

Roll No.

Total Pages : 03

BCA/M-24

1864

ADVANCED PROGRAMMING IN C

Paper : BCA-121

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. Explain the following with example : 4×4=16
- (a) Explain `calloc()` and `malloc()`
 - (b) Explain `gets()` and `puts()`
 - (c) File operations
 - (d) `Strcmp()`.

Unit I

2. Write a program to sort the list of names of students in alphabetic order. 16
3. Explain the following with suitable example : 4×4=16
- (a) String copy and string length
 - (b) Structure
 - (c) Union
 - (d) Array of structures.

Unit II

4. Explain the following with suitable example : $4 \times 4 = 16$
- (a) Pointers and array
 - (b) Pointers and functions
 - (c) Dynamic memory allocation
 - (d) Pointer to pointer
5. (a) What is pointer ? How would you declare and initialize a pointer variable ? 8
- (b) Write a program in C to count vowels in string using pointers. 8

Unit III

6. (a) What is console input output in C ? How is it different from file input/output. 8
- (b) Write a program in C to read the contents of a file. 8
7. Explain the following functions in C using suitable examples : $4 \times 4 = 16$
- (a) Fscanf()
 - (b) fseek()
 - (c) fflush()
 - (d) feof()

Unit IV

8. (a) Explain the different command line arguments. 8
- (b) What is macro ? Explain with suitable example. 8
9. Explain the following using suitable example in C :
- (a) #error
 - (b) #ifdef
 - (c) #if
 - (d) #define $4 \times 4 = 16$

Roll No.

Total Pages : 02

BCA/M-24

1865

LOGICAL ORGANIZATION OF
COMPUTER-II

Paper : BCA-122

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) What is Cache Memory ? How is it useful ?
- (b) What are Binary Counters ?
- (c) Prove that NAND and NOR are universal gates.
- (d) What is Internal and External Interrupt ?

Unit I

2. Describe the working of JK Flip-Flop. What is the disadvantage of JK Flip-Flop ? 16
3. Elaborate the following :
 - (a) D Type Flip-Flop 8
 - (b) T Type Flip-Flop 8

(8-04/10)L-1865

P.T.O.

Unit II

4. (a) Differentiate between Synchronous and Asynchronous Counters. 8
- (b) Describe 4-Bit Up-Down Counter with timing diagrams. 8
5. Explain Register as a Storage Unit. Make shift register to store 1010. Convert it into parallel in parallel out. 16

Unit III

6. (a) Write a note on I/O Devices and their controllers. 8
- (b) Explain various Magnetic Storage Devices. 8
7. Distinguish ROM and RAM. Explain various types of RAM. 16

Unit IV

8. Discuss the working of DMA in detail with diagram. 16
9. (a) Explain various Instruction Formats with example in detail. 8
- (b) Explain addressing modes. 8

Roll No.

Total Pages : 03

BCA/M-24

1866

MATHEMATICAL FOUNDATIONS-II

BCA-123

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) If p and q be any statement then construct the truth table $\sim(p \wedge q)$.
- (b) Define subgroup.
- (c) Define skew-symmetric matrix with example.
- (d) Define prime ideal of a ring.
- (e) State Cayley-Hamilton theorem.
- (f) Define Singular matrix.
- (g) Define order of an element of a group.
- (h) Construct a 2×2 matrix whose elements are given by $a_{ij} = i.j$. 8×2=16

Unit I

2. (a) Prove that $[(p \Leftrightarrow q) \wedge ((q \Rightarrow r) \wedge r)] \Rightarrow r$ is a tautology. 8

- (b) Prove that $3^{2n+2} - 8n - 9$ is divisible by 64. 8
3. (a) Prove that $3^n > 2^n$ by Principle of Mathematical Induction for all $n \in \mathbb{N}$. 8
- (b) Show that $\sim(p \leftrightarrow q) \equiv (\sim p) \leftrightarrow q \equiv p \leftrightarrow (\sim q)$. 8

Unit II

4. (a) Let $G = \{0,1,2,3,4\}$, find the order of the elements of the group G under the binary operation addition modulo 5. 8
- (b) If every element of a group is its own inverse, then show that the group is abelian. 8
5. (a) Prove that intersection of the two subring is a ring. 8
- (b) Let R be a ring of 2×2 matrices over integers. Let $S = \left\{ \begin{bmatrix} a & 0 \\ b & 0 \end{bmatrix} : a, b \text{ integers} \right\}$, then S is a left ideal but not right ideal. 8

Unit III

6. (a) Find rank of the matrix $\begin{bmatrix} 9 & 0 & 2 & 3 \\ 0 & 1 & 5 & 6 \\ 4 & 5 & 3 & 0 \end{bmatrix}$ by reducing it to Normal Form. 8

(b) If $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & -2 & 1 \\ 4 & 2 & 1 \end{bmatrix}$,

then show that $A^3 - 23A - 40I = 0$. 8

7. (a) Solve the following using rank method : $x + y + z = 0$, $2x - 3y + z = 9$, $x - y + z = 2$. 8
- (b) Solve the following : $x - y + z = 0$, $x + 2y - z = 0$, $2x + y + 3z = 0$. 8

Unit IV

8. Find eigen values and eigen vectors of the matrix

$$\begin{bmatrix} 1 & 2 & 2 \\ 0 & 2 & 1 \\ -1 & 2 & 2 \end{bmatrix}. \quad 16$$

9. Verify Cayley-Hamilton Theorem for the matrix

$$A = \begin{bmatrix} 2 & -1 & 1 \\ -1 & 2 & -1 \\ 1 & -1 & 2 \end{bmatrix}, \text{ and hence find its inverse. } \quad 16$$

Roll No.

Total Pages : 03

BCA/M-24

1867

OFFICE AUTOMATION TOOLS

BCA-124

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory.

1. (a) List *two* key applications of desktop publishing in business and media industries.
- (b). Name *one* popular desktop publishing software and briefly describe its importance in publishing workflows.
- (c) Write shortcut keys for performing the following operations in Page Maker :
 - (i) Replacing word in the text
 - (ii) Spell-checking of the text
- (d) Briefly explain story editor in Page maker.
- (e) What is auto-text feature in office automation, and how does it help users ?
- (f) Explain the difference between linking and embedding objects in word processing.

- (g) Name any *two* types of animation effects commonly used in presentations and briefly describe each.
- (h) On which objects in a slide of a presentation animation effects can be added ? 8×2=16

Unit I

- 2. (a) Explain the importance of desktop publishing (DTP) software in document creation. Provide reasons why DTP software is essential in today's digital age. 8
- (b) Briefly explain some common features of Desktop publishing (DTP) software. 8
- 3. (a) Explain the window components of Page Maker Window. 8
- (b) Compare any *two* desktop publishing packages in terms of their features. 8

Unit II

- 4. (a) What is meant by indent ? Explain the types of indent options available in Page Maker. 8
- (b) Explain the process of defining styles in Desktop Publishing (DTP) software by mentioning the steps involved in defining styles. 8

- 5. (a) Explain the process of changing character and paragraph attributes in PageMaker. 8
- (b) Write steps to Copy-Paste, Cut-Paste and creating columns in PageMaker. 8

Unit III

- 6. (a) Explain the process of creating a dictionary within a Word document. How is it used in the document ? 8
- (b) Explain the concept of bookmarks in Word. How is it created, used and deleted ? 8
- 7. (a) What do you mean by Mail-Merge ? Write steps to create mail-merge in Word. 8
- (b) Explain in detail concept of Macros in Word by elaborating steps to create and use macro in Word. 8

Unit IV

- 8. What is meant by Organizational charts and Excel charts ? Explain in detail how are these two different from one another ? Write steps to include a chart in presentation. 16
- 9. (a) What steps would you take to ensure that a sound effect plays automatically during a presentation ? 8
- (b) How do you insert an animated picture into a PowerPoint presentation ? 8

Roll No.

Total Pages : 03

BCA/M-24

1868

STRUCTURED SYSTEM ANALYSIS AND
DESIGN
BCA-125

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) What qualities should be there in a system analyst ?
(b) What is social feasibility ?
(c) What is normalization in database system ?
(d) What is the difference between white box and black box testing ?

Unit I

2. (a) What is the difference between open and closed system ? Discuss using suitable examples.
(b) Write a note on different stages in the system life-cycle.
3. (a) Define system and differentiate between deterministic and probabilistic systems.

- (b) What considerations are crucial for system planning and control to ensure project success ? Discuss.

Unit II

- 4. (a) Explain the concept of observation as a fact-gathering technique in system analysis and discuss its advantages and limitations.
- (b) How can Gantt charts be utilized to effectively plan and manage project timelines in system development ?
- 5. (a) Can you explain the difference between primary and secondary sources of information, and provide examples of each in the context of system analysis ?
- (b) Describe the purpose and benefits of using IPO and HIPO charts in system analysis.

Unit III

- 6. (a) Differentiate between the logical and physical views of data in database design and explain their significance in system development.
- (b) Discuss the importance of input/output design in enhancing user experience and system efficiency, and provide examples of good input/output design practices.

- 7. (a) Explain the process of conducting cost/benefit analysis for a system, including the identification and quantification of costs and benefits.
- (b) Discuss different file structures and their respective advantages and disadvantages.

Unit IV

- 8. (a) How can proactive maintenance approaches, such as preventive maintenance and predictive maintenance, help in minimizing unexpected system failures and downtime ?
- (b) How does system testing ensure that a software system meets its specified requirements and functional objectives ?
- 9. (a) What are the primary activities involved in software maintenance and how do they support the ongoing functionality and improvement of a system ?
- (b) In what ways does quality assurance contribute to overall customer satisfaction and trust in the software product or system ?

Roll No.

