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PD—01—2024

FACULTY OF COMPUTER STUDIES

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

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

(Basic of Computer Science)

(Tuesday, 2-4-2024) **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*) Assume suitable data wherever necessary.

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

(*a*) Explain file Transfer Protocol.

(*b*) Explain OSI Model.

(*c*) Write a note on ROM.

(*d*) Explain Web browser.

(*e*) What is Network ?

(*f*) Explain Cache Memory.

(*g*) What is operating system ?

P.T.O.

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

(*a*) Explain the concept of Workstation.

(*b*) Explain client and server model.

(*c*) Explain second and third generation of Computer.

(*d*) Explain organization of Computer.

(*e*) Explain characteristics of Computer.

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

(*a*) Explain the concept of Keyboard.

(*b*) Explain the concept of projector.

(*c*) Explain Bio-metric Device.

(*d*) Explain types of Monitor.

(*e*) Explain the concept of RAM.

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

(*a*) Explain USB flash Drive.

(*b*) Explain the concept of HDD.

(*c*) Explain the concept of DVD.

(*d*) Explain Disk O.S. in detail.

(*e*) Explain Windows O.S. in detail.

5. Attempt any *three* (short notes) of the following : 15

(*a*) Cache memory

(*b*) Mainframe computer

(*c*) E-mail

(*d*) First Generation of computer

(*e*) Memory Card.

This question paper contains **4** printed pages]

PD—22—2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-104-B

(Fundamentals of Digital Electronics)

(Wednesday, 10-4-2024) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three 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*) Excess-3 code

(*b*) NAND Gate

(*c*) Two's Complement Binary

P.T.O.

(*d*) Analog & Digital Signals

(*e*) Decoder

(*f*) T flip-flop

(*g*) SISO shift register.

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

(*a*) Perform the following conversions :

(*i*) $(452)_8 = (?)_{16}$

(*ii*) $(10101110)_2 = (?)_8$

(*iii*) $(1101011011111)_2 = (?)_{16}$

(*iv*) $(7F)_{16} = (?)_{10}$

(*v*) $(567)_{10} = (?)_8$

(*b*) Perform the following operations :

(*i*) $(11110)_2 + (11001)_2$

(*ii*) $(100001)_2 - (1011)_2$

(*iii*) $(100)_2 \times (011)_2$

(*iv*) $(1111)_2 \div (11)_2$

(*v*) $(1010)_2 = (?)_{Gray}$

(*c*) What is Number System ? Explain Octal and Hexadecimal number systems in detail.

(*d*) What is error detecting and correcting code ? Explain hamming code with suitable example.

(*e*) State and prove Demorgan's first and second theorem.

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

(*a*) Explain full adder in detail.

(*b*) Explain Ex-OR and Ex-NOR Gates in detail.

(*c*) Explain SOP and POS forms of Boolean function in detail.

(*d*) Express the following Boolean function in its standard or canonical form :

$$Y = A'B + B'C + A'C'.$$

(*e*) Simplify the following using K-map :

$$Y = A'B'C + AB'C' + ABC + A'B'C'$$

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

(*a*) Simplify the following using K-map :

$$f(A, B, C, D) = \pi M(0, 1, 3, 4, 5, 6, 8, 9, 10, 11, 14).$$

(*b*) What is De-multiplexer ? Explain 1 : 8 De-multiplexer in detail.

(*c*) What is flip-flop ? Explain S-R flip-flop in detail.

(*d*) What is asynchronous counter ? Explain 3-bit asynchronous counter in detail.

(*e*) Explain J-K flip-flop in detail.

P.T.O.

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

(*a*) Gray Code

(*b*) Digital to Analog converter

(*c*) D flip-flop

(*d*) Encoder

(*e*) SIPO shift register.

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

PD—07—2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-102

(Introduction to Programming Language Using C : Part I)

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

Time—Three 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.

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

(*a*) Explain the history of C.

(*b*) Explain the Primary Data types in C.

(*c*) Explain the Break and Continue statements.

(*d*) Explain the Compilers and Interpreters.

(*e*) Explain the array declaration and initialization.

(*f*) Explain the Algorithms.

(*g*) Explain the relational operator.

P.T.O.

