SLR-GG-1

Seat No.	

Set P

B.C.A. (Semester - I) (New) (CBCS) Examination: March/April-2024
ENGLISH (Comp.)
Communication Skill (BCA1101)

Day & Date: Friday, 05-04-2024 Max. Marks: 40
Time: 12:00 PM To 02:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives from the options. **08**

1) What topic was Gandhi asked to deliver?
a) Khadi b) Freedom
c) Poverty d) Religion

2) What did the grandmother feed in the city?
a) Dogs b) Sparrows
c) Vultures d) Cows

3) Where should one look for allies?
a) The battlefield b) Heart
c) Wit d) Bravery

4) Which flowers compete for the title?
a) Lily and daisy b) Rose and daisy
c) Lily and rose d) Rose and tulip

5) How many times does the son disobey?
a) 7 b) 8
c) 5 d) 4

6) -tion in education is _____.
a) Prefix b) Suffix
c) infix d) circumfix

7) The government is not very sensitive towards farmer. (identify underlined parts of speech)
a) Noun b) Verb
c) Adjective d) Adverb

8) The books are informative. (identify underlined parts of speech)
a) Noun b) Verb
c) determiner d) Adverb

Q.2 Answer any four of the following. **12**

a) What is the most deep-seated disease in India?
b) What is the significance of sparrows?
c) Discusses the poets state of mind in “Let me not pray to be sheltered ...?
d) What changed their relationship?
e) Why did poet focus on the lotus flower?
f) Why does father punishes his son?

Q.3 **Answer any One of the following questions.** **10**

What is communication? Write the elements of communication.

OR

What is formal communication? Write the principles of effective communication.

Q.4 What are aspects of intrapersonal communication? **10**

SLR-GG-2

Seat No.	

Set P

B.C.A. (Semester - I) (New) (CBCS) Examination: March/April-2024
Fundamentals of Computer (Paper - I) (BCA1102)

Day & Date: Sunday, 12-05-2024 Max. Marks: 40
Time: 12:00 PM To 02:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose correct alternative for the following. **08**

1) The main electronic component used in first generation computers was _____.
a) Transistors b) Vacuum Tubes
c) Integrated Circuits d) None of above

2) UNIVAC is _____.
a) Universal Automatic Computer b) Universal Array Computer
c) Unique Automatic Computer d) Unvalued Automatic Computer

3) Computer is free from tiresome We call it _____.
a) Accuracy b) Reliability
c) Diligence d) Versatility

4) _____ is the optical storage device.
a) Magnetic Tape b) Hard Disk
c) Pen Drive d) CD/DVD

5) Magnetic tape is _____ storage device.
a) Random b) Sequential Accessed
c) Track d) None of these

6) _____ is an input device.
a) Printer b) Plotter
c) MICR d) None of these

7) The language that the computer can understand and execute is called _____.
a) Machine language b) high level
b) System program d) None of the above

8) _____ device is commonly used to check the optical answer sheets in multiple choice question examination.
a) MICR b) OBCR
c) OMR d) Scanner

Q.2 Answer Any Four the following **08**

a) What is joystick?
b) What is inbox and outbox?
c) What is system software?
d) How to create a new E-mail?
e) What is compiler?

Q.3 Write notes on any Two of the following. **08**

a) Bar code reader
b) WWW
c) Laser printer

Q.4 Answer any Two of the following. **08**

a) Explain types of scanner.
b) Short note on light pen.
c) What is search engine? Explain any one popular search engines.

Q.5 Answer any One of the following. **08**

a) Explain LAN, WAN, MAN in details.
b) Explain different generations of computers.

SLR-GG-3

Seat No.		Set	P

B.C.A. (Semester - I) (New) (CBCS) Examination: March/April-2024
Office Automation (Paper - II) (BCA1103)

Day & Date: Wednesday, 10-04-2024 Max. Marks: 40
Time: 12:00 PM To 02:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions: **08**

1) _____ is a program that helps us to manage our files and folders.
a) Windows b) Help
c) DOS d) Windows Explorer

2) Another name for a pre-programmed formula in Excel is _____.
a) Cell b) Graph
c) Function d) Range

3) PowerPoint presentation(s) is/are widely used as _____.
a) Project presentations by students
b) Communication of planning
c) Note outlines for teachers
d) All of the above

4) Microsoft word is _____ software.
a) Application b) Compiler
c) System d) Programming

5) _____ is not a part of a MS Word document.
a) Quick access toolbar b) Start Menu button
c) Home panel d) View option

6) Which file are contents readymade styles that can be used for a word document?
a) Presentation b) Letters
c) Magic wands d) Templates

7) Excel documents are stored as files called _____.
a) Workgroups b) Worktables
c) Worksheets d) Workforce

8) To create queries in Access _____.
a) You can drag and drop fields on query builders
b) You can type the SQL command in SQL view
c) You can use query wizard or design view
d) All of above

Q.2 Answer any four of the following. **08**

a) What is mean by Spreadsheet?
b) Define Hardware & Software.
c) What is database?
d) What is the use of PowerPoint presentation?
e) What is template?
f) What are Desktop icons and their functions?

Q.3 Write short notes on any two of the following. **08**

a) What are the Characteristics of Computer?
b) What are the Features of MS Excel?
c) Formatting Document in MS Word.

Q.4 Answer any two of the following. **08**

a) How to Adding Effects to the Presentation.
b) What is report? Explain types of Reports.
c) How to create a Macro in word.

Q.5 Answer any one of the following. **08**

a) Explain MS Access.
b) Explain Mail merge in detail.

SLR-GG-4

Seat No.	

Set P

B.C.A. (Semester - I) (New) (CBCS) Examination: March/April-2024
Programming and Problem Solving using 'C' (Paper - I) (BCA1104)

Day & Date: Friday, 12-04-2024 Max. Marks: 40
Time: 12:00 PM To 02:00 PM

Instructions: 1) All questions are compulsory.
2) Draw necessary diagrams wherever necessary.
3) Figures to the right indicate full marks.
4) Non programable calculators are allowed.

Q.1 Choose the correct alternatives from the options. **08**

1) Who is father of C Language?
a) Bjarne Stroustrup b) Dennis Ritchie
c) James A. Gosling d) Dr. E.F. Codd

2) do while loop is called _____ loop.
a) Entry restricted b) Entry controlled
c) Exit controlled d) None of these

3) Which of the following is not an arithmetic operation?
a) a * = 10; b) a / = 10;
c) a ! = 10; d) a % = 10;

4) Which Array index start from _____.
a) 1 b) 0
c) 2 d) size-1

5) Which of the following is not a basic data type in C language?
a) float b) int
c) real d) char

6) Size of an float data type is ____.
a) 4 Bytes b) 8 Bytes
c) 6 bytes d) Cannot be determined

7) An array elements are always stored in _____ memory locations.
a) Sequential b) Random
c) Sequential and Random d) None of the above

8) An Identifier may contain.?
a) Letters a-z, A-Z in Basic character set. Unicode alphabet characters other languages
b) Underscore _ symbol
c) Numbers 0 to 9. Unicode Numbers in other languages
d) All the above

Q.2 Answer any four of the following. **08**

a) Define Token.
b) What is meant by Type Casting?
c) Draw a flowchart for while loop.
d) What is meant by Header file? Give the list of header file.
e) Write is the syntax of the variable initialization.
f) What is logic? List out the types of logic.

Q.3 Write short notes on any two of the following. **08**

a) Explain Data types in details.
b) Write a program to calculate factorial of a given number.
c) What is Operator? Explain any two types of operator with example.

Q.4 Answer any two of the following. **08**

a) Explain Unconditional branching statements.
b) Write a program to check given number is Armstrong or not.
c) What is Array? Explain one and two dimensional array with example.

Q.5 Answer any one of the following. **08**

a) What is Flowchart? Explain symbols of flowchart with example.
b) What is String? Explain inbuilt string functions

SLR-GG-5

Seat No.		Set	P

B.C.A (Semester - I) (New) (CBCS) Examination: March/April-2024
Web Programming - I (Paper - II) (BCA1105)

Day & Date: Saturday, 13-04-2024 Max. Marks: 40
Time: 12:00 PM To 02:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) HTML stands for?
   a) Hyper Text Markup Language
   b) High Text Markup Language
   c) Hyper Tabular Markup Language
   d) None of these

2) CSS is used along with _____ and JavaScript in most websites to create user interfaces.
   a) Java b) VB
   c) HTML d) None of the above

3) In HTML5, the autofocus attribute is a _____ attribute.
   a) Password b) Text
   c) Boolean d) None of the above

4) The attribute of <form> tag.
   a) method b) action
   c) Both (a) &(b) d) none of these

5) SVG stands for _____.
   a) Scalable Vector Graphics b) Selector Vector Graphics
   c) Style Vector Graphics d) Standard Vector Graphics

6) Use the stroke() or the _____ method to actually draw the rectangle on the canvas.
   a) Fill b) Border
   c) stroke-width d) border-width

7) The common element which describes the web page, is?
   a) Heading b) paragraph
   c) List d) All of these

8) Which of the following tag is used to insert a line-break in HTML?
   a)
 b) <a>
   c) <pre> d) <b>

Q.2 Answer any Four of the following. **08**

a) What is history of web technology?
b) Anchor tag.
c) Explain img tag.
d) List any four text formatting tags.
e) What is a web application?
f) Given any four differences between Get and Post Method.

Q.3 Write short notes. **08**

a) What is CSS? How CSS can be used in HTML.

b) Explain position and float properties.

Q.4 Answer any Two of the following. **08**

a) Explain New tags in HTML5.

b) Explain any two event in HTML5.

c) Explain need of HTML5.

Q.5 Answer any One of the following. **08**

a) Explain Graphics in HTML5.

b) Write Syntax of id selector and class selector and Explain with suitable example in CSS.

SLR-GG-6

Seat No.	

Set P

B.C.A. (Semester - I) (New) (CBCS) Examination: March/April-2024
Basics of Mathematics (Paper - I) (BCA1106)

Day & Date: Monday, 15-04-2024 Max. Marks: 40
Time: 12:00 PM To 02:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct alternatives from the options. **08**

1) If $A = \begin{bmatrix} 4 & 6 \\ 3 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 2 \\ 4 & 4 \end{bmatrix}$ then find $A - B =$ _____.

a) $A = \begin{bmatrix} 1 & 2 \\ -1 & 5 \end{bmatrix}$ b) $A = \begin{bmatrix} 3 & 4 \\ -1 & 1 \end{bmatrix}$

c) $A = \begin{bmatrix} 2 & 4 \\ 8 & 5 \end{bmatrix}$ d) $A = \begin{bmatrix} 10 & 2 \\ 40 & 5 \end{bmatrix}$

2) A relation with itself i.e. (a,a) belongs to R is called _____.
a) reflexive b) symmetric
c) transitive d) poset

3) A matrix having only one Row is called as _____.
a) row matrix b) column matrix
c) null matrix d) none of these

4) A matrix with equal number of rows and columns is called _____.
a) square matrix b) column matrix
c) null matrix d) none of these

5) Disjunction of two statement p and q are false the both the statements are _____.
a) False b) True
c) Both d) None of these

6) $p \vee q \equiv$ _____.
a) $q \vee p$ b) $p \vee p$
c) $q \vee q$ d) None of these

7) If $A = \{a, e, i, o, u\}$ then cardinality of a given set is _____.
a) 4 b) 6
c) 7 d) 5

8) If $A = \{1, 2, 3, 4, 5\}$ and $B = \{2, 4, 5, 6, 10\}$ then $A \cup B =$ _____.
a) $\{1, 2, 3, 4, 5, 6, 10\}$ b) $\{2, 4, 5\}$
c) $\{1, 2, 3, 4, 3\}$ d) $\{0, 1, 2, 3, 4, 3\}$

Q.2 Solve any four the following questions. **08**

a) State both Associative law of sets.
b) Define Anti-Symmetric relation.
c) Define Finite set with suitable example.
d) Draw the truth table of $(p \rightarrow q) \rightarrow p$.
e) State pigeonhole principle.
f) Definition compound statement of logic.

Q.3 a) Solve any one the following questions. **03**

1) State and prove both Demorgans law of logic by using truth table.
2) Write short note on Graphical representation of relation.

b) Define Equivalence and partial ordering relation with suitable example. **05**

Q.4 Answer of the following questions. (Any Two) **08**

a) Prove that: $p \leftrightarrow q \equiv (p \rightarrow q) \wedge (q \rightarrow p)$

b) Let $A = \{a, b, c, d\}$, $B = \{p, q, r, a, c, s\}$ Find $A \cup B$, $A \cap B, A - B, A + B$.

c) Write the converse, inverse and contrapositive of the following statement "If teacher is present then student attend the class"

Q.5 Answer of the following questions. (Any One) **08**

a) Let $A = \{a, b, c\}$ and relation R on A is $R = \{(a, a), (a, b), (b, c), (a, c), (c, a), (c, b)$. Find transitive closure R^* by Warshalls Algorithm and also find diagraph of R^*.

b) State and prove both Distributive law of logic by using truth table.

SLR-GG-7

Seat No.	

Set P

B.C.A (Semester - I) (New) (CBCS) Examination: March/April-2024
Descriptive Statistics (Paper - II) (BCA1107)

Day & Date: Tuesday, 16-04-2024 Max. Marks: 40
Time: 12:00 PM To 02:00 PM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations wherever necessary.
3) Figures to the right indicate full marks.
4) Use of logarithmic table and calculator is allowed.

Q.1 Choose the correct alternate. **08**

1) The characteristics which change its value is called as _____.
a) constant b) variable
c) attribute d) None of these

2) Median are the values dividing a given set of observations into _____.
a) Two equal parts b) Four equal parts
c) Three equal parts d) Five equal parts

3) The value of correlation coefficient is always lies between _____.
a) 0 to 1 b) -1 to 1
c) -1 to 0 d) None of these

4) The number of items belonging to a particular class is called as _____ of that class.
a) lower limit b) upper limit
c) mid-value d) class frequency

5) In _____ method of sampling same item may be selected more than once.
a) SRSWOR b) SRSWR
c) SRS d) All of these

6) For the given set of observations 20, 25, 23, 27, 20, 23, 22, 28, 22, 20 the mean is _____.
a) 20 b) 27
c) 23 d) None of these

7) Which of the following average is also known as positional average?
a) A.M. b) Median
c) S.D. d) All of these

8) To draw a histogram class must be of type _____.
a) open end b) exclusive
c) inclusive d) all of these

Q.2 Answer any Four of the following. **08**

a) Find the median for $73, 87, 86, 48, 34, 22, 19, 95$ and 30.

b) Define Population and Sample.

c) Given $n = 10, \sum x = 590, \sum x^2 = 48920$, find coefficient of variation (C.V.).

d) Given $Cov(X, Y) = -90, Var(X) = 121, Var(Y) = 361$ find $'r_{xy}'$

e) Define range and coefficient of rang.

f) Write a Merits of A.M.

Q.3 Answer any Two of the following. **08**

a) Define the Simple Random Sampling (SRS) and its types.

b) Calculate A.M. from following frequency distribution.

X	1	2	3	4	5
f	7	12	15	17	6

c) Find correlation coefficient between X and Y.

X	10	13	15	21	22
Y	19	17	13	9	8

Q.4 Answer any Two of the following. **08**

a) Find the value of median.

Marks	0-20	20-40	40-60	60-80	80-100
No. of students	8	14	20	25	11

b) Write the procedure to construct the less than ogive curve.

c) Distinguish between absolute and relative measure of dispersion.

Q.5 Answer any One of the following. **08**

a) Draw the histogram from the following data. Hence determine the mode.

Classes	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	11	15	18	25	16	9

b) Write down the types of correlation with its scatter diagram.

SLR-GG-8

Seat No.	

Set P

B.C.A (Semester - I) (New) (CBCS) Examination: March/April-2024
Fundamentals of Electronics (Paper - I) (BCA1108)

Day & Date: Thursday, 18-04-2024 Max. Marks: 40
Time: 12:00 PM To 02:00 PM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations wherever necessary.
3) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) LCD stands for _____.
a) Logical Crystal Display b) Liquid Crystal Display
c) Logical Crystalline Display d) None of these

2) LED turn ON _____ Biasing condition.
a) Forward b) Reverse
c) Both a and b d) None of these

3) Anode has _____ Polarity.
a) Positive b) Negative
c) Zero d) Neutral

4) _____ type PCB has Single Layer of Conduction.
a) Single Sided b) Double Sided
c) Multi Sided d) None of these

5) Range of Digits of Seven segment display is _____.
a) 0-8 b) 0-9
c) 1-8 d) 1-9

6) Digital IC work on _____ signal.
a) Continuous b) Discrete
c) Both a and b d) None of these

7) _____ material is used for Insulation Layer.
a) Ge b) AL
c) SiO_2 d) None of these

8) _____ metal is used in metallization Process.
a) Silicon b) Germanium
c) Aluminum d) None of these

Q.2 Answer any four of the following. **08**

a) What is IC?
b) Write the applications of LED.
c) What is PCB?
d) What is SMT and SMD?
e) What is mean by Wafer in IC?
f) Define LCD.

Q.3 Write short notes on any two of the following. **08**

a) Explain working of LED.
b) Explain Single layer and Multilayer PCB in detail.
c) Explain IC fabrication of transistor and Diode.

