

Seat No. 319258



SLR-DG-1

Set P

B.C.A. (Semester - I) (New) (CBCS) Examination: Oct/Nov-2023
ENGLISH (COMPULSORY)
Communication Skill (BCA1101)

Day & Date: Monday, 20-11-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Choose the correct alternative from the given options.

08

- 1) Where did Gandhi meet his missionary friends?
a) Orissa
b) Vellore
c) Madras
d) Panji
- 2) What was the school attached to?
a) Bus stand
b) Hospital
c) Temple
d) Library
- 3) According to Rabindranath Tagore what is necessary to win freedom?
a) Patience
b) Friends
c) Allies
d) Wars
- 4) Who sang praises for the flowers?
a) Bard
b) Oracle
c) Saints
d) Birds
- 5) How does the father discover the son in his room?
a) Sleeping
b) Sobbing
c) Playing
d) Reading
- 6) What is the suitable prefix of the word - Legal?
a) illegal
b) illegal
c) inlegal
d) delegal
- 7) What is the suitable suffix of the word - Manage?
a) Manage
b) Management
c) ill manage
d) Pre manage
- 8) Which of the following is used to join sentences, clauses and words?
a) adverbs
b) interjection
c) conjunction
d) verb

Q.2 Write the answer in short. (Any Four)

12

- a) What is the context of Gandhi's talk on religion?
- b) What kind of relationship did the author have with his grandmother?
- c) Discuss the poet's state of mind in the poem - Let Me Not Pray to be Sheltered from Danger.
- d) Discuss the theme of the poem - The Lotus.
- e) Define the ending of the poem - The Toys in your words.
- f) What is the significance of the Sparrows in the lesson - The Portrait of a Lady?

Q.3 Answer the following questions. (Any One)

✓ a) Define what is Communication and the process of Communication?

OR

✓ b) Write in detail about the channels of Communication.

Q.4 Write a detail note on various intrapersonal skills?

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SLR-DG-2

Set P

B.C.A. (Semester - I) (New) (CBCS) Examination: Oct/Nov-2023
Fundamentals of Computer (Paper - I) (BCA1102)

Day & Date: Tuesday, 21-11-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Choose correct alternative for the following.

08

- 1) _____ device is used in first generation.
a) IC
b) VLSI
c) ALSI
d) Vacuum tube
- 2) Which of the following is a scanning technology?
a) OCR
b) OMR
c) BCR
d) All of these
- 3) _____ is output device designed to get hard copy output.
a) LCD
b) Monitor
c) Printer
d) CRT
- 4) RAM is a _____ memory.
a) External
b) Auxiliary
c) Main
d) None of these
- 5) In MICR commonly used font is _____.
a) F13D
b) E13D
c) E13B
d) F13B
- 6) A computer _____ is a malicious code which self-replicates by copying itself to other programs.
a) program
b) virus
c) application
d) worm
- 7) Example of a good password is _____.
a) name of a partner or spouse
b) name of a child or pet
c) words contain multiple random digits
d) None of these
- 8) Backup of the source data can be created _____.
a) On the same device
b) On another device
c) At some other locate
d) All of these

Q.2 Answer Any Four the following

08

- a) What is hybrid computer?
- b) What is PROM?
- c) What is WWW?
- d) What is Memory Cell?
- e) What is a volatile and non-volatile memory?
- f) Give the List of computer applications.

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

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- a) Internet
- b) RAM
- c) Magnetic tape

Q.4 Answer any Two of the following.

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- a) What is software? Explain different types of system software.
- b) Explain types of network.
- c) What is pointing Device? Explain the types of mouse.

Q.5 Answer any one of the following.

08

- a) What is computer? Explain types of Computer in details.
- b) What is programming language? Explain high level language and its advantages.

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SLR-DG-4

Set P

B.C.A. (Semester - I) (New) (CBCS) Examination: Oct/Nov-2023
Programming and Problem Solving Using 'C' (Paper - I) (BCA1104)

Day & Date: Thursday, 23-11-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Choose correct alternative for the following.

- 1) C language developed by _____.
a) Martin Richards
b) Dennis Ritchie
c) Ken Thompson
d) None
- 2) C language contains _____ Keywords.
a) 23
b) 32
c) 36
d) 63
- 3) The _____ function is used to display output on to the screen.
a) scanf()
b) printf()
c) getchar()
d) print()
- 4) _____ escape sequence character causes the cursor to move to the next line.
a) \t
b) \a
c) \n
d) \b
- 5) _____ operator not operates on float type operands.
a) /
b) *
c) %
d) +
- 6) _____ is not operator in C language.
a) sizeof
b) +
c) *
d) #
- 7) _____ is the exit-controlled loop.
a) for
b) while
c) do-while
d) none
- 8) _____ is the pictorial representation of algorithm.
a) algorithm
b) problem
c) Flowchart
d) none of these

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Q.2 Answer any four of the following.

- a) What is algorithm?
b) What are the arithmetic operators?
c) Explain if-else statement.
d) What is string?
e) What is two dimensional array?
f) What is logic?

08

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SLR-DG-7

Set P

B.C.A. (Semester - I) (New) (CBCS) Examination: Oct/Nov-2023
Descriptive Statistics (Paper - II) (BCA1107)

Day & Date: Sunday, 26-11-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Multiple Choice questions.

08

- 1) With the help of ogive curve one cannot determine _____.
a) Median
b) deciles
c) Percentiles
d) mode
- 2) With the help of ogive curve one can determine _____.
a) Median
b) deciles
c) Percentiles
d) mode
- 3) The two regression lines intersect at _____.
a) (0,0)
b) (\bar{X}, \bar{Y})
c) (σ_x, σ_y)
d) None of these
- 4) The A.M of first n natural number is _____.
a) $n(n+1)/2$
b) $(n^2+1)/2$
c) $n(n^2+1)/2$
d) $(n^2+n)/2n$
- 5) A primary data is a data collected from _____.
a) Office records
b) direct interviews
c) bulletins
d) Annual reports
- 6) Which of the following is Positional average?
a) Arithmetic mean
b) Geometric mean
c) Harmonic mean
d) Median
- 7) Mode is _____.
a) middle most value
b) the minimum value
c) most frequent value
d) the maximum value
- 8) If the smallest value in a set is 7 and its range is 85, the largest value of the set is _____.
a) 85.5
b) 12.14
c) 78
d) 92

Q.2 Answer any four of the following.

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- a) Define A.M.
- b) Define population with example.
- c) Write down relation between mean, median and mode.
- d) Define continuous and discrete variable.
- e) Define C.V.
- f) Write down any two examples of sample.

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

- Write any two properties of regression coefficients.
- Calculate coefficient of correlation from the following information.
 $n = 5, \Sigma X = 25, \Sigma Y = 25, \Sigma X^2 = 150, \Sigma Y^2 = 150, \Sigma XY = 140$
- Discuss the effect of change of origin and scale on Correlation coefficient.

Q.4 Answer any two of the following.

- Define Correlation. Its types with example.
- Compute S.D. of first n natural number.
- Define A.M. for grouped data. Calculate the A.M. of the marks from the following

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of students	12	18	27	20	17	6

Q.5 Answer any one of the following.

- The number of runs scored by cricketers A and B in 10 test matches are shows below:

A	5	20	90	76	102	90	6	108	16	20
B	40	35	60	62	58	76	42	30	20	30

Find:

- Which cricketer is better in average?
 - Which cricketers is more consistent?
- b) You are given the following information about two variables x and y
 $n = 10, \Sigma X^2 = 385, \Sigma Y^2 = 192, \Sigma XY = 185, \bar{X} = 5.5, \bar{Y} = 4$
Find the regression line of y on x .



SLR-DG-5

Set P

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B.C.A. (Semester - I) (New) (CBCS) Examination: Oct/Nov-2023
Web Programming - I (Paper - II) (BCA1105)

Max. Marks: 40

Day & Date: Friday, 24-11-2023
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.

Q.1 Multiple choice questions.

- 1) Which of the following is the correct syntax to display the hyperlinks without any underline?
a) `a {text-decoration : underline;}`
b) `a {decoration : no-underline;}`
c) `a {text-decoration : none;}`
d) None of the above
- 2) What are the new form elements introduced in html5?
a) 2
b) 3
c) 4
d) 5
- 3) Which of the following is the correct syntax to make the background-color of all paragraph elements to yellow?
a) `p {background-color : yellow;}`
b) `p {background-color : #yellow;}`
c) `all {background-color : yellow;}`
d) `all p {background-color : #yellow;}`
- 4) Are the negative values allowed in padding property?
a) Yes
b) No
c) Can't say
d) May be
- 5) The CSS property used to specify the transparency of an element is _____.
a) opacity
b) filter
c) visibility
d) overlay
- 6) `<input>` is _____.
a) an format tag.
b) an empty tag.
c) All of the above
d) None of the above
- 7) In a CSS file, there is a CSS rule for paragraphs tags - what does p can be called?
a) Selector
b) Attribute
c) Property
d) Tag
- 8) Which of the following is the correct way to create a list using the lowercase letters?
a) `<ol alpha = "a" >`
b) `<ol type = "a">`
c) `<ol letter = "a">`
d) None of the above

08

- Q.2 Answer any four of the following.**
- What is an Event explain with example.
 - What is use of table tag explain with example.
 - Explain the canvas tag with example.
 - What is use of header and footer in web page.
 - What is Media tag?
 - What is DOCTYPE Element?

08

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

- Padding
- Singular and Paired tags
- 2D and 3D Transformations.

08

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

- Explain GET and POST methods with example.
- What is multiple column layout?
- Explain CSS Properties details.

08

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

- Explain the Form tag with input tag attributes.
- What is Web Technology? What are the features of Web Site?

08

Q.2 Answer any four of the following questions.

a) $A = \begin{bmatrix} 0 & 2 \\ 4 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 2 \\ 4 & 0 \end{bmatrix}$ then find $AB = ?$

b) $A = \begin{bmatrix} 0 & 2 \\ 4 & 5 \end{bmatrix}$ then find $A^T = ?$

c) If $c = \begin{bmatrix} 2 & 10 \\ 11 & 10 \end{bmatrix}$ then find inverse of c .

d) Draw the truth table of $[p \wedge (p \rightarrow Nq)] \rightarrow p$

e) State Addition principle.

f) Definition of disjoint sets.

Q.3 Write Short Notes. (Any Two)

a) Matrix representation of Relation.

b) State and prove Distributive law.

c) State and prove De-Morgan's law.

Q.4 Answer any two of the following questions.

a) Prove that : $(p \vee q) = (q \vee p)$ by using truth table.

b) State and prove associative law.

c) Write the converse, inverse and contrapositive of the following statement
" If switch is on then fan is start".

Q.5 Answer any one of the following questions.

a) Check given statement pattern are tautology or a contradiction or a contingency.

$$[(p \wedge q) \vee (Np \vee Nq)]$$

b) Find inverse of the A by adjoint method if $A = \begin{bmatrix} 2 & 3 & 1 \\ -1 & 0 & 3 \\ 3 & 1 & 2 \end{bmatrix}$

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Set P

B.C.A. (Semester - I) (New) (CBCS) Examination: Oct/Nov-2023
Office Automation (Paper - II) (BCA1103)

Day & Date: Wednesday, 22-11-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Choose the correct alternatives from the options.

- 1) What is the function of Ctrl+B in Ms-Word.
a) It converts selected text into the next larger size of the same font.
b) It adds a line break to the document.
c) It makes the selected text bold.
d) It applies italic formatting to the selected text.
- 2) In Microsoft Word shortcut key Ctrl+W is used for _____.
a) Open the print dialog box
b) Update the current web page
c) Close the current window
d) None of these
- 3) Which shortcut key is used to spell check in MS-Word?
a) f1
b) f2
c) f7
d) f9
- 4) Why header and footer used in MS-Word
a) To enhance the overall appearance of the document
b) To mark the starting of a page
c) To make large document more readable
d) To allow page header and footer to appear on document when it is printed
- 5) To start slide show of a presentation
a) Press f5 key
b) Press f7 key
c) Press f6 key
d) Press f8 key
- 6) What is the extension of power point file?
a) .pmt
b) .ppt
c) .ppt
d) .pdf
- 7) By default an excel work book displays _____ work sheets.
a) 1
b) 2
c) 3
d) 5
- 8) Windows is an operating system.
a) True
b) False

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

- a) What is a window? List any two its task.
- b) What is Title Bar?
- c) What is MS Access?
- d) What is the use of MS-Excel?
- e) What is PowerPoint.
- f) What is software?

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Q.3 Write Short Notes. (Any Two)

- a) Explain Dialog Box.
- b) How to insert page number on MS-Word?
- c) Explain any three components of window.

