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

VD—01—2024

FACULTY OF COMPUTER SCIENCE

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

NOVEMBER/DECEMBER, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-101

(Basic of Computer Science)

(Tuesday, 26-11-2024)   **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*)   Joystick

  (*b*)   Definition of computer

  (*c*)   Projector

  (*d*)   Write a short note on mainframe computer.

P.T.O.

(e) Write a short note on USB flash drive.

(f) Cache memory

(g) Software and hardware.

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

(a) Explain generation of computer.

(b) Explain Hard disk drive.

(c) Explain DVD.

(d) Explain output device monitor with its type.

(e) Explain types of web browser.

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

(a) Explain basic organization of computer.

(b) Explain computer memory in detail.

(c) Explain Linux Operating System.

(d) Define file transfer protocol.

(e) Explain characteristics of computer in detail.

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

(a) Explain DOS in detail.

(b) Explain compact disk and digital versatile disk.

(c) Define computer network with its type.

(d) Explain types of computer in detail.

(e) Explain input devices.

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

(a) Explain memory card.

(b) Explain output device in detail.

(c) Explain OSI model in detail.

(d) Explain types of operating system.

(e) Explain e-mail in detail.

VD—22—2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-104-B

(Fundamentals of Digital Electronics)

Tuesday, 3-12-2024)   **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*)   Draw suitable diagram wherever necessary.

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

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

   (*a*)   Explain octal number system.

   (*b*)   Explain Excess-3 code.

   (*c*)   Explain NOT-gate.

   (*d*)   Explain binary addition.

P.T.O.

(e) Explain T-flip-flop.

(f) Describe in brief POS-form.

(g) Explain D-flip-flop.

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

(a) Explain in detail binary number system.

(b) Describe 1's complement and 2's complement of a binary number.

(c) Differentiate between analog and digital signal.

(d) What is a gate ? Explain in detail working of OR-gates.

(e) Describe method of error detection and correction with Parity Bit.

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

(a) Perform the following conversions :

(i) $(846)_{10} = (?)_2$

(ii) $(462)_{16} = (?)_{10}$

(b) Explain in detail Hexadecimal number system.

(c) Explain working of NOR-gates.

(d) Explain working of EXNOR-gates.

(e) Describe in detail DeMorgan's first theorem.

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

   (*a*) Perform the following operations :

      (*i*) $(10101110)_2 + (10110101)_2 = (?)_2$

      (*ii*) $(110110101) \times (10110)_2 = (?)_2$

   (*b*) Explain working of full adder.

   (*c*) What is K-map ? Describe with K-map. How a circuit can be simplified ?

   (*d*) What is Multiplexer ? Describe 8 : 1 multiplexer.

   (*e*) Describe in detail JK-flip-flop.

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

   (*a*) Encoder

   (*b*) Digital to Analog Converter

   (*c*) Asynchronons Counter

   (*d*) SIPO-Shift Register

   (*e*) SR-flip-flop.

VD—07—2024

FACULTY OF SCIENCE AND TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-102

(Introduction to Programming Language Using C) (Part-I)

(Thursday, 28-11-2024)   **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 the history of 'C'.

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

(c)   Explain the Keywords in 'C'.

(d)   What is Array ?

P.T.O.

(*e*) Explain the getchar( ) and putchar( ).

(*f*) Explain the Machine language.

(*g*) Explain the logical operator in 'C'.

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

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

(*b*) Explain in detail Flowcharts with any *four* symbols.

(*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 and 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 split it.

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

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

(*b*) Explain in detail Array declaration and Initialization.

(*c*) Explain in detail Else if Ladder Statement.

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

(*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 two-dimensional array.

(*b*) Explain in detail Break and Continue with example.

(*c*) Explain in detail Passing arrays to functions.

(*d*) WAP in C to find area rectangle.

(*e*) WAP in C to read 10-array elements. Find and print summation of first and last element.