Q.4 Answer any Two of the following. **08**

a) Explain construction of LCD Display.
b) Write advantages and disadvantages of LED and LCD Display.
c) Explain construction of LED with diagram.

Q.5 Answer any one of the following. **08**

a) Draw and explain in brief Fabrication process of IC.
b) Define seven segment display. Explain its types in detail with diagram.

SLR-GG-9

Seat No.	

Set P

B.C.A (Semester - I) (New) (CBCS) Examination: March/April-2024
Linear Electronics – II (BCA1109)

Day & Date: Friday, 19-04-2024 Max. Marks: 40
Time: 12:00 PM To 02:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw necessary diagrams whenever necessary.

Q.1 Choose the correct alternatives from the options. **08**

1) IC 7805 produces DC voltage of _____ volt.
a) +5 b) -5
c) Both a and b d) None of these

2) _____ are Good conductors of Electricity.
a) Insulator b) Metal
c) semiconductor d) None of these

3) Unit of Capacitor is _____.
a) Ohm b) Henry
c) Faraday d) Volt

4) Intrinsic Semiconductor is also called as _____.
a) Pure b) Impure
c) Both a and b d) None of these

5) Si and Ge are examples of _____.
a) Insulator b) Metal
c) Semiconductor d) None of these

6) _____ Rectifier converts only half cycle of AC input.
a) Bridge wave b) Full wave
c) Half wave d) None of these

7) Barrier potential for Si is _____ Volt.
a) 0.3 b) 0.7
c) 1 d) 0.9

8) The example of Dielectric material is _____.
a) Air b) Mica
c) Ceramic d) All of these

Q.2 Answer any four of the following. **08**

a) Define Active components?
b) What is capacitor?
c) What is Power supply and write its types?
d) Define Rectifier?
e) Define Semiconductor?
f) What is resistor and draw the Symbol?

Q.3 Write short notes on any two of the following. **08**

a) What is Inductor? Explain iron core and Air core Inductor?
b) Explain the working of Transistor?
c) Explain the concept of SMPS with neat diagram.

Q.4 Answer any two of the following. **08**

a) Explain with neat diagram carbon composition resistor?
b) Explain working of Full wave rectifier?
c) Write note on color coding of Resistor.

Q.5 Answer any one of the following. **08**

a) What is Transformer Explain its different types?
b) Explain the types of semiconductors.

SLR-GG-10

Seat No.	

Set P

B.C.A. (Semester – II) (New) (CBCS) Examination: March/April-2024
ENGLISH (Comp.)
Communication Skill (BCA1201)

Day & Date: Friday, 10-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions: **08**

1) What according to the poet will rise again?
a) pollution b) rivers
c) the sun d) humans

2) What is the mood of poem “Our Earth Will Not Die”?
a) reflective and hopeful b) sad and gloomy
c) pensive and melancholic d) celebratory and joyful

3) What kind of place is the poet going to?
a) loud place b) market place
c) silent place d) dull place

4) Where in the world has the ideal of freedom grown tenuous?
a) The east b) The west
c) The entire world d) No where

5) Who denounced 'fugitive and cloistered' virtue?
a) Aristotle b) Milton
c) Galileo d) Newton

6) What should satirical people be wary of in other people?
a) Wit b) Humour
c) Memory d) Jest

7) She was never a _____ child. (quiet)
a) quiet b) question
c) cool d) none of the above

8) Ravi _____ (smoke) regularly.
a) smoking b) smoke
c) smokes d) none of the above

Q.2 Answer any four of the following. **12**

a) What are the different types of discourse?
b) What benefit could be derived from struggle of youth?
c) What are the people in the west flattered into believing?
d) What are the various images used by the poet deliver his message?
e) Why is the poet emphasizing on solitude in the poem and what does it mean to him?
f) What is true sense of freedom?

Q.3 **a)** Write an application for Post of Software Developer. **10**

OR

b) Write a letter to purchase 10 computers for your college.

Q.4 What is interpersonal Intelligence? Explain eight forms of intelligence. **10**

SLR-GG-11

Seat No.	

Set P

B.C.A. (Semester - II) (New) (CBCS) Examination: March/April-2024
Introduction to Python Programming (BCA1202)

Day & Date: Saturday, 11-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw necessary diagram wherever necessary.
4) Non programmable calculators are allowed.

Q.1 Multiple choice questions. **08**

1) Which one of the following is the correct extension of the Python file?
a) .c b) .py
c) .txt d) .doc

2) To add a new element to a list we use which command?
a) List1.add (5) b) list1.append (5)
c) list1.addLast(5) d) list1.addEnd(5)

3) In which language is Python written?
a) English b) php
c) C d) All of the above

4) What do we use to define a block of code in Python language?
a) Key b) Brackets
c) Indentation d) None of these

5) Which character is used in Python to make a single line comment?
a) // b) #
c) / d) !

6) Which one of these is floor division?
a) / b) //
c) % d) none of mentioned

7) Which of the following is a Python tuple?
a) [1,2,3] b) (1,2,3)
c) {1,2,3} d) {}

8) Which of these in not a core data type?
a) Lists b) Dictionary
c) Tuples d) Class

Q.2 Answer any four of the following. **08**

a) What is PVM?
b) What is type conversion?
c) What is dictionary?
d) List out operators used in python?
e) What is tuple?
f) Write syntax of for loop used in Python.

Q.3 Write short notes on any two of the following. **08**

a) What is string? Explain methods of string with example.
b) Set used in Python.
c) While loop used in python.

Q.4 Answer any Two of the following. **08**

a) Write a python program to check given number is odd or even.
b) What is array? Explain in detail.
c) What is bitwise operator? Explain with example.

Q.5 Answer any one of the following. **08**

a) Write a python program top check given number is prime or not.
b) Explain the Features of python in detail.

SLR-GG-12

Seat No.	

Set P

B.C.A. (Semester - II) (New) (CBCS) Examination: March/April-2024
Operating System (BCA1203)

Day & Date: Monday, 13-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations wherever necessary.
3) Figures to the right indicate full marks.
4) Use of logarithmic table and calculator is allowed.

Q.1 Choose correct alternatives. **08**

1) What is the name of the operating system that reads and reacts in terms of actual time?
a) Real time system b) Time sharing system
c) Quick response system d) Batch system

2) The allocation of processors by process management is also known as the CPU _____.
a) Managing b) Processing
c) Planning d) Scheduling

3) _____ systems have more than one CPU in close communication with the others.
a) Communication b) Multiprocessor
c) Controller d) Processor

4) What is the name of the program that controls the overall functions of computer?
a) A browser b) The file manager
c) An application program d) The operating system

5) A process having multiple threads of control implies _____.
a) Only one task at a time, but much faster.
b) More than one task at a time.
c) Only one thread per process to use.
d) All of the above.

6) When several processes access the same data concurrently and the outcome of the execution depends on the particular order in which the access takes place is called _____.
a) dynamic condition b) race condition
c) essential condition d) critical condition

7) In priority scheduling algorithm _____.
a) CPU is allocated to the process with highest priority
b) CPU is allocated to the process with lowest priority
c) Equal priority processes can not be scheduled
d) None of the mentioned

8) Which one of the following is a synchronization tool?
a) thread b) pipe
c) semaphore d) socket

Q.2 Answer any four of the following. **08**

a) With a neat diagram, explain various states of a process.
b) Define Operating System. List the types of operating system.
c) How multiprogramming increases the utilization of CPU?
d) Define kernel level thread.
e) What is the difference between monolithic and layered operating system.
f) What is IPC in operating system?

Q.3 Write short notes on any two of the following. **08**

a) Semaphore
b) Difference between process and thread.
c) Reader-writer problem.

Q.4 Answer any two of the following. **08**

a) Explain the Round Robin scheduling algorithm with a suitable example.
b) What is synchronization? Explain how semaphores can be used to deal with n- process critical section problem.
c) What do you mean by Time-sharing systems?

Q.5 Answer any one of the following. **08**

a) What is a process? Explain about various fields of Process Control Block.
b) What is Dining Philosophers problem? Discuss the solution to Dining philosopher's problem using monitors.

SLR-GG-13

Seat No.	

Set P

B.C.A (Semester - II) (New) (CBCS) Examination: March/April-2024
Programming and Problem Solving Using 'C'- II (BCA1204)

Day & Date: Tuesday, 14-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicates full marks.

Q.1 Multiple choice questions. **08**

1) The value obtained in the function is given back to main by using _____ keyword.
a) return b) static
c) new d) volatile

2) A preprocessor command
a) Need not start on a new line
b) Need not start on the first column
c) Has # as the first character
d) Comes before the first executable statement

3) The value of EOF is _____.
a) -1 b) 0
c) 1 d) 10

4) A structure member is generally accessed using the _____.
a) address Operator b) dot Operator
c) comma operator d) ternary operator

5) If there is any error while opening a file, fopen will return?
a) Nothing b) EOF
c) NULL d) None of these

6) Number of bytes in memory taken by the below structure is?

```
struct test
{
int k;
char c;
};
```

a) Multiple of integer size b) Integer size + character size
c) Depends on the platform d) Multiple of word size

7) The statement int **a;
a) is illegal
b) is illegal but meaningless
c) is syntactically and semantically correct
d) None of these

8) Which of the following mode argument is used to truncate?
a) a b) f
c) w d) t

Q.2 Answer Any Four of the following. **08**

a) List the applications of pointer.
b) Define and declare structure within structure.
c) What is file pointer in C?
d) What is the purpose of register keyword?
e) Write the purpose of fopen() and fclose()
f) What is function prototype?

Q.3 Write Short Notes. (Any Two) **08**

a) What is C preprocessor directive? Write down list of preprocessor directives.
b) Explain different file operations.
c) Write a program that stores the information (name, roll and marks) of a student and displays it on the screen using structures.

Q.4 Answer Any Two of the following. **08**

a) Write a program to copy one file into another file.
b) Explain various storage classes in C with example.
c) Define file. Explain their modes with examples

Q.5 Answer Any One of the following. **08**

a) Explain the types of functions according to return type and argument passed with example.
b) What is Structure? Explain pointer to structure with example.

SLR-GG-14

Seat No.	

Set P

B.C.A. (Semester - II) (New) (CBCS) Examination: March/April-2024
Web Programming – II (BCA1205)

Day & Date: Wednesday, 15-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw neat diagrams and give equations wherever necessary.
4) Use of logarithmic table and calculator is allowed.
(At.Wts.: H=1, C=12, O=16, N=14, Na=23, Cl=35.5)

Q.1 Multiple choice questions. **08**

1) In JavaScript, what is a block of statement?
a) Conditional block
b) block that combines a number of statements into a single compound statement
c) both conditional block and a single statement
d) block that contains a single statement.

2) Which of the following jQuery method can be used to deal with the name conflicts?
a) The conflict() method b) ThenameConflict() method
c) ThenoConflict() method d) None of the above

3) The "function" and " var" are known as:
a) Keywords b) Data types
c) Declaration statements d) Prototypes

4) jQuery is a ____.
a) JavaScript method b) JavaScript library
c) JSON library d) PHP method

5) In the JavaScript, which one of the following is not considered as an error:
a) Syntax error b) Missing of semicolons
c) Division by zero d) Missing of Bracket

6) Which jQuery method is used to set one or more style properties to the selected element?
a) The html() method b) The style() method
c) Thecss() method d) All of the above

7) Which one of the following is an ternary operator:
a) ? b) :
c) - d) +

8) The jQuery method used to set the width property of an element is _____.
a) Set Width(val) method b) width(val) method
c) Set CSSWidth(val) method d) None of the above

Q.2 Answer any Four of the following. **08**

a) What is javascript?
b) What is jquery?
c) What is datatype?
d) What is fading?
e) What is operator?
f) What is jquery selector?

Q.3 Write short notes on any Two of the following. **08**

a) Explain validation in javascript.
b) Write a program of string.
c) Describe get and set class of css.

Q.4 Answer any Two of the following. **08**

a) Explain event handling in javascript.
b) Write a program of jquerynoconflict method.
c) Describe callback functions of jquery.

Q.5 Answer any One of the following. **08**

a) Explain built-in functions.
b) Write a program of switch case statement.

SLR-GG-15

Seat No.	

Set P

B.C.A. (Semester - II) (New) (CBCS) Examination March/April-2024
Graph Theory (BCA1206)

Day & Date: Thursday, 16-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and wherever necessary.
3) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) A walk in which there is no repetition of any Edges is called _____.
a) path b) trail
c) tour d) none of these

2) A graph having parallel edges and loop is called _____ graph.
a) pseudo b) multi
c) simple d) none of these

3) A graph having more than one component is called _____ graph.
a) disconnected b) multi
c) connected d) none of these

4) The number of edges incidence of vertex V is called _____ of a vertex.
a) degree b) order
c) vertex d) None of these

5) The total Degree of K7 graph is _____.
a) 10 b) 42
c) 21 d) 8

6) A connected circuit free graph is called _____ graph.
a) simple b) null
c) Tree d) none of these

7) _____ algorithm is used to find shortest path.
a) Dijkstras b) Kruskals
c) Warshalls d) none of these

8) If both the set of vertices and edges are infinite then the graph is called _____.
a) Finite b) Infinite
c) Vertex deleted d) none of these

Q.2 Answer the following questions (Any Four) **08**

1) Define Pseudo graph with one suitable example
2) Define Tree with one suitable example
3) Define complete graph with one suitable example
4) Draw the graph K2,3 and N5
5) Define Null graph with one suitable example
6) Define Trail with one suitable example.

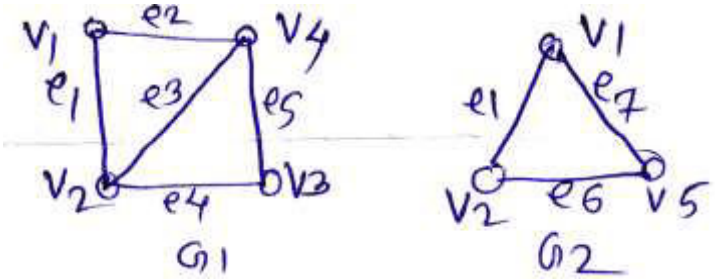
Q.3 Answer the following (Any Two) **08**

1) Verify Hand-Shaking lemma with suitable examples

2) a) Draw a Hamiltonian graph and Eulerian graph

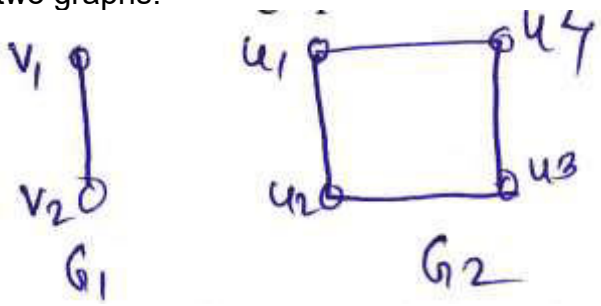
b) Hamiltonian but not Eulerian graph

3) Find G1 ∪ G2 and G1 ∩ G2 of two graphs.



Q.4 Answer the following questions (Any Two) **08**

1) Find G1 x G2 of two graphs.

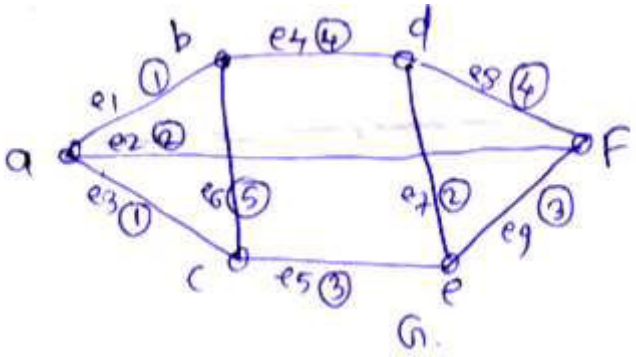


2) Write note on matrix representation of graph.

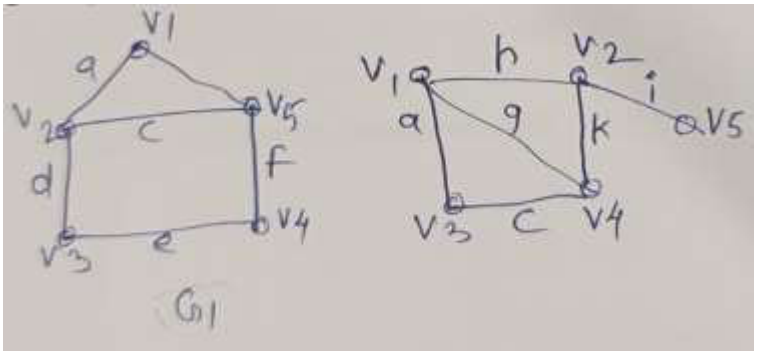
3) Define Walk and path with suitable example

Q.5 Answer any one of the following questions. **08**

1) By using Kruskals algorithm find shortest spanning tree of the graph given bellow



2) Find $G1 \cup G2, G1 \cap G2$ and $G1$ Ring sum of $G2$ of following two graphs.



SLR-GG-16

Seat No.	

Set P

B.C.A. (Semester - II) (New) (CBCS) Examination: March/April-2024
Probability Theory (BCA1207)

Day & Date: Friday,17-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations whenever necessary.
3) Figures to the right indicate full marks.
4) Use of logarithmic table and calculator is allowed.

