iv*) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) Explain ways to open publication.

(*b*) Explain ways for setting page size.

P.T.O.

(*c*) Explain different orientations of page.

(*d*) Explain color conversions in Photoshop.

(*e*) What are the different marquee select tools in Photoshop ?

(*f*) Explain magic wand tool in photoshop.

(*g*) Explain how to set page numbers in PageMaker ?

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain tool box in PageMaker.

(*b*) Explain any *five* tools in Photoshop.

(*c*) Explain procedure to set master page left page and right page in PageMaker.

(*d*) Explain purpose of merging layers with its procedure.

(*e*) Explain purpose of brushes also state its types and usage procedure.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain all methods of adding and removing pages in PageMaker.

(*b*) Explain types of effects Photoshop.

(*c*) Explain procedure to tone and make color correction in Image using Photoshop.

(*d*) Write down different page measurements in Photoshop.

(*e*) Explain different options in create new document window in PageMaker.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain various ways to alter any image in Photoshop.

(*b*) Explain zoom tool in detail in both Photoshop and PageMaker.

(*c*) Explain ways to clean image in Photoshop.

(*d*) Write a procedure to add any image in PageMaker and wrapping text.

(*e*) Write down PageMaker window elements.

5. Write short notes on any *three* of the following (**5** marks each) : 15

(*a*) Lasso select tool

(*b*) Crop tool

(*c*) Shadow in Photoshop

(*d*) Procedure to select font in PageMaker

(*e*) Drawing tools in PageMaker.

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PD—11—2024

FACULTY OF SCIENCE & TECHNOLOGY

B.Sc. (CS) (Second Semester) EXAMINATION

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper-AF-15

(Intro. to Programming Language Using C (Part 2))

(Friday, 05-04-2024) **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Assume suitable data, if required.

(*iv*) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) What is function ? Explain in detail.

(*b*) Explain dereferencing pointers.

(*c*) Explain Dynamic memory allocation.

P.T.O.

(*d*) Explain malloc() memory allocation function.

(*e*) Explain difference between structure and union.

(*f*) Explain operations on file.

(*g*) Explain strcmp() string library functions.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain types of functions.

(*b*) Explain command line arguments.

(*c*) Explain recursion with a suitable example.

(*d*) Write a program to perform addition of two numbers using function.

(*e*) Explain storage classes in detail.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) What is pointer ? Explain pointer declaration in detail.

(*b*) Explain pointer to pointer in detail.

(*c*) Explain types of file in detail.

(*d*) Write a program to define a structure of student.

(*e*) Explain the concept of array of structure.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain concept of union with suitable example.

(*b*) Explain pointer to structure in detail.

(*c*) What is file ? Explain how to create FILE.

(*d*) What is structure ? Explain nested structure.

(*e*) Write a program to read the data from a file.

5. Write short notes on any *three* of the following (**5** marks each) : 15

(*a*) strcpy() & strcat()

(*b*) Pointer to function

(*c*) Random access file

(*d*) calloc()

(*e*) Pointer to structure.

This question paper contains **3** printed pages]

PD—04—2024

FACULTY OF SCIENCE & TECHNOLOGY

B.Sc. (CS) (Second Semester) EXAMINATION

MARCH/APRIL, 2024

(Revised/CBCS Pattern)

COMPUTER SCIENCE

(AF-05)

(Operating System)

(Wednesday, 03-04-2024) **Time : 10.00 a.m. to 1.00 p.m.**

Time—3 *Hours* *Maximum Marks*—75

N.B. :— (1) *All* questions are compulsory.

(2) Figures to the right indicate full marks.

(3) Assume suitable data, if required.

(4) Use of any electronic media such as mobile phone, digital diary and electronic calculator is not permitted.

1. Attempt any *five* of the following (**3** marks each) : 15

(*a*) Explain operating system services.

(*b*) Explain SCFS in brief.

(*c*) Explain contagious memory allocation scheme.

(*d*) Explain concept of multiprocessor.

(*e*) Explain command line interpreter.

(*f*) Explain user's view of operating system.

(*g*) Explain extended machine.

P.T.O.

2. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain operating system structure.

(*b*) Explain OS as a resource manager.

(*c*) Explain single processor comport system architecture.

(*d*) Explain system boot in brief.

(*e*) Explain process control system calls in brief.

3. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain process state model.

(*b*) Explain context switching.

(*c*) Explain shortest job first algorithm.

(*d*) Explain process control block.

(*e*) Explain concept of scheduler.

4. Attempt any *three* of the following (**5** marks each) : 15

(*a*) Explain priority scheduling.

(*b*) Explain fragmentation in brief.

(*c*) Explain round robin method.

(*d*) Explain scheduling queue.

(*e*) Explain segmentation.

5. Write short notes on any *three* of the following (**5** marks each) : 15

(*a*) Paging method

(*b*) Concept of process

(*c*) Communication and protection system calls

(*d*) Hierarchical machine

(*e*) SJF.