Total Pages : 03

BCA/M-24

1869

PERSONALITY DEVELOPMENT

BCA-126

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

(Compulsory Question)

1. (a) What is general intelligence ? Explain. 4
- (b) Discuss group dynamics. What is the focus of group dynamics ? 4
- (c) What is the difference between work groups and work teams ? 4
- (d) What is panel addressing ? 4

Unit I

2. Discuss Personality and self-concept. What are the determinants of personality ? Also explain the causes of deranged personality. 16

3. (a) What is the significance body language ? Also discuss various types of body language. 10
(b) Explain the art of good conversation. How is it useful ? 6

Unit II

4. (a) Explain the factors that play an important role in negotiations. 10
(b) Discuss the tactics used for conflict management. 6
5. Describe the factors that should be kept in mind while dealing with (i) seniors, (ii) contract workers, (iii) customers and (iv) owners. 16

Unit III

6. Discuss the group discussion process along with its ingredients and advantages. How can one have an effective group discussion ? 16
7. (a) What are different types of presentation skills ? How can you have a successful presentation in various situations ? 10
(b) Discuss various skills required during the seminars. 6

Unit IV

8. Explain the selection procedure and different types of interviews. Also discuss the important styles of interviewing. 16

9. (a) What are the essential features of a Resume ? How is it different from a CV ? 8
(b) Discuss the factors that are to be kept in mind while preparing for the interviews. 8

NBAE/M-24
COMPUTER SCIENCE
(Web Development)
Paper : 23-CSE-201
(CC-2/MCC-3)

Time : Three Hours]

[Maximum Marks : 50

Note : Question Number 1 is compulsory. Attempt *five* questions in all, selecting at least *one* question from each unit. All questions carry equal marks

Compulsory Question

1. (a) Explain the primary function of search engine.
(b) List out any *two* features of CSS3.
(c) Give one example of a CSS property used to style text on a webpage.
(d) Define static HTML and briefly describe its characteristics.
(e) What is the purpose of using frames in HTML?

UNIT-I

2. Compare and contrast web clients and web servers, Explain how they help people communicate over the World Wide Web.
3. (a) What is URL? Discuss its various elements.
(b) Write down the various steps for developing a website.

UNIT-II

4. (a) Define Form tag. Design a Registration page by using all Form controls.
(b) Describe the key features introduced in HTML5.
5. Write short notes on the following :
 - (a) Radio Buttons and Check Boxes.
 - (b) Ordered and Unordered list.

UNIT-III

6. (a) Explain CSS box model with example.
(b) Describe the differences between static, relative, absolute, and fixed positioning.
7. What are the various ways for creating style sheets? Explain with examples.

UNIT-IV

8. (a) Explain the concept of client-side scripting and its significance in web development.
(b) Write the advantages and potential pitfalls associated with employing JavaScript in HTML documents.
9. Differentiate between static and dynamic HTML documents, and explain how JavaScript contributes to making HTML documents dynamic.

Roll No.

Total Pages : 2

3950

NBCA/M-24

OBJECT ORIENTED PROGRAMMING USING C++

Paper : B23-CAP-201

(CC-A2) (BCA)

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt *five* questions in all, selecting at least *one* question from each unit. Question No. 1 is compulsory. All questions carry equal marks.

Compulsory Question

1. Define following terms :
 - (i) Data hiding.
 - (ii) Resolution operator.
 - (iii) Copy constructor.
 - (iv) Define any two string operator.
 - (v) Handling uncaught exceptions. (5×2=10)

UNIT-I

2. Explain following in detail :
 - (a) Inline Functions.
 - (b) Union in C++. 10
3. Explain following in detail :
 - (i) Function overloading.
 - (ii) Pointer. 10

3950/4400/KD/1381

[P.T.O.
25/6

UNIT-II

4. What is the use of constructor and destructor in C+? How do we declare them? Write a program to demonstrate the concepts. 10
5. What are friend functions and friend classes? Write a normal function which adds objects of the complex number class. Declare this normal function as friend of complex class. 10

UNIT-III

6. Explain following in detail :
 - (i) Abstract Class.
 - (ii) Virtual Base Class. 10
7. Write and explain a program in C++ to overload any unary operator. 10

UNIT-IV

8. What is the benefit of handling exceptions? How can you catch all exceptions? Explain with suitable example. 10
9. What do you mean by polymorphism? How can you achieve polymorphism with pointers? How late binding is different from early binding? 10

NBCA/M-24**INTRODUCTION TO WEB TECHNOLOGIES**

Paper : B23-CAP/CTS/CAL/CDS-202

(CC-B2)

(B.C.A.)

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt *five* questions in all, selecting *one* question from each unit. Question number 1 is compulsory. All questions carry equal marks.

Compulsory Question

1. (a) Discuss the difference between a URL and a URI.
- (b) Discuss the use of comments in HTML. How do you add comments to an HTML document?
- (c) What are the differences between margin and padding in CSS?
- (d) How do you create and manipulate objects in JavaScript?

UNIT-I

2. (a) Explain the concept of a search engine and discuss the key components of a search engine.
- (b) What is a web browser? What are the common functions provided by it? Discuss.

3. (a) What are the best practices for optimizing website performance and speed?
(b) What is HTTP? Can you explain the difference between HTTP and HTTPS?

UNIT-II

4. (a) Discuss the difference between <table>, <tr>, <td>, and <th> tags in HTML.
(b) Explain the difference between the GET and POST methods in HTML forms. When would you use each method?
5. (a) Describe the structure of an unordered list in HTML. What elements are used to create list items within an unordered list? Illustrate.
(b) Explain the difference between block-level and inline HTML elements.

UNIT-III

6. (a) How does the descendant selector work in CSS, and when would you use it?
(b) What are the different CSS link states? Discuss using examples.
7. (a) Explain the concept of the CSS box-sizing property and how it affects the layout of elements.

- (b) What is grouping of CSS selectors, and why is it useful in web development? Discuss.

UNIT-IV

8. (a) Discuss the importance of JavaScript in building dynamic and interactive web applications.
(b) What is the difference between var, let, and const in terms of scope and hoisting?
9. (a) How do you define and call functions in JavaScript? Illustrate.
(b) What are the different types of loops in JavaScript? Discuss.
-

Roll No.

Total Pages : 3

3952

NBCA/M-24

BCA

(Concept of Operating Systems)

Paper-B23-CAP/CTS/CAL/CDS

(CC-C2)

Time : Three Hours]

[Maximum Marks : 50

Note : Question No. 1 is compulsory. In addition attempt *four* more questions, selecting *one* question from each unit. All questions carry equal marks.

Compulsory Question

1. Attempt all the followings :
 - (a) Process Control Block.
 - (b) Deadlock Avoidance.
 - (c) Thrashing.
 - (d) Real time processing.
 - (e) Swapping. (5×2=10)

UNIT-I

2. What is an Operating System? Explain the role of Operating System as resource manager. Explain the important functions of Operating System in detail. (10)

3952/4400/KD/1244

[P.T.O.
8/7

3. Differentiate between followings :
- (a) Multiprogramming and multitasking. (5)
- (b) Single user and multi-user operating system. (5)

UNIT-II

4. Consider the following set of processes that arrive at time 0, with the length of CPU Burst time (or run time) given in milliseconds.

Process	Burst Time
P1	8
P2	4
P3	7
P4	5

Calculate Average Waiting Time and Average Turnaround time for following :

- (i) Shortest job first.
- (ii) Round Robin Scheduling.
- Consider time quantum of 5 milliseconds. (10)

5. (a) Define deadlock. Explain the necessary conditions for deadlock. (5)
- (b) What is a Process? Explain process state transition diagram in detail. (5)

UNIT-III

6. Explain the concept of paging with suitable example. Write its advantages and disadvantages. (10)

7. Explain following :
- (a) Virtual Memory. (5)
- (b) Inter-process communication. (5)

UNIT-IV

8. What is file management? Explain various file access methods and file protection mechanisms in detail. (10)
9. Explain following with example :
- (a) C-SCAN Scheduling. (5)
- (b) Directory Structure. (5)

BCA/M-24**OBJECT ORIENTED PROGRAMMING USING C++**

Paper-BCA-301

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *five* questions in all. Q. No. 1 is compulsory.
Attempt *four* more questions selecting *one* question from each unit.

Compulsory Question

1. Answer the following questions in brief :
 - (a) What is structure in C++? How is it different from class?
 - (b) Explain use of new and delete operators with a suitable example.
 - (c) How can you create an abstract class in C++? Explain with an example.
 - (d) What are different derivation rules in C++? Explain.
(4×4=16)

UNIT-I

2.
 - (a) What is scope resolution operator in C++? Explain its uses with examples. (8)
 - (b) What is static data members? Explain its use with an example. (8)

3. (a) What is copy constructor? Explain its usage by giving an example. (8)
(b) What is constructor? How can you give default values to parameters? Explain with an example. (8)

UNIT-II

4. (a) How can you create array objects? Explain with an example. (8)
(b) How can you pass an object as a parameter to a function? Give an example. (8)
5. (a) What is compile-time polymorphism? Explain function overloading with an example. (8)
(b) Overload '+' operator to increment distance given in feet and inches. (8)

UNIT-III

6. (a) What is function overriding? Explain with an example. (8)
(b) What is virtual function? Explain its characteristics. (8)
7. (a) Explain basic type into object type conversion with an example. (8)
(b) Explain explicit and implicit type conversions with examples. (8)

UNIT-IV

8. Give an example of multilevel inheritance and implement it in C++. Also explain the roles of constructors and destructors in multilevel inheritance. (16)

9. (a) What is template function? Explain with an example. (8)
(b) Explain the use of try, throw and catch constructs used in exception handling. (8)

Roll No.

Total Pages : 2

20588

BCA/M-24
COMPUTER GRAPHICS
Paper-BCA-305

Time : Three Hours]

[Maximum Marks : 80

Note : Question No. 1 is compulsory. Attempt *four* more questions selecting at least *one* question from each unit I to IV. All questions carry equal marks. .

Compulsory Question

1. (i) What is refresh rate?
(ii) How interactive computer graphics work?
(iii) What do you mean by scan conversion?
(iv) Write importance of using polar coordinates.
(v) Explain shearing operation.
(vi) Differentiate between pointing and positioning operation.
(vii) Differentiate between rotation and scaling.
(viii) What do mean by window and viewport?

UNIT-I

2. Draw and explain the working of CRT.
3. Write usage of graphics software's PHIGS, PHIGS+.

20588/100/KD/199

23 [P.T.O.
28/5

UNIT-II

4. Write steps and find set of intermediate coordinates for drawing a line between (7,7) and (15, 17) using Bresenham's line drawing algorithm.
5. Write flood fill algorithm.

UNIT-III

6. Find the resultant coordinates after performing translation transformation operation on triangle with end points (7, 7), (3, 3), (10, 10) by $t_x = 2$, $t_y = 2$.
7. Explain working of any three pointing devices.

UNIT-IV

8. Write and explain Cohen-Sutherland line clipping algorithm.
 9. Write equation and matrix for 3-D translation rotation and scaling operation.
-

Roll No.