This question paper contains **2** printed pages]

NEPVD—103—2024

FACULTY OF SCIENCE & TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

COMPUTER SCIENCE

SCSCMT–1102

(Computer Network)

(Monday, 16-12-2024)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

N.B. :— (*i*)   Question No. **1** is compulsory.

(*ii*)   From Q. Nos. **2** to **5** solve any *three* questions.

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

(*iv*)   Assume suitable data if necessary.

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

1.   Attempt the following (**2** marks each) :   10

(*a*)   Explain types of Network.

(*b*)   Explain IP Address Classes.

(*c*)   Explain SMTP in detail.

(*d*)   Explain Repeater.

(*e*)   What is mesh topology ?

P.T.O.

2. Attempt the following (any *two*) (**5** marks each) :   10

   (*a*)   Explain Twisted pair cable and its types.

   (*b*)   What is Topology ? Explain star topology.

   (*c*)   Explain serial transmission mode.

3. Attempt the following any *two* (**5** marks each) :   10

   (*a*)   Explain types of Ethernet.

   (*b*)   Explain Internet *versus* Intranet in detail.

   (*c*)   Explain IPv4 *Vs* IPv6.

4. Attempt the following (any *two*) :   10

   (*a*)   Explain OSI/ISO reference model.

   (*b*)   What is Switching ? Explain packet switching.

   (*c*)   Explain DHCP in detail.

5. Attempt the following (any *two*) :   10

   (*a*)   Explain NIC card in detail.

   (*b*)   Explain wifi and wimax in detail.

   (*c*)   Explain Internet of Things (IOT).

This question paper contains **2** printed pages]

NEPVD—101—2024

FACULTY OF SCIENCE & TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

(NEP 2020)

COMPUTER SCIENCE

SCSCCT–1101

(Logic Building Using C)

(Friday, 13-12-2024)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

N.B. :— (*i*) Question No. **1** is compulsory.

  (*ii*) Attempt any *three* questions from Q. No. **2** to Q. No. **5**.

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

  (*iv*) Assume suitable data if necessary.

1.   Attempt the following :   10

(*a*)   Explain primary data types.

(*b*)   Explain interpreter in detail.

(*c*)   Explain continue statement with example.

(*d*)   Explain one-dimensional array declaration in detail.

(*e*)   Explain bitwise operators.

P.T.O.

2. Attempt the following (any *two*) : 10

   (*a*) How complier differ from interpreter ?

   (*b*) Explain assembly level language in detail.

   (*c*) Explain advantages of high level language.

3. Attempt any *two* of the following : 10

   (*a*) Explain flow chart with symbols.

   (*b*) Explain ++ and − − operators.

   (*c*) Write a program to calculate area of circle.

4. Attempt any *two* of the following : 10

   (*a*) Explain switch statement with syntax and example.

   (*b*) How do-while loop differ from while loop ?

   (*c*) Write a program in C to calculate factorial of given number.

5. Attempt any *two* of the following : 10

   (*a*) How one-dimensional array is declared and initialized ?

   (*b*) How array is passed to function ?

   (*c*) Write a program to sort array in ascending order.

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

NEPVD—102—2024

FACULTY OF SCIENCE & TECHNOLOGY

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

NOVEMBER/DECEMBER, 2024

(NEP 2020)

COMPUTER SCIENCE

Paper–SCSCMT–1101

(Web Technology)

(Saturday, 14-12-2024)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—*40

N.B. :— (*i*) Question No. **1** is compulsory.

(*ii*) From Q. No. **2** to Q. No. **5**, solve any *three* questions.

1.   Attempt the following (**2** marks each) :   10

(*a*) Define internet.

(*b*) What do you mean by tag ?

(*c*) What is the use of BR & HR tag ?

(*d*) Define ordered list.

(*e*) What are features of HTML5 ?

P.T.O.