08

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

- a) Explain any four shortcuts in MS-Word.
- b) Explain Save and Save As command in MS-Word.
- c) Explain any four MS-Excel features.

08

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

- a) How we create a new database in MS-Access. Explain Steps.
- b) What is Presentation? Explain Steps of Creating Presentation.

08

Q.3 Write short notes (Any Two)

- a) Write a note on LCD display. (construction, working).
- b) Write a note on photolithography process.
- c) Write a note on epitaxial growth.

Q.4 Answer the following (Any Two)

- a) Explain with neat diagram how transistor and diode are fabricated in IC.
- b) Explain with neat diagram working of 7 segment display.
- c) State types of PCB. Explain double sided PCB.

08

Q.5 Answer the following (Any One)

- a) Explain diffusion and isolation process with neat diagrams for IC fabrication process.
- b) Explain construction and working of LED display. State its applications.

08



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Set P

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B.C.A. (Semester - I) (New) (CBCS) Examination: Oct/Nov-2023
Linear Electronics - II (BCA1109)

Day & Date: Wednesday, 29-11-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

- 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 Choose the correct alternatives from the options.

- 1) Capacitance of a capacitor is inversely proportional to _____.
a) area of plates
b) thickness of dielectric
c) dielectric constant
d) none of above
- 2) For $1.5k\Omega$ resistor with 10% tolerance the color band is in the sequence of _____.
a) Brown red yellow gold
b) Brown green red silver
c) Brown red red gold
d) Brown Green orange gold
- 3) In a semiconductor diode, the current through the junction is maximum when it is _____.
a) forward biased
b) reverse biased
c) no supply
d) none of above
- 4) For NPN transistor, emitter base junction is forward biased and collector base junction is reverse biased, the region of operation is _____.
a) active
b) saturation
c) cut off
d) reverse saturation
- 5) Regulated power supplies are used in _____.
a) mobile charger
b) measurement devices
c) computers
d) all of above
- 6) Rectification is a process of converting _____.
a) DC to AC
b) AC to DC
c) AC to AC
d) None of above
- 7) Transformer converts _____.
a) AC to DC
b) DC to AC
c) high/low voltage AC to low/high voltage AC
d) high/low voltage AC to low/high voltage DC
- 8) Rectification can be done using _____.
a) transformer
b) conductors
c) bridge rectifier
d) none of above

Q.2 Answer any four of the following.

- Draw symbol of capacitor. Define capacitance. State its unit.
- What are two types of transformer according to secondary voltage. Draw their diagrams.
- What is doping process? Which are two types of impurities. Give examples.
- Draw symbol of inductor. What is inductance. State its unit?
- State specifications of resistors.
- Write classification of capacitors with symbols.

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

- Write a note on P type semiconductor.
- Write a note on SMPS.
- Write a note on PN junction diode.

Q.4 Answer any two of the following.

- Draw block diagram of regulated power supply. Explain function of each block.
- Explain with neat diagram construction and working of P-type semiconductor.
- State applications of BJT and PN junction diode.

Q.5 Answer any one of the following.

- What is rectifier? Draw and explain circuit diagram of CT full wave rectifier. Also draw input output waveforms.
- Draw and explain construction of NPN transistor. Explain with neat diagram working of NPN transistor.

SLR-DG-11

Seat No.	
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Set **P**

B.C.A (Semester - II) (New) (CBCS) Examination : Oct/Nov-2023
Introduction to Python Programming (BCA1202)

Day & Date: Sunday, 03-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Multiple choice questions.

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- Which of the following statements is correct for variable names in Python language?
 - All variable names must begin with an underscore.
 - Unlimited length.
 - The variable name length is a maximum of 2.
 - All of the above.
- Suppose `d = {"john":40, "peter":45}`, to delete the entry for "john" what command do we use?
 - `d.delete("john":40)`
 - `d.delete("john")`
 - `del d["john"]`
 - `del d("john":40)`
- In order to store values in terms of key and value we use what core data type?
 - list
 - tuple
 - class
 - dictionary
- What will be the output of the following Python code?

```
i = 1
while False:
    if i%2 == 0:
        break
    print(i)
    i += 2
```

 - 1
 - 1 3 5 7 ...
 - 1 2 3 4 ...
 - none of the mentioned
- Who developed Python Programming Language?
 - Wick van Rossum
 - Rasmus Lerdorf
 - Guido van Rossum
 - Niene Stom
- Which one of the following has the same precedence level?
 - Division, Power, Multiplication, Addition and Subtraction
 - Division and Multiplication
 - Subtraction and Division
 - Power and Division
- Which of the following statements is used to create an empty set?
 - `{}`
 - `set()`
 - `[]`
 - `()`
- What arithmetic operators cannot be used with strings?
 - `+`
 - `*`
 - `-`
 - All of the mentioned

- Q.2 Answer the following (Any Four)**
- What is Docstring in Python?
 - Define Literals and Constants.
 - What is PVM?
 - What is String in Python?
 - List any 4 flavors of Python.
 - What is indexing and slicing on array?

08

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

- Data types in Python
- Looping statements
- Dictionary

08

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

- Write the difference between Python and C language.
- Explain the Set in python with example.
- WAP to accept two 2×2 matrix and display the addition of these matrices.

08

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

- Explain Tuples and List in Python.
- Explain any 8 features of Python.

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Set **P**

Seat No.

B.C.A (Semester - II) (New) (CBCS) Examination: Oct/Nov-2023
Probability Theory (BCA1207)

Day & Date: Friday, 08-12-2023
Time: 09:00 AM To: 11:00 AM

Max. Marks: 40

- 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.

- 1) 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
- 2) The probability curve of standard normal distribution is symmetric about _____.
a) 0
b) μ
c) σ^2
d) None of these
- 3) For a continuous r.v. $X P(X = k) =$ _____, where k be a constant.
a) 0
b) 1
c) $\frac{1}{k}$
d) None of these
- 4) A discrete r.v. X has Poisson distribution then _____.
a) Mean = Variance
b) Mean > Variance
c) Mean < Variance
d) None of these
- 5) A discrete r.v. X has Binomial Distribution with parameter (n, p) then _____.
a) $p =$ probability of success in any trial
b) $n =$ number of times trial is repeated
c) $E(X) > V(X)$
d) All of these
- 6) If event $A \subset B$ then, _____.
a) $P(A) \leq P(B)$
b) $P(A) > P(B)$
c) $P(A) + P(B) = 1$
d) None of these
- 7) Permutations means arrangement of objects in a row such that order of arrangement is _____.
a) important
b) not important
c) particular
d) none of these
- 8) If C is constant then $E(C) =$ _____.
a) 0
b) 1
c) C
d) Infinity

08

Q.2 Answer any four of the following.

- 1) State mean and variance of Binomial distribution
- 2) Define - conditional probability
- 3) Find k if following is p.m.f. of discrete r.v. X

X	2	4	6	8
P(x)	K	2k	4k	0.2

- 4) Given: $P(A) = 0.3$, $P(B) = 0.5$. Find $P(A \cup B)$ if A and B are mutually exclusive events.
- 5) If $X \rightarrow P(4)$. Find $E(X)$ and standard deviation of X.
- 6) Define sample space and its example.

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

- 1) State the axioms of probability and prove $P(\Phi) = 0$.
- 2) Define the c.d.f. of continuous r.v. and state its properties.
- 3) State addition and multiplication principle of counting with illustration.

Q.4 Answer any Two of the following.

- 1) For the following probability distribution of a discrete r.v. X, Find $V(X)$

X	2	4	6	8	10
P(x)	0.2	0.4	0.1	0.2	0.1

- 2) Define event and state any two types with example.
- 3) The p.d.f. of continuous r.v. X is,
 $f(x) = Cx^3$; $0 < x < 1$
 $= 0$; otherwise
 Find i) C ii) $E(X)$

Q.5 Answer any one of the following.

- 1) Define Normal distribution. State mean and variance of it and also state any four properties of it.
- 2) The continuous r.v. X has the p.d.f.
 $f(x) = Cx^4$; $0 < x < 1$
 $= 0$; otherwise
 Find i) C ii) $E(X)$ iii) $V(X)$

SLR-DG-12

Set **P**

Seat
No.

B.C.A. (Semester - II) (New) (CBCS) Examination: Oct/Nov-2023
Operating System (BCA1203)

Day & Date: Monday, 04-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Choose the correct alternatives from the option.

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- 1) The operating system where fixed time slot is allocated to each active process is _____.
 - a) Real time O.S
 - b) Multiprogramming O.S
 - c) Batch O.S
 - d) Time-sharing O.S
- 2) A program in execution is called _____.
 - a) Process
 - b) Instruction
 - c) Procedure
 - d) Function
- 3) Interval between the time of submission and completion of the job is called _____.
 - a) Waiting time
 - b) Turn-around time
 - c) Throughput
 - d) Response time
- 4) FIFO scheduling is _____.
 - a) Preemptive scheduling
 - b) Non-preemptive scheduling
 - c) Deadlock scheduling
 - d) None of these
- 5) The priority scheduling algorithm suffers by _____.
 - a) Starvation
 - b) Aging
 - c) Deadlock
 - d) All of these
- 6) The degree of Multiprogramming is controlled by _____.
 - a) CPU Scheduler
 - b) Context Switching
 - c) Long-term Scheduler
 - d) Medium term Scheduler
- 7) Process is called as a _____ entity.
 - a) Passive
 - b) Active
 - c) Non active
 - d) None of these
- 8) There is a guarantee that the critical tasks are completed in given amount of time. That is called as _____.
 - a) Hard Real time systems
 - b) Soft real time system
 - c) Real time systems
 - d) None of the above

Q.2 Answer any four of the following.

08

- a) Define Operating systems?
- b) What is mean by Multiprogramming?
- c) What is mean by Real-time system?
- d) What is mean by virtual machine?
- e) Define the term Thread?
- f) What is mean by Scheduling?

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

- a) Process Control Block
- b) FCFS Scheduling algorithms
- c) Time Sharing Operating System

Q.4 Answer any Two of the following.

- a) Explain the different Services provided by Operating System?
- b) Explain the different Scheduling criteria in detail.
- c) What is process? Explain process state with block diagram?

Q.5 Answer any one of the following.

- a) Define Process Synchronization? Explain Dinning Philosopher problem?
- b) Explain SJF Scheduling Algorithms with example?

Q.4 Answer any Two of the following.

- a) Write the difference between call by value and call by reference.
- b) Explain different file opening modes.
- c) Write a program to calculate sum of digit of the entered number using function.

Q.5 Answer any One of the following.

- a) Write a program to create structure of student information with appropriate data members.
- b) Explain different four types of user defined functions with suitable example.

Seat
No.

B.C.A (Semester - II) (New) (CBCS) Examination: Oct/Nov-2023
Web Programming - II (BCA1205)

Day & Date: Wednesday, 06-12-2023
 Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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 a single global function defined in the jQuery library?
 - a) jQuery()
 - b) \$()
 - c) Queryanalysis()
 - d) global()
- 2) Which is the method that operates on the return value of \$()?
 - a) show()
 - b) css()
 - c) click()
 - d) done()
- 3) Which of the following sign is used as a shortcut for jQuery?
 - a) the % sign
 - b) the & sign
 - c) the \$ sign
 - d) the @ sign
- 4) Which property helps to initiate the HTTP requests?
 - a) request
 - b) location
 - c) send
 - d) write
- 5) Arrays in JavaScript are defined by which of the following statements?
 - a) It is an ordered list of values
 - b) It is an ordered list of objects
 - c) It is an ordered list of string
 - d) It is an ordered list of functions
- 6) Which of the following uses scripted HTTP?
 - a) XML
 - b) HTML
 - c) Ajax
 - d) CSS
- 7) What will be the output of the following JavaScript code?


```
<p id="demo"><p>
<script>
function myFunction( )
{
  var str = "Tables";
  var patt1 = /tables/ i;
  var result = str.match(patt1);
  document.getElementById ("demo") . innerHTML = result;
}
</script>
```

 - a) Tables
 - b) tables
 - c) Undefined
 - d) Error
- 8) Which of the following attribute can hold the JavaScript version?
 - a) LANGUAGE
 - b) SCRIPT
 - c) VERSION
 - d) None of the above

Q.2 Answer any four of the following.

- a) Data types in JavaScript.
- b) Explain Math() method.
- c) What is variables in JavaScript?
- d) What is syntax of JQuery?
- e) Write the syntax of switch statement in javascript.
- f) Explain css() in JQuery.

Q.3 A) Write notes on any one of the following.

- 1) String functions in JAVASCRIPT.
- 2) Explain ID selectors in JQuery?

B) Solve / short answer
Explain operators in javascript.

03

05

Q.4 Answer any Two of the following.