Total Pages : 03

BCA/M-24

1876

WEB DESIGNING USING ADVANCED
TOOLS
BCA-361

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) List out any *two* disadvantages of VBScript.
- (b) What is the purpose of the 'option explicit' statement in VBScript ?
- (c) Describe the use of Dreamweaver.
- (d) Describe ID attribute.
- (e) What is PHP ?
- (f) Name the different data types available in JavaScript.
- (g) Write any *two* features of Microsoft front page.
- (h) What is the meaning of version in XML ?

Unit I

2. (a) How to handle events in JavaScript ? Explain mouse events with example.

- (b) Explain the properties and methods of 'document' object.
3. (a) What is the difference between a 'Sub Procedure' and a 'Function Procedure' in VBScript ? Explain with example.
- (b) Describe the different ways of embedding VBScript in HTML.

Unit II

4. (a) What are the various control statements used in ASP ?
- (b) What are the tools used in Macromedia Flash ?
5. (a) What is Dreamweaver ? Describe its properties. What are the several types of modes used in Dreamweaver ?
- (b) Explain various data types used in ASP.

Unit III

6. (a) Describe the properties and values in CSS. Explain the possible ways to apply CSS styles to a web page.
- (b) What is the use of filter and transition in CSS ?
7. (a) How would you create a table in HTML ? How to use rowspan and colspan and put background color to table ?
- (b) How can you control the events in DHTML ?

Unit IV

8. Write short notes on the following :
- (a) Fontface
- (b) Title Bar
- (c) Flow objects in XML.
- (d) DTD.
9. (a) How XML is different from HTML ?
- (b) What is well formed XML document ?

Roll No.

Total Pages : 03

BCA/M-24

1877

OPERATING SYSTEM-II

BCA-361

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory.
Attempt *four* more questions by selecting *one* from
each Unit.

Compulsory Question

1. (a) What is a critical section ? Give examples.
- (b) Write a note on safe, unsafe and deadlock state spaces.
- (c) Discuss data structure for swap-space management in Linux system.
- (d) What are the performance parameters of disk structure ?
- (e) Discuss the mail command along with example.
- (f) Discuss redirection in Linux.
- (g) Write syntax for changing ownership and group name on a given file/s.
- (h) Discuss various modes of vi editor. 8×2=16

Unit I

2. (a) Distinguish between counting and binary semaphores. Show when does the semaphore definition require busy waiting. Suggest a solution to overcome this problem.
- (b) Discuss about deadlock detection techniques. Explain how to recover the system from a deadlock. $8+8=16$
3. (a) What is Dining Philosopher's problem ? Discuss the solution to Dining philosopher's problem using monitors.
- (b) Write a detailed note on the following directory structures :
- (i) Tree Structure
 - (ii) Acyclic Graph $8+8=16$

Unit II

4. Discuss the key terms associated with disk scheduling. Given the following queue—95, 180, 34, 119, 11, 123, 62, 64 with the Read-write head initially at the track 50 and the tail track being at 199. Explain and compare amongst different disk scheduling algorithms. 16
5. (a) Discuss about remote file transfer. How to share file securely and how do I access files remotely ?

- (b) What is the process migration ? Explain process migration in heterogeneous system. $8+8=16$

Unit III

6. Describe in detail about the structure of LINUX. What are the features of Linux operating system ? Draw a comparison of Linux with Unix, Windows and Android operating systems. 16
7. (a) Discuss about the following Linux commands :
- (i) umask
 - (ii) comm
 - (iii) tail
 - (iv) telnet.
- (b) Differentiate between grep, egrep and fgrep with illustration. $8+8=16$

Unit IV

8. (a) What are the file types available in Linux ? Write about file structure and file permissions in Linux.
- (b) Explain in detail foreground and background jobs. Discuss various job control commands with example. $8+8=16$
9. (a) How do you use a variable in korn shell ? Describe different types of variables used in korn shell.
- (b) Illustrate decision-making statements using examples in korn shell. $8+8=16$

Roll No.

Total Pages : 03

BCA/M-24

1878

COMPUTER GRAPHICS

Paper : BCA-363

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory. In addition to compulsory question, attempt four more questions selecting *one* question from each Unit. All questions carry equal marks.

Compulsory Question

1. Answer any *four* of the following questions in brief :
 - (i) Distinguish between interactive and passive graphics.
 - (ii) Discuss the concept of color depth and its significance in digital imaging.
 - (iii) Explain the Polynomial Method for scan-converting ellipses.
 - (iv) Calculate the result of a point (3, 4) after a translation transformation of 5 units to the left and 2 units up.
 - (v) What are homogeneous coordinates, and how are they used in two-dimensional graphics transformations ?

- (vi) Describe any one 3D display method commonly used in computer graphics.

Unit I

2. (a) Define computer graphics and explain any *four* of its applications.
(b) Define refresh rate and interlacing in the context of display technology and describe any *one* display device along with its working.
3. Give examples of interactive input devices used in computer graphics and explain the working of any *two* of them.

Unit II

4. Compare the DDA algorithm with the Bresenham's line drawing algorithm. Calculate the coordinates of pixels drawn using Bresenham's line algorithm to draw a line from (3,3) to (9,6).
5. Explain how the scan-line fill algorithm determines the interior pixels of a polygon. What data structures are used to efficiently store polygon edges ?

Unit III

6. Explain the basic transformations in two-dimensional graphics and provide examples illustrating each transformation.
7. (a) Shear a rectangle defined by vertices (1, 1), (3, 1), (3, 3), and (1, 3) with a shear factor of 2 along the x-axis.
(b) Give an overview of any one pointing technique in brief.

Unit IV

8. Explain the concept of a viewing transformation in two-dimensional graphics. Given a window defined by $(x_{\min}, y_{\min}) = (1, 1)$ and $(x_{\max}, y_{\max}) = (5, 5)$, and a viewport defined by $(x_{v\min}, y_{v\min}) = (0, 0)$ and $(x_{v\max}, y_{v\max}) = (1, 1)$, determine the normalized device coordinates for a point (3, 3) within the window.
9. Describe the Cohen-Sutherland line clipping algorithm. How does it determine if a line lies within the clipping window ?

Roll No.

Total Pages : 03

BCA/M-24

1879

INTERNET TECHNOLOGIES

BCA-364

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

(Compulsory Question)

1. (a) What is meant by TCP/IP Internet ?
- (b) Differentiate between Internet and Intranet.
- (c) Which applications are better suited for UDP ?
- (d) What is IGMP ?
- (e) What is meant by HTTP ?
- (f) State the purpose of RSVP.
- (g) Differentiate between static and dynamic interior routes.
- (h) State the purpose of SSL. 8×2=16

Unit I

2. (a) Discuss the various Internet Services in detail. 8
- (b) Differentiate between TCP/IP and OSI models. 8
3. Write short notes on the following : 16
 - (i) Chat
 - (ii) Bulletin Board
 - (iii) USENET
 - (iv) NNTP.

Unit II

4. (a) Discuss the original IPv4 classful addressing scheme along with IPv4 Subnet addressing. 8
- (b) What is ARP ? How is it solved ? 8
5. (a) Discuss the concept of ICMP message delivery. 8
- (b) Why is the UDP checksum separate from the IP checksum ? Would you object to a protocol that used a single checksum for the complete IP datagram including the UDP message ? 8

Unit III

6. What are the various TCP/IP Standards for Electronic Mail Service ? Explain. 16
7. Discuss the working RTP and RTCP in detail. 16

Unit IV

8. (a) What is meant by Forwarding with Partial Information in routing ? 8
- (b) Discuss the various characteristics of BGP. 8
9. (a) Discuss the IP Multicast Scheme. 8
- (b) Discuss the working of SNMP in detail. 8

Roll No.

Total Pages : 03

BCA/M-24

1880

ADVANCED PROGRAMMING WITH
VISUAL BASIC
BCA-365

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

(Compulsory Question)

1. (a) Comment on the purpose of the collection.
- (b) What is the purpose of a form-load event ?
- (c) How can you add a separator to a menu ?
- (d) How can you use an Image list in VB ?
- (e) Differentiate between sequential and random access files.
- (f) How can you draw a circle in VB ?
- (g) Enlist the various data-bound controls in VB.
- (h) How can you add a record to a database ?

8×2=16

Unit I

2. Create a project in VB to drag the files from a folder and move them to another folder. Show the design and coding of this project. 16
3. Differentiate between the following : 16
 - (i) SDI form and MDI form
 - (ii) Activate and deactivate events
 - (iii) Load and unload statements
 - (iv) Hide and show forms.

Unit II

4. Explain the following in detail : 16
 - (i) Scroll Bar
 - (ii) Cool Bar.
5. What is a common dialog box ? How can these be attached to menu controls ? Explain in detail using suitable examples. 16

Unit III

6. Write a program in VB to read the contents of a file encrypt them and store them in another file. Also, display the encrypted contents of the second file. 16

7. How can you draw color or pattern-filled ellipses, rectangles, and squares in VB ? Explain. 16

Unit IV

8. Differentiate between DAO, RDO, and ADO. Explain the major pros and cons of each in detail. 16
9. How can you create and use a database in VB ? Explain by creating a small project. 16

Roll No.

Total Pages : 03

BCA/M-24

1881

PROGRAMMING IN CORE JAVA

BCA-366

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. Discuss the following :

- (a) Polymorphism
- (b) final and finally
- (c) Garbage Collection
- (d) Inheritance
- (e) Wrapper Class.

Unit I

2. (a) How to define the object and their methods in JAVA ? Write a program to create your own object.
- (b) Write a JAVA code to find the area of Rectangle using object.

3. (a) Discuss the need of Java as Internet Language.
What is JVM ?
- (b) Why are pointers missing in Java ? Differentiate fully OOP and Partially OOP with examples.

Unit II

4. (a) What is an Array and how to create an array ? Also explain the types of array.
- (b) WAP to find the sum of 10 elements of an array.
5. Write program to find the parameter of a rectangle using :
- (i) Function overloading
- (ii) Inheritance.

Unit III

6. Explain different types of inheritance. Write java code to print different messages using multilevel inheritance.
7. What do you mean by java code reusability, how can you achieve it using package ? Write java code using package to print your own name.

Unit IV

8. Explain the Exception handling model in detail. How to create your own exception ? Justify your answer .
9. What are AWT classes ? Explain various feature sof AWT classes in detail. Write a program to add two numbers entered in two TextFields while pressing the button "Click".

8. Differentiate between Principles of Centralisation and Decentralisation. Discuss the conditions and circumstance under which they are best suited.