Q.1 Multiple choice questions. **08**

1) A fair die is rolled what is the probability of getting a number which is multiple of three?
a) $1/3$ b) $1/6$
c) ½ d) $5/6$

2) If $X \to U[2,14]$ then variance is _____.
a) 144 b) 12
c) 1 d) 28

3) The distribution function always lies between _____.
a) $-1\ to\ 1$ b) $0\ to\ \infty$
c) $0\ to\ 1$ d) None of these

4) If A and B are two events, which have no any point in common, then the event A and B are _____.
a) Complementary of each other b) Independent
c) Mutually exclusive d) Dependent

5) For a continuous r.v. $X\ P(X = k) =$ _____ where k be a constant.
a) 0 b) 1
c) 2 d) None of these

6) If X is a r.v. with $E(X) = 4, V(X) = 9\ then\ V(2X + 5)$= _____.
a) 36 b) 9
c) 1.6 d) None of these

7) In ${}^{n}P_{r}$, n must be _____.
a) $\neq r$ b) $> r$
c) $\leq r$ d) $\geq r$

8) In a _____ distribution mean is always greater variance.
a) Binomial b) Poisson
c) Uniform d) All of these

Q.2 Answer any Four of the following. **08**

a) Define the Binomial distribution.

b) The p.m.f. of r.v. X is given by,

X	0	1	2	3	4
$P(x)$	k	$2k$	$3k$	$4k$	k

Find value of k.

c) In how many ways 2-digit numbers can be formed using the digits $1,3,5,7,9$ if repetition is not allowed.

d) Define – Probability.

e) Define continuous r.v.

f) If $X \rightarrow U[5,3]$ then find mean and variance of uniform distribution.

Q.3 Write short notes on any Two of the following. **08**

a) Define a Cumulative Distribution Function (c.d.f.) of continuous r.v. X and state any two properties of it.

b) Give the axiomatic definition of probability and using it prove that $P(\Phi) = 0$.

c) Define Poisson distribution and state its additive property.

Q.4 Answer any Two of the following. **08**

a) The p.m.f. of r.v. X is as follows,

X	0	1	2	3	4
$P(x)$	k	$2k$	$3k$	k	$3k$

Find

i) k

ii) $E(X)$

b) If $X \rightarrow U[a, b]$ with mean 3 and variance 9. Find parameters "a" and "b".

c) Show that: $P(A') = 1 - P(A)$, where A' is complement of A.

Q.5 Answer any One of the following. **08**

a) A r.v. X has p.d.f. given by,

$f(x) = Cx^2 \quad ; 0 < X < 1$

$= 0 \quad ; otherwise$

i) C

ii) $E(X)$

iii) $V(X)$

b) Define Event and state any four types of event with example.

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Seat No.	

Set P

B.C.A. (Semester - II) (New) (CBCS) Examination: March/April-2024
Digital Fundamentals of Computer (BCA1208)

Day & Date: Saturday, 18-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations wherever necessary.
3) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) _____ Gate is Basic Gate.
a) EX-OR b) OR
c) NAND d) NOR

2) IC 7408 is _____ Gate.
a) AND b) OR
c) NOT d) NOR

3) MOD -5 means it can counted _____ states.
a) 0-4 b) 0-5
c) 0-10 d) None of these

4) MUX has _____ Input and _____ Output
a) Many, One b) One, Many
c) Many, Many d) None of these

5) Flip flop is _____ Circuit.
a) Unistable b) Astable
c) Bistable d) None of these

6) IC 7495 is _____.
a) Shift Register b) MUX
c) DEMUX d) FLIP-FLOP

7) _____ is Logic OR Gate.
a) 7408 b) 7432
c) 7474 d) 7486

8) _____ Gate is Derived Gate.
a) EX-OR b) OR
c) AND d) NOT

Q.2 Answer any Four of the following. **08**

a) Define Encoder?
b) Define Up counter?
c) Define Decoder?
d) Define Register?
e) Define NAND Gate?
f) Define Combinational Circuit?

Q.3 Write short notes on any Two of the following. **08**

a) Write note on J-K Flip Flop?
b) Draw and explain half adder circuit?
c) Draw and Explain pin configuration of IC 7495?

Q.4 Answer any Two of the following. **08**

a) Draw and Explain 3 bit Asynchronous down counter?
b) Draw and Explain 1 to 4 Demultiplexer?
c) Draw and Explain Full Subtractor circuit?

Q.5 Answer any One of the following. **08**

a) Draw and Explain Symbol-truth table Pin configuration of Logic Gates?
b) Define sequential Circuit and Explain R-S Flip Flop using NAND and NOR Gate?

SLR-GG-18

Seat No.	

Set P

B.C.A. (Semester - II) (New) (CBCS) Examination: March/April-2024
Introduction of Microprocessor and Interfacing (BCA1209)

Day & Date: Monday, 20-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw neat & well labeled diagrams wherever necessary.

Q.1 Fill in the blanks by choosing correct alternatives: **08**

1) 8085 is _____ Bit Microprocessor.
a) 8 b) 16
c) 32 d) 64

2) Address bus of 8085 is _____ Bit.
a) 8 b) 16
c) 32 d) 64

3) Pin number of 20 in 8085 Microprocessor is _____.
a) VCC b) RST
c) GND d) RD

4) _____ is control signal in 8085 microprocessor.
a) RD b) GND
c) VCC d) None of these

5) _____ is data transfer instruction.
a) MOV b) ADD
c) SUB d) None of these

6) Control bus in 8085 microprocessor is _____.
a) Unidirection b) Bidirection
c) Both a and b d) None of these

7) _____ is Arithmetic instruction.
a) MOV b) ADD
c) PUSH d) None of these

8) Data bus of 8085 is _____ Bit.
a) 8 b) 16
c) 32 d) 64

Q.2 Answer the following Question in Briefly. (Any Four) **08**

a) Define Microprocessor.
b) Define T-State?
c) Write note on Instruction Cycle.
d) What is mean by interfacing?
e) Write note on Cache Memory.
f) Write note on Machine Cycle.

Q.3 Write Short Notes on Any Two of the following. **08**

a) Write down different features of 8085 Microprocessor.
b) Write note on Associative Memory.
c) Draw and Explain system bus architecture?

Q.4 Answer any Two of the following. **08**

a) Write down difference between I/O mapped I/O and Memory mapped I/O.
b) Explain data transfer and Arithmetic instruction in 8085 Microprocessor?
c) Explain any two types of Addressing modes.

Q.5 Answer Any One of the following. **08**

a) Draw and Explain DMA controller.
b) Draw and Explain internal Architecture of 8085 Microprocessor.

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Seat No.	

Set P

B.C.A (Semester - III) (New) (CBCS) Examination: March/April-2024
Object Oriented Programming using Java – I (BCA1301)

Day & Date: Wednesday, 24-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) What is the use of final keyword in Java?
a) When a class is made final, a sublcass of it can not be created.
b) When a method is final, it can not be overridden.
c) When a variable is final, it can be assigned value only once.
d) All of the above

2) Java is Collection _____.
a) A group of objects b) A group of classes
c) A group of interfaces d) None of these

3) Which of these classes is not related to input and output stream in terms of functioning?
a) File b) Writer
c) InputStream d) Reader

4) Which of these interfaces is not a member of java.io package?
a) DataInput b) ObjectInput
c) ObjectFilter d) FileFilter

5) Which of these keywords is used to manually throw an exception?
a) try b) finally
c) throw d) catch

6) When does Exceptions in Java arises in code sequence?
a) Run Time b) Compilation Time
c) Can Occur Any Time d) None of the mentioned

7) Which of these packages contains abstract keyword?
a) java.lang b) java.util
c) java.io d) java.system

8) _____ keywords must be used to monitor for exceptions?
a) try b) finally
c) throw d) catch

Q.2 Answer any four of the following. **08**

a) Write steps to java programming?
b) What is String builder class?
c) What is Stream?
d) Define the term Package?
e) What is Java File Reader class?
f) Define the term Polymorphism?

Q.3 Write short notes on any Two of the following. **08**

a) Write Short note on control statements?
b) Write short note on ‘final’ keyword.
c) Write short note on JVM?

Q.4 Answer any Two of the following. **08**

a) What is Array? Explain types of Array with example?
b) Explain ’this’ keyword with example?
c) What is Method overloading? Explain method overload vs method overriding?

Q.5 Answer any one of the following. **08**

a) What is java? Explain different Features of Java?
b) What is Exception Handling? Explain try catch and finally block with example.

SLR-GG-20

Seat No.		Set	P

B.C.A. (Semester - III) (New) (CBCS) Examination: March/April-2024
Data Structure Using 'C'- I (BCA1302)

Day & Date: Thursday, 25-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations wherever necessary.
3) Figures to the right indicate full marks.
4) Use of logarithmic table and calculator is allowed.

Q.1 Multiple choice questions. **08**

1) Stacks can't be used to _____.
a) Evaluate an arithmetic expression in postfix form
b) Implement recursion
c) Convert a given arithmetic expression in infix form to its equivalent postfix form
d) Allocate resources by the operating system

2) Which one of the below mentioned is linear data structure _____.
a) Queue b) Stack
c) Arrays d) All of the above

3) What is the meaning of FIFO?
a) First In Fast Out b) Fast In First Out
c) First In First Out d) Fast In Fast Out

4) In linked list each entry contains?
a) Data b) Link
c) Both Data and Link d) None of these

5) Two main measures of the efficiency of an algorithm are _____.
a) Processor and memory b) Complexity and capacity
c) Time and space d) Data and space

6) A linked list in which the first element points to the last element and vice versa, is known to be
a) Doubly linked list b) Linear linked list
c) Circular linked list d) None of these

7) When new data are to be inserted into a data structure, but there is no available space; this situation is usually called _____.
a) Underflow b) Houseful
c) Overflow d) Saturated

8) What will be the output of the following arithmetic expression? 5+3*2%10-8*6
a) -37 b) -42
c) -32 d) -28

Q.2 Answer any Four of the following. **08**

a) Define Abstract Data Type.
b) What do you mean by Dynamic stack?
c) Describe Priority queue.
d) Difference between prefix and postfix expression.
e) State Disadvantages of using Array.
f) What is Time and Space Complexity?

Q.3 Write short notes. (Any Two) **08**

a) Stack as an ADT
b) Divide and Conquer
c) Dynamic programming

Q.4 Answer any Two of the following. **08**

a) Write a program to implement a STACK using array and perform the following operation.
   1) PUSH
   2) POP
   3) Display
b) Explain types of linked list.
c) Explain types of an array.

Q.5 Answer any One of the following. **08**

a) What is queue? Which operations we can perform on a queue? Explain types and applications of queue?
b) Write an algorithm to convert infix expression to postfix with one example.

SLR-GG-21

Seat No.	

Set P

B.C.A. (Semester - III) (New) (CBCS) Examination: March/April-2024
Database Management System –I (BCA1303)

Day & Date: Friday, 26-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw necessary diagram whenever necessary.
4) Non programmable calculators are allowed.

Q.1 Multiple choice question. **08**

1) Schema definition is written by _____.
a) Database Administrator b) Database Application
c) Storage Manager d) Database Manager

2) Foreign key is the one in which the _____ of one relation is referenced in another relation.
a) Foreign key b) Primary key
c) References d) Check constraint

3) In the database table, data types describe the kind of _____ that it can contain.
a) Table b) Data
c) Number d) None of the above

4) Generalization is a _____ process.
a) Bottom – up b) Top - Down
c) Left – Right d) None of the above

5) TCL stands for:
a) Transaction control languages
b) Transaction command languages
c) Transaction connect languages
d) None of the Mentioned

6) An attribute is a _____ in a relation.
a) Row b) Column
c) Value d) Tuple

7) How many Primary keys can have in a table?
a) Only 1 b) Only 2
c) Depends on no of Columns d) Depends on DBA

8) Where subqueries cannot be used?
a) Field names in the SELECT statement
b) The WHERE clause only in the SELECT statement
c) The WHERE clause in SELECT as well as all DML statements
d) The FROM clause in the SELECT statement

Q.2 Answer the following questions. (Any Four) **08**

a) Write syntax for create command?
b) List out the logical operator?
c) What is Sub-queries?
d) List out the components of DBMS.
e) State the difference between 2- tier and 3-tier architecture.
f) What is Sub-queries? List out the types of sub-queries.

Q.3 Write notes on any Two of the following. **08**

a) Relational algebra operations.
b) Sequence.
c) Data type.

Q.4 Answer any Two of the following. **08**

a) Explain aggregate function with example.
b) Explain 12 Codd's rule.
c) What is Join? Explain types of Join.

Q.5 Answer any One of the following. **08**

a) What is Database? Explain Database Structure.
b) What is Index? Explain index with example.

SLR-GG-22

Seat No.	

Set P

B.C.A. (Semester - III) (New) (CBCS) Examination: March/April-2024
Software Engineering (BCA1304)

Day & Date: Saturday, 27-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figure to the right indicates full marks.

Q.1 Multiple choice questions. **08**

1) Software Engineering aims at developing?
a) Reliable software
b) Cost effective software
c) Reliable and cost effective software
d) None of the above

2) _____ ensures an internal consistency of data, retrieval, maintenance and stability.
a) Normalization b) ER-diagram
c) DFD d) None of these

3) System performs well through such circumstances like incorrect input, malfunctioning of hardware then the software system is _____.
a) Reliable b) Robust
c) Efficient d) Portable

4) _____ is sometimes referred as 'Bubble Diagram'.
a) Flowchart b) ER- Diagram
c) Decision table d) DFD

5) The most important feature of spiral model is _____.
a) Risk management b) Quality management
c) Performance management d) Efficiency management

6) External entities may be a _____.
a) Source of input data only
b) Source of input data or destination of result
c) Destination of result only
d) Repository of data

7) _____ is an object that has its own unique identity.
a) Relationship b) Entity
c) Attribute d) None of these

8) The longest method of conversion is _____.
a) Direct b) Parallel
c) Pilot d) Phased

Q.2 Answer any Four of the following. **08**

a) What is Normalization?

b) Define the term:

i) Entity

ii) Attribute

c) List out the characteristics of system.

d) What are the 7 Phases of SDLC?

e) What is CLD?

f) Write the steps of traditional approach to implementation.

Q.3 Write short notes on any Two of the following. **08**

a) Explain System Analysis.

b) What is Flowchart? State the principles of the flowcharting.

c) Differentiate between Physical and Logical DFD.

Q.4 Answer any Two of the following. **08**

a) What is DD? Explain the importance of Data Dictionary.

b) Draw a Decision tree for following case study.

A company decides to give Diwali bonus to all the employees for which the management has divided the employees into 3 categories namely Administrative Staff (AS), Office Staff (OS), Workers (W) and considered following rules:

i) If the employee is permanent and belongs to AS category the bonus amount is 3 month's salary.

ii) If the employee is permanent and belongs to OS category the bonus amount is 2 month's salary.

iii) If the employee is permanent and belongs to W category the bonus amount is 1 month's salary.

iv) If the employee is temporary then half of the amount is given to them as per the permanent employee's bonus amount.

c) Explain RAD model in detail.

Q.5 Answer any One of the following. **08**

a) Explain the various types of system in detail.

b) What is Decision table? Explain its types with example.

SLR-GG-23

Seat No.	

Set P

B.C.A. (Semester - III) (New) (CBCS) Examination: March/April-2024
Web Development using PHP (SEC-1)

Day & Date: Monday, 29-04-2024 Max. Marks: 80
Time: 09:00 AM To 12:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to right indicate full marks.

Q.1 A) Select the correct alternative from the following. **10**

1) What does PHP stand for?
   a) Personal Home Page
   b) Hypertext Preprocessor
   c) Pretext Hypertext Processor
   d) Preprocessor Home Page

2) PHP files have a default file extension of _____.
   a) .html b) .xml
   c) .php d) .ph

3) Which version of PHP introduced Try/catch Exception?
   a) PHP 4 b) PHP 5
   c) PHP 6 d) PHP 5 and later

4) Which of the following PHP statement/statements will store 111 in variable num?
   i) int$num=111; ii) int mum =111;
   iii) $num=111; iv) 111=$num;
   a) Both i) and ii) b) i), ii), iii) and iv)
   c) Only iii) d) Only i)

5) What will be the output of the following PHP code?

```
<?php
$num=1;
$num1=2;
print$num."+".$num 1;
?>
```

   a) 3 b) 1+2
   c) 1.+.2 d) Error

6) What will be the output of the following PHP code?

```
<?php
$num="1";
$num1="2";
print$num+$num 1;
?>
```

   a) 3 b) 1+2
   c) Error d) 12

7) Which of the conditional statements is/are supported by PHP?
   i) if statements ii) if-else statements
   iii) if-elseif statements iv) switch statements
   a) Only i) b) i), ii) and iv)
   c) ii), iii) and iv) d) i), ii), iii) and iv)

8) Which of the looping statements is/are supported by PHP?
   i) for loop ii) while loop
   iii) do- while loop iv) foreach loop
   a) i) and ii) b) i), ii) and iii)
   c) i), ii), iii) and iv) d) Only iv)

9) Who is the father of PHP?
   a) Rasmus Lerdorf b) Wiliam Makepiece
   c) Drek Kolkevi d) List Barely

10) What does SPL stands for in Php?
   a) Source PHP List b) Standard PHP List
   c) Standard PHP Library d) None of the above

B) Fill in the blanks. **06**

1) _____ is used to create a session?
2) _____ is used for concatenation in PHP?
3) _____ variables is not a predefined variable in PHP?
4) _____ PHP function is used to find files?
5) The latest version of PHP is _____.
6) We can define a function in PHP by using _____.