- a) Explain Events in JQuery.
- b) What is if else if statement in JavaScript? Explain with suitable example.
- c) What is validation in javascript.

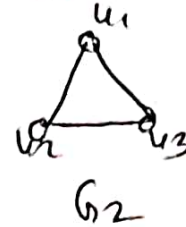
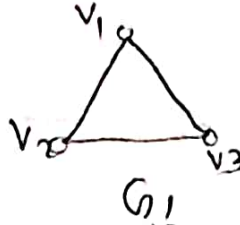
08

Q.5 Answer any one of the following.

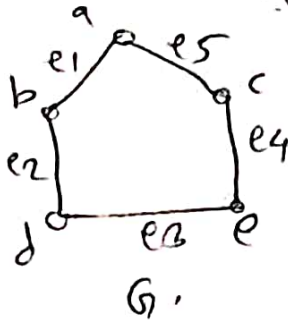
- a) Event handing in Javascript.
- b) Write the syntax of fading and sliding effects in jquery? and explain with suitable example.

08

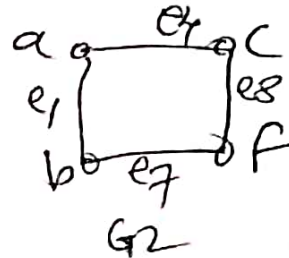
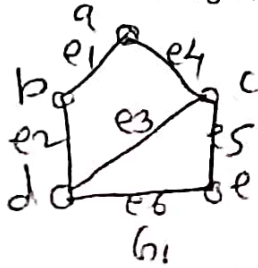
- Q.3 Write Short Notes (Any Two)**
- 1) Write note on trail and circuit.
 - 2) Find $G_1 \times G_2$ of the following graph.



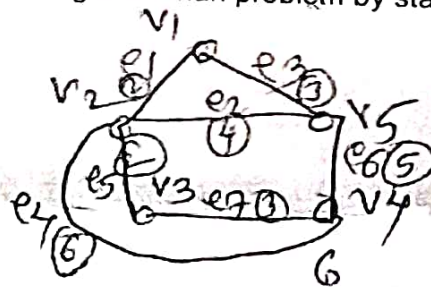
- 3) Solve the Chinese postman problem.



- Q.4 Answer the following questions (Any Two)**
- 1) Write note on matrix representations of graph.
 - 2) Find union and ring sum of the following two graphs.

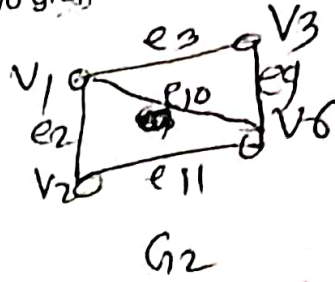
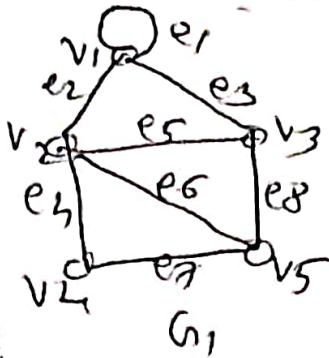


- 3) Solve the following traveling salesman problem by starting to v.

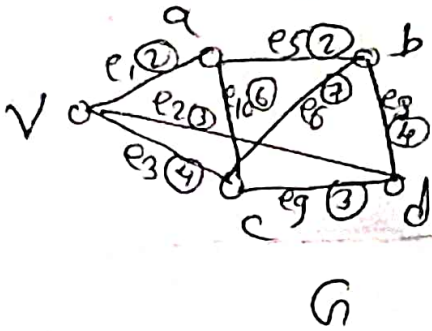


Q.5 Answer any one of the following questions.

1) Find union, intersection and ring sum of two graphs.



2) By using Kruskal's algorithm to find shortest spanning tree of the given graph G.



SLR-DG-17

Set **P**

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B.C.A. (Semester - II) (New) (CBCS) Examination: Oct/Nov-2023
Digital Fundamentals of Computer (BCA1208)

Day & Date: Saturday, 09-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

- Instructions:**
- 1) All questions are compulsory.
 - 2) Draw neat diagrams and give equations wherever necessary.
 - 3) Figures to the right indicate full marks.
 - 4) Non programmable calculators are allowed.

Q.1 Multiple choice questions

- 1) _____ IC is used as counter.
a) 7490
b) 7474
c) 7432
d) 7404
- 2) _____ is universal gate.
a) AND
b) OR
c) NOT
d) NAND
- 3) Half adder performs addition of _____ bit.
a) 8
b) 6
c) 4
d) 2
- 4) Asynchronous counter uses _____ clock.
a) separate
b) common
c) dual
d) synchronous
- 5) Flip flop is _____ device.
a) monostable
b) unstable
c) bistable
d) astable
- 6) RS flip flop is set when S input is _____.
a) 0
b) 1
c) 00
d) 11
- 7) 4:1 is _____ circuit.
a) multiplexer
b) demultiplexer
c) encoder
d) decoder
- 8) _____ flip flop is used to construct shift register.
a) RS
b) JK
c) MSJK
d) D

Q.2 Answer any four of the following.

- 1) Draw symbol of NAND, NOR gate.
- 2) Draw the block diagram of half adder.
- 3) Write definition of combinational circuit.
- 4) Explain application of flip flop.
- 5) Explain concept of multiplexer
- 6) Write disadvantages of RS flip flop.

Q.3 Answer any two of the following.

- a) Explain construction of OR and AND gate using NOR gate.
- b) Explain decoder with diagram.
- c) Explain SIPO shift register.

08

Q.4 Answer any Two of the following.

- a) Explain 4:2 encoder.
- b) Explain full adder using gates.
- c) Explain De Morgan's theorem with logical diagram.

08

Q.5 Answer any One of the following.

- a) Explain multiplexer and demultiplexer with logical diagram.
- b) Classify counter. Explain asynchronous 3 bit up down counter with block diagram.

08

SLR-DG-18

Set P

Seat No.	
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B.C.A. (Semester - II) (New) (CBCS) Examination: Oct/Nov-2023
Introduction of Microprocessor and Interfacing (BCA1209)

Day & Date: Sunday, 10-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

- 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, Cl = 35.5)

Q.1 Choose correct alternative for the following.

- 1) PC is _____ bit in 8085 microprocessor.
a) 8
b) 16
c) 20
d) 30
- 2) _____ bus is uni directional.
a) Data
b) Address
c) Both a & b
d) None
- 3) _____ logical group instruction.
a) MVI
b) Add
c) LORA
d) loop
- 4) _____ is a decrement in push operation.
a) SP
b) BP
c) PC
d) None
- 5) _____ data transfer CPU does not involve.
a) DMA
b) Interrupt initiated
c) None
d) All
- 6) Size of accumulator in 8085 is _____ bit.
a) 16
b) 20
c) 8
d) 9
- 7) Own memory of CPU called as _____.
a) cache
b) RAM
c) ROM
d) register
- 8) 8085 is _____ pin microprocessor.
a) 40
b) 20
c) 10
d) 30

Q.2 Answer any four of the following.

- 1) Define data Bus.
- 2) Define machine Cycle.
- 3) Define interrupt.
- 4) Define DMA data transfer.
- 5) Define Pop Operation.
- 6) Define flag register.

08

- Q.3 Answer any two of the following.**
- a) Explain I/O mapped I/O interfacing.
 - b) Explain logical instructions.
 - c) Explain programmed i/o data transfer.

08

- Q.4 Answer any two of the following.**
- a) Write features of 8085.
 - b) Define addressing mode and gives the classification of it.
 - c) Explain DMA data transfer.

08

- Q.5 Answer any One of the following.**
- a) Draw and explain architecture of 8085 microprocessor.
 - b) Define instruction set and gives the classification of it.

Q.3 Write short notes (Any Two)

- a) Recursion
- b) Dynamic Memory Allocation
- c) Pointer to Pointer

08

Q.4 Answer the following (Any Two)

- a) Explain array of structures.
- b) Write a program that swaps two number using pointers.
- c) What is file? What are the different file opening modes?

08

Q.5 Answer the following (Any One)

- a) Explain storage classes.
- b) Explain call by value and call by reference.

Q.3 Write short notes (Any Two)

- a) Recursion
- b) Dynamic Memory Allocation
- c) Pointer to Pointer

Q.4 Answer the following (Any Two)

- a) Explain array of structures.
- b) Write a program that swaps two number using pointers.
- c) What is file? What are the different file opening modes?

08

Q.5 Answer the following (Any One)

- a) Explain storage classes.
- b) Explain call by value and call by reference.

08

SLR-DG-24

Set P

Seat
No.

B.C.A. (Semester - II) (Old) (CBCS) Examination: Oct/Nov-2023
Basics of Mathematics - II (19409206)

Day & Date: Thursday, 07-12-2023
Time: 09:00 AM To: 11:00 AM

Max. Marks: 40

- 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 calculator is allowed.

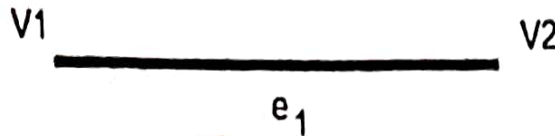
Q.1 Choose the correct alternative.

- 1) The number of edges in complete graph is K_7 _____
a) 21
b) 42
c) 49
d) 7
- 2) A null graph having 'n' vertices is _____ regular graph.
a) n
b) $n - 1$
c) 0
d) None of these
- 3) The two of more edges are said to be parallel edges if they having _____ end vertices.
a) Multiple
b) Same
c) Large
d) None of these
- 4) A graph without loop & parallel edge is called as _____ graph.
a) Pseudo
b) Simple
c) Multiple
d) None of these
- 5) A tree with 7-vertices has _____ number of edges.
a) 7
b) 6
c) 8
d) None of these
- 6) Chinese postman problem is a particular case of _____ graph.
a) Eulerian
b) Hamiltonian
c) Both a & b
d) Neither a nor b
- 7) In a tree there exists _____ path in between every pair of vertices.
a) Unique
b) No
c) More than one
d) Exact two
- 8) In a graph, every vertex has degree _____ is called as regular graph.
a) Odd
b) Even
c) Same
d) None of these

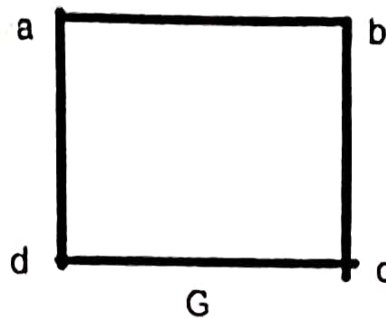
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Q.2 Answer any four of the following questions.

- a) Define Pseudo graph with example.
- b) Draw the graphs K_3 & N_5
- c) Define length of path.
- d) Draw all possible sub graphs of following graph.



e) Draw the complement of following graph.



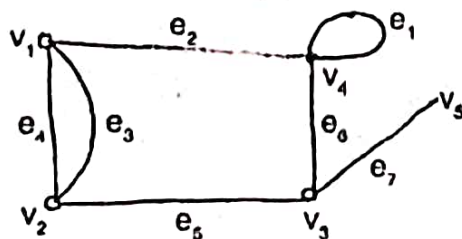
f) Define Tree with example.

Q.3 Write short notes on (Any Two)

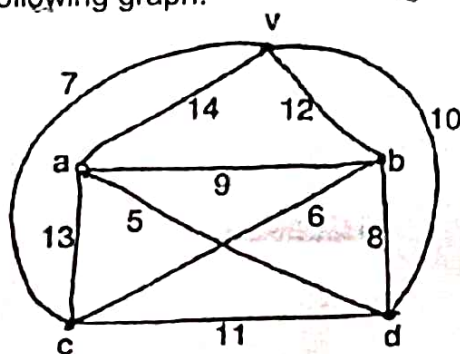
- a) Define complete bipartite graph & draw the graph $K_{2,3}$ & $K_{4,3}$
- b) Write the note on Chinese postman problem.
- c) Explain Hamiltonian graph with example.

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

a) Find the adjacency and incidence matrix for the following graph.

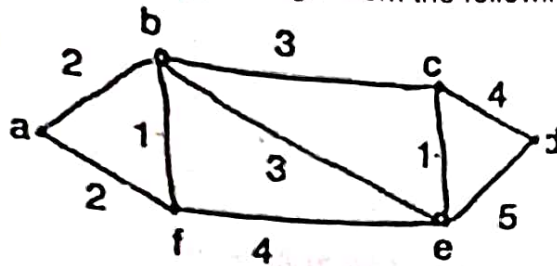


- 2) a) Draw the graph which is neither Euler circuit nor Hamilton cycle.
- b) Draw the graph which is Hamilton cycle but not Euler circuit.
- 3) By starting with vertex v, solve the travelling salesman problem for the following graph.

