

Total No. of Questions : 5]

SEAT No. :

PE-5193

[Total No. of Pages : 2

[6590]-1

S.Y. B.B.A. (CA)

(MJ-201-DS-T) : Data Structure
(2024 Pattern) (Semester - III)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

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

Q1) Write answer the following 8 out of 10 :

[16]

- a) Define node structure of doubly linked list.
- b) List the basic operation on Linked List.
- c) What are the applications of Queue?
- d) What is the difference between Stack and Queue.
- e) What is an Abstract Data Type (ADT)? Give any one example.
- f) What is the difference between linear and non-linear data structures?
- g) What is the balance factor? How is it calculated?
- h) What is a leaf node?
- i) Define space complexity.
- j) Give difference between calloc() and malloc() .

Q2) Write answer the following 4 out of 5 :

[16]

- a) What are asymptotic notations? Explain Big O, Big Omega (Ω), and Big Theta (θ) with examples.
- b) Explain Binary search method with an example.
- c) Explain Tree traversal methods with example.
- d) Explain circular linked list with node structure.
- e) Explain DFS traversing technique with an example.

P.T.O.

Q3) Write answer the following 4 out of 5 : **[16]**

- a) Write a function to remove the last node from the doubly linked list.
- b) Write a recursive function to traverse a tree by using inorder () and preorder () traversing functions.
- c) Write a C program for selection sort.
- d) Write a function to add node at a given position in a singly linked list.
- e) Write a function to delete elements from the linear queue.

Q4) Write answer the following 4 out of 5 : **[16]**

- a) Construct a Binary search tree for the following data 10, 5, 75, 62, 49, 58.
- b) Explain Adjacency matrix with example.
- c) Write a program to count the total number of nodes and display the count.
- d) Write functions for push() and POP() to implement static stack.
- e) Write a program to check whether the queue is empty or full.

Q5) Write short note 2 out of 3 : **[6]**

- a) Define:
 - i) Pendant Vertex
 - ii) Path
 - iii) Directed Graph
- b) Convert the following expression into postfix.
 - i) $(A + B) * (C - D)$
 - ii) $(A + B * C - D) / E * F$
- c) Define :
 - i) Complete Binary tree
 - ii) Binary search tree
 - iii) Degree of node



Total No. of Questions : 5]

SEAT No. :

PE-5194

[Total No. of Pages : 2

[6590]-3

S.Y. B.B.A. (C.A.)

MJ-202-PHP-T : PHP

(2024 Pattern) (Semester - III)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

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

Q1) Attempt any Eight (Out of Ten):

[8×2=16]

- a) What is PHP?
- b) How to declare variable in PHP?
- c) What is cookie?
- d) Which are the methods to submit form?
- e) Explain array_merge() function in PHP.
- f) What is the use of Sticky form in PHP?
- g) What is \$_SESSION in PHP?
- h) Explain mysqli_connect() in PHP.
- i) Which attribute is used for multiple selections in select tag?
- j) What is the use of isset () function?

Q2) Attempt any Four (Out of Five):

[4×4=16]

- a) What is Array? Explain all types of array in PHP.
- b) Explain string manipulation function in PHP.
- c) What is the difference between GET and POST method.
- d) Write a PHP program to check the given number is Armstrong or not.
- e) Write a PHP script to define an interface which has methods area () and volume (). Define constant PI. Create a class cylinder which implements this interface and calculate area and volume.

P.T.O.

Q3) Attempt any Four (Out of Five):

[4×4=16]

- a) Explain the role of phpMyAdmin?
- b) Write a php program to count total number of vowels from the given string.
- c) How to create cookies? Give an example.
- d) Explain passing values by reference with an example.
- e) Write a PHP function to calculate factorial of a number using recursion.

Q4) Attempt any Four (Out of Five):

[4×4=16]

- a) Explain self processing form using example.
- b) Write a PHP program to display record of employee with fields(empid, empname, salary, dept).
- c) Write a PHP program to create login page and welcome user on next page.
- d) Write a PHP program to display multiplication table of entered value.
- e) How inheritance is implemented in PHP? Explain using example.

Q5) Write a short note on any Two (Out of Three):

[2×3=6]

- a) Session
- b) Class and Object
- c) Radio button and checkbox.