Q.2 Solve any Eight of the following. **16**

a) What is use of scripting Language?
b) Explain Static website.
c) Define the Database.
d) Explain While and Do-While loop in PHP.
e) Explain the Super global variables.
f) Explain PWS.
g) How we can combine PHP and HTML code explain with example.
h) Use of server-side scripting.
i) Define PHP-MySQL Environment.
j) Explain Insert query in database connectivity.

Q.3 A) Attempt any Two of the following. **10**

1) Explain different Data types used in PHP.
2) Explain difference between Static website vs Dynamic website.
3) Explain Super global Array in PHP.

B) Short Note. **06**

Web browser and Web server.

Q.4 A) Attempt any Two of the following. **08**

1) Define Database in PHP? Explain PhpMyAdmin?
2) Define Maintaining state? Explain different type of techniques with example?
3) How we can display returned data on web page.

B) Describe the following. **08**

Explain the Session. With start and stop example.

Q.5 Attempt any Two of the following. **16**

a) What is Validation? Explain Client-side validation and Server-side validation.
b) Define the Cookies? Explain how we can start and stop the Cookies.
c) Define the connectivity PHP with PhpMyAdmin.
With – create database, create table and insert record in that table.

SLR-GG-24

Seat No.	

Set P

B.C.A. (Semester - III) (New) (CBCS) Examination: March/April-2024
Financial Accounting with Tally (BCA1305)

Day & Date: Tuesday, 30-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations wherever necessary.
3) Figures to the right indicate full marks.
4) Use of logarithmic table and calculator is allowed.
(At. Wts.: H=1, C=12, O=16, N= 14, Na =23, C1 = 35.5)

Q.1 Multiple choice questions. **08**

1) Transferring an entry from Journal to ledger is called _____.
a) Journal Posting b) Ledger Posting
c) Transaction d) Entry

2) _____ Discount is not recorded in the books of account.
a) Cash b) Trade
c) Quantity d) None of these

3) _____ is an art of recording business transaction in a set of books.
a) Accounting b) Costing
c) Book keeping d) None of these

4) Straight line method of depreciation is also called as _____ method.
a) Original Cost b) Equal installment
c) Fixed Installment d) All of above

5) In Tally for payment Voucher _____ key used.
a) F6 b) F7
c) F5 d) F9

6) Which voucher type is used to transfer amount from one bank to another?
a) Payment b) Receipts
c) Contra d) Post-dated

7) Which short key used for change the data in Tally?
a) F2 b) F3
c) Alt+F3 d) Alt+F2

8) Which shortcut key is pressed for save the voucher entry?
a) Alt+A b) Alt+C
c) Alt+X d) Alt+D

Q.2 Answer any Four of the following. **08**

a) Define Accountancy.
b) Explain the Rule of Real A/c. with examples.
c) Specimen of cash book with cash and bank column.
d) How can you create Ledger A/c in Tally?
e) How can you copy and paste the text in Tally?
f) How can you create Group in Tally?

Q.3 Write short notes on any Two of the following. **08**

a) Capital & Drawings.
b) Accounting Concepts.
c) Explain the features of Tally?

Q.4 Answer any Two of the following. **08**

a) Give the objectives of Book-keeping.
b) Benefit of double entry book-keeping?
c) Explain the importance of Bank Reconciliation Statement?

Q.5 Answer any One of the following. **08**

a) Explain the list of Groups in Tally?
b) Journalize the following transaction in the books of Mahalaxmi for the month of October 2022.

1st Oct 2022, Mahalaxmi started business with cash ₹ 1,50,000.
2nd, cash deposited into State Bank of India ₹ 5,000
3rd, Purchased Computer from Hi-tech Computer ₹ 20,000
7th, Purchased goods from Pannalal & Co. on credit ₹ 80,000
10th, Sold goods to Ramanlal Co. ₹ 40,000
20th, Sold goods ₹ 25,000 by cheque
27th, Paid stationary bill of ₹ 2,650 by cheque
31st, Received commission ₹ 1,000

Assuming CGST @8% and SGST@8%

SLR-GG-25

Seat No.	

Set P

B.C.A. (Semester - III) (New) (CBCS) Examination: March/April-2024
Operating System - II (BCA1306)

Day & Date: Thursday, 02-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to right indicate full marks.

Q.1 Multiple choice question. **08**

1) The banker's algorithm is used for deadlock _____.
a) Prevention b) Avoidance
c) Detection d) Recovery

2) _____ Memory allocation scheme suffers from external fragmentation.
a) Segmentation b) Pure demand paging
c) Swapping d) Paging

3) Physical memory is broken into fixed-sized blocks called _____.
a) Frames b) Pages
c) Backing store d) None of the mentioned

4) Virtual memory can be implemented with _____.
a) Segmentation b) Paging
c) Both A and B d) None of the above

5) _____ is a technique of temporarily removing inactive programs from the Memory of computer system.
a) Swapping b) Spooling
c) Semaphore d) Scheduler

6) A direct method of deadlock prevention is to prevent the occurrence of _____.
a) Mutual exclusion b) Hold and wait
c) Circular waits d) No preemption

7) _____ Involves treating main memory as a resource to be allocated to and shared among a number of active processes.
a) Partition management b) Memory management
c) Disk management d) All of the above

8) The data structures available in the Banker's algorithm are _____.
a) Available b) Need
c) Allocation d) All of the mentioned

Q.2 Answer any four of the following. **08**

a) Define Wait-For Graph
b) What is paging?
c) Define Virtual Machine
d) What is disk scheduling?
e) What is mean by boot block?
f) Define the term Thrashing?

Q.3 Write short notes on any two of the following. **08**

a) Short note on Swapping.
b) Short note on File System structure.
c) Short note on Deadlock detection and Recovery.

Q.4 Answer any Two of the following. **08**

a) Define the term deadlock? Explain the necessary conditions for deadlock to occur?
b) Explain Contiguous memory allocation with fixed sized partitions.
c) What is Segmentation? Explain Segmentation with diagram?

Q.5 Answer any one of the following. **08**

a) Explain banker's algorithm with example?
b) What is page replacement? Write the working of FIFO page replacement algorithm?

SLR-GG-26

Seat No.	

Set P

B.C.A (Semester - III) (Old) (CBCS) Examination: March/April-2024
OOPS with C++-I (19409301)

Day & Date: Wednesday, 24-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations wherever necessary.
3) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) Object oriented programming approach focus on _____.
a) Function b) Data
c) Both d) None of the above

2) Iostream.h is _____.
a) Header file b) Preprocessor directive
c) Both A & B d) User defined function

3) In C++ cout and cin are _____.
a) objects b) class
c) function d) command

4) By default all member of a class _____.
a) public b) private
c) protected d) All

5) A destructor is invoked automatically when _____.
a) object is initialized b) object is created
c) object goes out of scope d) anytime

6) We cannot pass parameter to _____.
a) default argument constructor b) destructor
c) dynamic constructor d) copy constructor

7) C++ developed by _____.
a) Donald Knuth b) Bjarne Stroustrup
c) Ken Thompson d) Deniss Ritchie

8) Maximum number of values that can be returned from function _____.
a) 1 b) 0
c) 2 d) any

Q.2 Answer any Four of the following. **08**

a) Write applications of Object Oriented Programming.
b) Write a visibility of private members of class.
c) What is destructor?
d) What is inline function?
e) What is reference variable?

Q.3 Answer any Two of the following. **08**

a) What is class? Write syntax and example of class.
b) Write a program for function overloading.
c) Explain looping control statements used in C++.

Q.4 Answer any Two of the following. **08**

a) What is constructor? Explain types of constructor with example.
b) Write a program to demonstrate passing object to member function.
c) Explain Static Data member and Member function.

Q.5 Answer any One of the following. **08**

a) Explain in detail features of Object Oriented programming.
b) What is friend function? Explain with example.

SLR-GG-27

Seat No.	

Set P

B.C.A. (Semester - III) (Old) (CBCS) Examination: March/April-2024
Data Structures using 'C'- I (19409302)

Day & Date: Thursday, 25-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) What is the value of the postfix expression 10 5 + 60 6 / * 8 -?
a) 111 b) 140
c) 142 d) -118

2) A data structure in which elements can be inserted or deleted at/from both ends but not in the middle is?
a) Queue b) Circular queue
c) Dequeue d) Priority queue

3) The data structure required to check whether an expression contains a balanced parenthesis is?
a) Stack b) Queue
c) Array d) Tree

4) Which of these is not an application of a linked list?
a) To implement file systems
b) For separate chaining in hash-tables
c) To implement non-binary trees
d) Random Access of elements

5) Linked list is considered as an example of _____ type of memory allocation
a) Dynamic b) Static
c) Compile time d) Heap

6) Which of the following statement(s) about stack data structure is/are NOT correct?
a) Linked List are used for implementing Stacks
b) Top of the Stack always contain the new node
c) Stack is the FIFO data structure
d) Null link is present in the last node at the bottom of the stack

7) Queues serve major role in _____.
a) Simulation of recursion
b) Simulation of arbitrary linked list
c) Simulation of limited resource allocation
d) Simulation of heap sort

8) What are the disadvantages of arrays?
a) Data structure like queue or stack cannot be implemented
b) There are chances of wastage of memory space if elements inserted in an array are lesser than the allocated size
c) Index value of an array can be negative
d) Elements are sequentially accessed

Q.2 Answer any Four of the following. **08**

a) Convert the infix expression a - b / (c + d * e) into prefix form.
b) Write the Node structure of Doubly Linked List.
c) Write any 4 applications of Queue.
d) Write ADT for stack and queue.
e) Define Dynamic Programming.
f) Define Single Linear list.

Q.3 Write short notes. (Any Two) **08**

a) Applications of stack.
b) Circular Queue
c) ADT

Q.4 Answer any Two of the following. **08**

a) Write difference between stack and queue.
b) What is Array? Explain types of array in detail.
c) What is doubly linear linked list? Implement function that reverses it.

Q.5 Answer any One of the following. **08**

a) Write an algorithm to convert infix expression into postfix and prefix expression
b) What is Linear linked list? Explain its following operations:-
1) insert_last ()
2) display()
3) remove_from_beginning()

SLR-GG-28

Seat No.	

Set P

B.C.A. (Semester - III) (Old) (CBCS) Examination: March/April-2024
Database Management System (19409303)

Day & Date: Friday, 26-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) _____ is an alternative of log-based recovery.
a) Disk recovery b) Shadow paging
c) Dish shadowing d) Crash recovery

2) An entity in A is associated with at most one entity in B, and an entity in B is associated with at most one entity in A. This is called as _____.
a) One-to-many b) One-to-one
c) Many-to-many d) Many-to-one

3) Which of the following is not a recovery technique?
a) Deferred update b) Immediate update
c) Two-phase commit d) Recovery management

4) A relational database consists of a collection of _____.
a) Tables b) Fields
c) Records d) Keys

5) In order to undo the work of transaction after last commit which one should be used?
a) View b) Commit
c) Rollback d) Flashback

6) A _____ of the transactions can be obtained by finding a linear order consistent with the partial order of the precedence graph.
a) Serializability order b) Direction graph
c) Precedence graph d) Scheduling scheme

7) _____ locks the item from access of any type.
a) Implicit lock b) Explicit lock
c) Exclusive lock d) Shared lock

8) _____ join operations do not preserve non matched tuples.
a) Left outer join b) Right outer join
c) Inner join d) Natural join

Q.2 Answer any Four of the following. **08**

a) What is attributes?
b) Define the term:
i) Tuple ii) Domain
c) List of database users.
d) What is scheduling?
e) What is Instance and Schema?
f) What is Shared lock and Exclusive Lock?

Q.3 Write short notes on any Two of the following. **08**

a) Explain conflict and view serializability with example.
b) What is Transaction? Explain ACID properties with example.
c) What is deadlock? How to handle deadlock?

Q.4 Answer any Two of the following. **08**

a) Explain Three problems of concurrency control with example.
b) Explain 2-tier and 3-tier architecture.
c) Explain shadow paging in detail.

Q.5 Answer any One of the following. **08**

a) What is Join in DBMS? Explain Types of Joins with example.
b) Explain Generalization, Specialization and Aggregation in detail.

SLR-GG-29

Seat No.		Set	P

B.C.A. (Semester - III) (Old) (CBCS) Examination: March/April-2024
Software Testing & Quality Assurance (19409304)

Day & Date: Saturday, 27-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) Which of the following testing is related to the boundary value analysis?
a) White box and black box testing
b) White-box testing
c) Black box testing
d) None of the above

2) Functional testing is a _____?
a) Test design technique b) Test level
c) SDLC Model d) Test type

3) What are the different levels of Testing?
a) Integration testing b) Unit testing
c) System testing d) All of the above

4) Black box testing is only functional testing.
a) True b) False

5) Executing the same test case by giving the number of inputs on same build called as _____.
a) Ad hoc Testing b) Sanity Testing
c) Retesting d) Regression Testing

6) White box testing techniques are?
a) Statement coverage testing b) Decision coverage testing
c) Data flow testing d) All of the above

7) Defects can be found more easily in _____.
a) Bottom up Integration Testing b) Sandwich Integration Testing
c) Top down Integration Testing d) Big Bang Testing

8) White box testing is not called as _____.
a) Open box testing b) Closed box testing
c) Clear box testing d) Glass box testing

Q.2 Answers any Four of the following. **08**

a) What is Buddy Testing?
b) What is System Testing?
c) What is Error guessing?
d) What is Volume Testing?
e) What is Bug, Defect?
f) What is need of software testing?

Q.3 Write short notes on any Two of the following. **08**

a) Explain Advantages & Disadvantages of BBT.
b) Explain Regression Testing and its types.
c) What is Test Execution? Report and Summary Report.

Q.4 Answers any Two of the following. **08**

a) Explain Defect Logging and Tracking.
b) Explain Types of Bugs.
c) Design test case for Online Purchase Order.

Q.5 Answer any One of the following. **08**

a) Explain Adhoc Testing, Recovery Testing.
b) Explain Static Techniques.

SLR-GG-30

Seat No.	

Set P

B.C.A. (Semester - III) (Old) (CBCS) Examination: March/April - 2023
Web Development using PHP (19409305)

Day & Date: Monday, 29-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions **08**

1) Which of the following is the use of strpos() function in PHP?
a) The strops() function is used to search for the spaces in a string
b) The strops() function is used to search for a number in a string
c) The strops() function is used to search for a character/text in a string
d) The strops() function is used to search for a capitalize character in a string

2) Variable name in PHP starts with _____.
a) ! (Exclamation b) $ (Dollar)
c) & (Ampersand) d) # (Hash)

3) Which of the following is not a variable scope in PHP?
a) Extern b) Local
c) Static d) Global

4) Who is the father of PHP?
a) Drek Kolkevi b) Rasmus Lerdorf
c) Wiliam Makepiece d) List Barely

5) How many functions does PHP offer for searching and modifying strings using Perl-compatible regular expressions?
a) 10 b) 7
c) 8 d) 9

6) The developers of PHP deprecated the safe mode feature as of which PHP version?
a) PHP 5.3.1 b) PHP 5.3.0
c) PHP 5.1.0 d) PHP 5.2.0

7) What does PDO stand for?
a) PHP Database Orientation b) PHP Data Orientation
c) PHP Data Object d) PHP Database Object

8) Which variable is used to collect form data sent with both the GET and POST methods?
a) $_BOTH b) $REQUEST
c) $_REQUEST d) $BOTH

Q.2 Answer any Four of the following. **08**

a) Explain the local server and remote server.
b) Define the PHP framework.
c) Explain dynamic function call.
d) Explain the IF statement.
e) What is IIS.
f) What is basic PHP syntax.

Q.3 Write short notes on any Two of the following. **08**

a) Benefits of PHP
b) Personal web server
c) Sorting arrays

Q.4 Answer any Two of the following. **08**

a) Explain MySQL Architecture.
b) Explain Static and global variable declaration in details.
c) How we can display returned data on web page.

Q.5 Answer any One of the following. **08**

a) How we can Working With Form using form contrls.
Explain retrieving form data with $_POST, $_GET and $_REQUEST.
b) What is cookies and session in PHP? Explain working with query string.

SLR-GG-31

Seat No.	

Set P

B.C.A. (Semester - III) (Old) (CBCS) Examination: March/April-2024
Computer Networks – I (19409306)

Day & Date: Tuesday, 30-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations wherever necessary.
3) Figures to the right indicate full marks.
4) Use of logarithmic table and calculator is allowed.