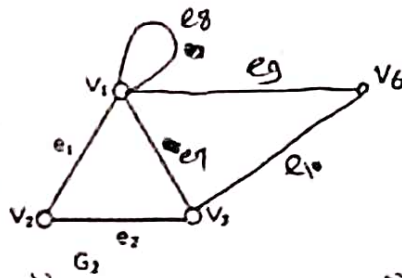
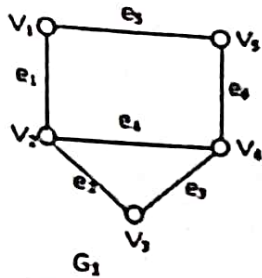


Q.5 Answer any one of the following questions.

a) What is Shortest Spanning tree? By using Kruskal's algorithm find the shortest spanning tree and its weight from the following graph.



b) State & prove Shaking hand lemma. Find the union of following graphs.



SLR-DG-26

Set **P**

Seat No.	
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B.C.A. (Semester - II) (Old) (CBCS) Examination: Oct/Nov-2023
Introduction to Microprocessor (19409208)

Day & Date: Saturday, 09-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

- 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, Cl=35.5)

Q.1 Multiple choice questions.

- 1) ALU of 8085 microprocessor consists of _____.
 - a) accumulator, arithmetic, logic circuits and five flags
 - b) accumulator, arithmetic and logic circuits
 - c) accumulator, temporary register, arithmetic, logic circuits and five flags
 - d) accumulator, temporary register, arithmetic and logic circuits
- 2) The Intel 8086 microprocessor is a _____ processor.
 - a) 16 bit
 - b) 32 bit
 - c) 8 bit
 - d) 4 bit
- 3) In which year 8086 microprocessor was introduced?
 - a) 1978
 - b) 1979
 - c) 1977
 - d) 1981
- 4) Which of the following is a type of microprocessor _____.
 - a) CISC
 - b) RISC
 - c) EPIC
 - d) All of the above
- 5) What is the word length of an 8-bit microprocessor _____.
 - a) 8-bits-64 bits
 - b) 4-bits-32 bits
 - c) 8-bits-16 bits
 - d) 8-bits-32 bits
- 6) What is true about microprocessor?
 - a) Microprocessor is a controlling unit of micro computer
 - b) It is fabricated on a small chip capable of performing ALU operations
 - c) It is also communicate with the other devices connected to it
 - d) All of this
- 7) In 8-bit microprocessor, how many opcodes are present?
 - a) 246
 - b) 278
 - c) 250
 - d) 256
- 8) Which of the following is a special purpose register of microprocessor?
 - a) Program counter
 - b) Instruction register
 - c) Accumulator
 - d) Temporary register

Q.2 Answer the following (Any Four)

- a) What are the types of addressing mode in 8085 microprocessor?
- b) What is the microprocessor? Give the power supply and clock frequency of 8085.
- c) What are the purpose of use SID and SOD lines?
- d) Explain priority interrupts of 8085?
- e) Define instruction cycle, machine cycle and T-state.

Q.3 Write Short Notes (Any Two)

- Draw and explain the basic bus system of 8085 microprocessor.
- Explain how the instructions are classified in 8085 microprocessor.
- Write an assembly language program to multiply and divide two 8-bit numbers.

08

Q.4 Answer the following (Any Two)

- Write the difference between microprocessor and microcontroller.
- Explain the features of 8085 in detail.
- Explain the various addressing modes of 8085 microprocessor with example.

08

Q.5 Answer the following (Any One)

- Explain with neat block diagram the architecture of 8085 microprocessor.
- Describe different types of interrupts used in 8085 microprocessor.

SLR-DG-27

Set

P

Seat
No.

B.C.A. (Semester - II) (Old) (CBCS) Examination: Oct/Nov-2023
Software Engineering - II (19409209)

Max. Marks: 40

Day & Date: Sunday, 10-12-2023
Time: 09:00 AM To: 11:00 AM

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

08

Q.1 Multiple choice question

- 1) Decision table is a combination of _____.
a) Stubs and conditions
b) Conditions and actions
c) Input and output
d) None of these
- 2) Data dictionary is also called as _____.
a) Catalog
b) Central repository
c) Both A & B
d) None of these
- 3) An entity in ER Model is a real world being, which has some properties called _____.
a) Attributes
b) Relationship
c) Domain
d) None of these
- 4) The relation between data items and removing unnecessary data item is known as _____.
a) ERD
b) DFD
c) Normalization
d) None of these
- 5) The testing in which code is checked?
a) Black box testing
b) White box testing
c) Red box testing
d) Green box testing
- 6) Level-O DFD is similar to _____.
a) Use case diagram
b) Context diagram
c) System diagram
d) None of the above
- 7) Which of the following system implementation approach should be used if you want to run the old system and the new system at the same time for a specified period?
a) Direct
b) Pilot
c) phased
d) Parallel
- 8) Which of the following is not a content of data dictionary?
a) Physical Location of data
b) Data composition
c) Data Aliases
d) None of these

08

Q.2 Answer any four of the following.

- a) What is Flowchart?
- b) What is the purpose of DFD?
- c) What is Data Dictionary?
- d) Define the term Software Testing.
- e) What is Normalization?
- f) Write the steps of traditional approach to implementation.

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

- 1) White Box Testing
- 2) HIPO Chart.
- 3) State the principles of flowcharting

Q.4 Answer any two of the following.

- 1) Explain the various contents of Data dictionary.
- 2) Draw a Decision tree for following case study.

A Co-operative bank XYZ will grant loans under the following conditions:

- i) If a customer has an account with the bank and has no loan outstanding, loan will be granted.
- ii) If a customer has an account with the bank but some amount is outstanding from previous loan, then loan will be granted if special management approval is obtained.
- iii) Reject loan application in all other cases.

3) Explain various symbols used in DFD.

Q.5 Answer any One of the following.

- a) Draw a CLD and first level DFD for College Admission System.
- b) Define the term, Entity, Attribute and Relationship. Explain types of relationship with example.

Seat No.

SLR-DG-28

Set **P**

B.C.A. (Semester- III) (New) (CBCS) Examination: Oct/Nov-2023
Object Oriented Programming Using Java – I (BCA1301)

Day & Date: Wednesday, 13-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Choose the correct alternatives from the option.

- 1) Which of the following option leads to the portability and security of Java.
 - a) Byte code is executed by JVM
 - b) The applet makes the Java code secure and portable
 - c) Use of exception handling
 - d) Dynamic binding between objects
- 2) Arrays in java are _____.
 - a) object references
 - b) object
 - c) primitive data type
 - d) None of these
- 3) Which of these cannot be used for a variable name in Java?
 - a) identifier & keyword
 - b) identifier
 - c) keyword
 - d) None of the above
- 4) Which of the following is not an OOPS concept in Java?
 - a) Polymorphism
 - b) Inheritance
 - c) Compilation
 - d) Encapsulation
- 5) Which of this keyword must be used to inherit a class?
 - a) super
 - b) this
 - c) extent
 - d) extends
- 6) Which of these keywords are used to define an abstract class?
 - a) abst
 - b) abstract
 - c) Abstract
 - d) abstract class
- 7) Which of these keywords is not a part of exception handling?
 - a) try
 - b) finally
 - c) thrown
 - d) catch
- 8) Which of these packages contains abstract keyword?
 - a) java.lang
 - b) java.util
 - c) java.io
 - d) java.sys

- Q.2 Answer any four of the following.**
- What is Java programming?
 - Define String in Java.
 - What is Inheritance?
 - What is Interface?
 - What is Abstract Class?
 - Define Class and object in Java?

- Q.3 Write short notes on any two of the following.**
- Write Short note on Switch statement in Java.
 - Write Short note on String buffer class method.
 - Write Short note on Polymorphism.

- Q.4 Answer any Two of the following.**
- Explain different of Features of Java.
 - What is Exception Handling? Explain Try-catch block with example?
 - What is method overload? Explain method overload with example?

- Q.5 Answer any one of the following.**
- What is Array? Explain different types of Array in Java.
 - Explain Hierarchy of Output Stream and Input Stream class with example?

08

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SLR-DG-29

Seat No.	
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Set **P**

B.C.A. (Semester - III) (New) (CBCS) Examination: Oct/Nov-2023
Data Structure Using 'C'-I (BCA1302)

Day & Date: Thursday, 14-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

- 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.

- 1) The situation when in a linked list $START=NULL$ is _____.
a) Underflow
b) Overflow
c) Houseful
d) Saturated
- 2) Which of the following is non-linear data structure?
a) Stacks
b) List
c) Strings
d) None of these
- 3) _____ form of access is used to add and remove nodes from a queue.
a) LIFO, Last In First Out
b) FIFO, First In First Out
c) Both a and b
d) None of these
- 4) A parentheses checker program would be best implemented using _____.
a) Stack
b) Queue
c) Linked List
d) All of these
- 5) Which of the following linked list does not consist NULL links?
a) Single linked list
b) Double linked list
c) Circular linked list
d) None
- 6) A mathematical-model with a collection of operations defined on that model is called _____.
a) Data Structure
b) Abstract Data Type
c) Primitive Data Type
d) Algorithm
- 7) Which of the following case does not exist in complexity theory?
a) Best Case
b) Worst Case
c) Average Case
d) Null Case
- 8) $push()$ and $pop()$ function are found in?
a) Stack
b) Queue
c) Linked list
d) All of these

Q.2 Answer the following (Any Four)

- a) How doubly linked list can be represented?
- b) What are benefits of ADT?
- c) Which are the operations performed in list?
- d) What are the applications of queue?
- e) What are the advantages of linked list?
- f) Differentiate between single and two dimensional array.

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Q.3 Write short notes on (Any Two)
a) Disadvantages of Array over Linked List
b) Priority queue
c) Greedy Algorithm

08

Q.4 Answer the following (Any Two)
a) How the queue is implemented by linked list?
b) What are the postfix and prefix forms of the expression?
 $A+B*(C-D)/(P-R)$
c) Differentiate between STACK and QUEUE

08

Q.5 Answer the following (Any One)
a) Explain how to evaluate arithmetic expressions using stack with example.
b) Write a 'C' Program to implement doubly linked list and perform the following operations:
i) Insert in between
ii) Reverse the list

08

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SLR-DG-30

Set P

B.C.A. (Semester - III) (New) (CBCS) Examination: Oct/Nov-2023
Database Management System - I (BCA1303)

Day & Date: Friday 15-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Multiple choice questions

- 1) Schema definition is written by _____.
a) Database Administrator
b) Database Application
c) Storage Manager
d) Database Manager
- 2) Which of the following is not Integrity Constraint?
a) Primary Key
b) Not Null
c) Check
d) Union
- 3) The term "Data independence" refers to _____.
a) Data is defined separately and not included in the programs
b) Programs are not dependent on the logical attributes of the data
c) Programs are not dependent on the physical attributes of the data
d) Both b) & c)
- 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 any Four of the following.**
- Write syntax for Insert command?
 - List out the string function.
 - What is Sub-queries?
 - List out the components of DBMS.
 - State the difference between DBMS and RDBMS.
 - What is Join? List out the types of join.

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

- Order by clause
- 2 tier and 3 - tier architecture
- Specialization

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

- What is Operator? Explain special operator with example.
- Explain relational algebra operations.
- What is Database? Explain Database Structure.

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

- What is Database Language? Explain database languages.
- What is Sequence? Explain sequence with example.

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SLR-DG-31

Set: P

Seat No.	
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B.C.A. (Semester - III) (New) (CBCS) Examination: Oct/Nov-2023
Software Engineering (BCA1304)

Day & Date: Saturday, 16-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

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Q.1 Multiple choice questions.

- 1) Which model can be selected if user is involved in all the phases of SDLC?
a) Waterfall model b) Prototyping model
c) RAD model d) None of these
- 2) The 'Big picture' diagram of a system is the _____.
a) Logic diagram b) Block diagram
c) System flowchart d) Program flowchart
- 3) What threatens the quality and timeliness of the software to be produced?
a) Known risks b) Business risks
c) Project risks d) Technical risks
- 4) Which of the following is not a type of maintenance?
a) Adaptive Maintenance b) Preventive Maintenance
c) Perfective Maintenance d) Performative Maintenance
- 5) Which of the following is not content of data dictionary?
a) Physical Location of data b) Data composition
c) Data Aliases d) None of these
- 6) Problem identification is done during _____ phase.
a) System design b) System analysis
c) System testing d) All of the above
- 7) Decision table is a combination of _____.
a) Stubs and conditions b) Conditions and actions
c) Input and output d) None of these
- 8) Which of the following system implementation approach should be used if you want to run the old system and the new system at the same time for a specified period?
a) Direct b) Pilot
c) Phased d) Parallel

08

Q.2 Answer any four of the following.

