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GF—01—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2023

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-101-B

(Basics of Computer Science)

(Wednesday, 19-4-2023) **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*) Explain mainframe computer.

(*b*) Explain Mouse.

(*c*) What is RAM ?

(*d*) Explain USB flash Drive.

(*e*) Explain E-mail.

(*f*) Explain Workstation.

(*g*) Explain Compact disc.

P.T.O.

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

(*a*) Explain characteristics of computer.

(*b*) Explain third and fourth generations of computer.

(*c*) What is Input device ? Explain keyboard in detail.

(*d*) What is Output device ? Explain any *one* type of printer in detail.

(*e*) What is ROM ? Explain different types of ROM in detail.

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

(*a*) Explain Hard disk drive in detail.

(*b*) What is Operating System ? Explain Windows operating system.

(*c*) Explain memory card in detail.

(*d*) Explain Linux operating system in detail.

(*e*) Explain Disk operating system in detail.

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

(*a*) What is Network ? Explain LAN in detail.

(*b*) Explain OSI reference model in detail.

(*c*) What is Web Browser ? Explain different types of web browser.

(*d*) Explain file transfer protocol.

(*e*) Explain data transmission modes in detail.

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

(*a*) Client and Server

(*b*) Biometric devices

(*c*) Trackball

(*d*) Digital versatile disk

(*e*) MAN.

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GF—27—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2023

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-104-B

(Fundamentals of Digital Electronics)

(Thursday, 27-4-2023) **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*) Hexadecimal Number System

(*b*) BCD Code

(*c*) Two's Complement Binary

(*d*) Ex-NOR gate

(*e*) PISO Shift register

(*f*) Half Adder

(*g*) Excess-3 Code

P.T.O.

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

(*a*) Perform the following conversions :

(*i*) $(F53A)_{16} = (?)_8$

(*ii*) $(724.2)_8 = (?)_{10}$

(*iii*) $(4532)_8 = (?)_2$

(*iv*) $(111111101111010)_2 = (?)_{16}$

(*v*) $(88)_{10} = (?)_2$.

(*b*) Perform the following operations :

(*i*) $(101)_2 + (11100)_2$

(*ii*) $(110011)_2 - (1111)_2$

(*iii*) $(11)_2 \times (111)_2$

(*iv*) $(10100)_2 \div (100)_2$

(*v*) $(842)_{10} = (?)_{BCD8421}$

(*c*) State and prove DeMorgan's first and second theorem.

(*d*) Explain Decimal and Binary Number Systems in detail.

(*e*) What is Logic Gate ? Explain NAND and NOR Gates in detail.

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

(*a*) Explain SOP and POS forms of Boolean functions in detail.

(*b*) Explain K-map in detail.

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

$$f(A, B, C, D) = \Sigma m\,(0, 1, 2, 3, 4, 5, 8, 9, 10, 11, 14, 15)$$

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

$$Y = A' + BC' + A'BC$$

(*e*) What is Multiplexer ? Explain 4 : 1 Multiplexer in detail.

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

(*a*) What is Digital to Analog Converter ? Explain any *one* type in detail.

(*b*) What is Counter ? Explain 3 bit synchronous counter in detail.

(*c*) What is flip-flop ? Explain J-K flip-flop in detail.

(*d*) What is Shift Register ? Explain SIPO shift register in detail.

(*e*) What is Decoder ? Explain 2 : 4 Decoder in detail.

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

(*a*) T flip-flop

(*b*) Full Adder

(*c*) Octal Number System

(*d*) Gray Code

(*e*) De-multiplexer.

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GF—09—2023

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (First Semester) EXAMINATION

APRIL/MAY, 2023

(CBCS/Revised Course)

COMPUTER SCIENCE

(Introduction to Programming Language Using C : Part I)

(Friday, 21-4-2023) **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*) What is the difference between high level language and assembly language ?

(*b*) Explain what is compiler.

(*c*) Explain primary data types in C.

(*d*) What are reserved keywords ? Write any *five* keywords.

P.T.O.

(*e*) Draw a flowchart for addition of 2 integers.

(*f*) Explain nested if else syntax.

(*g*) What are the applications of C Language ?

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

(*a*) Explain operators and types of operators in C.

(*b*) What is formatted I/O statement ?