केंद्रीकरण और विकेंद्रीकरण के सिद्धांतों के बीच अंतर बताइए। उन स्थितियों और परिस्थितियों पर चर्चा कीजिए जिनके तहत वे सबसे उपयुक्त हैं।

Roll No.

Total Pages : 04

BBA/M-24

24501

PRINCIPLES OF MANAGEMENT

Paper : 108

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all. Question No. 1 is compulsory.

कुल पाँच प्रश्नों के उत्तर दीजिए। प्रश्न संख्या 1 अनिवार्य है।

Compulsory Question (अनिवार्य प्रश्न)

1. (a) Briefly describe the System Approach to Management.
प्रबंधन के लिए सिस्टम दृष्टिकोण का संक्षेप में वर्णन कीजिए।
- (b) Enlist the various types of departmentation.
विभिन्न प्रकार के विभागों को सूचीबद्ध कीजिए।
- (c) What is Job Design and why is it important ?
जॉब डिजाइन क्या है और यह महत्वपूर्ण क्यों है ?
- (d) Identify the modern factors which influence the effectiveness of communication.
उन आधुनिक कारकों की पहचान कीजिए जो संचार की प्रभावशीलता को प्रभावित करते हैं।

- (e) Explain Graicunas Formula.
ग्रेकुनस फॉर्मूला को समझाइए ।
- (f) State the relevance of business ethics for any modern business.
किसी भी आधुनिक व्यवसाय के लिए व्यावसायिक नैतिकता की प्रासंगिकता बताइए ।
2. Compare and contrast the Classical and Neo-classical Approach to management. Discuss their contribution in the emergence of management thought.
प्रबंधन के लिए शास्त्रीय और नव-शास्त्रीय दृष्टिकोण की तुलना कीजिए और अंतर बताइए । प्रबंधन विचार के उद्भव में उनके योगदान की चर्चा कीजिए ।
3. Is Group decision-making better than individual decision-making ? Justify your viewpoint. Also throw light on widely recognised techniques of group decision-making.
क्या समूह निर्णय लेना व्यक्तिगत निर्णय लेने से बेहतर है ? अपने दृष्टिकोण का औचित्य सिद्ध कीजिए । समूह निर्णय लेने की व्यापक रूप से मान्यता प्राप्त तकनीकों पर भी प्रकाश डालिए ।
4. Why performance of an employee needs to be appraised ?
Elaborate the various stages of process of conducting Performance Appraisal.

किसी कर्मचारी के प्रदर्शन का मूल्यांकन क्यों आवश्यक है ? निष्पादन मूल्यांकन आयोजित करने की प्रक्रिया के विभिन्न चरणों का विस्तार से वर्णन कीजिए ।

5. Why every modern business is supposed to behave ethically while conducting business ? State certain arguments in favour of Corporate Social Responsibility initiatives. Use examples.
प्रत्येक आधुनिक व्यवसाय को व्यवसाय चलाते समय नैतिक आचरण क्यों करना चाहिए ? कॉर्पोरेट सामाजिक उत्तरदायित्व पहल के पक्ष में कुछ तर्क बताइए । उदाहरणों का प्रयोग कीजिए ।
6. How planning and controlling are linked and why that link is quite important for effective management ? Describe the most widely used techniques of effective control.
नियोजन और नियंत्रण कैसे जुड़े हुए हैं और प्रभावी प्रबंधन के लिए यह कड़ी क्यों महत्वपूर्ण है ? प्रभावी नियंत्रण की सबसे व्यापक रूप से उपयोग की जाने वाली तकनीकों का वर्णन कीजिए ।
7. Define Organisation Structure. Describe various traditional and modern types of organisation structure. Which one of them is most preferred and why ?
संगठन संरचना को परिभाषित कीजिए । विभिन्न पारंपरिक और आधुनिक प्रकार की संगठन संरचना का वर्णन कीजिए । इनमें से कौनसा सर्वाधिक पसंदीदा है और क्यों ?

निम्नलिखित पर संक्षिप्त टिप्पणियाँ लिखिए :

- (अ) आदर्श वित्तीय विवरणों की अनिवार्यताएँ
- (ब) शेयरधारकों के धन पर रिटर्न
- (स) नकदी प्रवाह विवरण की सीमाएँ
- (द) कार्यशील पूँजी का प्रबंधन ।

Roll No.

Total Pages : 10

BBA/M-24

24502

ANALYSIS OF FINANCIAL STATEMENTS

Paper : 109

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, Q. No. 1 is compulsory.

All questions carry equal marks.

कुल पाँच प्रश्नों के उत्तर दीजिए । प्रश्न संख्या 1 अनिवार्य है । सभी प्रश्नों के अंक समान हैं ।

Compulsory Question (अनिवार्य प्रश्न)

1. Give the answers of the following : 16
 - (i) Give any *two* limitations of Ratio Analysis.
 - (ii) Horizontal Analysis.
 - (iii) Current Liabilities of a Company are ₹ 3,50,000. Its Current Ratio is 3 : 1 and Acid Test Ratio is 1.75 : 1. Calculate the value of Current Assets, Liquid Assets and Inventories.
 - (iv) What is meant by Cash Equivalents ?
 - (v) Provision for Taxation.
 - (vi) Why are financial statements unsuitable for forecasting ?

निम्नलिखित के उत्तर दीजिए :

- (i) अनुपात विश्लेषण की कोई दो सीमाएँ दीजिए ।
 - (ii) क्षैतिज विश्लेषण ।
 - (iii) एक कंपनी की चालू देनदारियाँ ₹ 3,50,000 हैं । इसका चालू अनुपात 3 : 1 और अम्ल परीक्षण अनुपात 1.75 : 1 है । चालू सम्पत्तियाँ तरल सम्पत्तियाँ और इन्वेंटरी के मूल्य की गणना कीजिए ।
 - (iv) नकद समतुल्य से क्या तात्पर्य है ?
 - (v) कराधान के लिए प्रावधान ।
 - (vi) पूर्वानुमान के लिए वित्तीय विवरण अनुपयुक्त क्यों हैं ?
2. What do you mean by financial statements ? Discuss the uses and limitations of financial statements. 16
वित्तीय विवरणों से आपका क्या तात्पर्य है ? वित्तीय विवरणों के उपयोग और सीमाओं की विवेचना कीजिए ।
3. Explain the procedure of measuring short-term solvency of a business through the ratio analysis. 16
अनुपात विश्लेषण द्वारा किसी व्यवसाय की अल्पकालीन शोधन क्षमता को मापने की प्रक्रिया की व्याख्या कीजिए ।
4. Explain the process of preparing Funds Flow Statement with imaginary figures. 16
काल्पनिक आँकड़ों के साथ कोष प्रवाह विवरण तैयार करने की प्रक्रिया की व्याख्या कीजिए ।

5. Using the information, complete the balance sheet given below : 16
- | | |
|---|----------|
| Gross Profit (20% of Sales) | ₹ 60,000 |
| Equity Share Capital | ₹ 50,000 |
| Credit Sales to Total Sales | 80% |
| Total Sales/Total Assets | 3 times |
| Inventory Turnover (to cost of sales) | 8 times |
| Average Collection Period (360 days year) | 18 days |
| Current Ratio | 1.6 |
| Long Term Debt Equity Ratio | 40% |

BALANCE SHEET

as at.....

Particulars	₹
A. EQUITY & LIABILITIES :	
Equity Share Capital	—
Long Term Debt	—
Creditors	—
TOTAL	—

B. ASSETS :

Fixed Assets	—
Inventory	—
Debtors	—
Cash	—
TOTAL	—

जानकारी का उपयोग करते हुए, नीचे दी गई बैलेंस शीट को पूरा कीजिए :

सकल लाभ (बिक्री का 20%)	₹ 60,000
समता अंश पूँजी	₹ 50,000
क्रेडिट बिक्री कुल बिक्री के लिए	80%
कुल बिक्री/कुल संपत्ति	3 गुना
इन्वेंटरी टर्नओवर (बिक्री की लागत के लिए)	8 गुना
औसत संग्रह अवधि (360 दिन वर्ष)	18 दिन
चालू अनुपात	1.6
दीर्घावधि ऋण समता अनुपात	40%

बैलेंस शीट

पर जैसा.....

विवरण	₹
अ. समता और देनदारियाँ :	
समता अंश पूँजी	—
दीर्घावधि ऋण	—

लेनदार	—
कुल	—
ब. संपत्ति :	
अचल संपत्तियाँ	—
इन्वेंटरी	—
देनदार	—
रोकड़	—
कुल	—

6. The following are the summarized Balance Sheets of a Company as on 31st December 2017 and 2018. Prepare the following : 16

- (i) Statement of changes in Working Capital
(ii) Fund Flow Statement

Particulars	31.3.2017	31.03.2018
(a) EQUITY &	₹	₹
LIABILITIES :		
Share Capital	2,00,000	3,00,000
Profit & Loss		
Balance	1,20,000	2,00,000
Proposed Dividends	24,000	36,000

Provision for		
Taxation	30,000	40,000
Trade Payables	1,76,000	2,09,000
TOTAL	<u>5,50,000</u>	<u>7,85,000</u>
(b) ASSETS :	₹	₹
Plant & Machinery	3,00,000	3,50,000
Depreciation Fund	(1,00,000)	(65,000)
Inventory	1,50,000	2,00,000
Trade Receivables	1,20,000	1,08,000
Cash	80,000	1,92,000
TOTAL	<u>5,50,000</u>	<u>7,85,000</u>

Additional Information :

A machine which was purchased in 2010 for ₹ 75,000 was sold for ₹ 10,000. The book value of the machine on the date of sale was ₹ 15,000. Company also purchased new machinery during the year.