- a) Define the term 'System'.
- b) What is the purpose of DED?
- c) What is Open and closed system?
- d) Who is 'System Analyst'?
- e) Write any 2 benefits of prototyping.
- f) What is Flowchart?

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

- a) Elements of the system.
- b) Feasibility study.
- c) Explain following qualities of software: i) Performance ii) Productivity

08

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Q.4 Answer any Two of the following.

- a) Explain Waterfall model.
- b) Draw a Decision tree for following case study
A Co-operative bank XYZ will grant loans under the following conditions:
 - i) If a customer has an account with the bank and has no loan outstanding, loan will be granted.
 - ii) If a customer has an account with the bank but some amount is outstanding from previous loan, then loan will be granted if special management approval is obtained.
 - iii) Reject loan application in all other cases.
- c) Explain various symbols used in DFD.

08

Q.5 Answer any One of the following.

- a) What is Normalization? Explain up to 3NF with example.
- b) Define the term Entity, Attribute and Relationship. Explain types of relationship with example.

SLR-DG-33

Set **P**

Seat No.	
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B.C.A. (Semester - III) (New) (CBCS) Examination: Oct/Nov-2023
Financial Accounting with Tally (BCA1305)

Day & Date: Monday, 18-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

- 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, D=16, N= 14, Na =23, C1 = 35.5)

Q.1 Multiple choice questions

- 1) Solapur university A/c _____ type of account.
a) Real account
b) Personal A/c
c) Nominal A/c
d) None of these
- 2) Amount invested in business is called as _____.
a) Drawing
b) Capital
c) Liability
d) None of these
- 3) 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
- 4) _____ is explanation for the journal entries passed.
a) Voucher
b) Transaction
c) Narration
d) Invoice
- 5) In Tally for Receipt Voucher _____ key used.
a) F6
b) F7
c) F8
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 period in Tally?
a) F2
b) F3
c) Alt+F3
d) Alt+F2
- 8) Which shortcut key is pressed for cancel voucher entry?
a) Alt+A
b) Alt+C
c) Alt+X
d) Alt+D

Q.2 Answer the following (Any Four)

- a) Define Book-keeping.
- b) Explain the Rule of Nominal A/c.
- c) Specimen of Ledger.
- 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?

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SLR-DG-33

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Q.3 Write short notes on (Any Two)

- Accounting Concepts.
- Debtors and Creditors
- Explain the features of Tally?

Q.4 Answer the following (Any Two)

- What is the difference between Book-keeping & Accountancy?
- Explain the advantages of double entry book-keeping?
- Explain the importance of Bank Reconciliation Statement?

08

Q.5 Answer the following (Any One)

- Explain the list of Groups in Tally?
- Journalize the following transaction in the books of Vaishnavi for the month of July 2019
1st July 2019, Vaishnavi started business with cash ₹ 1,00,000.
2nd, Deposited cash into bank of ₹ 10,000 for open new bank account
3rd, Purchased furniture from S & Sons ₹ 20,000
5th, Purchased goods from M & Co. on credit ₹ 50,000
8th, Sold goods to G & Co. ₹ 20,000
12th, Sold goods to Ram ₹ 30,000 by cheque
13th, Paid Electricity bill of ₹ 2,000 by cheque
15th, Received commission Rs. 500
Assuming CGST @8% and SGST@8%

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SLR-DG-34

Set **P**

Seat No.	
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B.C.A. (Semester - III) (New) (CBCS) Examination: Oct/Nov-2023
Operating System - II (BCA1306)

Day & Date: Tuesday, 19-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Multiple choice question.

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- 1) A set of processes is deadlock if _____.
 - a) Each process is blocked and will remain so forever
 - b) Each process is terminated
 - c) All processes are trying to kill each other
 - d) None of the mentioned
- 2) _____ algorithm has lowest page fault rate.
 - a) FIFO
 - b) LRU
 - c) Optimal page replacement
 - d) None of the above
- 3) A process can be terminated due to _____.
 - a) Normal exit
 - b) Fatal error
 - c) Killed by another process
 - d) all of the mentioned
- 4) Virtual memory is implemented using _____.
 - a) Demand Paging
 - b) Swapping
 - c) Fragmentation
 - d) None of these
- 5) A direct method of deadlock prevention is to prevent the occurrence of _____.
 - a) Mutual exclusion
 - b) Hold and Wait
 - c) Circular wait
 - d) All of the above
- 6) File type can be represented by _____.
 - a) File name
 - b) File extension
 - c) File identifier
 - d) None of the above
- 7) In a segmentation scheme the logical memory will be divided into _____.
 - a) Pages
 - b) Frames
 - c) Blocks
 - d) Segments
- 8) Which directory implementation is used in most Operating System?
 - a) Single level directory structure
 - b) Two level directory structure
 - c) Tree directory structure
 - d) Acyclic directory structure

Q.2 Answer any four of the following.

08

- a) What is paging?
- b) What is Contiguous Memory allocation?
- c) Define the term Segmentation?
- d) What is mean by compaction?
- e) What is Dynamic Loading?
- f) What is Virtual Memory?

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

- a) Resource Allocation Graph
- b) Demand paging
- c) File concept

08

Q.4 Answer any Two of the following.

- a) Define the term deadlock? Explain the necessary conditions for deadlock to occur?
- b) What is fragmentation? Explain types of fragmentation?
- c) What is disk scheduling? Explain FCFS disk scheduling algorithms.

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Q.5 Answer any one of the following

- a) Explain banker's algorithm with example?
- b) What is page replacement? Write the working of Least Recently used (LRU), page replacement algorithm?

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SLR-DG-35

Seat No.

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**B.C.A. (Semester - III) (Old) (CBCS) Examination: Oct/Nov-2023
OOPS with C++-I (19409301)**

Day & Date: Wednesday, 13-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Multiple choice question.

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- 1) What are the actual parameters in C++?
 - a) Parameters with which functions are called
 - b) Parameters which are used in the definition of a function
 - c) Variables other than passed parameters in a function
 - d) Variables that are never used in the function
- 2) Which members are inherited but are not accessible in any case?
 - a) Private
 - b) Public
 - c) Protected
 - d) Both private and protected
- 3) C++ is _____.
 - a) procedural programming language
 - b) object oriented programming language
 - c) functional programming language
 - d) both procedural and object oriented programming language
- 4) Which of the following is an exit-controlled loop?
 - a) For
 - b) While
 - c) do-while
 - d) all of the mentioned
- 5) What is the other name of compile-time polymorphism?
 - a) Static polymorphism
 - b) Dynamic polymorphism
 - c) Executing polymorphism
 - d) Non-executing polymorphism
- 6) Which of the following is correct?
 - a) A class is an instance of its objects
 - b) An object is an instance of its class
 - c) A class is an instance of the data type that the class have
 - d) An object is an instance of the data type of the class
- 7) The data members and functions of a class in C++ are by default _____.
 - a) Protected
 - b) Private
 - c) Public
 - d) public & protected
- 8) Which of the following operator cannot be overloaded?
 - a) +
 - b) ?:
 - c) -
 - d) %

Q.2 Answer any four of the following.

08

- a) Define object-oriented programming.
- b) What is a class?
- c) What is an inline function?
- d) What are the types of a constructor?
- e) What are the different features of C++?
- f) What is function overloading?

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

- a) Explain comparison between POP and OOP.
- b) Explain Applications of OOPs.
- c) Explain friend function.

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Q.4 Answer any two of the following.

- a) What is pointer to object? Explain with example.
- b) Explain different access specifier.
- c) Write a program to calculate factorial of given numbers.

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Q.5 Answer any one of the following

- a) Write a program for constructor overloading.
- b) Explain type conversion. Implicit and explicit with example.

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SLR-DG-36

Set **P**

Seat No.	
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B.C.A. (Semester - III) (Old) (CBCS) Examination: Oct/Nov-2023
Data Structures Using 'C' - I (19409302)

Day & Date: Thursday, 14-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

- 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 question.

08

- 1) The data structure required to check whether an expression contains a balanced parenthesis is?
 - a) Stack
 - b) Queue
 - c) Array
 - d) Tree
- 2) Linked list is considered as an example of _____ type of memory allocation.
 - a) Dynamic
 - b) Static
 - c) Compile time
 - d) Heap
- 3) 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
- 4) 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
- 5) 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
- 6) 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
- 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 is the value of the postfix expression $6\ 3\ 2\ 4\ +\ -\ *?$
 - a) 1
 - b) 40
 - c) 74
 - d) -18

Q.2 Answer the following (Any Four)

- Convert the infix expression $a - b / (c + d * e)$ into postfix form.
- Explain Node structure of Doubly Linked List.
- Explain any 2 applications of Queue
- Define 'two dimensional' array and write its declaration syntax.
- Write difference between stack and queue.
- Define Single Linear list.

Q.3 Write short notes on (Any Two)

- Applications of stack.
- Priority Queue
- Singular Linked List.

Q.4 Answer the following (Any Two)

- Write an algorithm that evaluates postfix expression using stack.
- What is Array? Explain types of array in detail.
- What is doubly linear linked list? Implement function that reverses it.

Q.5 Answer the following (Any One)

- Write a program to implement circular queue.
- What is Linear linked list? Explain its following operations:-
 - insert_last()
 - Search()
 - remove_after()

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SLR-DG-37

Seat No.

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B.C.A. (Semester - III) (Old) (CBCS) Examination: Oct/Nov-2023
Database Management System (19409303)

Day & Date: Friday, 15-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

Instructions: 1) All questions are compulsory.
2) Draw neat diagrams and give equations wherever necessary.

Q.1 Multiple choice question.

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- 1) If a transaction does not modify the database until it has committed, it is said to use the _____ technique.
a) Deferred-modification b) Late-modification
c) Immediate-modification d) Undo
- 2) Tree structures are used to store data in _____ model.
a) Network b) Relational
c) Hierarchical d) File based system
- 3) A collection of interrelated records is called a _____.
a) Database
b) Spreadsheet
c) Management information system
d) Text file
- 4) The overall description of a database is called _____.
a) Data integrity b) Data manipulation
c) Database schema d) Data definition
- 5) The ability to change the conceptual schema without affecting the external schemas or application programs is known as _____.
a) Program-data independence b) Logical data independence
c) Physical data independence d) Data abstraction
- 6) Which of the following is a top-down approach in which the entity's higher level can be divided into two lower sub-entities?
a) Aggregation b) Generalization
c) Specialization d) All of these
- 7) The number of attributes in relation is called as _____.
a) Cardinality b) Degree
c) Tuples d) Entity
- 8) What does Rollback do?
a) Undoes the transactions before commit
b) Clears all transactions
c) Redoes the transactions before commit
d) No action

Q.2 Answer the following questions briefly. (Any Four)

- List out the advantages of DBMS.
- What is relationship and its types?
- What is deadlock?
- What are the types of locks?
- List out the advantages of Data Distribution.
- What is union operation?

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

- Distinguish between Serial Schedule and Serializable Schedule
- Generalization
- Database Users

Q.4 Answer any Two of the following.

- Explain shadow paging.
- Explain immediate database modification algorithm.
- Explain ACID properties of transaction.

Q.5 Answer any One of the following.

- Explain timestamp ordering protocol with example.
- Explain various concurrency control problems with example.

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SLR-DG-38

Set **P**

Seat No.	
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B.C.A. (Semester - III) (Old) (CBCS) Examination: Oct/Nov-2023
Software Testing & Quality Assurance (19409304)

Day & Date: Saturday, 16-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Multiple choice questions.

- 1) Black Box Testing is also known as _____.
a) Behavioral Testing
b) Flow Testing
c) Data Testing
d) Control structure testing
- 2) _____ is not an appraisal cost in SQA.
a) Inter-process inspection
b) Quality planning
c) Maintenance
d) Testing
- 3) Deferred status in bug life cycle means _____.
a) Developer feels that the bug is not genuine
b) Bug is repeated twice or the two bugs mention the same concept of the bug
c) The bug is expected to be fixed in next releases
d) It is not bug at all
- 4) _____ technique we called sometimes as a glass box testing.
a) White box testing
b) Control structure testing
c) Black box testing
d) Gray box testing
- 5) Faults are found most cost effectively in which test activity _____.
a) Design
b) Execution
c) Planning
d) Check Exit criteria completion
- 6) _____ is the objective of integration testing.
a) To verify that system is functioning according to specified requirements
b) To verify that system meets user expectation and needs
c) To verify that system separately testable modules are functioning properly
d) To verify that interfaces between different parts of system
- 7) Alpha testing is done at _____.
a) developer's end
b) user's end
c) developer's & user's end
d) none of the mentioned
- 8) _____ is largest bug producer.
a) code
b) design
c) analysis
d) specification

Q.2 Answers any four of the following.