Total No. of Questions : 5]

SEAT No. :

PE12841

[Total No. of Pages : 2

[6590]-11

F.Y.B.B.A. (Computer Application)
PSC 101 T : PROBLEM SOLVING USING C
(2024 Credit Pattern) (NEP) (Semester-I)

Time : 2 Hours]

[Max. Marks : 30

Instructions to the candidates:

- 1) *All questions are compulsory.*
- 2) *Figures to the right indicates full marks.*
- 3) *Assume suitable data if necessary.*

Q1) Trace the output (any 2).

[2×2=4]

- a) `# include <stdio.h>`
`int main()`
`{`
`int x = 5;`
`printf ("%d%d%d ", x++, x++, ++x);`
`return 0;`
`}`
- b) `# include <stdio.h>`
`int main()`
`{`
`int i = 0;`
`if (i = 1)`
`printf ("Yes");`
`else`
`printf ("No");`
`return 0;`
`}`
- c) `# include <stdio.h>`
`void fun (int x)`
`{`
`x=20;`
`}`
`int main()`
`{`
`int a=10;`
`fun (a);`
`printf ("%d", a);`
`return 0;`
`}`

P.T.O.

```
d) #include <stdio.h>
int main()
{
    int a=5, b=8;
    printf ("%d", a>b?a:b);
    return 0;
}
```

Q2) Answer of the following. **[4×1=4]**

- a) Define function.
- b) What is Identifier?
- c) What does Global Variable Mean?
- d) Define syntax of do-while loop.

Q3) Attempt any three of the following. **[3×2=6]**

- a) What is C language? Write any two features of C.
- b) Define variable and constant.
- c) Explain logical operators with examples.
- d) What is Recursion?

Q4) Attempt any two of the following. **[2×4=8]**

- a) What is Array? Explain types of Array.
- b) C program to print pattern using Nested loops.

```
1
1  2
1  2  3
1  2  3  4
```

- c) C program to find Armstrong Number.

Q5) Attempt any two of the following. **[2×4=8]**

- a) What is storage class? Explain types of storage classes.
- b) C program to calculate area of circle using function.
- c) C program to subtract two matrices.



Total No. of Questions : 4]

SEAT No. :

PE-12842

[Total No. of Pages : 2

[6590]-12
F.Y.B.B.A. (Computer Application)
DBM 102 T- Database Management System
(2024 Pattern) (Semester - I)

Time : 2 Hours]

[Max. Marks : 30

Instructions to the candidates :

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

Q1) Write answer the following Six of the following (out of Eight) **[6 × 1 = 6]**

- a) Candidate Key
- b) What is an entity?
- c) Define relation.
- d) What is a foreign key?
- e) What is normalization?
- f) Define SQL constraint.
- g) What is an attribute?
- h) Write any one aggregate function.

P.T.O.

Q2) Write answer the following Four of the following (out of Five). **[4 × 2 = 8]**

- a) Write any two applications of DBMS
- b) Explain Database Designers.
- c) What is an Entity Relationship Diagram (ERD)?
- d) What is DBMS?
- e) What is data independence? Explain its types.

Q3) Write answer the following Two of the following (out of Three). **[2 × 4 = 8]**

- a) Explain advantages of DBMS.
- b) Write an SQL query for the following
 - i) To create a Hospital database with minimum 5 fields.
 - ii) To insert two records
 - iii) To add new field in hospital
 - iv) To display all records.
- c) Write SQL queries.
 - i) Create table 'Employee (Emp ID, Emp Name, Salary)
 - ii) Insert two records in Employee table
 - iii) Display salary of Emp ID = 2
 - iv) Add new field in Employee table

Q4) Write answer the following Two of the following (out of Three). **[2 × 4 = 8]**

- a) Explain Network Data Model
- b) Explain basic concepts of Relational Model.
 - i) Relation
 - ii) Tuple
- c) Write SQL queries.
 - i) Create a table 'student' with fields student ('Roll No', 'Name', 'Address')
 - ii) Insert two records into student table
 - iii) Display all records from 'student' table.
 - iv) Display record of rollno = 2 only



Total No. of Questions : 4]

SEAT No. :

PE12843

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[6590]-13

F.Y.B.B.A. (Computer Application)

SEC-101-T : PROGRAMMING PRINCIPLES AND ALGORITHM

(NEP 2024 Credit Pattern) (Semester-I)

Time : 2 Hours]

[Max. Marks : 30

Instructions to the candidates:

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

Q1) Write answer of the following.(Solve any 6 out of 8)

[6×1=6]

- a) Define problem.
- b) What is array?
- c) What is mean?
- d) Define algorithm.
- e) List the limitations of flowchart.
- f) What is recursive algorithm?
- g) What is transpose matrix?
- h) Define lower triangular matrix.