31 दिसंबर, 2017 और 2018 को कंपनी के वित्तीय स्थिति विवरण निम्नलिखित हैं ।

निम्नलिखित तैयार कीजिए

- कार्यशील पूँजी में परिवर्तन का विवरण
- निधि प्रवाह विवरण

विवरण	31.3.2017	31.03.2018
(अ) इक्विटी और	₹	₹
देनदारियाँ :		
अंश पूँजी	2,00,000	3,00,000
लाभ और हानि		
शेष	1,20,000	2,00,000
प्रस्तावित लाभांश	24,000	36,000
कराधान के लिए		
प्रावधान	30,000	40,000
व्यापार देय	1,76,000	2,09,000
कुल	<u>5,50,000</u>	<u>7,85,000</u>
(ब) सम्पत्ति :	₹	₹
सयंत्र एवं मशीनरी	3,00,000	3,50,000
मूल्यहास निधि	(1,00,000)	(65,000)
इन्वेन्टरी	1,50,000	2,00,000
व्यापार प्राप्य	1,20,000	1,08,000
नकद	80,000	1,92,000
कुल	<u>5,50,000</u>	<u>7,85,000</u>

अतिरिक्त सूचनाएँ :

एक मशीन जो 2010 में ₹ 75,000 में खरीदी गई थी, वह ₹ 10,000 में बेची गई । बिक्री की तिथि पर मशीन की बुक वैल्यू ₹ 15,000 थी । कंपनी ने वर्ष के दौरान नई मशीनरी भी खरीदी ।

7. Calculate Cash Flows from Financing Activities from the following particulars : 16

	March 31, 2016	March 31, 2015
	₹	₹
Equity Share Capital	12,00,000	7,00,000
8% Preference Share Capital	—	1,00,000
9% Debentures	2,00,000	—
7% Debentures	—	1,00,000

Additional Information :

- Equity shares were issued at a premium of 2%.
- 8% Preference Shares were redeemed at a premium of 2%.
- 9% Debentures were issued at a discount of 1% and 7% debentures were redeemed at a premium of 5%.
- Underwriting commission on Equity Shares was paid @ 2.5% on issue price.
- Interest paid on 7% debentures ₹ 7,000.
- Dividend paid on preference shares ₹ 8,000.

निम्नलिखित विवरणों से वित्तीय गतिविधियों से नकदी प्रवाह की गणना कीजिए :

	31 मार्च, 2016	31 मार्च, 2015
	₹	₹
समता शेयर पूँजी	12,00,000	7,00,000
8% पूर्वाधिकार अंश पूँजी	—	1,00,000
9% ऋणपत्र	2,00,000	—
7% ऋणपत्र	—	1,00,000

अतिरिक्त जानकारी :

- समता अंश 2% के प्रीमियम पर जारी किए गए।
 - 8% पूर्वाधिकार अंशों को 2% के प्रीमियम पर भुनाया गया।
 - 9% ऋणपत्र 1% की छूट पर जारी किए गए और 7% ऋणपत्र 5% के प्रीमियम पर भुनाए गए।
 - समता अंशों पर अंडरराइटिंग कमीशन का भुगतान निर्गम मूल्य पर 2.5% की दर से किया गया।
 - 7% ऋणपत्र ₹ 7,000 पर ब्याज का भुगतान।
 - लाभांश ₹ 8,000 पूर्वाधिकार अंशों पर भुगतान किया गया।
8. Write brief notes on the following : 16
- Essentials of Ideal Financial Statements
 - Return on Shareholder's Funds
 - Limitations of Cash Flow Statements
 - Management of Working Capital

Roll No.

Total Pages : 03

BBA/M-24

24503

MANAGERIAL ECONOMICS-II

Paper : 110

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory.

कुल पाँच प्रश्नों के उत्तर दीजिए । प्रश्न संख्या 1 अनिवार्य है ।

Compulsory Question (अनिवार्य प्रश्न)

1. Write short notes on the following : 5×4=20

- (a) Relationship of multiplier with MPC
- (b) Constituents of macro economics
- (c) Role of RBI in country
- (d) Say's law of markets
- (e) CRR vs. SLR

निम्नलिखित पर संक्षिप्त टिप्पणियाँ लिखिए :

- (अ) एम.पी.सी. के साथ गुणक का संबंध
- (ब) समष्टि अर्थशास्त्र के घटक
- (स) देश में आर.बी.आई. की भूमिका
- (द) 'से' का बाजार नियम
- (इ) सी.आर.आर. बनाम एस.एल.आर. ।

2. What do you understand by national income ? Discuss the methods to measure the national income. 15
राष्ट्रीय आय से आप क्या समझते हैं ? राष्ट्रीय आय मापने की विधियों पर चर्चा कीजिए ।
3. Explain 'Keynes' income-expenditure approach to the determination of national income. Why can this equilibrium be reached below full-employment level ? 15
राष्ट्रीय आय के निर्धारण के लिए कीन्स के आय-व्यय दृष्टिकोण की व्याख्या कीजिए । यह संतुलन पूर्ण-रोजगार स्तर से नीचे क्यों पहुँचाया जा सकता है ?
4. What is consumption function ? Explain the various factors that determine consumption demand in the economy. 15
उपभोग फलन क्या है ? अर्थव्यवस्था में उपभोग मांग को निर्धारित करने वाले विभिन्न कारकों की व्याख्या कीजिए ।
5. Discuss the income-consumption relationship. How absolute, relative and permanent income hypothesis are different ? 15
आय-उपभोग संबंध पर चर्चा कीजिए । निरपेक्ष, सापेक्ष और स्थायी आय परिकल्पनाएँ किस प्रकार भिन्न हैं ?
6. How does expansionary fiscal policy affect investment ? In Indian context, is it correct to say that expansionary fiscal policy of increasing government expenditure by borrowing will push private investment ? 15

विस्तारवादी राजकोषीय नीति निवेश को कैसे प्रभावित करती है ? भारतीय संदर्भ में, क्या यह कहना सही है कि उधार लेकर सरकारी व्यय बढ़ाने की विस्तारवादी राजकोषीय नीति निजी निवेश को बढ़ावा देगी ?

7. What are the main causes of inflation in India ? Which policies of government has helped to check rise in prices ? 15

भारत में मुद्रास्फीति के मुख्य कारण क्या हैं ? सरकार की किन नीतियों से कीमतों में वृद्धि रोकने में मदद मिली है ?

8. Distinguish between autonomous investment and induced investment. According to Keynes. What factors determine inducement to invest ? 15
स्वायत्त निवेश और प्रेरित निवेश के बीच अंतर स्पष्ट कीजिए । कीन्स के अनुसार कौनसे कारक निवेश के लिए प्रेरणा निर्धारित करते हैं ?

Roll No.

Total Pages : 02

BBA/M-24

24504

UNDERSTANDING SOCIAL BEHAVIOUR
Paper III

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory.

All questions carry equal marks.

कुल पाँच प्रश्नों के उत्तर दीजिए । प्रश्न संख्या 1 अनिवार्य है । सभी प्रश्नों के अंक समान हैं ।

Compulsory Question (अनिवार्य प्रश्न)

1. Short answer type question :

- (i) Meaning of Sociology
- (ii) Social Institutions
- (iii) Assimilation
- (iv) Social Action
- (v) Social Change
- (vi) Social Stratification.

लघु उत्तरीय प्रश्न :

- (i) समाजशास्त्र का अर्थ
- (ii) सामाजिक संस्थाएँ
- (iii) आत्मसात्करण
- (iv) सामाजिक क्रिया

- (v) सामाजिक परिवर्तन
- (vi) सामाजिक स्तरीकरण ।

2. Discuss the nature and scope of Sociology.
समाजशास्त्र की प्रकृति और कार्यक्षेत्र की चर्चा कीजिए ।
3. Explain the types of Social Structure with suitable examples.
उपयुक्त उदाहरणों के साथ सामाजिक संरचना के प्रकारों की व्याख्या कीजिए ।
4. Discuss about any *two* Social Processes with examples.
किन्हीं दो सामाजिक प्रक्रियाओं की उदाहरण सहित चर्चा कीजिए ।
5. Define Socialization. Explain it as a process of Learning.
समाजीकरण को परिभाषित कीजिए। इसे सीखने की प्रक्रिया के रूप में समझाइए ।
6. Elucidate the Political and Religious integration of Ends.
साध्यों के राजनीतिक और धार्मिक एकीकरण को स्पष्ट कीजिए ।
7. Write an 'essay on Attitude formation and Change.
मनोवृत्ति निर्माण और परिवर्तन पर एक निबंध लिखिए ।
8. What do you mean by Social Problems ? Suggest the remedies for social problems.
सामाजिक समस्याओं से आप क्या समझते हैं ? सामाजिक समस्याओं के उपाय भी सुझाइए ।

(e) Evaluate :

3

$$\int \frac{1}{\sqrt{x-1}-\sqrt{x+1}} dx$$

मान ज्ञात कीजिए :

$$\int \frac{1}{\sqrt{x-1}-\sqrt{x+1}} dx$$

(f) Define G.P.

1

मुण्ठेतर श्रेणी को परिभाषित कीजिए ।

Roll No.

Total Pages : 06

BBA/M-24

24505

BUSINESS MATHEMATICS-II

BBA Paper-112

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt Five questions in all. Q. No. 8 is compulsory.

कुल पाँच प्रश्नों के उत्तर दीजिए । प्रश्न संख्या 8 अनिवार्य है ।

1. (a) Show that the points A(-2, -1), B(1, 0), C(4, 3) and D(1, 2) form a parallelogram. 8
दर्शाइए कि बिंदु A(-2, -1), B(1, 0), C(4, 3) और D(1, 2) एक समांतरचतुर्भुज बनाते हैं ।
- (b) Find the equation of a line passing through the point (2, 3) and making an angle of 45° with the line 3x + y - 5 = 0. 8
रेखा 3x + y - 5 = 0 के साथ 45° का कोण बनाकर बिंदु (2, 3) से गुजरने वाली रेखा का समीकरण ज्ञात कीजिए ।
2. (a) If the pth term of an A.P. is $\frac{1}{q}$ and the qth term is $\frac{1}{p}$, prove that the sum of the first pq terms must be $\frac{1}{2}(pq+1)$. 8

यदि समान्तर श्रेणी का p वाँ पद $\frac{1}{q}$ है और q वाँ पद $\frac{1}{p}$ है, तो सिद्ध कीजिए कि प्रथम pq पदों का योग $\frac{1}{2}(pq+1)$ होना चाहिए ।

(b) Sum the series :

$7 + 7.7 + 7.77 + \dots$ upto n -terms.

शृंखला का योग कीजिए :

$7 + 7.7 + 7.77 + \dots$ n -पदों तक ।

3. (a) Evaluate :

$$\int \frac{1}{e^x - 1} dx$$

मान ज्ञात कीजिए :

$$\int \frac{1}{e^x - 1} dx$$

(b) Evaluate :

$$\int \sqrt{x} e^{\sqrt{x}} dx.$$

मान ज्ञात कीजिए :

$$\int \sqrt{x} e^{\sqrt{x}} dx.$$

4. (a) Evaluate :

$$\int \frac{dx}{1+3e^x+2e^{2x}}$$

L-24505(TR)

2

मान ज्ञात कीजिए :

$$\int \frac{dx}{1+3e^x+2e^{2x}}$$

(b) Evaluate :

$$\int \frac{x}{\sqrt{(x+1)(x-2)}} dx$$

मान ज्ञात कीजिए :

$$\int \frac{x}{\sqrt{(x+1)(x-2)}} dx$$

5. (a) Evaluate :

$$\int_1^3 \frac{\log x}{(1+x)^2} dx$$

मान ज्ञात कीजिए :

$$\int_1^3 \frac{\log x}{(1+x)^2} dx$$

(b) The demand function for a commodity is $p=e^{-x}$. Find the consumer's surplus when $p = 0.25$.