- a) Soak Testing
- b) Automation Testing
- c) Smoke Testing
- d) Use Case Testing
- e) Defect Tracking
- f) Adhoc Testing

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

- a) Explain Difference between Bug, Defect, Failure, Error.
- b) What is Test Case? Explain Types of Test Cases.
- c) What is Software Testing? Importance or need of software testing.

Q.4 Answers any Two of the following.

- a) Explain Types of Bugs.
- b) Explain Integration Testing & Top-Down, Bottom-Up type.
- c) Explain Advantages & Disadvantages of WBT.

Q.5 Answer any one of the following.

- a) Explain Statement Coverage Testing, Branch Coverage Testing, Path Coverage Testing in WBT.
- b) Explain Performance Testing and its types.

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SLR-DG-39

Set **P**

Seat No.	
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B.C.A. (Semester - III) (Old) (CBCS) Examination: Oct/Nov-2023
Web Development Using PHP (19409305)

Day & Date: Sunday, 17-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Multiple choice questions

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- 1) Who is the father of PHP?
a) Rasmus Lerdorf
b) William Makepeace
c) Drek Kolkevi
d) List Barely
- 2) What does SPL stands for in Php?
a) Source PHP List
b) Standard PHP List
c) Standard PHP Library
d) None of the above
- 3) Which of the following is used to create a session?
a) \$_SESSION[]
b) isset() function
c) session_start() function
d) session_destroy() function
- 4) Which of the following function is used to compress a string?
a) zip()
b) compress()
c) Zip_compress()
d) gzcompress()
- 5) Which of the following variables is not a predefined variable in PHP?
a) \$get
b) \$post
c) \$request
d) \$ask
- 6) Which PHP function is used to find files?
a) file()
b) fold()
c) glob()
d) None of the above
- 7) What is the latest version of PHP?
a) PHP 3
b) PHP 5
c) PHP 7
d) PHP 8
- 8) How to define a function in PHP?
a) function {function body}
b) functionName(parameters) {function body}
c) function functionName(parameters) {function body}
d) None of the above

Q.2 Answer any four of the following

08

- a) What is Variables in PHP?
- b) Include () function.
- c) Explain Static website.
- d) Explain any four date and time function with example.
- e) How data type of variable are tested? Explain with example.
- f) What is multidimensional array? Explain with example.

- Q.3 Write short notes on any two of the following.**
- Explain different forms controls, its properties, methods and events.
 - Write note on passing arguments to a function by reference.
 - What is array? Types of arrays with example.
- Q.4 Answer any two of the following.**
- Explain different sorting techniques of arrays with proper examples.
 - Difference between Static website vs Dynamic website development.
 - What is Control statements in PHP?
- Q.5 Answer any one of the following.**
- Design web page which insert, delete and update records.
 - What is Session? Explain session state management in detail.

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SLR-DG-40

Set **P**

Seat No.	
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B.C.A. (Semester - III) (Old) (CBCS) Examination: Oct/Nov-2023
Computer Networks – I (19409306)

Day & Date: Monday, 18-12-2023
Time: 09:00 AM To 11:00 AM

Max. Marks: 40

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

Q.1 Multiple choice questions.

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) For a _____ channel, we need to use the Shannon capacity to find the maximum bit rate.
 - a) Noiseless
 - b) noisy
 - c) low-pass
 - d) band pass
- 3) _____ provides a connection-oriented reliable service for sending messages.
 - a) TCP
 - b) IP
 - c) UDP
 - d) All of the above
- 4) Addressing mechanism is done at _____.
 - a) Physical Layer
 - b) Data Link Layer
 - c) Application Layer
 - d) Physical Layer
- 5) Coaxial cable consists of _____ concentric copper conductors.
 - a) 1
 - b) 2
 - c) 3
 - d) 4
- 6) Which one of the following is not a network topology?
 - a) Star
 - b) Ring
 - c) Bus
 - d) Peer to Peer
- 7) Physical or logical arrangement of network is _____.
 - a) Networking
 - b) Routing
 - c) Topology
 - d) Linking
- 8) _____ Topology there is a central controller or hub.
 - a) Mesh
 - b) Star
 - c) Ring
 - d) Bus

Q.2 Answer any Four of the following.

08

- a) Define Computer Network?
- b) Define the term half-duplex and full-duplex.
- c) What are the different transmission media?
- d) Define Analog and Digital signal?
- e) What is Attenuation?
- f) Define the term Period and Phase

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

- a) Write Short on Hubs
- b) Write short on Twisted Pair Cable
- c) Write short on Multiple Access Protocol-ALOHA

Q.4 Answer any Two of the following.

- a) Explain Parallel and Serial Transmission Mode in physical layer?
- b) What is transmission media? Explain Fiber Optic Cable transmission media
- c) What is mean by Switching? Explain Message Switching?

Q.5 Answer any One of the following.

- a) Explain ISO- OSI Reference Model in detail with suitable diagram?
- b) Explain different Design issues of Data link layer?

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Set **P**

B.C.A. (Semester - III) (Old) (CBCS) Examination: Oct/Nov-2023
Financial Accounting with Tally (19409307)

Day & Date: Tuesday, 19-12-2023
Time: 09:00 AM To 12:00 PM

Max. Marks: 80

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

Q.1 A) Multiple choice questions.

10

- 1) In Tally to change the features of the company _____ key is used.
a) f12
b) F4
c) F11
d) F1
- 2) The _____ is an arithmetical check of all transactions done as per date.
a) Trial Balance
b) Ledger
c) Balance Sheet
d) Profit & Loss account
- 3) Which option is used to enable VAT, TDS and Services Tax in Tally?
a) Accounting features
b) Inventory features
c) Statutory and taxation
d) None of these
- 4) In receipts voucher, cash account has _____ type of balance.
a) Cash
b) Journal
c) Credit
d) Debit
- 5) Which option is used in tally to make changes in created company?
a) Select company
b) Shut company
c) Alter
d) None of these.
- 6) Gradual and permanent decrease in the value of assets is known as _____.
a) Discount
b) Interest
c) Depreciation
d) Installment
- 7) _____ is an explanation of the journal entries passed.
a) Invoice
b) Voucher
c) Transaction
d) Narration
- 8) Sales journal records only _____ Sales of goods.
a) Debit
b) Credit
c) Excess
d) None
- 9) The entire ledger is summarized in the form of a _____.
a) Journal
b) Balance sheet
c) Final account
d) Trial Balance
- 10) According to law who has to pay TDS to the Income Tax Department?
a) Service Provider
b) Service Receiver
c) Service Provider and Service Receiver both
d) There is no such provision

B) Fill in the blanks.

- 1) Expense incurred on administration come under _____ expense group.
- 2) Stock items can be viewed through _____ book.
- 3) Golden rule of classification of accounts _____ the receiver, _____ the giver.
- 4) _____ Sub menu is used for voucher entry in Tally.
- 5) A person who owes money to the business is called _____.
- 6) Total amount invested by the proprietor into the business is called as _____.

Q.2 Solve any Eight of the following.

- a) What is mean by voucher?
- b) Long form of E-TCS
- c) TDS stands for
- d) SLM stands for
- e) Liability
- f) Stock Groups
- g) Godowns
- h) Ledger
- i) FIFO stands for
- j) Depreciation

16

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

- 1) Define Accounting and Explain Internal and External users of account.
- 2) What is TDS? and how to create TDS Master and Ledger in Tally.
- 3) Draw journal specimen ledger specimen, Trial balance and Balance sheet specimen.

10

B) What is E-TDS? How to create TDS ledger.

06

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

- 1) Discuss the different reasons for difference in balance shown in cash book and balance shown in pass book.
- 2) What are the advantages of computerized accounting software?
- 3) Explain the features of tally.

08

B) What is mean by purchase order? How can create alter and delete purchase order.

08

Q.5 Attempt any Two of the following.

- a) Define voucher and explain different type of vouchers.
- b) Define groups and Explain types of groups with example.
- c) Give the advantages and disadvantages of computerized Tally.

16

SLR-DG-42

Set **P**

Seat
No.

B.C.A. (Semester - IV) (CBCS) Examination: Oct/Nov-2023
OOPS with C++-II (19409401)

Day & Date: Wednesday, 13-12-2023
Time: 12:00 PM To: 02:00 PM

Max. Marks: 40

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

Q.1 Multiple choice question.

08

- 1) A virtual function that has no definition within the base class is called _____.
a) Pure virtual function b) Pure static function
c) Pure Const function d) Friend function
- 2) We can create objects of the abstract class _____.
a) True b) False
- 3) To create an output stream, we must declare the stream to be of class _____.
a) ofstream b) ifstream
c) iostream d) None of these
- 4) Which feature can be implemented using encapsulation?
a) Inheritance b) Abstraction
c) Polymorphism d) Overloading
- 5) An exception is thrown using _____ keyword in CPP.
a) throws b) throw
c) threw d) thrown
- 6) When a child class inherits traits from more than one parent class, this type of inheritance is called _____ inheritance.
a) Hierarchical b) Hybrid
c) Multilevel d) Multiple
- 7) By default, all the files in C++ are opened in _____ mode.
a) Text b) Binary
c) ISCI d) VTC
- 8) _____ is used to move the file pointer to start of a file.
a) ios::beg b) ios::start
c) ios::cur d) ios::first

Q.2 Answer any four of the following.

08

- a) What is file?
- b) Which are the file opening modes used in CPP?
- c) What is mean by pure virtual function.
- d) What is the use of inheritance?
- e) What is mean by polymorphism?
- f) What is mean by containership?

Q.3 Write short note on any two of the following.

- a) Protected visibility mode.
- b) Class template.
- c) Virtual base class.

08

Q.4 Answer any two of the following.

- a) Write down characteristics of pure virtual function.
- b) Explain stream classes.
- c) Explain virtual function with program.

08

Q.5 Answer any one of the following.

- a) Explain error handling mechanism using try, catch keyword.
- b) Explain any two types of inheritance with program.

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Set **P**

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B.C.A. (Semester -IV) (CBCS) Examination: Oct/Nov-2023
Data Structures using 'C' 4.0 II (19409402)

Day & Date: Thursday, 14-12-2023
Time: 12:00 PM To:02:00 PM

Max. Marks: 40

- 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.
 - 5) (At. Wts.: H=1, C=12, O=16, N= 14, Na =23, Cl = 35.5)

Q.1 Multiple choice question.

08

- 1) Which of the following properties does a simple graph not hold?
 - a) Must be connected
 - b) Must be unweighted
 - c) Must have no loops or multiple edges
 - d) Must have no multiple edges
- 2) Breadth First Search is equivalent to which of the traversal in the Binary Trees?
 - a) Pre-order Traversal
 - b) Post-order Traversal
 - c) Level-order Traversal
 - d) In-order Traversal
- 3) _____ is not a stable sorting algorithm?
 - a) Insertion sort
 - b) Selection sort
 - c) Bubble sort
 - d) Merge sort
- 4) Which of the following is not an advantage of trees?
 - a) Hierarchical structure
 - b) Faster search
 - c) Router algorithms
 - d) Undo/Redo operations in a notepad
- 5) Heap can be used as _____.
 - a) Priority queue
 - b) Stack
 - c) A decreasing order array
 - d) Normal Array
- 6) What is an AVL tree?
 - a) A tree which is balanced and is a height balanced tree
 - b) A tree which is unbalanced and is a height balanced tree
 - c) A tree with three children
 - d) A tree with at most 3 children
- 7) Which of the following is not a non-comparison sort?
 - a) Counting sort
 - b) Bucket sort
 - c) Radix sort
 - d) Shell sort
- 8) The Depth First Search traversal of a graph will result into?
 - a) Linked List
 - b) Tree
 - c) Graph with back edges
 - d) Array

Q.2 Answer any four of the following.

- Define Leaf Node.
- Define Strictly Binary Tree.
- AVL Tree.
- Undirected Graph.
- Merge sort.
- What Is Pre-Order Traversal?

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

- What is Heap Tree? Explain its types.
- Write a note on Partition exchanged sort (Quick sort).
- Explain concept & terminologies used in graph.

Q.4 Answer any Two of the following.

- What is tree? What are the advantages of tree over linked list?
- What is Hashing? Explain different Hash functions.
- WAP of Binary Search using array.

Q.5 Answer any one of the following.

- What is searching? Explain categories of searching with advantages and disadvantages.
- Explain BFS traversal of graph in detail.

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Set **P**

B.C.A (Semester - IV) (CBCS) Examination: Oct/Nov-2023
MySQL (19409403)

Day & Date: Friday 15-12-2023
Time: 12:00 PM To 02:00 PM

Max Marks: 40

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

Q.1 Multiple choice questions.