Q2) Write answer of the following.(Solve any 4 out of 5)

[4×2=8]

- a) Define row major representation of array with example.
- b) What is brainstorming?
- c) List characteristics of good algorithm.
- d) What are the steps involved in problem solving?
- e) Explain 1-D array with example.

P.T.O.

Q3) Write answer of the following.(Solve any 2 out of 3)

[2×4=8]

- a) Write an algorithm and draw a flowchart to check given no. is even or odd.
- b) What is recursion? Explain with example.
- c) Write an algorithm to reverse a given number.

Q4) Write answer of the following.(Solve any 2 out of 3)

[2×4=8]

- a) Explain program development cycle.
- b) Draw a flowchart to find maximum number from array using recursion.
- c) Draw a flowchart to display subtraction of matrix.



Total No. of Questions : 3]

SEAT No. :

PE-12844

[Total No. of Pages : 2

[6590]-14
F.Y.B.B.A.
COMPUTER APPLICATION
AEC 101 T- Business Communication Skills - I
(Credit System) (2024 Pattern) (Semester - I)

Time : 2 Hours]

[Max. Marks : 30

Instructions to the candidates :

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

Q1) Fill in the blanks (Any 4) **[4]**

- a) Facial expressions, gestures and posture are forms of _____ communication.
 - i) non - verbal
 - ii) verbal
 - iii) formal
 - iv) vertical
- b) The study of body movements in communication is called _____.
 - i) Proxemics
 - ii) Kinesics
 - iii) Chronemics
 - iv) Haptics
- c) The word communication comes from the _____ word 'communis' means common.
 - i) French
 - ii) Spanish
 - iii) Latin
 - iv) Italic
- d) _____ communication includes letters, circulars, memos, reports, minutes forms etc.
 - i) Written
 - ii) Visual
 - iii) Oral
 - iv) Informal

P.T.O.

- e) _____ is the first stage of any organized activities
- i) Planning
 - ii) Investigation
 - iii) Research
 - iv) Interpret
- f) _____ is the list of items to be discussed in the meeting.
- i) Agenda
 - ii) Minutes
 - iii) Report
 - iv) Letter

Q2) Answer the following (Any 2). **[14]**

- a) Elaborate the importance of effective communication in professional life.
- b) Explain the role of non-verbal communication.
- c) Mention tips and techniques to improve listening skills
- d) Explain the barriers in communication? How will you overcome the barriers in communication?

Q3) Write short notes on (Any 4). **[12]**

- a) Minutes of meeting
- b) Video-conferencing
- c) Importance of verbal communication
- d) Types of Blogs
- e) Barriers in listening
- f) E-mail.



Total No. of Questions : 2]

SEAT No. :

PE12845

[Total No. of Pages : 2

[6590]-15

First Year B.A.

SANSKRIT (संस्कृत)

OE-H-101-SAN : (पञ्चतन्त्रम्) (Panchatantram)
(2024 Credit Pattern) (Semester - I)

वेळ : 2 तास]

[एकूण गुण : 35

- सूचना :** 1) सर्व प्रश्न सोडविणे आवश्यक आहेत.
All questions are compulsory.
2) उजवीकडील अंक प्रश्नांचे पूर्ण गुण दर्शवितात.
Figures to the right indicate full marks.

Q1) A) संदर्भासह स्पष्टीकरण करा. (कोणतेही दोन) [6]

Explain with reference to content (any two).

- i) जिह्वालौल्यं रूजाक्रान्तो जीवितं योऽत्र वाञ्छति।
- ii) अर्थेन कुरुते कार्यं, सर्वनाशो हि दुःसहः।
- iii) यत्ने कृते यदि न सिद्ध्यति कोऽत्र दोषः ?