Q.1 Choose correct alternatives. **08**

1) Computer Network is _____.
a) Collection of hardware components and computers
b) Interconnected by communication channels
c) Sharing of resources and information
d) All of the Above

2) How many layers does OSI Reference Model has?
a) 4 b) 5
c) 6 d) 7

3) What is the meaning of Bandwidth in Network?
a) Transmission capacity of a communication channels
b) Connected Computers in the Network
c) Class of IP used in Network
d) None of Above

4) What is the use of Bridge in Network?
a) to connect LANs b) to separate LANs
c) to control Network Speed d) All of the above

5) Each IP packet must contain _____.
a) Only Source address
b) Only Destination address
c) Source and Destination address
d) Source or Destination address

6) _____ provides a connection-oriented reliable service for sending messages.
a) TCP b) IP
c) UDP d) All of the above

7) Physical or logical arrangement of network is _____.
a) Topology b) Routing
c) Networking d) None of the mentioned

8) Which of the following tasks is not done by data link layer?
a) framing b) error control
c) flow control d) channel coding

Q.2 Answer any Four of the following. **08**

a) What is hub? Give types of hub.
b) List the layers of OSI.
c) What is Stop-and-Wait Protocol?
d) State the different types of network.
e) What is the use of Gateways?
f) What are the responsibilities of physical Layer?

Q.3 Write short notes on any Two of the following. **08**

a) Satellite Communication.
b) Synchronous Transmission & Asynchronous Transmission.
c) Stop and Wait ARQ.

Q.4 Answer any Two of the following. **08**

a) Describe router with neat and labeled diagram. State the situation under which router are necessary in network.
b) Explain mesh topology with suitable diagram.
c) Explain working of data link layer and network layer of OSI model.

Q.5 Answer any One of the following. **08**

a) Explain TCP/IP reference model with diagram.
b) Explain the types of multiplexing in data communication.

SLR-GG-32

Seat No.	

Set P

B.C.A. (Semester - III) (Old) (CBCS) Examination: March/April-2024
Financial Accounting with Tally (19409307)

Day & Date: Thursday, 02-05-2024 Max. Marks: 80
Time: 09:00 AM To 12:00 PM

Instructions: 1) All questions are compulsory.
2) Draw neat labeled diagrams wherever necessary.
3) Figures to right indicate full marks.
4) Use of log table and calculators is allowed.

Q.1 A) Multiple choice questions. **10**

1) Solapur University is _____ type of account.
a) Real account b) Personal A/c
c) Nominal A/c d) None of these

2) _____ is an art of recording business transaction in a set of books.
a) Accounting b) Costing
c) Book keeping d) None of these

3) _____ discount is recorded in the books of account.
a) Cash b) Trade
c) Quantity d) None of these

4) Cash, goods, or assets invested by proprietor in the business for earning profit is called _____.
a) Profit b) Fixed Assets
c) Capital d) None of these

5) Which method of depreciation amount of depreciation is constant?
a) Depreciation Fund b) Reducing Balance Method
c) Fixed Installment d) All of above

6) In Tally for Payment Voucher _____ Key used.
a) F5 b) F6
c) F7 d) F8

7) Which shortcut key used to view features in tally?
a) F10 b) F11
c) F12 d) Alt+F9

8) Which short key used to make contra in tally?
a) F5 b) F7
c) F4 d) F6

9) What is the full form of TDS?
a) Tax Declared at Source b) Tax Decided at Source
c) Tax Deducted at Source d) None of these

10) What is the full form of GST?
a) Goods and Supply Tax b) Goods and Service Tax
c) General Sales Tax d) None of these

B) Fill in the blank/Definition/One sentence answer/ One word answer/ Give the name /Predict the product etc. **06**

1) Surplus of income over expenses is _____.
2) Amount or goods used by proprietor for personal use is called _____.
3) _____ shows financial position of the business.
4) The concept of TDS was introduced in the Income Tax Act _____.
5) Asset account has always _____ type of balance.
6) _____ short key used to view configure in tally.

Q.2 Solve any Eight of the following. **16**

a) What is Account?
b) Give Rule of Real A/c?
c) Narration
d) What is term 'Goods'?
e) What is Gross Profit?
f) Goodwill
g) Specimen of cash book with cash and bank column.
h) How can you copy and paste the text from Tally?
i) What is Voucher?
j) Write any four short cut key in Tally?

Q.3 A) Attempt any Two of the following. **10**

1) Give the objectives of Book-keeping
2) Benefits of double entry book-keeping system.
3) Explain the feature in Tally?

B) Short note/Solve **06**

a) Explain Accounting Concepts.

Q.4 A) Attempt any Two of the following. **08**

1) Subsidiary Books
2) What is Reducing balance method of depreciation? Explain its Advantages and Disadvantages?
3) Explain the list of Groups in Tally?

B) Jayhari purchased Furniture on 1st April. 2020 at Rs.40, 000/- and spent Rs. 10,000/- on its installation. The firm provides depreciation at 10% p.a. under written down value method on 31st March every year. **08**
Show machinery A/c for 2020-2021, 2021-2022 and 2022-2023.

Q.5 Attempt any Two of the following. **16**

a) Journalize the following transactions in the books of Mr. Devansh for the month of September 2022.

1) Mr. Devansh commenced business with cash Rs. 75,000/
2) Cash deposited into Bank Rs.15,000/
3) Purchased goods from Pawanlal Traders Rs.50, 000/- on credit.
4) Sold goods to Ramanlal Rs.25,000/
5) Goods of Rs. 10,000/- used by Devansh for his personal use.
6) Received cash Rs. 15,000/- from Ramanlal.
7) Paid telephone bill Rs. 1,350/- by cheque.
8) Received dividend Rs. 500

b) Explain Specimen of Trading A/c, Profit & Loss A/c and Balance sheet with their Ledger Accounts.

c) Write short note on e-TDS in Tally ERP 9.

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Seat No.	

Set P

B.C.A. (Semester - IV) (New) (CBCS) Examination: March/April-2024
Object Oriented Programming Using Java - II (BCA1401)

Day & Date: Friday, 05-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations wherever necessary.
3) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) Thread priority in Java is?
a) Integer b) Float
c) double d) long

2) What will be the output of the following Java code?

```
class Multi_Pro
{
        public static void main(String args[ ])
        {
                Thread t = Thread.currentThread();
                System.out.println(t);
        }
}
```

a) Thread[5,main] b) Thread[main,5]
c) Thread[main,0] d) Thread[main,5,main]

3) Which of these is a super class of wrappers Long, Character & Integer?
a) Long b) Digits
c) Float d) Number

4) What will be the output of the following Java program?

```
        class Sample{
                public static void main(String args[ ])
                {
                        Integer i = new Integer (257);
                        byte x = ibyteValue();,
                        Syetem.out.println(x);
                }}
```

a) 0 b) 1
c) 257 d) 256

5) Which of these classes is not part of Java's collection framework?
a) Maps b) Array
c) Stack d) Queue

6) Which collection maintains the insertion order of elements?
a) ArrayList b) LinkedList
c) HashSet d) HashMap

7) An _____ is a change in the state of an item.

a) Spinner b) Event
c) Occurrence d) Activity

8) How many types of events are there?

a) 5 b) 3
c) 2 d) 4

Q.2 Answer any four of the following. **08**

a) Define thread.
b) Define wrapper classes.
c) What are the different types of Layout Managers?
d) Define type casting in java.
e) Define iterator.

Q.3 Write short notes on any two of the following. **08**

a) Runnable interface
b) Types of statements in JDBC
c) Listener Interface

Q.4 Answer any two of the following. **08**

a) State the difference between list and set.
b) Explain the use of JCheckbox and JRadioButton with example.
c) Explain auto boxing and unboxing with example.

Q.5 Answer any one of the following. **08**

a) What are the different types of JDBC drivers? Explain.
b) What are the different Collection classes? Explain ArrayList with example.

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Seat No.	

Set P

B.C.A. (Semester - IV) (New) (CBCS) Examination: March/April-2024
Data Structure Using 'C' - II (BCA1402)

Day & Date: Sunday, 12-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions **08**

1) Best case of Linear search is _____.
a) O(n) b) $O(n^2)$
c) O(n logn) d) O(1)

2) Traversal of graph is different from tree because_____.
a) BFS b) DFS
c) LOOP d) AII

3) Graph is _____ data structure.
a) linear b) non-linear
c) Both d) None

4) _____ is not advantage of trees.
a) Hierarchical structure b) Router algorithm
c) Fast search d) undo/redo operations

5) _____ is the maximum height of any AVL-tree with 7 nodes. (Assume that the height of a tree with a single node is 0).
a) 2 b) 3
c) 4 d) 5

6) Quick sort uses _____.
a) Divide-and-conquer b) Backtracking
c) Heuristic approach d) Greedy approach

7) The time complexity of merge sort is always _____.
a) O(n) b) $O(n^2)$
c) O(n logn) d) O(logn)

8) _____ data structure is used in BFS of graph to store nodes.
a) Array b) Queue
c) Stack d) Tree

Q.2 Answer any four of the following. **08**

a) Define Graph.
b) What is leaf node and sibling in tree?
c) What is searching?
d) What is complete binary tree?
e) Explain Linear and nonlinear data structure.
f) List different types of hashing functions.

Q.3 a) Write note any One of the following **03**

1) State difference between linear search and binary search.
2) What is AVL tree? Explain with example.

b) Write a program for linear search method that searches entered element. **05**

Q.4 Answer any Two of the following. **08**

a) Explain Graph traversals BFS and DFS.
b) Explain Indexed sequential search method in details.
c) Write a note on Tree sorting techniques.

Q.5 Answer any one of the following. **08**

a) Write a program for Selection sort method.
b) Write a program to implement binary tree with tree traversal methods.

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Seat No.	

Set P

B.C.A. (Semester - IV) (New) (CBCS) Examination: March/April-2024
Database Management System - II (BCA1403)

Day & Date: Wednesday 10-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose correct alternative from the following. **08**

1) _____ is used to declare a record.
a) %ROWTYPE b) %TYPE
c) Both a & b d) None of the above

2) Which of the following is true about comments in PL/SQL?
a) Comments are explanatory statements.
b) The PL/SQL single-line comments start with the delimiter — (double hyphen)
c) Multi-line comments are enclosed by /* and */.
d) All of the above

3) PL/SQL is a completely portable, _____ transaction processing language.
a) Low-performance b) high-performance
c) both a & b d) None of the above

4) _____ provide a way for selects multiple rows of data from the database.
a) PL/SQL Select b) PL/SQL Trigger
c) PL/SQL Cursors d) PL/SQL Process

5) Execution of translation in isolation preserves the _____ of a database.
a) Atomicity b) Consistency
c) Durability d) All of the mentioned

6) A transaction that has not been completed successfully is called as _____.
a) Compensating transaction b) Aborted transaction
c) Active transaction d) Partially committed transaction

7) The execution sequences in concurrency control are termed as _____.
a) Serials b) Schedules
c) Organizations d) Time tables

8) _____ statements against an Oracle table can execute procedures implicitly.
a) INSERT b) UPDATE
c) DELETE d) All of the above

Q.2 Answer the following questions. (Any Four) **08**

a) Define Deadlock.
b) ACID properties
c) What data type in PL/SQL?
d) Lost update problem
e) Write a syntax of while loop with example.

Q.3 Answer any two of the following. **08**

a) Write any two control structures used in PL/SQL.
b) Explain types of parameters passed to procedure.
c) Discuss the properties of transaction.

Q.4 Answer any two of the following. **08**

a) What locking protocol? Explain in details.
b) What is package in PL/SQL? Explain package specification and body.
c) What are the rules followed when shared and exclusive locking used?

Q.5 Answer any one of the following. **08**

a) Explain recovery techniques used in DBMS.
b) What is cursor? Explain parameterized cursors with example.

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Seat No.	

Set P

B.C.A. (Semester - IV) (New) (CBCS) Examination: March/April-2024
Software Testing & QA (BCA1404)

Day & Date: Friday, 12-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose correct alternatives. **08**

1) Defect Tracking _____.
a) Is interface between testing team and development team
b) Is interface between the testing team and end users
c) Both a and b
d) None of these

2) Which of the following are needs of volume testing?
a) Check if the data is stored correctly or not
b) Check if there is any data loss
c) Check whether high volume data affects the speed of processing
d) All of these

3) _____ should be the first test case for the login screen of the Social media website?
a) Check the URL of the login screen is working
b) Check the field validation of the username and password
c) Check that password must be visible in encrypted form
d) Label of the user name and password field must be visible

4) Which of the following is not a type of loop testing?
a) Nested loop b) Concatenated loop
c) Unstructured loop d) None of these

5) Writing a test summary report is major task of _____.
a) Test Closure activity
b) Implementation and execution
c) Evaluating exit criteria and Reporting
d) Analysis and Design

6) Early defects detection are _____.
a) Costly to find and difficult to fix
b) Cheap to find and easy to fix
c) Costly to find and easy to fix
d) Cheap to find and difficult to fix

7) If customers told that a quality of the product is too good, when _____.
a) Software meets its defined specification
b) Software is technically excellent
c) Software fulfills expectations of customer
d) Software has few bugs

8) _____ testing is to be done in-house before handing over the software to the client?
a) Theta b) Beta
c) Gamma d) Alpha

Q.2 Answers any four of the following. **08**

a) What is WalkThroughs?
b) What is Cyclomatic complexity and Write the formula.
c) What are the errors uncovered by black box testing?
d) List out types of loop testing.
e) A wholesaler sells printer cartridges. The minimum order quantity is 5. There is a 20% discount for orders of 100 or more printer cartridges. Write down boundary value analysis three test inputs values for the number of printer cartridges ordered.
f) List out steps of Software Test Life Cycle.

Q.3 Answer the following. (Any Two) **08**

a) Why integration testing is needed? What is Top-down and bottom-up integration testing?
b) Explain load testing with example.
c) What is performance testing? Describe parameters of performance testing.

Q.4 Answer the following. (Any Two) **08**

a) Explain recovery testing with example.
b) How to prepare test plan? Explain it.
c) What is Requirements Traceability Matrix? Explain its types.

Q.5 Answer the following. (Any One) **08**

a) Describe attributes of defect report with suitable example.
b) What is Test Case? Design test cases for Email Login Form.

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Seat No.		Set	P

B.C.A (Semester - IV) (New) (CBCS) Examination: March/April-2024
Digital Marketing (BCA1405)

Day & Date: Saturday, 13-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct Alternative from the following. **08**

1) Which of the following is not a traditional forms of digital marketing?
a) Radio b) TV
c) Billboard d) All of the above

2) What is not true about digital marketing?
a) Digital marketing is any form of marketing products or services that involves electronic devices.
b) Digital marketing can be done online
c) Digital marketing cannot be done online
d) Digital marketing is often referred to as online marketing, internet marketing or web marketing.

3) SEO stands for _____.
a) Search Engine Optimization
b) Search Engine Optimum
c) Search Electronic Optimization
d) None of the above

4) Which of the following statements is correct with regard to natural links?
a) They are two way links
b) They are from authority websites
c) They are voluntary in nature
d) They are from .edu or .gov extension websites

5) Which social network is considered the most popular for social media marketing?
a) Twitter b) Facebook
c) LinkedIn d) WhatsApp

6) Which of the following is not an advantage of email newsletters?
a) Email newsletters spread your brand awareness
b) leverage the temporary content
c) freedom to include different types of content
d) leverage the existing content

7) In which type of email campaign, advertisement are sent to target group of customer?
a) Direct email marketing b) Indirect email marketing
c) Spamming d) Spoofing

8) Blogs are web pages created by an individual or a group of individuals.
a) TRUE b) FALSE
c) Can be true or false d) Can not say

Q.2 Answer the following. (Any Four) **08**

a) What is Social Media Marketing?
b) What is Facebook Marketing?
c) What is Search Engine Rank?
d) What is E-Commerce?
e) What is pay per Click?
f) What is Affiliate Marketing?

Q.3 Write Short Notes. (Any Two) **08**

a) Characteristics of Digital Marketing
b) Social media strategy
c) Advantages of Blogging

Q.4 Answer the following Questions. (Any Two) **08**

a) Why the Digital Marketing is important?
b) Which are the SEO Tools? Explain.
c) How online businesses use e-mail to engage customers?

Q.5 Answer the following Question. (Any One) **08**

a) Explain Search Engine Optimization Process & Goals.
b) Difference between traditional and digital marketing.

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Seat No.	

Set P

B.C.A (Semester - IV) (New) (CBCS) Examination: March/April-2024
Python - II (BCA1406)

Day & Date: Monday, 15-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose correct alternative for the following. **08**

1) Which type of elements are accepted by random.shuffle()?
a) strings b) lists
c) tuples d) integers

2) Multithreading on a single processor is possible with the help of _____.
a) Threader b) Scheduler
c) Method d) Divider

3) What will be the output of the following Python code?
1st = [1, 2, 3]
1st[3]
a) NameError b) ValueError
c) IndexError d) TypeError

4) To read two characters from a file object infile, we use _____.
a) infile.read(2) b) infile.read()
c) infile.readline() d) infile.readlines()

5) Which method of cursor class which used to fetch limited row from table?
a) cursor.fetchsize(size) b) cursor.fetchmany(size)
c) cursor.fetchall(size) d) cursor.fetchonly(size)

6) To delete any widget from the screen which function we use?
a) stop() b) break()
c) delete() d) destroy()

7) If all the classes use private inheritance in multilevel inheritance, then _____.
a) It will not be called multilevel inheritance
b) Each class can access only non-private members of its parent
c) Each subsequent class can access all members of previous level parent classes
d) None of the members will be available to any other class

8) Which keyword is used for function?
a) Fun b) Define
c) def d) Function

Q.2 Answer any four of the following. **08**

a) What is namespace?
b) What is formal & actual parameter?
c) What is inner class?
d) Use of thread
e) What is database?