08

- 1) Which statement is used to select a default database?
a) USE
b) CREATE
c) DROP
d) SCHEMA
- 2) Which keyword in the UPDATE statement is used to assign values to columns?
a) ASSIGN
b) SET
c) MARK
d) GET
- 3) The _____ constraint can only be applied at column level.
a) Foreign key
b) Primary key
c) Not null
d) None of above
- 4) Which procedure parameter enables the caller to pass in a value and get back a value?
a) IN
b) OUT
c) INOUT
d) GETINOUT
- 5) In the following SQL command "*" stands for?
SELECT * FROM person;
a) Retrieve all data from the table
b) Retrieve data of primary key only
c) Retrieve NULL data
d) None of the mentioned
- 6) What is generally done after the transactions are executed successfully?
a) delete
b) rollback
c) commit
d) update
- 7) Which of the following statements does not modify the table?
a) Insert
b) Update
c) Delete
d) Select
- 8) Which of the following is case sensitive?
a) Stored function name
b) Stored procedure name
c) Trigger name
d) Event name

Q.2 Answer any four of the following.

- a) What is View?
- b) What is Join?
- c) What is mean by transaction?
- d) Differentiate between the procedure and function
- e) What is Group Function?
- f) What is Cursor?

08

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

- a) Explain Alter commands with example.
- b) Explain any four Numeric functions with example.
- c) Explain the various operator used in SQL.

08

Q.4 Answer any Two of the following.

- a) Explain Aggregate function with example.
- b) What is sub query? Explain its type with example.
- c) Explain Union and Intersect set of operations with example.

08

Q.5 Answer any one of the following.

- a) Explain Group by clause and Having clause with example.
- b) Explain primary key and foreign key constraints with example.

08

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

- a) Explain weakness in Information Technology Act.
- b) Explain Cyber offenses in detail.
- c) Explain Network Security Challenges.

08

Q.4 Answer any Two of the following.

- a) Explain Essential Terminology (Threat, Vulnerability, Target of Evaluation, Attack, Exploit)
- b) What is a keylogger? Explain types of keyloggers.
- c) What is Foot Printing? Explain objectives of Foot Printing.

08

Q.5 Answer any one of the following

- a) What is Ethical Hacking? Explain Scope & Limitations of Ethical Hacking? What are the skills required for Ethical Hacking.
- b) Explain any Eight Classifications of Cybercrimes.

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Set **P**

B.C.A. (Semester - IV) (CBCS) Examination: Oct/Nov-2023
Angular JS (19409405)

Day & Date: Sunday, 17-12-2023
Time: 12:00 PM To 02:00 PM

Max. Marks: 40

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

Q.1 Choose correct alternative from the following.

08

- 1) AngularJS is _____ framework.
a) Javascript
b) Java
c) Html
d) None of these
- 2) Angularjs is based on _____ pattern.
a) PVC
b) MVC
c) TVC
d) None of these
- 3) In Angularjs a _____ is the HTML which is responsible for displaying the data.
a) CSS
b) View
c) Table
d) None of these
- 4) A _____ is an object that represents the application model for an Angularjs application.
a) \$scope
b) data
c) view
d) None of these
- 5) Each AngularJS application can have only _____ root scope.
a) One
b) Two
c) Three
d) None of these
- 6) _____ is used to build Single Page Application
a) Object
b) Routing
c) Both a and b
d) None of these
- 7) In Angularjs all directives start with _____ keyword.
a) ng
b) \$cng
c) sg
d) None of these
- 8) AngularJS expressions are placed inside _____.
a) <expression>
b) [expression]
c) {{expression}}
d) None of these

Q.2 Answer any four of the following.

08

- a) Write any four features of AngularJS.
- b) What is MVC in Angularjs? Draw the diagram of Angularjs architecture.
- c) What is Directive in AngularJS? Give any four names of directives.
- d) What is ng-init directive in Angularjs?
- e) What is data binding in Angularjs?
- f) What is \$apply in Angularjs?

- Q.3 Write short note on any two of the following.**
- a) Write Short Notes on Numbers and String Expression in Angularjs with suitable example.
 - b) Write Short Notes on Module and How to create a Module in Angularjs.
 - c) Write short notes on \$rootScope and \$scope in Angularjs.

- Q.4 Answer any two of the following.**
- a) Explain two-way data binding in Angularjs with suitable example.
 - b) Write pros and cons of Single Page Application in Angularjs.
 - c) Explain ng-click event in Angularjs with suitable example.

- Q.5 Answer any one of the following**
- a) Write a program in Angularjs to accept two numbers using ng-model and print addition, subtraction, multiplication and division of two numbers.
 - b) What is ngAnimate Module? Explain Directives supporting to animation in Angularjs.

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Set **P**

Seat No.	
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B.C.A. (Semester - IV) (CBCS) Examination: Oct/Nov-2023
Advance 4.0 d Computer Networks (19409406)

Day & Date: Monday, 18-12-2023
Time: 12:00 PM To 02:00 PM

Max. Marks: 40

- 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, Cl = 35.5)

Q.1 Multiple choice questions:

- 1) A collection of hyperlinked documents on the internet forms the _____.
a) World Wide Web (WWW) b) E-mail system
c) Mailing list d) Hypertext markup language
- 2) _____ versions available of IP in computer network.
a) 6 version b) 4 version
c) 2 version d) 1 version
- 3) Why are parity bits used _____.
a) To encrypt data b) To detect error
c) To identify user d) None of these
- 4) When the mail server sends mail to other mail servers it becomes _____.
a) SMTP client b) SMTP server
c) Peer d) Master
- 5) What does a set of rules define _____.
a) SMTP b) FTP
c) IMAP d) Protocol
- 6) What does PoP stand for _____.
a) Pre Office Protocol b) Post Office Protocol
c) Protocol of Post d) None of these
- 7) 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
- 8) Which software prevents the external access to a system _____.
a) Firewall b) Gateway
c) Router d) Virus checker

Q.2 Answer any four of the following.

- a) VPN
- b) Encryption & decryption
- c) Samba Server
- d) Data Compression
- e) Digital Signatures
- f) Optimality Principle

08

- Q.3 Write short notes on any two of the following.**
- a) Explain Congestion Control in Virtual-Circuit Subnets.
 - b) Difference between Transmission Control Protocol and User Datagram Protocol.
 - c) Explain Roles & responsibility of Network Administrator.

08

- Q.4 Answer any two of the following.**
- a) Explain Authentication Mechanisms in network security.
 - b) Explain SSL Encryption, TLS and SET.
 - c) Explain Elements of Transport Protocols.

08

- Q.5 Answer any one of the following.**
- a) Explain Shortest Path Routing algorithm with example.
 - b) Elaborate FTP, DNS, TelNet, SMTP, HTTP, WWW, SNMP, ARP.

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SLR-DG-49

Set P

B.C.A. (Semester - V) (New) (CBCS) Examination: Oct/Nov-2023

ENGLISH

Business English (20409501)

Day & Date : Saturday, 02-12-2023
Time: 03:00 PM to 05:00 PM

Max. Marks: 40

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

Q.1 Rewrite the sentence by filling the blanks with the correct answer from the given options. 08

- 1) What occasion is being celebrated in the story 'The Gift of the Magi'?
a) Easter
b) Christmas
c) New Year's
d) Della's birthday
- 2) Who came to visit Phatik's mother?
a) Their grandfather
b) Their uncle
c) Their aunt
d) Cousin
- 3) The girl in the poem 'The Solitary Reaper' was _____.
a) reaping and singing
b) cutting and bending
c) singing and dancing
d) reaping and quarrelling
- 4) The Queen Gulnaar desires _____.
a) The King's attention
b) more jewellery
c) a rival
d) more clothes
- 5) The schoolmaster lives in _____.
a) cottage
b) bungalow
c) mansion
d) apartment
- 6) The 'road' in the poem of Robert Frost is the symbol of _____.
a) the difficulties of life
b) the fun in life
c) the attractive aspects in life
d) the choice in life
- 7) He has sold his car. (change the voice of this sentence)
a) His car had been sold by him
b) His car has been sold by him
c) His car have being sold by him
d) His car having been sold by him
- 8) Don't lose hope. Keep _____ and you will surely succeed. (Fill in the blanks with choosing correct phrasal verb of the following alternatives)
a) going
b) going on
c) going with
d) going at

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

- 1) Who are the Magi? Why are Della and Jim called Magi?
- 2) Why did Phatik suffocate in the big city?
- 3) Describe the use of nature and harmony in the poem 'The Solitary Reaper.'
- 4) Why is the Queen Gulnaar unsatisfied and seeks a rival?
- 5) Describe the character of the village schoolmaster.
- 6) What is the significance of the two roads in the poem?

12

- B) **One Sentence Answer.**
- 1) Write any two use of 'super' keyword.
 - 2) What is Array?
 - 3) Give the list of JDBC drivers.
 - 4) What is API?
 - 5) Give the use of 'final' keyword.
 - 6) Write any two java operators.

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

- a) Write any 2 JDBC drivers.
- b) Definition of Constructor.
- c) Define throws keyword.
- d) List the methods of KeyListener.
- e) Give the steps of Thread Life Cycle.
- f) Definition of Polymorphism.
- g) Define try exception.
- h) Explain callable statement execute().
- i) What is runtime exception?
- j) Give the syntax of static method.

16

Q.3 a) **Attempt any Two of the following.**

- 1) Write a java program to give factorial of a number.
- 2) Explain access specifiers in java.
- 3) Give note on Method Overriding.

10

b) Write a program to check whether number is prime or not.

06

Q.4 a) **Attempt any Two of the following.**

- 1) Explain features of java.
- 2) What is the use of Layout Manager? Explain Grid Layout with example.
- 3) Write a note on JDK tools in java.

08

b) Write a program to display given number in reverse order. (java program code)

08

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

- a) What is Exception? Explain types of it.
- b) What is JDBC? Explain JDBC architecture.
- c) What is Listener? Explain types of Listener.

16

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Set **P**

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B.C.A. (Semester - V) (New) (CBCS) Examination: Oct/Nov-2023
Visual Programming (19409503)

Day & Date: Monday, 04-12-2023
 Time: 03:00 PM To 06:00 PM

Max. Marks: 80

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

Q.1 Multiple choice questions.

- 1) _____ is the necessary condition for implementing delegates.
 - a) Class declaration
 - b) Inheritance
 - c) Run-time Polymorphis
 - d) Exceptions
- 2) The capability of an object in Csharp to take number of different forms and hence display behaviour as according is known as _____.
 - a) Encapsulation
 - b) Polymorphism
 - c) Abstraction
 - d) None of the mentioned
- 3) _____ classes provide the operation of reading from and writing to the console in C#.NET.
 - a) System.Array
 - b) System.Output
 - c) System.ReadLine
 - d) System.Console
- 4) Correct statement about constructor overloading in C# is?
 - a) Overloaded constructors have the same name as the class
 - b) Overloaded constructors cannot use optional arguments
 - c) Overloaded constructors can have different type of number of arguments as well as differ in number of arguments
 - d) All of the mentioned
- 5) _____ options is not a Bitwise Operator in C#?
 - a) &, |
 - b) ~, ^
 - c) <<, >>
 - d) +=, -=
- 6) Choose the class on which all stream classes are defined?
 - a) System.Input.stream
 - b) System.IO.stream
 - c) System.Output.stream
 - d) All of the mentioned
- 7) _____ the keyword which declares the indexer.
 - a) base
 - b) this
 - c) super
 - d) extract
- 8) When is no exception thrown at runtime then _____ will catch it.
 - a) Loader
 - b) Operating System
 - c) CLR
 - d) Compiler
- 9) Syntax for declaration and initialization of data variable is _____.
 - a) <var_name> = <value>;
 - b) <data.type><var_name>;
 - c) <var_name><data type>;
 - d) <data type><var_name> = <Value>;

10

- 10) What is CTS?
- Common type system
 - Common type-safe
 - Compiler type structure
 - Common type specification

B) True or false.

- Classes are reference types and structs are value types.
- Delegates are object oriented.
- An identifier can contain spaces.
- Graphical User Interface applications can't be developed using Visual Basic tool.
- The value of a constant can be assigned only in the declaration.
- An object cannot be assigned to an enum variable.

Q.2 Solve any eight questions of the following.

- Text Stream
- Common Language Integration
- Constant
- Boxing and unboxing
- MDI Applications
- Anonymous Methods
- Reference Type
- Stored Procedures
- Finally block
- Virtual Methods

Q.3 a) Attempt any two of the following.

- Define Menu and explain Context Menus in detail.
- What is Stream? Explain System.IO and Base classes of Stream.
- Explain Data set and its Advantages.