किसी वस्तु का माँग फलन $p=e^{-x}$ है, जब $p = 0.25$ है तो उपभोक्ता का अधिशेष ज्ञात कीजिए ।

(3-08/5) L-24505(TR)

3

P.T.O.

6. (a) Solve :

$$\log_2 x + \log_4 x + \log_{16} x = \frac{21}{4}$$

हल कीजिए :

$$\log_2 x + \log_4 x + \log_{16} x = \frac{21}{4}$$

(b) Evaluate :

$$\frac{(17.5)^{1/2} + (15.2)^{-1/3}}{(56.3)^{3/5} - (12.4)^{1/4}}$$

मान ज्ञात कीजिए :

$$\frac{(17.5)^{1/2} + (15.2)^{-1/3}}{(56.3)^{3/5} - (12.4)^{1/4}}$$

7. (a) At what rate will Rs. 1,000 amount to Rs. 1,500 in 12 years at compound interest ?

किस दर से चक्रवृद्धि ब्याज पर 12 वर्षों में 1,000 रुपये की राशि 1,500 रुपये हो जाएगी ?

(b) Evaluate :

$$\int \sqrt{2x^2 + 3x + 4} dx$$

मान ज्ञात कीजिए :

$$\int \sqrt{2x^2 + 3x + 4} dx$$

(Compulsory Question)

8

8. (a) The three vertices of a rhombus are (2, -1), (3, 4) and (-2, 3). Find the fourth vertex. 3

एक समचतुर्भुज के तीन शीर्ष (2, -1), (3, 4) और (-2, 3) हैं। चौथा शीर्ष ज्ञात कीजिए।

8

(b) Evaluate :

$$\int \frac{e^x}{1+e^x} dx$$

मान ज्ञात कीजिए :

$$\int \frac{e^x}{1+e^x} dx$$

(c) The 6th term of A.P. is 19 and 17th term is 41. Find the 40th term. 3

समान्तर श्रेणी का 6वाँ पद 19 और 17वाँ पद 41 है। 40वाँ पद ज्ञात कीजिए।

(d) Find the sum of $\sqrt{3} + 3 + 3\sqrt{3} + \dots$ upto 10th terms. 3

10वें पद तक $\sqrt{3} + 3 + 3\sqrt{3} + \dots$ का योग ज्ञात कीजिए।

Roll No.

Total Pages : 03

BBA/M-24

24506

BUSINESS COMMUNICATION-I

Paper : 113

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory.

All questions carry equal marks.

(Compulsory Question)

1. (a) Write a note on positive gestures.
(b) Write a note on Business Communication.
(c) Write a note on Homonyms. 16
2. Write a detailed note on meaning and importance of Business Communication. 16
3. Discuss the essential components of Business Communication. 16
4. Write paragraph on any *two* of the following : 8+8=16
 - (a) Social Networking Sites
 - (b) Value of Games
 - (c) Moral Education
 - (d) Communication Skills.

- 5: Make a précis of the following passage and give it a suitable title :

It is physically impossible for a well-educated, intellectual, or brave man to make money the chief object of his thoughts just as it is for him to make his dinner the principal object of them. All healthy people like their dinners, but their dinner is not the main object of their lives. So all healthy minded people like making money ought to like it and enjoy the sensation of winning it; it is something better than money. A good soldier, for instance, mainly wishes to do his fighting well. He is glad of his pay—very properly so and justly grumbles when you keep him ten years without it—till, his main mission of life is to win battles, not to be paid for winning them. So of clergymen. The clergyman's object is essentially baptize and preach not to be paid for preaching. So of doctors. They like fees no doubt—ought to like them; yet if they are brave and well-educated the entire object to their lives is not fees. They on the whole, desire to cure the sick; and if they are good doctors and the choice were fairly to them, would rather cure their patient and lose their fee than kill him and get it. And so with all the other brave and rightly trained men: their work is first, their fee second—very important always; but still second.

16

6. Write an application for the post of a Data Analyst. 16
7. Explain the importance of Non-verbal Communication. 16
8. Give antonyms and synonyms of the following words : 16
- (i) Moderate
 - (ii) Uphold
 - (iii) Forsake
 - (iv) Commendable
 - (v) Ignorance
 - (vi) Deficient
 - (vii) Calamity
 - (viii) Escalate.

Roll No.

Total Pages : 5

NBAH/M-24

13091

BUSINESS STATISTICS

Paper – B23-BBA-201

(CC-A2)

Time : Three Hours]

[Maximum Marks : 70

Note : Attempt *five* questions in all. Section A, comprising of four short answer type questions carrying 3.5 marks each, is compulsory. Section B is comprising of eight questions (two questions in each unit) carrying 14 marks each and a student is required to attempt *four* questions selecting *one* question from each unit.

नोट : कुल पाँच प्रश्न कीजिए। खण्ड-अ, जो अनिवार्य है इसमें चार लघु उत्तरीय प्रकार के प्रश्न हैं, प्रत्येक प्रश्न 3.5 अंक का है। खण्ड-ब में आठ प्रश्न (प्रत्येक इकाई में दो प्रश्न) हैं, प्रत्येक प्रश्न 14 अंक का है। छात्रों को प्रत्येक इकाई से एक प्रश्न चुनते हुए चार प्रश्न करने हैं।

SECTION-A (खण्ड-अ)

Explain briefly :

- (a) Pie chart.
- (b) Moving Average.
- (c) Kurtosis.
- (d) Seasonality analysis.

(4×3.5=14)

91/3000/KD/968/Trans.

[P.T.O.

25/6

संक्षेप में व्याख्या कीजिए :

- (क) पाई चार्ट।
- (ख) गतिमान औसत।
- (ग) कुट्योसिस।
- (घ) मौसमी विश्लेषण।

SECTION-B (खण्ड-ब)

UNIT-I (इकाई-I)

2. Define business statistics. Explain the scope of business statistics. How is it useful for decision-making in business? 14
व्यावसायिक सांख्यिकी को परिभाषित कीजिए। व्यावसायिक सांख्यिकी के कार्यक्षेत्र की व्याख्या कीजिए। व्यवसाय में निर्णय लेने के लिए यह किस प्रकार उपयोगी है?
3. Define primary data and secondary data. Explain the methods of collecting primary data in detail. 14
प्राथमिक डेटा और द्वितीयक डेटा को परिभाषित कीजिए। प्राथमिक डेटा एकत्र करने की विधियों की विस्तार से व्याख्या कीजिए।

UNIT-II (इकाई-II)

4. A survey was conducted to determine the age (in years) of 120 automobiles. The result of such a survey is as follows :
Age of Auto : 0-4 4-8 8-12 12-16 16-20
No. of Autos: 13 29 48 22 8
What is the median age for the autos? 14
120 ऑटोमोबाइल कितना पुराना (वर्षों में) निर्धारित करने के लिए एक सर्वेक्षण किया गया था। ऐसे सर्वेक्षण का परिणाम इस प्रकार है :

13091/3000/KD/968

2

ऑटो की उम्र : 0-4 4-8 8-12 12-16 16-20
ऑटो की संख्या : 13 29 48 22 8
ऑटो की औसत आयु क्या है?

5. Compute mode value from the following data relating to dividend paid by companies in a particular financial year. 14

Dividend Value (in per cent)	No. of Companies (in per cent)	Dividend of the share of the share value	No. of Companies
5.0-7.5	182	15.0-17.5	280
7.5-10.0	75	7.5-20.0	236
10.0-12.5	59	20.0-22.5	378
12.5-15.0	127	22.5-25.0	331

किसी विशेष वित्तीय वर्ष में कंपनियों द्वारा भुगतान किए गए लाभांश से संबंधित निम्नलिखित डेटा से मोड मूल्य की गणना करें।

लाभांश मूल्य (प्रतिशत में)	कंपनियों की संख्या (प्रतिशत में)	शेयर मूल्यों के शेयर का लाभांश	कंपनियों की संख्या
5.0-7.5	182	15.0-17.5	280
7.5-10.0	75	7.5-20.0	236
10.0-12.5	59	20.0-22.5	378
12.5-15.0	127	22.5-25.0	331

13091/3000/KD/968

3

[P.T.O.]

UNIT-III (इकाई-III)

6. Explain the term variation. What does a measure of variation serve? In the light of these, comment on some of the well-known measures of variation. 14

भिन्नता शब्द को परिभाषित कीजिए। भिन्नता का उपाय क्या प्रदान करता है? इनके आलोक में भिन्नता के कुछ प्रसिद्ध उपायों पर टिप्पणी कीजिए।

7. The wholesale prices of a commodity for seven consecutive days in a month is as follows :

Days : 1 2 3 4 5 6 7

Commodity price/quintal : 240 260 270 245 255 286 264

Calculate the variance and standard deviation. 14

एक महीने में लगातार सात दिनों के लिए किसी वस्तु की थोक कीमतें इस प्रकार हैं :

दिन : 1 2 3 4 5 6 7

वस्तुओं की

कीमत/क्विंटल : 240 260 270 245 255 286 264

प्रसरण और मानक विचलन की गणना कीजिए।

UNIT-IV (इकाई-IV)

8. Discuss the various types of probability sampling methods with examples. 14

विभिन्न प्रकार की संभाव्यता नमूनाकरण विधियों की उदाहरण के साथ विवेचना कीजिए।

9. Compute index numbers from the following data using (i) Laspeyre's, (ii) Paasche's (iii) Fisher's Ideal formulae. 14

Commodity	Base Year		Current Year	
	Quantity	Price	Quantity	Price
A	8	4	10	9
B	7	3	8	4
C	6	4	7	8
D	5	2	5	4

(i) लासपेयर (ii) पाशे (iii) फिशर के आदर्श सूत्रों का उपयोग करके निम्नलिखित डेटा से सूचकांक संख्याओं की गणना कीजिए।

वस्तुएं	आधार वर्ष		वर्तमान वर्ष	
	मात्रा	कीमत	मात्रा	कीमत
A	8	4	10	9
B	7	3	8	4
C	6	4	7	8
D	5	2	5	4

NBAH/M-24

13092

MANAGERIAL ECONOMICS

Paper – B23-BBA-202

Time : Three Hours]

[Maximum Marks : 70

Note : Attempt *five* questions in all. Part-A is compulsory (14 Marks).
Attempt remaining *four* questions (14 marks each) from
Part-B, selecting *one* from each unit.