Q.3 Answer any two of the following. **08**

a) Explain Anonymous function.
b) Write a program for User defined Exception.
c) Explain Abstract class & super() method.

Q.4 Answer any two of the following. **08**

a) Explain thread synchronization.
b) What is file? Explain types of files.
c) Write a program for inserting data into student table using MySQLdb.

Q.5 Answer any One of the following. **08**

a) What is module? Explain Math & NumPy.
b) Explain Entry, button, rediobutton, Listbox widgets with example.

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Seat No.	

Set P

B.C.A. (Semester - IV) (Old) (CBCS) Examination: March/April-2024
OOPS with C++ - II (19409401)

Day & Date: Friday, 05-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) There are _____ specifiers used to derive a class.
a) 1 b) 2
c) 3 d) 4

2) If a class contains pure virtual function, then it is termed as _____.
a) Virtual class b) Sealed class
c) Pure Local class d) Abstract Class

3) To perform File I/O operations, we must use _____ header file.
a) < ifstream> b) < ofstream>
c) < fstream> d) Any of these

4) The code of statements which may cause abnormal termination of the program should be written under _____ block.
a) try b) catch
c) Finally d) None of these

5) In Multipath inheritance, in order to remove duplicate set of records in child class, we _____.
a) Write Virtual function in parent classes
b) Write virtual functions is base class
c) Make base class as virtual base class
d) All of these

6) When a base class is privately inherited by the derived class, then _____.
a) protected members of the base class become private members of derived class
b) public members of the base class become private members of derived class
c) both a and b
d) None of the above

7) Which of the following is not used as a file opening mode?
a) ios::trunk b) ios::binary
c) ios::in d) ios::ate

8) _____ are used to format the data display in CPP.
a) Iterators b) Punctuators
c) Manipulators d) Allocators

Q.2 Answer any four of the following. **08**

a) Explain getline() and write() functions used in CPP.
b) Define virtual base class.
c) Which are the file handling modes used in CPP?
d) Explain abstract class.
e) What is inheritance? How many types of inheritance are available?
f) What is mean by exception?

Q.3 Write short notes on any two of the following. **08**

a) File Stream classes
b) Exception handling mechanism
c) Pointer to base class

Q.4 Answer any two of the following. **08**

a) Explain command line arguments.
b) Explain function template with program.
c) Explain different functions used in error handling during file operations.

Q.5 Answer any one of the following. **08**

a) Explain hybrid and multilevel inheritance.
b) Write down the program for pure virtual function and its characteristics.

SLR-GG-40

Seat No.	

Set P

B.C.A (Semester - IV) (Old) (CBCS) Examination: March/April-2024
Data Structures Using 'C' - 4.0 II (19409402)

Day & Date: Sunday, 12-05-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions **08**

1) Which of the following is not an advantage of tree?
a) Hierarchical structure
b) Faster search
c) Router algorithms
d) Undo/Redo operations in a notepad

2) The balance factor of a node in a binary tree is defined as _____.
a) Addition of heights of left and right subtrees
b) Height of right subtree minus height of left subtree
c) Height of left subtree minus height of right subtree
d) Height of right subtree minus one

3) In a Max-heap, element with the greatest key is always in the which node?
a) Left node b) First node of left subtree
c) root node d) First node of right subtree

4) The number of elements in the adjacency matrix of a graph having 7 vertices is _____.
a) 7 b) 14
c) 36 d) 49

5) Dijkstra's Algorithm will work for _____.
a) Positive weights b) Negative weights
c) Both a & b d) None of these

6) Binary search can be categorized into _____ of the following.
a) Brute force technique b) Divide and conquer
c) Greedy algorithm d) Dynamic programming

7) What is the worst case complexity of bubble sort?
a) O(nlogn) b) O(logn)
c) O(n) d) $O(n^{2)}$

8) _____ of the following sorting algorithms is the fastest.
a) Merge sort b) Quick sort
c) Insertion sort d) Shell sort

Q.2 Answer any four of the following. **08**

a) What is Data Structure?
b) Write an ADT for stack.
c) Write the node structure of DLL.
d) List the application of Queue.
e) Define searching.
f) Define Binary Tree.

Q.3 Write short notes on any two of the following. **08**

a) Dijkstra's shortest path algorithm
b) Selection sort
c) Binary search Tree

Q.4 Answer any Two of the following. **08**

a) Explain Quick sort with example.
b) What is Binary Tree? Explain its types in brief.
c) WAP to implement Binary search technique.

Q.5 Answer any one of the following. **08**

a) Explain the Graph traversals in detail.
b) Explain AVL tree with example.

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Seat No.	

Set P

B.C.A (Semester - IV) (Old) (CBCS) Examination: March/April-2024
MYSQL (19409403)

Day & Date: Wednesday, 10-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) _____ command is used to delete a database.
a) DELETE DATABASE_NAME;
b) DROP DATABASE_NAME;
c) DROP DATABASE DATABASE_NAME;
d) DELETE DATABASE DATABASE_NAME;

2) _____ operator is used to compare a value to a specified list of values.
a) ANY b) BETWEEN
c) ALL d) IN

3) ____ statement is used to grant privileges to a user in MySQL.
a) GRANT b) REVOKE
c) DENY d) ALLOW

4) ____ is a program that performs some common action on database data and also stored in the database.
a) Stored Procedure b) Trigger
c) Stored Function d) None of the above

5) The value of Primary key _____.
a) can be duplicated b) can be null
c) cannot be null d) none of these

6) Which of the following function returns the current date and time in MySQL?
a) CURDATE() b) NOW()
c) CURTIME() d) DATE()

7) In _____ language MYSQL is written.
a) PYTHON b) C/C+
c) JAVA d) COBOL

8) _____ command is used to display definition of a table.
a) select b) update
c) revoke d) desc

Q.2 Answer any four of the following. **08**

a) What are the features Stored Procedure.
b) Write syntax and example of IFNULL()function
c) Write syntax and example of BETWEEN operator.
d) Write syntax and example of group by clause.
e) What is Column Level Constraints?
f) Define CURDATE() Function.

Q.3 Write short notes on any two of the following. **08**

a) Explain Primary key and Foreign key constraint with e.g.
b) Explain Math function with example.
c) Explain ROLLUP in MySQL.

Q.4 Answer any Two of the following. **08**

a) What is Table Locking? Explain types of locks with example.
b) Explain Procedures with INOUT Parameter.
c) Explain Union, Union all, Minus and Intersect Set Operations with example.

Q.5 Answer any one of the following. **08**

a) Explain Import CSV File into MySQL Table and Export MySQL Table to CSV File with example.
b) Explain CREATE, ALTER(ADD AND MODIFY), DROP on table with example.

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Seat No.	

Set P

B.C.A. (Semester - IV) (Old) (CBCS) Examination: March/April-2024
Ethics and Cyber Law (19409404)

Day & Date: Friday, 12-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct alternative from the option. **08**

1) _____ is a component of the reconnaissance stage that is used to gather possible information for a target computer system or network.
a) Fingerprinting b) 3D printing
c) Footprinting d) Data printing

2) Cyber-crime can be categorized into _____ types.
a) 4 b) 3
c) 2 d) 6

3) What is the name of the IT law that India is having in the Indian legislature?
a) India's Technology (IT) Act, 2000
b) India's Digital Information Technology (DIT) Act, 2000
c) The Technology Act, 2008
d) India's Information Technology (IT) Act, 2000

4) Which of the following is not done by cybercriminals?
a) Unauthorized account access
b) Mass attack using Trojans as botnets
c) Email spoofing and spamming
d) Report vulnerability in any system

5) In which year India's IT Act came into existence?
a) 2000 b) 2001
c) 2002 d) 2003

6) Which of the following term refers to a group of hackers who are both white and black hat?
a) Yellow Hat hackers b) Grey Hat hackers
c) Red Hat Hackers d) White-Black Hat Hackers

7) _____ is the technique used in business organizations and firms to protect IT assets.
a) Ethical hacking b) Unethical hacking
c) Fixing bugs d) Internal data-breach

8) Collecting freely available information over the internet is an example of _____ type of information gathering.
a) active b) passive
c) active & passive d) non-passive

Q.2 Answer any four of the following. **08**

a) Define criminal aspect.
b) Define Cyberstalking.
c) Define Cyber Law.
d) Define Botnets.
e) Define penetration testing.
f) Define Foot printing.

Q.3 Write short notes on any two of the following. **08**

a) Explain Network Security Challenges.
b) What is a keylogger? Explain types of keyloggers.
c) Explain Elements of Information Security.

Q.4 Answer any two of the following. **08**

a) Explain objectives of Foot Printing.
b) Explain weakness in Information Technology Act.
c) What is Cybercrime? Explain Passive Attacks and Active Attacks in detail.

Q.5 Answer any one of the following. **08**

a) Explain any Eight Classifications of Cybercrimes.
b) What is Hacking? Explain types of Hackers? Explain Reasons for Hacking.

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Seat No.	

Set P

B.C.A (Semester - IV) (Old) (CBCS) Examination: March/April-2024
Angular JS (19409405)

Day & Date: Saturday, 13-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations wherever necessary.
3) Figures to the right indicate full marks.

Q.1 Select appropriate answer. **08**

1) CSS _____ allow you to change CSS property values smoothly, from one value to another, over a given duration:
a) transitions b) elements
c) CDN d) None of the these

2) MVC stands for Model View _____.
a) Connection b) Connector
c) Controller d) None of the these

3) _____ are special attributes starting with ng- prefix.
a) CSS b) Directories
c) Directives d) None of these

4) _____ directive repeats html elements for each item in a collection.
a) ng-repeat b) ng-while
c) ng-do d) none of these

5) To make a controller in AngularJS, you have to pass the _____ object as an argument.
a) $view b) $scope
c) $event d) None of these

6) ____ in AngularJS helps to determine whether or not any changes have been made by the user at run time in Form Validation.
a) ng-dirty b) $invalid
c) $error d) None of these

7) The _____ directive is a starting point of AngularJS Application.
a) ng-init b) ng-app
c) ng-model d) None of these

8) AngularJS expression is like JavaScript expression surrounded with _____.
a) ((expression)) b) <<expression>>
c) {{ expression }} d) None of these

Q.2 Answer any Four of the following. **08**

a) What is ng-bind directive? How to create ng-bind Directive.
b) What is currency format filter? How to create currency Format Filter.
c) Write steps to create an AngularJS Program.
d) What is CSS? Write uses of CSS in AngularJS.
e) What is ng-app directive in AngularJS?
f) Explain SPA in AngularJS?

Q.3 Write short notes on any Two of the following. **08**

a) Form Validation in AngularJS
b) Data Binding in AngularJS
c) ng-if Directive

Q.4 Answer any Two of the following. **08**

a) Explain Life Cycle of AngularJS Scope.
b) Explain Directives supporting for the animation in AngularJS.
c) Explain ng-show and ng-hide with suitable example.

Q.5 Answer any One of the following. **08**

a) Explain following Filters with suitable example:
1) lower case
2) upper case
3) number
4) date

b) Write a program to create a Single Page Application in AngularJS.

SLR-GG-44

Seat No.	

Set P

B.C.A. (Semester - IV) (Old) (CBCS) Examination: March/April-2024
Advance 4.0 d Computer Networks (19409406)

Day & Date: Monday, 15-04-2024 Max. Marks: 40
Time: 09:00 AM To 11:00 AM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Multiple choice questions. **08**

1) The network layer is concerned with _____ of data.
a) bits b) frames
c) packets d) bytes

2) Which of the following are transport layer protocols used in networking?
a) TCP and FTP b) UDP and HTTP
c) TCP and UDP d) HTTP and FTP

3) Which component is included in IP security?
a) Authentication Header (AH)
b) Internet key Exchange (IKE)
c) Encapsulating Security Payload (ESP)
d) All of the mentioned

4) DNS database contains _____.
a) name server records b) hostname-to-address records
c) hostname aliases d) all of the mentioned

5) Network layer firewall works as a _____.
a) Frame filter b) Packet filter
c) Content filter d) Virus filter

6) Which of the following routing algorithms can be used for network layer design?
a) shortest path algorithm b) distance vector routing
c) link state routing d) all of the mentioned

7) Expansion of FTP is _____.
a) Fine Transfer Protocol b) File Transfer Protocol
c) First Transfer Protocol d) Fast Transfer Protocol

8) Pretty good privacy (PGP) is used in _____.
a) Browser security b) Email security
c) FTP security d) Wi-Fi security

Q.2 Answer any four of the following. **08**

a) Long form of SMTP and HTTP
b) What is Firewall?
c) Long form of PGPs and MIME
d) What is General principle of congestion control?
e) Define Encryption & decryption.
f) What is Flow Control?

Q.3 Write short notes on any two of the following. **08**

a) Write short note on Bluetooth.
b) Explain Real Time Transport Protocol.
c) Write short note on Samba Server.

Q.4 Answer any two of the following. **08**

a) Explain Digital Signatures.
b) Explain POP, HTTP.
c) Difference between TCP and UDP.

Q.5 Answer any one of the following. **08**

a) Explain Data Compression in detail.
b) Explain Shortest Path Routing with example.

SLR-GG-45

Seat No.	

Set P

B.C.A. (Semester - IV) (Old) (CBCS) Examination: March/April-2024
Python Programming (19409407)

Day & Date: Tuesday, 16-04-2024 Max. Marks: 80
Time: 09:00 AM To 12:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to right indicate full marks.
3) Draw necessary diagram whenever necessary.

Q.1 A) Choose correct alternative from the following. **10**

1) Overriding means changing behavior of methods of derived class methods in the base class.
a) True b) False

2) In which language is Python written?
a) English b) php
c) C d) All of the above

3) Which one of the following is the correct extension of the Python file?
a) .c b) .py
c) .txt d) .doc

4) What do we use to define a block of code in Python language?
a) Key b) Brackets
c) Indentation d) None of these

5) Which character is used in Python to make a single line comment?
a) // b) #
c) / d) !

6) What is the method inside the class in python language?
a) Object b) Function
c) Attribute d) Argument

7) Which of the following is not a keyword in Python language?
a) val b) try
c) with d) raise

8) The assignment of more than one function to a particular operator is _____.
a) Operator over-assignment
b) Operator overriding
c) Operator overloading
d) Operator instance

9) Which of the following is not a class method?
a) Non-static b) Static
c) Bounded d) Unbounded

10) Who developed the Python language?
a) Zim Den b) Guido van Rossum
c) Niene Stom d) Wick van Rossum

B) Fill in the blank. **06**

1) Program code making use of a given module is called a _____ of the module.
2) _____ data structures is returned by the functions globals() and locals().
3) In python context, what does GUI stand for _____
4) A _____ is python sequence which stores a group of elements.
5) Dictionary represents a group of elements arranged in the form of _____ pairs.
6) Hiding unnecessary data and code from the user is called _____.

Q.2 Solve any Eight of the following. **16**

a) List out data types used in python.
b) What is GUI?
c) What is thread?
d) What is regular exception?
e) What is exception?
f) What is set?
g) Write the syntax of if and if-else statements.
h) What is the use of PVM?
i) What is the use of str.upper() and str.lower() functions in string?
j) Define array with an example.

Q.3 A) Attempt any Two of the following. **10**

1) What is abstract class? Explain with example.
2) What is list? Explain methods of list with example.
3) What is exception? Explain with example.

B) Write a short note constructor used in python. **06**

Q.4 A) Attempt any Two of the following. **08**

1) Write a python program to check given number is odd or even by using GUI.
2) What is file? Explain all modes of file with example.
3) What is Function? Explain types of function arguments with example.

B) Explain List and methods of List with example. **08**

Q.5 Attempt any Two of the following. **16**

a) What is inheritance? Explain types of inheritance with example.
b) What is string? Explain all the methods of string with example.
c) Explain any four widgets used in python tkinter with example.

SLR-GG-46

Seat No.	

Set P

B.C.A. (Semester - V) (New) (CBCS) Examination: March/April-2024
ENGLISH
Business English (20409501)

Day & Date: Friday, 05-04-2024 Max. Marks: 40
Time: 03:00 PM To 05:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Choose the correct answer and rewrite the sentences. **08**

1) What was Della going to cook for dinner?
a) Soup b) Chops
c) Pie d) lentils

2) Who came to visit Phatik's mother?
a) grandmother b) their uncle
c) cousin d) daughter

3) What was The Solitary Reaper doing in the field?
a) watering b) planting
c) reaping the harvest d) tilling the field

4) What does Queen Gulnaar desire?
a) A rival b) more clothes
c) more jewellary d) The king's attention

5) Where did the schoolmaster live?
a) cottage b) mansion
c) apartment d) bungalow

6) The Road in the poem is a symbol of_____.
a) Good omen b) the choice in life
c) the fun in life d) the difficulty in life

7) My mother usually _____ till late on Sundays. (Use appropriate phrasal verb)
a) Sleeps on b) Sleeps in
c) Sleeps away d) Sleeps out

8) He has sold his car. (Change the voice)
a) His car has been sold by him.
b) His car has been sold by her.
c) His car has been sold by them.
d) His car has been sold by he.

Q.2 Write the answers to the following questions. (Any Four) **12**

a) Why is the queen unsatisfied and seeks a rival?
b) Describe the character of The Village Schoolmaster.
c) Explain the title The Road Not Taken.
d) What was the solitary reaper doing in the field?
e) Why was Della sad in the beginning of the story in The Gift of Magi?
f) Justify the title of the story The Homecoming.