- b) Explain Array List, Hash table, stack and queue.

Q.4 a) Attempt any two of the following.

- Explain Rules for Handling Exception.
- Explain Common Language Runtime in detail.
- Explain Parameter passing techniques.

- b) Define delegate. Explain Types of delegate in detail.

Q.5 Attempt any two of the following.

- Define Inheritance & Polymorphism. Explain Operator and method Overloading and overriding.
- Explain DOT Parameter passing techniques.
- How to Establish Connection with Database? Write a program of Executing simple Insert, Update and Delete commands.

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Set P

B.C.A. (Semester - V) (New) (CBCS) Examination: Oct/Nov-2023
Computer Graphics (19409504)

Day & Date: Tuesday, 05-12-2023
Time: 03:00 PM To 06:00 PM

Max. Marks: 80

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

Q.1 A) Multiple choice questions.

10

- 1) The transformation in which an object can be shifted to any coordinate position are called _____.
 - a) Translation
 - b) Scaling
 - c) Rotation
 - d) Shearing
- 2) If polygon has total 'n' points then first argument in drawpoly() function is _____.
 - a) n
 - b) n - 1
 - c) n + 2
 - d) n + 1
- 3) By applying _____ type of transformation, we will get the mirror image of graphics object.
 - a) Translation
 - b) Scaling
 - c) Rotation
 - d) Reflection
- 4) A translation is applied to an object by _____.
 - a) Repositioning it along with straight line path
 - b) Repositioning it along with circular path
 - c) Both a and b
 - d) None of the above
- 5) The matrix representation for translation in homogeneous coordinate's is given by eq _____.
 - a) $P' = T + P$
 - b) $P' = S * P$
 - c) $P' = P * T$
 - d) $P' = T * P$
- 6) In CRT, the electron intensity is adjusted using _____.
 - a) Accelerating anode
 - b) Control grid
 - c) Electron gun
 - d) Focusing anode
- 7) The quality of an image depend on _____.
 - a) No. of end points used by image
 - b) No. of line used by image
 - c) No. of resolution used by image
 - d) None of these
- 8) _____ is responsible for accessing the frame buffer to refresh the screen.
 - a) Graphics package
 - b) Video controller
 - c) CPU
 - d) Monitor
- 9) For scaling parameters, If $S_x = S_y$ then _____.
 - a) Size of image decreases
 - b) Size of image increases
 - c) Uniform scaling is done
 - d) None of these



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Seat No. 393520

Set P

B.C.A. (Semester - V) (New) (CBCS) Examination: Oct/Nov-2023
Recent Trends in IT (19409505)

Day & Date: Wednesday, 06-12-2023
Time: 03:00 PM To 06:00 PM

Max. Marks: 80

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

Q.1 A) Multiple choice questions.

- 1) Applications and services that run on a distributed network using virtualized resource is Known as _____
a) Parallel computing b) Soft computing
c) Distributed computing d) Cloud computing
- 2) _____ has the world's largest Hadoop cluster.
a) Apple b) Datamatics
c) Facebook d) None of the mentioned
- 3) Data science is the process of diverse set of data through?
a) Organizing data b) Processing data
c) Analysing data d) All of the above
- 4) Who is the father of data science?
a) Rasmus Lerdorf b) James Gosling
c) Guido van Rossum d) William S. Cleveland
- 5) Which of the following is the most important language for Data Science?
a) Ruby b) R
c) Java d) None of these
- 6) Type of matrix decomposition model is _____.
a) Predictive model b) descriptive model
c) logical model d) None of these
- 7) Which of the following is performed by Data Scientist?
a) Create reproducible code
b) Challenge results
c) Define the question
d) All of the above

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B) Short note on

- 1) Cloud service models
- 2) Big Data

06

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

- 1) What are the Core Components of Hadoop?
- 2) Explain IoT Architecture.
- 3) Explain applications of Machine Learning Algorithms

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B) Describe/Explain/Solve

Explain in details the architecture of IOT and applications of IOT.

08

Q.5 Attempt any Two of the following.

- a) What are Virtual Machines? Explain Architecture of Virtual Machines in detail.
- b) What do you mean by virtualization? Explain in details about Virtualization technologies and Architectures.
- c) What are the Environmental impacts of IT and explain the Holistic Approach to Greening IT.

16

Q.2 Solve the following (Any Eight)

- a) Define Boot Loader.
- b) List TWO differences between GRUB and LILO.
- c) \$find command
- d) List out any 4 Linux Distributions.
- e) Define metacharacter.
- f) What is shell Process?
- g) State usage of \$mkdir command.
- h) State the purpose of \$paste command.
- i) State usage of traceroute command
- j) What is boot block?

Q.3 a) Attempt the following (Any Two)

- 1) Explain LINUX Architecture with Diagram.
- 2) Write Note, on \$uniq command.
- 3) Write a Shell Script to check entered number is EVEN or ODD.

- b) List Out differences between LINUX & WINDOWS OS.

Q.4 a) Attempt the following (Any Two)

- 1) Write a note on Super Block.
- 2) State any FOUR Shell types.
- 3) Explain Piping with Example.

- b) Explain Hierarchy of file system with diagram.

Q.5 Attempt the following (Any Two)

- a) Define System Administrator and state different roles of system administrator.
- b) Explain File and directory permission commands.
- c) Explain case..esac statement with shell script example.

10

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08

08

16

SLR-DG-55

Seat No.	
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Set P

B.C.A. (Semester - VI) (New) (CBCS) Examination: Oct/Nov-2023
ENGLISH
Literary Mindscapes - I (19409601)

Day & Date: Monday, 20-11-2023
Time: 03:00 PM To 05:00 PM

Max. Marks: 40

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

Q.1 Choose the correct alternative.

08

- _____ are the names of the children in the story 'Growing up'.
- a) Joss and Kady b) Jane and Karli
c) Jade and Katie d) Jenny and Kate
- 2) What was Aksionov fond of when he was younger?
- a) dancing b) sleeping
c) singing d) reading
- 3) _____ children are listening to the story in the poem 'Sita'.
- a) One b) Two
c) Three d) Four
- 4) What was the cause of the death of the duchess?
- a) illness b) accident
c) drowning d) the duke
- 5) Complete the following line.
'A thing of beauty is a _____ forever'.
- a) cheerful b) pleasant
c) joy d) truth
- 6) Charlotte Bronte says that _____ possess the golden wings.
- a) Morning dew b) Hope
c) Butterflies d) None of the above
- 7) Choose the correct adverb to fill in the blank
I am _____ tired. I want to sleep for a couple of hours.
- a) extremely b) extreme
c) insufficiently d) sufficient
- 8) My teacher often says to me "If you do not work hard, you will fail"
The correct indirect speech of the above sentence is _____
- a) My teacher often says to me that if I do not work hard, I will fail.
b) My teacher told to me that if I do not work hard, I will fail
c) My teacher said that if I does not work hard, I would fail.
d) My teacher ordered that if I am not working hard, I would fail.

Q.2 Write short answers of the following questions. (Any Four)

- 1) What do you know about Robert Quick's wife?
- 2) Why did Aksionov leave the inn early?
- 3) What is the tragic story told by the narrator in the poem 'Sita'?
- 4) Describe the personality of the duchess.
- 5) What objects of nature does John Keats mention as a source of joy?
- 6) What is the theme of the poem "Life"?

Q.3 Answer any one of the following.

- a) Explain the three most important literacy skills (IMT).
- OR**
- b) Discuss in detail the life skills, known as (FLIPS).

Q.4 There is a spate of motor cycle robberies in your city. Give three steps that you would take as a civically literate person and as a leader.

12

10

BLR-DG-56

88t P

Seat No.	
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B.C.A. (Semester - VI) (Now) (CBCS) Examination; Oct/Nov-2023
Advanced Java (19409602)

Max. Marks: 80

Day & Date: Tuesday, 21-11-2023
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.

- 1) In Session tracking which method is used in a bit of information that is sent by a web server to a browser and which can later be read back from that browser?
a) HttpSession
b) URL rewriting
c) Cookies
d) Hidden form fields
- 2) _____ Method Returns the parameter value for the specified parameter name in web.xml.
a) getInitParameter(String name)
b) getParameter(String name)
c) setInitParameter(String name)
d) setParameter(String name)
- 3) Which are the session tracking techniques?
a) URL rewriting
b) Using session object
c) Using hidden fields
d) All of these
- 4) A JSP is transformed into _____.
a) Java applet
b) Java servlet
c) Both a) and b)
d) None of these
- 5) In Hibernate inheritance mapping which is used when tables are created as per class but related by foreign key, so there are no duplicate columns?
a) Table per Hierarchy
b) Table Per Concrete Class
c) Table Per Subclass
d) None of these
- 6) In Spring JDBCTemplate which interface can be used to fetch records from the database?
a) PreparedStatement
b) RowMapper
c) ResultSetExtractor
d) JDBCData
- 7) If you don't use @Table annotation, hibernate will use the _____ as the table name by default.
a) class name
b) HibernateTable
c) Object Name
d) annotationTable

10

SLR-DG-56

Q.4 n) Attempt any two of the following. 08

- 1) What is Inheritance mapping in Hibernate? Explain TPS Inheritance mapping with example.
- 2) Difference between GenericServlet and HttpServlet.
- 3) Write a servlet to take name as request parameter from the user and display Welcome Page to the user with his name (use HTTP post method).

b) What is Session? Explain all session tracking mechanism with example. 08

Q.5 Attempt any two of the following. 10

- a) Explain Spring JDBC template with suitable example.
- b) Explain JSTL SQL tags with Example.
- c) What is Dependency Injection? Explain Constructor Injection (CI) with collection and Map.

SLR-DG-60

Seat No.	
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Set **P**

B.C.A. (Semester - VI) (New) (CBCS) Examination: Oct/Nov-2023
Advanced Python (19409606)

Day & Date: Saturday, 25-11-2023
Time: 03:00 PM To 06:00 PM

Max Marks: 80

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

Q.1 A) Multiple choice questions.

10

- 1) fg in tkinter widget stands for?
 - a) foreground
 - b) background
 - c) forgap
 - d) None of these
- 2) One of the following applications of the Client and Server Model?
 - a) Email
 - b) Network Printing
 - c) World Wide Web
 - d) All of these
- 3) Which architectural pattern does django follow?
 - a) php
 - b) MVC
 - c) HTML
 - d) None of these
- 4) Which widget are used to get the data from the user?
 - a) Button
 - b) Label
 - c) Entry
 - d) None of the mentioned
- 5) What are the features available in Django web framework?
 - a) Admin Interface (CRUD)
 - b) Templating
 - c) Form handling
 - d) All of these
- 6) XML Is Designed To Store Data And _____
 - a) Design
 - b) Verify
 - c) Both A & B
 - d) Transport
- 7) Tkinter tool in python provide the _____
 - a) database
 - b) OS commands
 - c) GUI
 - d) All of mentioned
- 8) What is the purpose of settings.py?
 - a) To configure settings for the Django project
 - b) To configure settings for an app
 - c) To set the date and time on the server
 - d) To sync the database schema
- 9) One of the following classes are used for connection-less socket programming?
 - a) Datagram Socket
 - b) Datagram Packet
 - c) Both Datagram Socket
 - d) None of the above
- 10) The XML DOM object is _____.
 - a) Entity
 - b) Comment Data
 - c) Entity Reference
 - d) Comment Reference

B) Fill in the blanks.

- 1) _____ is used to display the static text and titles.
- 2) An XML document can be depicted using _____ kind of structure.
- 3) Django is a web development _____.
- 4) _____ is used to accept the connection from the client.
- 5) GUI stands for Graphical _____ Interface.
- 6) Django supports the _____ pattern.

Q.2 Solve any eight of the following.

16

- a) What is python tkinter?
- b) What is Geometry Management?
- c) What is Framework?
- d) What is XML DOM?
- e) What is Network?
- f) What are 'views'?
- g) What is XML Parser?
- h) How to do you create a Django project?
- i) What is TCP?
- j) What are widgets?

Q.3 a) Attempt any Two of the following.

10

- 1) What is GUI? Explain it's advantages.
- 2) Difference between app and project.
- 3) Write a program for sending email application.

b) Explain pack() Layout Managers.

06

Q.4 a) Attempt any Two of the following.

08

- 1) Explain parsing XML with SAX API's.
- 2) Write a program for URL in network Programming.
- 3) Explain features of Django.

b) What is IP address? Write a program for IP address.

08

Q.5 Attempt any two of the following.

16

- a) What is XML? Explain Architecture of XML?
- b) Explain Button & Spinbox widgets.
- c) What is Django? Explain the various files that are created when you create a Django Project?