B) जोड्या जुळवा. (कोणत्याही सहा) [6]

Match the following (any six)

- | A | B |
|--------------------------|---------------------------------|
| i) सिंहशृगालपुत्रयोः कथा | a) राजद्वारे श्मशाने च तिष्ठति। |
| ii) सङ्गीते | b) राजपुत्रस्य नाम। |
| iii) उद्धतः | c) लब्धप्रणाशतन्त्रम् |
| iv) बान्धवः | d) एकविंशतिः मूर्च्छना |
| v) अनन्तशक्तिः | e) गर्दभः |
| vi) सकलशास्त्रपारङ्गतः | f) सिंहः |
| vii) पिङ्गलकः | g) पं. विष्णुशर्मा |

P.T.O.

Q2) A) खालील परिच्छेद वाचून, त्यावरील कोणत्याही पाच प्रश्नांची उत्तरे लिहा. [5]

Read the following passage and write answers to (any five).

कस्मिंश्चिदधिष्ठाने सोमिलको नाम कौलिको वसति स्म। स चानेकविधपट्टरचनारञ्जितानि वस्त्राण्युत्पादयति। परं तस्य चानेक – विधपट्टरचनानिपुणस्यापि न भोजनाच्छादनाभ्यामधिकं कथमण्यर्थमात्रं सम्पद्यते। अथान्ये तत्र सामान्यकौलिकाः स्थूलवस्त्रसम्पादनविज्ञानिनो महद् हि सम्पन्नाः। तानवलोक्य स स्वभार्यामाह – “प्रिये, पश्यैतान् स्थूलपट्टकारकान् धनकनकसमृद्धान्। तद्धारणकं ममैतसूधानम्। तदन्यत्रोपार्जनाय गच्छामि।”

- i) कौलिकस्य नाम किम्?
- ii) कौलिकस्य कार्यं किम् आसीत्?
- iii) सोमिलकस्य समस्या का?
- iv) सोमिलकस्य नैपुण्यं किम्?
- v) सामान्यकौलिकाः कथमासीत्?
- vi) सोमिलकेन किं निश्चितम्?

B) सविस्तर उत्तर लिहा. (कोणतेही एक) [10]

Write an essay typed answer (any one).

- i) सोमिलक कथा सांगून, तिचे तात्पर्य स्पष्ट करा.

Narrate सोमिलक कथा and explain moral of the same.

- ii) पञ्चतन्त्र हे राजनीतिशास्त्रावरील पुस्तक आहे, हे विधान स्पष्ट करा.

Explain the statement that पञ्चतन्त्र is a text on राजनीतिशास्त्र.

C) टीपा लिहा. (कोणत्याही दोन) [8]

Write short notes (any two)

- i) पञ्चतन्त्रम् चे अनुबंध चतुष्टय
अनुबन्ध चतुष्टय पञ्चतन्त्रम्
- ii) राजा अमरशक्तिः।
- iii) नृपसेवकवानर कथा।



Total No. of Questions : 4]

SEAT No. :

PE-12846

[Total No. of Pages : 2

[6590]-16

F.Y.B.Sc. (Computer Science/AI & ML)

OE-102-CS-T: Introduction to Computers and Basics of Internet

(2024 Pattern) (Semester - I) (Open Elective)

Time : 2 Hours]

[Max. Marks : 30

Instructions to the candidates :

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

Q1) Attempt any Six out of the following (out of Eight)

[6 × 1 = 6]

- a) What is Computer?
- b) Define a Hotspot.
- c) Give an example of a social networking site
- d) What does URL stands for?
- e) List examples of operating system.
- f) Give three input devices.
- g) Name one type of wireless internet connection.
- h) State true or false “Google chrome is a popular web browser”.

P.T.O.

Q2) Attempt any Four of the following (out of Five)

[4 × 2 = 8]

- a) Give advantages of analog computers
- b) Explain any two types of Blogs.
- c) How satellite internet works? Explain
- d) How to open Windows Notepad?
- e) What is the difference between Application Software and System Software?

Q3) Attempt any Two of the following (out of Three)

[2 × 4 = 8]

- a) Explain ISDN Network with diagram.
- b) Differentiate between Primary Storage and Secondary Storage.
- c) Describe the role of File Explorer in windows

Q4) Attempt any Two of the following (out of Three)

[2 × 4 = 8]

- a) Write characteristics of Computer.
- b) Explain e-mail message components.
- c) Differentiate between Tethering and Hotspot.