2. Attempt the following (any *two*) (**5** marks each) : 10

    (*a*) Explain IDE applications of HTML.

    (*b*) Explain history of WWW.

    (*c*) Explain HTTP and FTP protocol.

3. Attempt the following (any *two*) (**5** marks each) : 10

    (*a*) Explain structure of HTML.

    (*b*) Design web page in HTML to demonstrate image tag and their attributes.

    (*c*) Explain marquee tag and their attributes.

4. Attempt the following (any *two*) (**5** marks each) : 10

    (*a*) Create web page in HTML to display the following output (insert **5** record in it).

Roll No.	S_Name	DOB

    (*b*) Explain frame tag with their attributes.

    (*c*) Design web page to insert image using anchor tag.

5. Attempt the following (any *two*) (**5** marks each) : 10

    (*a*)   Write a simple program in HTML5 to print information (like name, address, phno) in it.

    (*b*)   Explain advantages and disadvantages of HTML5.

    (*c*)   Explain elements of HTML5.

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

VD—21—2024

FACULTY OF COMPUTER SCIENCE

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

NOVEMBER/DECEMBER, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-104A

(Office Automation)

Tuesday, 3-12-2024)   **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*)   How to open the Home Screen of MS-Word ?

   (*b*)   What is MS-Excel ? State its advantages.

   (*c*)   How to create a new presentation based on Templates in
           MS-PowerPoint ?

P.T.O.

(*d*) Write down the procedure to create Charts in MS-Excel.

(*e*) Explain Headers and Footers tool in MS-Word.

(*f*) Explain the features of Style Tab in MS-Word.

(*g*) How to open the Home Screen of MS-Access ?

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

(*a*) Explain the Editing Options in MS-Word.

(*b*) Explain Mail Merge in MS-Excel.

(*c*) Explain the feature of Home tab of MS-Word.

(*d*) What is Goal Seek in MS-Excel ? Explain in detail.

(*e*) What is Slide Transition ? Write the procedure to apply Slide Transition.

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

(*a*) Explain the Splitting of Column in MS-Excel.

(*b*) What is Custom Animation Effect in MS-PowerPoint ? Write procedure to apply the same.

(*c*) What is Slideshow ? Explain how Slideshow improve presentation.

(*d*) How to add Audio and Video on Slides in MS-PowerPoint ?

(*e*) What is Data Validation in MS-Excel ?

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

    (*a*) Which are Pre-set Conditional Formatting ? Explain in detail.

    (*b*) Write down the procedure to open Home Screen of MS-PowerPoint.

    (*c*) How to adjust Row Height and Column Width in MS-Excel ?

    (*d*) Explain different formatting option by using Format Cell option.

    (*e*) Explain printing option in MS-Word.

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

    (*a*) What are the advantages and disadvantages of MS-Access ?

    (*b*) Explain how to generate Database in MS-Access.

    (*c*) Explain how to perform Queries in MS-Access.

    (*d*) Explain how to generate Reports in MS-Access.

    (*e*) Explain how to create Form in MS-Access.

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

VD—14—2024

FACULTY OF COMPUTER SCIENCE

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

NOVEMBER/DECEMBER, 2024

(CBCS/Revised Pattern)

COMPUTER SCIENCE

Paper BCS-103

(Web Technologies)

(Saturday, 30-11-2024)   **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)   Explain Un-ordered List in HTML.

(c)   Explain Frameset tag.

(d)   Explain embedded style sheet.

P.T.O.

(*e*) Explain variable in JavaScript.

(*f*) Explain Web Browser.

(*g*) What is telnet ?

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

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

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

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

(*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*) Explain External style sheet with example.

(*b*) Explain Heading tag with example.

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

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

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

(*c*) Explain <form> tag with all attributes.

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

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

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

(*a*) Address tag.

(*b*) W.W.W.

(*c*) Ordered list.

(*d*) Radio button.

(*e*) Scrolled list.