नोट : कुल पाँच प्रश्न कीजिए। भाग-अ अनिवार्य है (14 अंकों का)।
प्रत्येक इकाई से एक प्रश्न चुनते हुए भाग-ब से शेष चार प्रश्न
(प्रत्येक 14 अंकों का) कीजिए।

PART-A (भाग-अ)**1.** Write notes on the following :

- Opportunity cost.
- Properties of ICs.
- Degrees of cross elasticity of demand.
- Revenue function.

निम्नलिखित पर टिप्पणी लिखिए :

- अवसर लागत।
- ICs के गुण।
- मांग की क्रॉस लोच का स्तर।
- राजस्व फलन।

PART-B (भाग-ब)

UNIT-I (इकाई-I)

2. Explain sales maximization goal of a firm. Give arguments in favour and against of sales maximization.
किसी फर्म की बिक्री अधिकतमीकरण के लक्ष्य की व्याख्या करें। बिक्री अधिकतमीकरण के पक्ष और विपक्ष में तर्क दीजिए।
3. Explain the role of managerial and incremental principle in managerial economics.
प्रबंधकीय अर्थशास्त्र में प्रबंधकीय और वृद्धि संबंधी सिद्धांत की भूमिका की व्याख्या कीजिए।

UNIT-II (इकाई-II)

4. What is law of demand? Why demand curve slopes downwards? What are the exceptions of law of demand?
मांग का नियम क्या है? मांग वक्र का ढलान नीचे की ओर क्यों होता है? मांग के नियम के अपवाद क्या हैं?
5. What is cardinal utility approach and its assumptions? Draw and explain the consumer's equilibrium with the principle of equi-marginal utility.
प्रमुख उपयोगिता दृष्टिकोण और इसकी मान्यताएं क्या हैं? सम-सीमांत उपयोगिता के सिद्धांत के साथ उपभोक्ता के संतुलन को अंकित करते हुए व्याख्या कीजिए।

UNIT-III (इकाई-III)

6. What is the difference between TC, AC and MC. Explain the short run and long run cost curves.

TC, AC और MC के बीच क्या अंतर है? अल्पकालीन और दीर्घकालीन लागत वक्रों की व्याख्या कीजिए।

7. What is production function? Discuss the different stages of law of variable proportions.
उत्पादन फलन क्या है? परिवर्तनीय अनुपात के नियम के विभिन्न चरणों की विवेचना कीजिए।

UNIT-IV (इकाई-IV)

8. What are the causes of monopoly? Explain the price and output determination in monopoly situation of the market structure.
एकाधिकार के कारण क्या हैं? बाजार संरचना की एकाधिकार स्थिति में कीमत और उत्पादन निर्धारण की व्याख्या कीजिए।
9. What are the characteristics of perfect competition? Discuss the price and output determination in perfect competition in short run as well as long run.
पूर्ण प्रतिस्पर्धा की विशेषताएं क्या हैं? अल्पकालिक के साथ-साथ दीर्घकालिक में पूर्ण प्रतिस्पर्धा में कीमत और उत्पादन निर्धारण की विवेचना कीजिए।

विभिन्न प्रकार के समूहों का उल्लेख करें। समूह निर्माण के विभिन्न सिद्धांतों का विस्तार से वर्णन कीजिए।

9. How Group is different from Team? Why team building is important at modern workplaces? State certain measures to build effective teams at workplace.

समूह टीम से किस प्रकार भिन्न है? आधुनिक कार्यस्थलों पर टीम निर्माण क्यों महत्वपूर्ण है? कार्यस्थल पर प्रभावी टीम बनाने के लिए कुछ उपाय बताएं।

Roll No.

Total Pages : 4

NBAH/M-24

13093

ORGANISATION BEHAVIOUR

Paper – BBA-203

Time : Three Hours]

[Maximum Marks : 70

Note : Attempt *five* questions in all, selecting *one* question from each unit. Question No. 1 is compulsory. All questions carry equal marks.

नोट : प्रत्येक इकाई से एक प्रश्न चुनते हुए कुल पाँच प्रश्न कीजिए। प्रश्न सं. 1 अनिवार्य है। सभी प्रश्नों के अंक समान हैं।

Compulsory Question (अनिवार्य प्रश्न)

1. Short Answer Type :

- What are motives and why they are relevant?
- Briefly mention the concepts of Group Dynamics.
- Identify the key indicators of Morale at workplace.
- Figure out the key challenges to the field of Organisational Behaviour.

लघु उत्तरीय प्रश्न :

- उद्देश्य क्या हैं और वे क्यों प्रासंगिक हैं?
- समूह गतिशीलता की अवधारणा का संक्षेप में उल्लेख कीजिए।
- कार्यस्थल पर मनोबल के प्रमुख संकेतकों को पहचानें।
- संगठनात्मक व्यवहार के क्षेत्र के लिए प्रमुख चुनौतियों का उल्लेख कीजिए।

UNIT-I (इकाई-I)

2. How has the understanding of organizational behaviour evolved over time, from its early roots to modern theories, and what key historical events have shaped its development?

समय के साथ संगठनात्मक व्यवहार की समझ इसकी प्रारंभिक जड़ों से लेकर आधुनिक सिद्धांतों तक कैसे विकसित हुई है, और किन प्रमुख ऐतिहासिक घटनाओं ने इसके विकास को आकार दिया है?

3. Which fundamental concepts forms the foundation of organizational behaviour discipline, and how do these concepts contribute to our understanding of individual and group behaviour within organizations?

कौन-सी मूलभूत अवधारणाएं संगठनात्मक व्यवहार व्यवस्था की नींव बनाती हैं, और ये अवधारणाएं संगठनों के भीतर व्यक्तिगत और समूह व्यवहार की हमारी समझ में कैसे योगदान करती हैं?

UNIT-II (इकाई-II)

4. How do content theories of motivation address the diverse range of human needs and desires, and what implications do these theories have for managers seeking to create motivating work environments?

प्रेरणा के सामग्री सिद्धांत मानवीय आवश्यकताओं और इच्छाओं की विविध श्रृंखला को कैसे संबोधित करते हैं, प्रेरक कार्य वातावरण बनाने के इच्छुक प्रबंधकों के लिए इन सिद्धांतों के क्या निहितार्थ हैं?

5. What is morale in the workplace? Explore the relationship of morale and productivity, examining how changes in morale can impact overall organizational performance?

कार्यस्थल में मनोबल क्या है? मनोबल और उत्पादकता के संबंध का अन्वेषण करें, यह परीक्षण करें कि मनोबल में परिवर्तन समग्र संगठनात्मक प्रदर्शन को कैसे प्रभावित कर सकता है?

UNIT-III (इकाई-III)

6. How do behavioural leadership theories provide insights into the behaviours and actions of effective leaders? Explore how these theories highlight specific leadership behaviours that contribute to group performance and satisfaction.

व्यवहारिक नेतृत्व सिद्धांत प्रभावी नेताओं के व्यवहार और कार्यों में अंतर्दृष्टि कैसे प्रदान करते हैं? उल्लेख करें कि कैसे ये सिद्धांत विशिष्ट नेतृत्व व्यवहारों को उजागर करते हैं जो समूह के प्रदर्शन और संतुष्टि में योगदान करते हैं?

7. What distinguishes contingency theories of leadership from earlier trait and behavioural theories? Discuss how contingency theories emphasize the importance of situational factors in determining leadership effectiveness.

नेतृत्व के आकस्मिक सिद्धांतों को पहले के लक्षण और व्यवहार सिद्धांतों से क्या अलग करता है? आकस्मिकता सिद्धांत नेतृत्व प्रभावशीलता का निर्धारण करने में स्थितिजन्य कारकों के महत्व पर कैसे जोर देते हैं, विवेचना कीजिए।

UNIT-IV (इकाई-IV)

8. Identify the various types of Groups. Elaborate the various theories of Group Formation.

Roll No.

Total Pages : 03

BBA/M-24

24513

ENTREPRENEURSHIP DEVELOPMENT

Paper : 308

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory.

कुल पाँच प्रश्नों के उत्तर दीजिए । प्रश्न संख्या 1 अनिवार्य है ।

Compulsory Question (अनिवार्य प्रश्न)

1. (a) Define Entrepreneurship.
उद्यमिता को परिभाषित कीजिए ।
- (b) Discuss the nature of Entrepreneurship.
उद्यमिता की प्रकृति पर चर्चा कीजिए ।
- (c) Explain any *three* scopes of entrepreneurship.
उद्यमिता के किन्हीं तीन क्षेत्रों की व्याख्या कीजिए ।
- (d) Describe any *three* traits of successful entrepreneur.
सफल उद्यमी के किन्हीं तीन लक्षणों का वर्णन कीजिए ।
- (e) How government is playing an important role in development of entrepreneurship in India ?
भारत में उद्यमिता के विकास में सरकार किस प्रकार महत्वपूर्ण भूमिका निभा रही है ?

- (f) Explain any *two* non-government agencies contributing in entrepreneurship development. $4 \times 6 = 24$
 उद्यमिता विकास में योगदान देने वाली किन्हीं दो गैर-सरकारी एजेंसियों की व्याख्या कीजिए ।
2. What do you mean by Entrepreneurship ? How it contributes in economic development ? 14
 उद्यमिता से आप क्या समझते हैं ? यह आर्थिक विकास में किस प्रकार योगदान देता है ?
3. What do you mean by New Venture Development ? Discuss its various stages. 14
 नये उद्यम विकास से आप क्या समझते हैं ? इसके विभिन्न चरणों पर चर्चा कीजिए ।
4. Explain various agencies for financing the new ventures in India. 14
 भारत में नए उद्यमों के वित्तपोषण के लिए विभिन्न एजेंसियों की व्याख्या कीजिए ।
5. State governments are contributing in the development of Entrepreneurship. How ? 14
 राज्य सरकारें उद्यमिता के विकास में योगदान दे रही हैं । कैसे ?
6. How Non-government agencies are playing an important role in entrepreneurship growth in India ? 14
 भारत में उद्यमशीलता के विकास में गैर-सरकारी एजेंसियाँ किस प्रकार महत्वपूर्ण भूमिका निभा रही हैं ?