Q.3 Answer the following question. (Any One) **10**

Write a note on creative and communicative skills. Give examples.

OR

What is Learning Skills? Write a detailed note on learning skill.

Q.4 Answer the following question. **10**

Discuss in detail types of 21st Century Skills.

SLR-GG-47

Seat No.	

Set P

B.C.A. (Semester - V) (New) (CBCS) Examination: March/April-2024
Core Java (19409502)

Day & Date: Sunday, 12-05-2024 Max. Marks: 80
Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.
2) Draw neat labeled diagrams wherever necessary.
3) Figures to the right indicate full marks.

Q.1 A) Multiple choice questions. **10**

1) Who invented Java Programming?
a) Guido van Rossum b) James Gosling
c) Dennis Ritchie d) Bjarne Stroustrup

2) Which component is used to compile, debug and execute the java programs?
a) JRE b) JIT
c) JDK d) JVM

3) What is not the use of “this” keyword in Java?
a) Referring to the instance variable when a local variable has the same name
b) Passing itself to the method of the same class
c) Passing itself to another method
d) Calling another constructor in constructor chaining

4) Which of these statements is incorrect about Thread?
a) start() method is used to begin execution of the thread
b) run() method is used to begin execution of a thread before start() method in special cases
c) A thread can be formed by implementing Runnable interface only
d) A thread can be formed by a class that extends Thread class

5) Which of these packages contains all the classes and methods required for even handling in Java?
a) java.applet b) java.awt
c) java.event d) java.awt.event

6) Which of these keywords is used to manually throw an exception?
a) try b) finally
c) throw d) catch

7) Which of these is correct way of inheriting class A by class B?
a) class B + class A { } b) class B inherits class A { }
c) class B extends A { } d) class B extends class A { }

8) What would be behaviour if the constructor has a return type?
a) Compilation error
b) Runtime error
c) Compilation and runs successfully
d) Only String return type is allowed

9) Polymorphism _____
- a) Is not supported by Java
- b) Refers to the ability of two or more objects belonging to different classes to respond to exactly the same message in different class-specific ways and simplifies code maintenance.
- c) Simplifies code maintenance
- d) Not simplifies code maintenance

10) Which of the following is used to call stored procedure?
- a) Statement
- b) PreparedStatement
- c) CallableStatment
- d) CalledStatement

B) Fill in the blank. **06**

1) The output of the Java compiler is known as _____.
2) The _____ statement is used to include another Java package in a Java source file.
3) A subclass can call a constructor method defined by its super class by use of the _____ keyword.
4) _____ is not supported by java.
5) A class may have several constructors and it is called _____
6) JVM stands for _____

Q.2 Solve any eight of the following. **16**

a) Use of final keyword.
b) What is class and object?
c) Define Abstract class.
d) State any 4 features of Java.
e) What is Constructor? List it's types.
f) What is the method overloading?
g) Define Stream. Mention types of streams in Java.
h) Use of static keyword.
i) List the JDK tool.
j) What is data type and variable?

Q.3 a) Attempt any two of the following. **10**

1) What is an inheritance? Explain the multiple inheritance with example.
2) Explain the structure of Java programming.
3) Explain types of polymorphism with example.

b) What is thread? Explain thread synchronization with example. **06**

Q.4 a) Attempt any two of the following. **08**

1) Design a frame to check given number is Armstrong or not.
2) What is Adapter class? Give an example of MouseAdapter class.
3) Explain access specifires in java.

b) Explain different types of JDBC drivers in detail. **08**

Q.5 Attempt any two of the following. **16**

a) Write a program to read one file and copy only owels from that file and write it to another file using character stream classes.
b) Explain types of LayoutMangers.
c) What is exception? Explain types of exceptions.

SLR-GG-48

Seat No.	

Set P

B.C.A. (Semester - V) (New) (CBCS) Examination: March/April-2024
Visual Programming (19409503)

Day & Date: Wednesday 10-04-2024 Max. Marks: 80
Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 A) Multiple choice questions. **10**

1) The _____ is an initially undifferentiated area of memory that can be referred to by items placed on the stack.
   a) Linked list b) List
   c) Heap d) Queue

2) An _____ is a block of code designed to handle the exception you have thrown.
   a) Structs b) Errors
   c) Indexers d) Exception handler

3) _____ framework has set of classes which are used to handle data access by connecting with different databases like SQL, Access, Oracle, etc.
   a) ADO.NET b) ASP.NET
   c) C#.NET d) Visual Studio

4) A _____ type is a type whose fields consist of a fixed set of constants.
   a) string b) enum
   c) struct d) array

5) Destructor will be called by _____.
   a) monitor b) garbage collector
   c) dispose() d) object

6) A parameter can be passed to a function by _____.
   a) pass by path b) pass by pointer
   c) pass by reference d) pass by key

7) Override is a _____.
   a) parameter modifier b) method modifier
   c) access modifier d) class modifier

8) C# supports_____.
   a) for statement only
   b) for each statement only
   c) both for and for each statement
   d) neither for nor for each statement

9) Objects cannot be created for _____ class.
   a) static b) Student
   c) Abstract d) struct

10) WriteLine is a_____.
   a) function b) Keyword
   c) literal d) class

B) One sentence answer. **06**

1) Stands for MSIL.
2) What is file?
3) Write function of ToLower ().
4) Write use of sealed class.
5) What is value type?
6) What is function?

Q.2 Solve any Eight of the following. **16**

a) What is boxing & unboxing?
b) What is inheritance?
c) What is managed code?
d) What is stored procedure in ADO.net?
e) What is early binding & late binding?
f) What is input stream & output stream?
g) What is Exception handling?
h) What is Assembly?
i) What is menu strip in C#?

Q.3 a) Attempt any two of the following. **10**

1) What is indexer? Explain with example.
2) Explain function overloading in c#.
3) Explain try-catch exception with example.

b) Short Note:- **06**

1) Array list
2) Hash table

Q.4 a) Attempt any two of the following. **08**

1) Explain type of operator in detail.
2) What is a delegate? Write simple example of delegate in c#.
3) Write a c# program to illustrate multilevel inheritance.

b) Describe any four controls with example in windows application. **08**

Q.5 Solve any two questions of the following: **16**

a) Explain constructor & its type.
b) Explain parameter passing technique.
c) Explain .Net framework in brief.

SLR-GG-49

Seat No.	

Set P

B.C.A. (Semester - V) (New) (CBCS) Examination: March/April-2024
Computer Graphics (19409504)

Day & Date: Friday, 12-04-2024 Max. Marks: 80
Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to right indicate full marks.

Q.1 A) Multiple choice questions. **10**

1) The graphics can be _____.
   a) Drawing b) Photograph, movies
   c) Simulation d) All of these

2) The transformation that is used to alter the size of an object is _____.
   a) Scaling b) Rotation
   c) Translation d) Reflection

3) The floodfill( ) graphics function has _____ number of parameters.
   a) 1 b) 2
   c) 3 d) 4

4) The major components of CRT are _____.
   a) Phosphorous coated screen
   b) Control electrodes
   c) Deflection yoke and Electronic Gun
   d) All of the above

5) Types of computer graphics are _____.
   a) Vector and raster b) Scalar and raster
   c) Vector and scalar d) None of these

6) The basic geometric transformations are _____.
   a) Translation b) Rotation
   c) Scaling d) All of the above

7) On raster system, lines are stored in terms of _____.
   a) Dash b) Dots
   c) Pixels d) None of the mentioned

8) The transformation that produces a parallel mirror image of an object is called _____.
   a) Rotation b) Reflection
   c) Translation d) Scaling

9) The Matrix representation for translation in homogeneous coordinate's is _____.
   a) P'=T+P b) P'=S*P
   c) P'=R*P d) P'=T*P

10) To change the position of circle or ellipse, we translate _____.
   a) Center coordinates & radius
   b) Center coordinates only
   c) Outline coordinates
   d) All of the above

B) Fill in the blank/Definition/One sentence answer/ One word answer/ Give the name/Predict the product etc. **06**

1) _____ is equivalent Cartesian coordinate point for homogeneous point P(40,25,5).
2) The 3D point X(-5,6,9) is lies in _____ plane.
3) The process of transforming 3D object onto 2D plane is called _____.
4) Higher the number of pixels, _____ the image quality.
5) A Transformation that slants the shape of objects is called the _____.
6) _____ computer graphics is also called as 'Passive computer graphics'.

Q.2 Solve any Eight of the following. **16**

a) What do you mean by sharing?
b) What is 2D rotation?
c) What is computer graphics? List out its applications.
d) What is Parallel projection?
e) What is Plotter?
f) List out graphical output devises.
g) What are the applications of computer graphics?
h) What is clipping?
i) Write 3D transformation matrix for scaling?
j) What is Trackball?

Q.3 A) Attempt any Two of the following. **10**

1) Derive the transformation matrix for reflection in 3D about arbitrary planes.
2) What are the merits and demerits of DDA line drawing algorithm.
3) What is viewing transformation?

B) Short Note: **06**

Explain working of CRT in details.

Q.4 A) Attempt any Two of the following. **08**

1) Scale the polygon with coordinates A(2,5), B(7,10) and C(10,2) by 2 units in X direction and 2 units in Y-direction.
2) Explain merits & demerits of plasma panel display.
3) Write the difference between 'Raster Scan display' and 'Random Scan Display'.

B) Describe/Explain/Solve **08**

Derive the transformation matrix for the rotation of graphics object about an arbitrary point.

Q.5 Attempt any Two of the following. **16**

a) What is 'Composition of 2D transformation'? Explain it with suitable example.
b) Explain DDA line drawing algorithm with suitable example.
c) Explain 3D geometric transformation in detail.

SLR-GG-50

Seat No.	

Set P

B.C.A. (Semester - V) (New) (CBCS) Examination: March/April-2024
Recent Trends in IT (19409505)

Day & Date: Saturday, 13-04-2024 Max. Marks: 80
Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to right indicate full marks.

Q.1 A) Multiple choice questions. **10**

1) Which of the following is a primary characteristic of Big Data?
   a) High velocity b) Structured data
   c) Low volume d) Easy to manage

2) Which of the following is an instance of a Big Data Analytics tool?
   a) Microsoft Excel b) Tableau
   c) Adobe Photoshop d) Google Docs

3) _____ technologies are commonly used for Big Data Analytics?
   a) Hadoop b) MySQL
   c) MongoDB d) PHP

4) What is the main aim of Big Data Analytics?
   a) To store and process large amounts of data
   b) To identify patterns and extract insights from large datasets
   c) To make data available to users in real-time
   d) To improve data security and privacy

5) _____ is the most difficult challenge in Big Data Analytics?
   a) Data security b) Data integration
   c) Data Accuracy d) All of the above

6) _____ is a method of data analysis that uses machine learning algorithms?
   a) Predictive analytics b) Prescriptive analytics
   c) Descriptive analytics d) All of the above

7) The process of evaluating data through analytical and statistical tools.
   a) Data Mining b) Data Exploration
   c) Data Analysis d) Data Visualization

8) In which language is Hadoop written?
   a) C b) Python
   c) Java d) Ruby

9) The output of training process in machine learning is _____.
   a) machine learning algorithm b) machine learning model
   c) null d) accuracy

10) The problem of finding hidden structure in unlabeled data is called ____.
   a) unsupervised learning b) reinforcement learning
   c) supervised learning d) none of these

B) Fill in the blank. **06**

1) Applications and services that run on a distributed network using virtualized resource is known as _____.
2) Data which are very large in size is called _____.
3) _____ has the world's largest Hadoop cluster.
4) _____ is a branch of AI and computer science which focuses on the use of data and algorithms to imitate the way that humans learn, gradually improving its accuracy.
5) KVM Stands for _____.
6) Who is the father of cloud computing?

Q.2 Solve any Eight of the following. **16**

1) What is Green IT?
2) What is Big Data?
3) What is Hadoop?
4) What are Green IT Standards and Eco-Labelling.
5) What is Distributed Processing System?
6) Define Hybrid Clouds.
7) What is hypervisor?
8) What is Cloud Computing?
9) Define Community Clouds.

Q.3 A) Attempt any Two of the following. **10**

1) Explain characteristics of Big data.
2) Explain in details the role of a Data Scientist.
3) Explain Hadoop Architecture.

B) Short note on. **06**

1) Cloud service models
2) Predictive and descriptive tasks

Q.4 A) Attempt any Two of the following. **08**

1) Explain types of Big Data.
2) Explain IoT Architecture.
3) Explain Data scientist skills.

B) Describe/Explain/Solve. **08**

What is mean by Data Science? Explain benefits of Data Science?

Q.5 Attempt any Two of the following. **16**

a) What is Machine Learning? Why is Machine Learning important?
b) Explain IoT Applications in detail.
c) Explain difference Between Hadoop and traditional system.

SLR-GG-51

Seat No.	

Set P

B.C.A. (Semester - V) (New) (CBCS) Examination: March/April-2024
Linux and Shell Programming (19409506)

Day & Date: Monday, 15-04-2024 Max. Marks: 80
Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.
2) Draw neat labelled diagrams wherever necessary.
3) Figures to the right indicate full marks.

Q.1 A) Multiple choice questions. **10**

1) _____ command is used to delete/remove a user.
   a) #deluser b) #rmuser
   c) #useradd d) #userdel

2) To view the permissions of the file then _____ command is used.
   a) vper b) ls – l
   c) chmod d) All of these

3) _____ is the octal representation of r-- -w- --x.
   a) 421 b) 241
   c) 412 d) 124

4) The _____ option enables to search for a string case insensitively in the given file in grep command.
   a) -i b) -h
   c) -c d) -e

5) _____ option is used with $ls command to list out all files along with HIDDEN files.
   a) -l b) -r
   c) -a d) -h

6) The FILE SYSTEM State information is stored in _____ Block.
   a) Super b) Boot
   c) Inode d) Data

7) Every process running on System has a _____.
   a) Permissions b) Process ID
   c) BOTH d) NONE

8) _____ is a difference between LINUX and Windows.
   a) Multiprogramming b) Multitasking
   c) Open Source d) None

9) echo command is used for taking input from user?
   a) TRUE b) FALSE

10) Hard Link can be created in different directory.
   a) TRUE b) FALSE

B) Define the following terms. **06**

1) Shell Variable
2) Boot Block
3) Metacharacter
4) usage of $cd command
5) usage of $ping command
6) Full form of DHCP

Q.2 Solve any EIGHT of the following. **16**

a) Define Data Block.
b) List TWO differences between Symbolic link and hard link.
c) $mkdir command.
d) List out any 4 Linux Shell types.
e) Define usage of #useradd command.
f) What is mounting?
g) State usage of $paste command.
h) State the purpose of $lpr command.
i) State usage of $pwd command.
j) What is mean by piping?

Q.3 a) Attempt any two of the following. **10**

1) List out differences between GRUB and LILO.
2) Write Note on $ps command.
3) Write a Shell Script to perform basic arithmetic operations.

b) Explain $cp command with its options. **06**

Q.4 a) Attempt any two of the following. **08**

1) Write a note $head command.
2) State any FOUR file system types.
3) Explain for in loop with Example.

b) List out differences between Windows and Linux OS. **08**

Q.5 Attempt any two of the following. **16**

a) Explain features of Linux OS.
b) Explain Vi Editor with modes.
c) Write shell script to check entered number is palindrome or not.

SLR-GG-52

Seat No.	

Set P

B.C.A (Semester - VI) (New) (CBCS) Examination: March/April-2024
ENGLISH
Literary Mindscapes - I (19409601)

Day & Date: Tuesday, 16-04-2024 Max. Marks: 40
Time: 03:00 PM To 05:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 Rewrite the following sentence by choosing the correct alternatives: 08

1) How old is Robert Quick?
a) fifty-two b) fifty-five
c) fifty-three d) fifty-six

2) What was Aksionov found of he was younger?
a) dancing b) sleeping
c) singing d) reading

3) How many children are listening to the story?
a) five b) two
c) three d) one

4) What was the cause of the death of the duchess?
a) illness b) accident
c) drowning d) the duke

5) What calls our best away?
a) responsibility b) family
c) work d) death

6) What makes for itself a cooling covert against the hot season?
a) daffodils b) beauty
c) clear rills d) animals

7) She was walking slowly. (Identify the adverb)
a) was b) walking
c) slowly d) None of the above

8) She said, “She must leave all the bad habits.” (Change into reported speech)
a) She said she has to leave all the bad habits.
b) She said that she must have leave all the bad habits.
c) She said that she had to leave all the bad habits.
d) She said that she could leave all the bad habits.

Q.2 Answer the following question in briefly. (Any Four) **12**

a) What was the Quick family garden wild and carefree?
b) Why did Aksionov leave the inn early?
c) Describe the personality of the duchess.
d) Describe the use of memory and tradition in the poem “Sita”.
e) Why “Ode to Beauty” considered to be a romantic poem?
f) Describe the imagery and its effectiveness in the poem “Life”.

Q.3 Write down the answer of any one of the following. **10**

Explain the “Media Literacy” and its importance.

OR

Define Initiative in your own words. Give an example of a situation in which you took initiative.