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

(*a*) Explain in detail structure of a C program.

(*b*) Explain in detail keyword and variables.

(*c*) Explain in detail printf( ) and scanf( ).

(*d*) WAP in C to read two integer number and swap it.

(*e*) WAP in C to read name of student, exam no. and marks in three subjects. Find the print total marks and average marks.

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

(*a*) Explain in detail if-else statement with example.

(*b*) Explain in detail Switch Statement with example.

(*c*) Explain in detail While Loop with example.

(*d*) WAP in C to read +ve integer no. and check prime or not.

(*e*) WAP in C to read four digit number and print in reverse order.

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

(*a*) Explain in detail Recursion with example.

(*b*) Explain in detail passing array to function.

(*c*) Explain in detail Nested for Loop with example.

(*d*) WAP in C to read two unequal numbers and print larges number.

(*e*) WAP in C to read a +ve integer number and find factorial.

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

(*a*) What is array ? Explain in detail one-dimensional array.

(*b*) Explain in detail two-dimensional array with example.

(*c*) Explain in detail increment and decrement operators in C.

(*d*) WAP in C to read to two matrix 3 × 3. Find and print matrix addition.

(*e*) WAP in C to read 10-array elements and sort in ascending order.

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

PD—21—2024

FACULTY OF COMPUTER SCIENCE

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

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-104-A

(Office Automation)

(Wednesday, 10-4-2024) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

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

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

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

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

(*a*) Slide show

(*b*) Slide transition

(*c*) Paragraph tag

(*d*) Row height

(*e*) Style tab

(*f*) Performing query

(*g*) Goal seek.

P.T.O.

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

(*a*) Explain Header and Footer in detail.

(*b*) Explain cell formatting in excel.

(*c*) Explain print dialog box in detail.

(*d*) Explain mail merge in detail.

(*e*) Explain database in MS-Access in detail.

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

(*a*) Explain reports in MS-Access in detail.

(*b*) What is Formula ? Explain basic functions in detail with example.

(*c*) Explain font tab in detail.

(*d*) Explain procedure for creating presentation using templates.

(*e*) Explain data validation in detail.

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

(*a*) What is chart ? Explain types of chart in detail.

(*b*) Explain in detail opening screen of MS-Word.

(*c*) Explain procedure to creating forms in MS-Access.

(*d*) Explain Insert tab.

(*e*) How to add Audio and Video on slides in MS-PowerPoint ?

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

(*a*) Custom animation effect

(*b*) Custom dictionary

(*c*) Advantage of MS-Access

(*d*) Rows and columns

(*e*) Editing option in MS-Word.

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PD—14—2024

FACULTY OF COMPUTER SCIENCE

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

MARCH/APRIL, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-103

(Web Technologies)

(Saturday, 6-4-2024) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

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

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

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

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

(*a*) Explain Historical Root of HTML.

(*b*) What is telnet ? Explain.

(*c*) Explain Frameset tag.

(*d*) Explain embedded style sheet.

(*e*) Explain Radio button in detail.

(*f*) What is W.W.W. ?

(*g*) Explain Un-Ordered List in HTML.

P.T.O.

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

(*a*) Explain Creating Email Hyperlinks in HTML with HTML.

(*b*) Explain <font> tag in HTML.

(*c*) Explain TABLE, TR, TH, TD tag with example.

(*d*) Explain input and output statement of JavaScript.

(*e*) Explain different text-level elements in HTML.

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

(*a*) What is JavaScript ? Explain features of JavaScript.

(*b*) Explain Heading tag with example.

(*c*) Explain HTML, HEAD, TITLE, BODY tag.

(*d*) How to create hyperlinks in HTML document ? Explain with example.

(*e*) Explain <Span> tag with example.

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

(*a*) Explain <form> tag with attributes.

(*b*) Explain <img> tag with all attributes.

(*c*) Write HTML code to design HTML Login form which includes Text control, Password Field Control, Submit Button and Reset Button Control.

(*d*) Explain <frame> tag in HTML.

(*e*) Explain External style sheet with example.

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

(*a*) Address tag.

(*b*) Web Browser

(*c*) Scrolled List

(*d*) Variable in JavaScript

(*e*) Ordered list.