(*c*) Write a program to find first 10 prime numbers.

(*d*) Write a program to print first 10 numbers of Fibonacci series.

(*e*) Explain the flow of nested for loop using any example.

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

(*a*) Explain the switch case/statement in C.

(*b*) Write a program to find greatest of 3 numbers, take 3 numbers from user.

(*c*) Explain the syntax of if-else ladder.

(*d*) Write a program to check whether given integer number is palindrome or not.

(*e*) Explain do-while loop syntax.

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

(*a*) Explain break statement with an example.

(*b*) Explain goto statement with an example.

(*c*) Explain continue statement with example.

(*d*) Explain what is array.

(*e*) What are header files ? Give at least **3** examples of header files.

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

(*a*) Bitwise operator

(*b*) Two-dimensional array

(*c*) Stdio.h header file and conio.h header file

(*d*) While loop

(*e*) History of C language.

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

GF—26—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2023

(CBCS/Revised Pattern)

COMPUTER SCIENCE

(Office Automation)

(Thursday, 27-4-2023) **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*) Explain Find and replace.

(*b*) Explain the use of query in MS-Access in detail.

(*c*) Explain slide transition.

(*d*) Introduce MS-Excel.

P.T.O.

(*e*) What is the use of styles in MS-Word ?

(*f*) Explain any *four* aggregate function.

(*g*) Write a note on creating index in MS-Word.

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

(*a*) How to use header and footer in Documentation ? Explain in detail.

(*b*) Explain string function.

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

(*d*) Give a detailed note on creating presentation based on template.

(*e*) Give a detailed note on advantages and disadvantages of MS-Access.

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

(*a*) Explain cell formatting in excel.

(*b*) Explain use of formulas and functions in Excel.

(*c*) Explain home menu-font tab.

(*d*) What are the custom animation effects in MS-PowerPoint ? Explain in detail.

(*e*) Explain advantages of MS-Access.

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

(*a*) Explain adding audio and video on slide.

(*b*) Explain style tab.

(*c*) Give a note on opening screen of MS-Access.

(*d*) Discuss about data validation and its use in detail.

(*e*) How to create a form and add new record in it ?

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

(*a*) Describe creating database in MS-Access in detail.

(*b*) Discuss about opening screen of MS-Word.

(*c*) Explain Mail merge in detail.

(*d*) Describe formatting cell, row and column in MS-Excel.

(*e*) Explain about the opening screen of MS-PowerPoint.

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

GF—17—2023

FACULTY OF SCIENCE AND TECHNOLOGY

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

APRIL/MAY, 2023

(CBCS/Revised Course)

COMPUTER SCIENCE

Paper BCS-103

(Web Technologies)

(Tuesday, 25-4-2023) **Time : 10.00 a.m. to 1.00 p.m.**

Time—Three Hours *Maximum Marks*—75

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

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

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

(*a*) Discuss in brief the history of HTML.

(*b*) Explain the structure of HTML program.

(*c*) Explain with example the use of HR tag.

(*d*) What is URL ? Explain with an example.

(*e*) What is Frame ? Explain with example.

(*f*) What are advantages of using CSS ?

(*g*) Explain in brief TELNET.

P.T.O.

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

(*a*) Explain heading tags in HTML with an example.

(*b*) Explain any *one* web browser.

(*c*) Explain with example, how to create frame in HTML ?

(*d*) What is DHTML ? Explain the components of DHTML.

(*e*) Write a HTML program to display the names of your five friends on separate lines and in bold format with center alignment.

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

(*a*) Explain paragraph tag with an example.

(*b*) How to give the hyperlink to an image in HTML ? Explain with example.

(*c*) What is a form ? Explain elements of a form.

(*d*) Explain with example inline CSS style.

(*e*) Write a program that will display our university name in the Marquee form at the top of screen and your paper title at the bottom of the screen.

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

(*a*) Explain with an example types of list in HTML.

(*b*) How to create the table of 3 columns and four rows in HTML ? Explain.

(*c*) What is java script ? Explain its advantages.

(*d*) Explain DIV tag with an example.

(*e*) Write a HTML program that will display a demonstration of Login form.

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

(*a*) Web page and Website

(*b*) Web server

(*c*) FRAME tags

(*d*) Structure of Java Script

(*e*) Rollover Buttons.