Q.4 What are the global awareness and civic literacy? **10**

SLR-GG-53

Seat No.		Set	P

B.C.A. (Semester - VI) (New) (CBCS) Examination: March/April-2024
Advanced Java (19409602)

Day & Date: Thursday, 18-04-2024 Max. Marks: 80
Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 A) Multiple choice questions. **10**

1) What type of servlets uses doGet(), doPost(), doHead, doDelete(), doTrace() methods?
   a) GenericServlet b) HttpServlet
   c) HttpSession d) None of these

2) What is javax.servlet.Servlet?
   a) interface b) abstract class
   c) concreate class d) None of the above

3) A servlet maintain session in _____.
   a) Servlet Context b) Servlet container
   c) Servlet response heap d) Servlet request heap

4) Which of the following code is used to get an attribute in a HTTP Session object in servlets?
   a) session.getAttribute(String name)
   b) session.alterAttribute(String name)
   c) session.updateAttribute(String name)
   d) session.setAttribute(String name)

5) In JSP Action tags, which tags are used for bean development?
   a) jsp:useBean b) jsp:setPoperty
   c) jsp:getProperty d) All mentioned above

6) _____ method is used to send the same request and response objects to another servlet in RequestDispacher?
   a) forward() b) sendRedirect()
   c) Both a & b d) None of the above

7) _____ is not a core interface of Hibernate?
   a) Configuration b) Criteria
   c) SessionManagement d) Session

8) What is the default scope of the Spring Bean?
   a) singleton b) prototype
   c) request d) session

9) _____ JSTL tag removes the variable from either a first scope or a specified scope.
   a) <c:set> b) <c:remove>
   c) <c:delete> d) All of these

10) _____ packages represent interfaces and classes for servlet API?
   a) javax.servlet b) javax.servlet.http
   c) Both (a) & (b) d) None of the above

B) Fill in the blanks. **06**

1) JSP stands for _____.
2) JSTL stand for _____.
3) "<% %>" this syntax in JSP is called as _____.
4) The Java _____ specification defines an application programming interface for communication between the Web server and the application program.
5) _____ configuration file is used to configure Hibernate setting.
6) _____ annotation is used to specify the column name in a Hibernate entity class.

Q.2 Solve any Eight of the following. **16**

a) What are Servlets?
b) Define the term Session.
c) What are servlet filter?
d) What is mean by JSP?
e) What is JSTL?
f) What is the Spring Framework?
g) What is Spring IOC Container?
h) What is a Session in Hibernate?
i) What are the technologies that are supported by Hibernate?
j) What is Jdbc Template?

Q.3 A) Attempt any two of the following. **10**

1) What are the differences between HttpServlet and GenericServlets?
2) What are the benefits of Spring?
3) Explain the basic structure of servlet.

B) Short note. **06**

1) JSTL SQL tags
2) Collection mapping

Q.4 A) Attempt any two of the following. **08**

1) Differentiate in between forward () method and sendRedirect () method
2) What are the different bean scopes in spring?
3) Write a program for date and time using JSP.

B) Describe/explain/Solve **08**

Explain the JSP architecture with advantages & disadvantages.

Q.5 Attempt any two of the following. **16**

a) Explain servlet life cycle in details.

b) Explain Hibernate architecture.

c) Explain out and page implicit object with example.

SLR-GG-54

Seat No.	

Set P

B.C.A. (Semester - VI) (New) (CBCS) Examination: March/April-2024
Dot Net Technology (19409603)

Day & Date: Friday, 19-04-2024 Max. Marks: 80
Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.
2) Draw neat labeled diagrams wherever necessary.
3) Figures to right indicate full marks.

Q.1 A) Choose the correct alternative from the option. **10**

1) ASP stands for?
   a) Active Server Pages b) Access Server Pages
   c) Active Server Platform d) Active Server Programming

2) Attribute must be set on a validator control for the validation to work.
   a) ControlToValidate b) ControlToBind
   c) ValidateControl d) Validate

3) Default Session data is stored in ASP.Net.
   a) StateServer b) Session Object
   c) InProcess d) All of the above

4) Which of the following object is not an ASP component?
   a) LinkCounter b) Counter
   c) AdRotator d) File Access

5) Web.config file is used _____.
   a) Configures the time that the server-side codebehind module is called.
   b) To store the global information and variable definitions for the application.
   c) To configure the web server.
   d) To configure the web browser

6) The first event triggers in an aspx page is _____.
   a) Page_Init() b) Page_Load()
   c) Page_click() d) Page_Trigger().

7) We can manage states in asp.net application using _____.
   a) Session Objects b) Application Objects
   c) Viewstate d) All of the above

8) Default scripting language in ASP.
   a) EcmaScript b) VBScript
   c) PERL d) JavaScript

9) Which object can help you maintain data across users?
   a) Application object b) Session object
   c) Response object d) Server object

10) You can have only one Global.asax file per project.
   a) Yes b) No

B) Define the following terms. **06**

1) Validation Controls
2) IIS
3) View State in ASP.NET
4) File Upload Control
5) Personalization
6) ADO.NET

Q.2 Solve any Eight of the following. **16**

a) What is Session in ASP.NET?
b) Differentiate ASP & ASP.NET.
c) List the all types of rich controls.
d) What is web service in ASP.NET?
e) List the different controls in AJAX.
f) Differentiate client side V/S server side state management techniques.
g) What is State Management in ASP.NET?
h) Draw website life cycle.
i) Compilation technique of ASP.NET?
j) What is Validation Group in ASP.NET?

Q.3 A) Attempt any Two of the following. **10**

1) Explain AdRotator Control with example.
2) Explain Master Page and Content Page in detail.
3) Explain different List Controls in ASP.NET.

B) Short note on Cross Page Posting with example. **06**

Q.4 A) Attempt any Two of the following. **08**

1) Write ASP.NET application for web user control in ASP.NET.
2) Explain all ASP.NET Page life cycle events in detail.
3) Explain Server side state management techniques in ASP.NET.

B) Explain Page Life Cycle in detail. **08**

Q.5 Attempt any Two of the following. **16**

a) Explain all directives in ASP.NET?
b) Explain ADO.NET architecture of ASP.NET.
c) Explain all Site Navigation Techniques in ASP.NET.

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Seat No.	

Set P

B.C.A. (Semester - VI) (New) (CBCS) Examination: March/April-2024
Data Warehouse and Data Mining (19409604)

Day & Date: Saturday, 20-04-2024 Max. Marks: 80
Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.

Q.1 A) Multiple choice questions. **10**

1) _____ is a subject-oriented, integrated, time-variant, nonvolatile collection of data in support of management decisions.
a) data mining b) data warehousing
c) web mining d) text mining

2) The important aspect of the data warehouse environment is that data found within the data warehouse is _____.
a) subject-oriented b) time-variant
c) integrated d) all of the above

3) _____ predicts future trends & behaviors, allowing business managers to make proactive, knowledge-driven decisions.
a) Data warehouse b) Data mining
c) Data marts d) Metadata

4) The process of removing deficiencies and loopholes in the data is called as _____.
a) Data aggregation b) Extraction of data
c) Compression of data d) Cleaning of data

5) Which one of the following can be considered as the correct application of the data mining?
a) Fraud detection
b) Corporate Analysis & Risk management
c) Management and market analysis
d) All of the above

6) In the example predicting the number of newborns, the final number of total newborns can be considered as the _____.
a) Features b) Observation
c) Attribute d) Outcome

7) Which one of the following statements is not correct about the data cleaning?
a) It refers to the process of data cleaning
b) It refers to the transformation of wrong data into correct data
c) It refers to correcting inconsistent data
d) All of the above

8) Small logical units where data warehouses hold large amounts of data is known as _____.
a) Access layers b) Data marts
c) Data Storage d) Data miners

9) DSS in data warehouse stands for _____.
a) Decision single system b) Decision support system
c) Data support system d) Data storable system

10) ETL stands for _____.
a) Effect, transfer and load b) Explain, transfer and load
c) Extract, transfer and load d) Extract, transfer and load

B) Fill in the blanks. **06**

1) _____ describes the data contained in the data warehouse.
2) _____ is the heart of the warehouse.
3) The star schema is composed of _____ fact table.
4) The key used in operational environment may not have an element of _____.
5) Data can be updated in _____ environment.
6) The full form of KDD is _____.

Q.2 Answer the following (any eight) **16**

a) Define Data warehouse.
b) What are operational databases?
c) Define the term OLAP?
d) Define Data cleaning.
e) What is mean by Clustering?
f) What is the purpose of Apriori Algorithm?
g) What is Decision tree?
h) What are Bayesian Classifiers?
i) Define spatial data mining?
j) Define Multimedia data mining.

Q.3 A) Attempt the following. (any two) **10**

1) Discuss the various schematic representations in multidimensional model.
2) Differentiate between operational database systems and data warehouses.
3) Explain K-means clustering algorithms.

B) Write short note on: **06**

1) Star Schema
2) MOLAP

Q.4 A) Attempt the following. (any two) **08**

1) Explain Data warehouse Characteristics.
2) Explain Need for Pre-processing the Data.
3) Explain Naive Bayes Classifier.

B) Explain Data warehouse Architecture and its Components. **08**

Q.5 Attempt the following. (any two) **16**

a) Explain KDD with suitable diagram
b) Explain APRIOIRI Algorithm in detail.
c) Explain classification by Decision tree induction Algorithm.

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Seat No.	

Set P

B.C.A. (Semester - VI) (New) (CBCS) Examination: March/April-2024
Cryptography and Network Security (19409605)

Day & Date: Monday, 22-04-2024 Max. Marks: 80
Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.
2) Draw neat labelled diagrams wherever necessary.
3) Figures to the right indicate full marks.
4) Use of log table and calculators is allowed.

Q.1 A) Choose the correct alternatives from the options. **10**

1) In monoalphabetic substitution, the relationship between a symbol in the plaintext to a symbol in the ciphertext is always _____.
a) one-to-many b) one-to-one
c) many-to-one d) many-to-many

2) In Cryptography, the original message, before being transformed, is called _____.
a) Simple text b) Plain text
c) Empty text d) Filled text

3) The full form of SSL is _____.
a) Serial Session Layer b) Secure Socket Layer
c) Session Secure Layer d) Series Socket Layer

4) The process of transforming plain text to unreadable text _____.
a) Decryption b) Encryption
c) Network Security d) Information Hiding

5) We use Cryptography term to transforming messages to make them secure and immune to _____.
a) Change b) Idle
c) Attacks d) Defend

6) In symmetric key cryptography, the key used by the sender and the receiver is _____.
a) shared b) different
c) two keys are used d) none of theses

7) An algorithm used in encryption is referred to as cipher _____.
a) True b) False

8) The keys used in cryptography are _____.
a) secret key b) private key
c) public key d) All of above

9) The Advanced Encryption Standard (AES), has three different configurations with respect to the number of rounds and _____.
a) Data size b) Round size
c) Key size d) Encryption Size

10) In Cryptography, when text is treated at the bit level, each character is replaced by _____.
a) 4 Bits b) 6 Bits
c) 8 Bits d) 10 Bits

B) Fill in the blank. **06**

1) Digital signature cannot provide _____ for the message.
2) DES stands for _____.
3) The number of rounds in RC5 can range from 0 to _____.
4) One security protocol for the e-mail system is _____.
5) The _____ is the message after transformation.
6) Cryptography algorithms (ciphers) are divided into _____.

Q.2 Solve any eight of the following. **16**

a) Define the term Attacks.
b) Write the Two security Protocols.
c) What is mean by Email?
d) What is Primality Testing?
e) What is Cryptography?
f) List three monoalphabetic cipher
g) What is mean by DES Function?
h) List six Security Attacks.
i) What is mean by Firewalls?
j) What is mean by password?

Q.3 a) Attempt any Two of the following. **10**

1) Explain the Structure and Analysis of DES.
2) What is Additive Cipher? Use the additive cipher with key = 15 to encrypt the message 'hello'.
3) Explain services provided by IPSec.

b) Write a Short note on Cryptographic attacks. **06**

Q.4 a) Attempt any two of the following. **08**

1) Explain RSA Cryptosystem.
2) Write the use of Stream Ciphers.
3) Explain the SSL Message Formats.

b) Explain the PGP and S/MIME in detail. **08**

Q.5 Attempt any two of the following. **16**

a) Distinguish between a substitution cipher and Transposition Cipher.
b) Explain the security services and mechanisms in detail.
c) Explain the Process and Services of the Digital Signature in detail.

SLR-GG-57

Seat No.	

Set P

B.C.A. (Semester - VI) (New) (CBCS) Examination: March/April-2024
Advanced Python (19409606)

Day & Date: Tuesday, 23-04-2024 Max. Marks: 80
Time: 03:00 PM To 06:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to right indicate full marks.

Q.1 A) Multiple choice questions. **10**

1) Which of the following is not correct way to import the tkinter in program?
   a) import tkinter from * b) import tkinter as t
   c) import tkinter as p d) All of the above

2) Which of the following statements is true:
   a) XML is a direct subset of SGML
   b) SGML is an application of HTML
   c) XML is a kind of dynamic HTML
   d) XHTML is XML rewritten in HTML

3) Which of the following are Advantages of Django?
   a) Object-Relational Mapping (ORM) Support
   b) Multilingual Support
   c) Administration GUI
   d) Framework Suppor

4) FTP server listens for connection on port number _____.
   a) 20 b) 21
   c) 22 d) 23

5) MVC pattern is based on _____ components.
   a) 2 b) 3
   c) 4 d) 5

6) In XML Document Comments Are Given As?
   a) <!-- --!> b) <!-- ?
   c) < /-- --> d) < ?-- ?

7) How to create a project in Django?
   a) urls.py b) _init_.py
   c) manage.py d) All of above

8) To hold the screen what we use?
   a) mainloop() function b) pause() function
   c) Stop() function d) None of the above

9) title() is used for _____.
   a) give a title name to the window
   b) give a title name to the Button
   c) give a title name to the Widet
   d) None of the above

10) What is the Syntax to create a Frame?
   a) Frame(window, options) b) win.frame(options)
   c) Both of the above d) None of the above

B) Fill in the blank. **06**

1) _____ is the default port of SMTP.
2) GUI stands for _____.
3) The XML DOM object is _____.
4) Config() in Python Tkinter are used for _____.
5) XML Is Designed To Store Data And _____.
6) Django supports the _____ pattern.

Q.2 Solve any Eight of the following. **16**

a) What is GUI?
b) What is Web Framework?
c) What is Geometry Management?
d) What is socket?
e) What is view?
f) What is DOM?
g) What is root window?
h) What is Event?
i) What is Widgets?
j) What is Tkinter?

Q.3 A) Attempt any Two of the following. **10**

1) Explain Server methods.
2) What is Django? Explain its advantages.
3) Write a program for Label.

B) Write a program for IP address. **06**

Q.4 A) Attempt any Two of the following. **08**

1) Explain MVC architecture.
2) Explain Advantages of f GUI.
3) Write a program for sending email application.

B) Explain pack Layout manager. **08**

Q.5 Attempt any Two of the following. **16**

a) Write a program for client and server.
b) Explain List Box and Button.
c) What is XML ?Explain architecture of XML.

SLR-GG-60

Seat No.	

Set P

B.C.A. (Semester - II) (CBCS) Examination: March/April-2024
Software Engineering - II (19409209)

Day & Date: Wednesday, 22-05-2024 Max. Marks: 40
Time: 03:00 PM To 05:00 PM

Instructions: 1) All questions are compulsory.
2) Figures to the right place indicates full marks.
3) Draw neat diagrams and give equations wherever necessary.
4) Use of logarithmic table and calculator is allowed.
5) (At. Wts.: H=1, C=12, O=16, N= 14, Na =23, Cl = 35.5)

Q.1 Multiple choice question **08**

1) DFD shows _____.
a) Areas where they are stored b) Processes
c) Flow of data d) All of the above

2) Which of the following is not an objective of testing?
a) Finding defects b) Preventing defects
c) Fixing defects d) All of the above

3) What types of errors are not done by Black-Box Testing and can be uncovered by White-Testing?
a) Logic errors b) Performance errors
c) Behavioural errors d) None of the above

4) Black box testing is only functional testing.
a) True b) False

5) Black box testing is also called _____.
a) Specification-based testing b) Structural testing
c) Verification d) Unit testing

6) A table is in BCNF if it is in 3NF and if every determinant is a ____ key.
a) Dependent b) Normal
c) Candidate d) Both Normal and Candidate

7) A data dictionary is created when a _____ created.
a) Instance b) Segment
c) Database d) Dictionary

8) An entity set that does not have sufficient attributes to form a primary key is termed a _____.
a) Strong entity set b) Variant set
c) Weak entity set d) Variable set

Q.2 Answer any four of the following. **08**

a) What is Decision Table?
b) Define Attribute in ERD. Explain Composite attribute.
c) Explain how design helps in software development.
d) Define Whitebox Testing.
e) What is Data Dictionary? Features of Data Dictionary.
f) What is Decision Tree?

Q.3 Write short notes on any two of the following. **08**

a) Write a short Note on Structure charting Techniques (HIPO).

b) Explain flow chart in detail with all symbols.

c) Explain Data flow diagram. Draw & Explain symbols used to draw DFD.

Q.4 Answer the following. **08**

a) Differentiate between Decision Table & Decision Tree.

b) Differentiate between white Box testing and Black box testing.

Q.5 Answer any One of the following. **08**

a) Explain ERD with any one Case study.

b) Explain Normalization in detail.