7. How Entrepreneurial growth is the backbone of society development ? 14
 उद्यमशीलता विकास किस प्रकार समाज के विकास की रीढ़ है ?
8. Discuss various entrepreneurial strategies followed by entrepreneur for business growth. 14
 व्यवसाय वृद्धि के लिए उद्यमी द्वारा अपनाई जाने वाली विभिन्न उद्यमशीलता रणनीतियों पर चर्चा कीजिए ।

Roll No.

Total Pages : 03

BBA/M-24

24514

BUSINESS LAWS-II

Paper : 309

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. **1** is compulsory.

कुल पाँच प्रश्नों के उत्तर दीजिए । प्रश्न संख्या **1** अनिवार्य है ।

Compulsory Question (अनिवार्य प्रश्न)

1. Short answers type questions :

- (a) Explain companies limited by guarantee.
- (b) Statement in lieu of Prospectus.
- (c) Distinguish between a share holder and a member.
- (d) Qualifications of a Director of a company.
- (e) Concept of Fixed and floating charge.
- (f) Extraordinary general meeting.

लघु उत्तरीय प्रश्न :

- (अ) गारंटी द्वारा सीमित कम्पनियों की व्याख्या कीजिए ।
- (ब) प्रविवरण के बदले का विवरण ।
- (स) एक अंशधारी और एक सदस्य के बीच अन्तर ।

- (द) किसी कम्पनी के निर्देशक की यांग्यताएँ ।
 (इ) स्थिर तथा अस्थिर प्रभार की धारणा ।
 (फ) असाधारण आम सभा ।
2. Distinguish between a private and public company. Explain the exemptions and privileges of a private companies.
 एक निजी और एक सार्वजनिक कंपनी के बीच अन्तर स्पष्ट कीजिए । निजी कम्पनी की छूट और विशेषाधिकारों के बारे में बताइए ।
3. Who is a company promoter ? Discuss his legal position, liability and remuneration.
 कम्पनी का प्रमोटर कौन है ? उसकी कानूनी स्थिति, देनदारियों और पारिश्रमिक की व्याख्या कीजिए ।
4. Define Memorandum of Association and Articles of Association. Explain the significance and contents of Memorandum of Association.
 पार्षद सीमा नियम तथा अंतर्नियमों को परिभाषित कीजिए । पार्षद सीमा नियम के महत्त्व व विषय-सामग्री को भी बताइए ।
5. Define a Director. Explain the legal position of directors of a company. Also discuss the ways of appointment of directors of a company.
 एक निर्देशक को परिभाषित कीजिए । किसी कम्पनी के निर्देशकों की कानूनी स्थिति के बारे में व्याख्या कीजिए । कम्पनी के निर्देशकों की नियुक्ति के तरीकों पर भी चर्चा कीजिए ।
6. Discuss the provisions of company law with regard to building of annual general meeting.
 वार्षिक आम सभा कराने के अधिकार के संदर्भ में कम्पनी कानून के प्रावधानों की विवेचना कीजिए ।
7. Explain the Borrowing Powers of a company. When can a company Lawfully borrow money ? What are the restrictions in borrowing powers of a company ?
 एक कम्पनी के ऋण लेने के अधिकार की व्याख्या कीजिए । एक कम्पनी वैधानिक रूप से कब ऋण ले सकती है ? कम्पनी द्वारा ऋण लेने के अधिकारों पर क्या प्रतिबंध हैं ?
8. What is meant by Winding up of a company. Discuss the different methods of winding up of a company.
 कम्पनी के समापन का क्या अर्थ है ? कम्पनी के समापन के विभिन्न तरीकों की व्याख्या कीजिए ।

Roll No.

Total Pages : 03

BBA/M-24

24515

LOGISTIC MANAGEMENT

BBA Paper : 310

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory.

All questions carry equal marks.

कुल पाँच प्रश्नों के उत्तर दीजिए । प्रश्न संख्या 1 अनिवार्य है । सभी प्रश्नों के अंक समान हैं ।

1. Answer the following short answer type questions :

- (i) Internal logistics
- (ii) Materials management
- (iii) Features of Purchase Order Processing
- (iv) Need for warehousing
- (v) Carrying cost in inventory management
- (vi) Importance of Product Packaging.

निम्नलिखित लघु उत्तरीय प्रश्नों के उत्तर दीजिए :

- (i) आंतरिक रसद
- (ii) सामग्री प्रबंधन
- (iii) क्रय आदेश प्रसंस्करण की विशेषताएँ
- (iv) भण्डारण की आवश्यकता

- (v) इन्वेंट्री प्रबंधन में लागत वहन करना
(vi) उत्पाद पैकेजिंग का महत्व ।
2. Explain the meaning, importance and functions of logistics. लॉजिस्टिक्स का अर्थ, महत्व एवं कार्य समझाइए ।
3. Explain the meaning and components of customer service. Also state factors contributing to good customer service. ग्राहक सेवा का अर्थ और घटकों की व्याख्या कीजिए । अच्छी ग्राहक सेवा में योगदान देने वाले कारकों का भी उल्लेख कीजिए ।
4. Distinguish between Physical distribution and Supply Chain Management. Explain the components of supply chain management. भौतिक वितरण और आपूर्ति श्रृंखला प्रबंधन के बीच अंतर बताइए । आपूर्ति श्रृंखला प्रबंधन के घटकों की व्याख्या कीजिए ।
5. What is Order Processing ? Explain its various types. ऑर्डर प्रोसेसिंग क्या है ? इसके विभिन्न प्रकार बताइए ।
6. What is meant by Warehousing ? Describe features of an ideal warehouse. Also explain the various types of warehouses. भण्डारण से क्या तात्पर्य है ? एक आदर्श गोदाम की विशेषताओं का वर्णन कीजिए । विभिन्न प्रकार के गोदामों की भी व्याख्या कीजिए ।

7. Explain the meaning and objectives of Inventory Management. Also explain its functions. इन्वेंट्री प्रबंधन का अर्थ और उद्देश्य स्पष्ट कीजिए । इसके कार्य भी समझाइए ।
8. In the highly competitive business world, describe the role of technology in logistics. अत्यधिक प्रतिस्पर्धी व्यापारिक दुनिया में, लॉजिस्टिक्स में प्रौद्योगिकी की भूमिका का वर्णन कीजिए ।

Roll No.

Total Pages : 03

BBA/M-24

24516

PRINCIPLES OF INSURANCE

BBA-Paper-311

Time : Three Hours]

[Maximum Marks : 80

Note : Question No. 1 is compulsory and each part of it carries 2 marks. Attempt *four* questions out of the remaining questions carrying 16 marks each.

1. Explain the following in very short :

- (a) Importance of insurance.
- (b) Distinguish between General Insurance from life insurance.
- (c) Principle of indemnity in insurance.
- (d) Term insurance policy.
- (e) Name the documents that are required in life insurance.
- (f) Broad types of life Insurance policies.

- (g) Eligibility to become life insurance individual agent in India.
- (h) Ayushman Bharat Insurance Policy of Centre Government, at present.
2. What is a Non-Life Insurance Policy ? What are the Key Features and Benefits of NonLife Insurance Policy. Also describe the types of non-life insurance policies in India.
 3. What are functions and powers of IRDA ? Describe IRDA guidelines about code of conduct for individual insurance agents.
 4. Explain in brief any five provisions of LIC Act-1956. Also explain some of the more popular products and policies of LIC.
 5. Write short notes on the following :
 - (a) Endowment Life insurance
 - (b) Children insurance plans
 - (c) Money-back life insurance policy
 - (d) Fire Insurance.
 6. Explain the Eligibility conditions to become a corporate agent in insurance sector in India ? Explain code of conduct and remuneration rules about the corporate agents.
 7. Describe various documents and procedures for buying a non-life insurance policy and making claim on the same. Also explain claim settlement procedure in Motor Insurance.
 8. Describe the following topic of insurance in short :
 - (a) Types of Hazards in Marine insurance
 - (b) Types of Group Insurance schemes
 - (c) Social insurance schemes
 - (d) Mortality tables and their uses.

Roll No.

Total Pages : 07

BBA/M-24

24517

INTRODUCTION TO FINANCIAL SERVICES

BBA-Paper 312

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. 1 (Part A) is Attempt *four* more questions from Part B. compulsory. All questions carry equal marks.

कुल पाँच प्रश्नों के उत्तर दीजिए । प्रश्न संख्या 1 (भाग 'अ') अनिवार्य है । भाग 'अ' से किन्हीं चार प्रश्नों के उत्तर दीजिए । सभी प्रश्नों के अंक समान हैं ।

Part A

भाग 'अ'

1. Write short notes on the following : 2×8=16
- (a) "Management of Financial Services is comparatively difficult from Management of Products and other services." Discuss.
 - (b) Bought out deals and Hire-purchase
 - (c) Significance of credit cards from the perspective of an financial institution.
 - (d) Benefits of credit rating to Investors. of a company
 - (e) "All Venture capital is a private equity but not all private equity is a venture capital." Justify.

- (f) Consumer Finance and Debenture Trustee
- (g) Book building and reverse book building
- (h) Right Issue and Underwriting

निम्नलिखित पर संक्षिप्त टिप्पणियाँ लिखिए :

- (अ) "उत्पादों और अन्य सेवाओं के प्रबंधन की तुलना में वित्तीय सेवाओं का प्रबंधन तुलनात्मक रूप से कठिन है।" चर्चा कीजिए।
- (ब) खरीदे गए सौदे और किराया खरीद।
- (स) एक वित्तीय संस्थान के नजरिए से क्रेडिट कार्ड का महत्त्व।
- (द) किसी कंपनी के निवेशकों को क्रेडिट रेटिंग का लाभ।
- (इ) "सभी उद्यम पूँजी एक निजी इक्विटी है लेकिन सभी निजी इक्विटी एक उद्यम पूँजी नहीं है।" समायोजित कीजिए।
- (फ) उपभोक्ता वित्त और ऋणपत्र ट्रस्टी।
- (ग) बुक बिल्डिंग और रिवर्स बुक बिल्डिंग।
- (ह) राइट इश्यू और अंडरराइटिंग।

Part B

भाग 'ब'

2. "Financial intermediaries have to perform the task of financial innovation to meet the dynamically changing needs of the economy." Discuss the above statement in the light of the various innovative products introduced in recent times in the financial service sector. 16

"वित्तीय मध्यस्थों को अर्थव्यवस्था की गतिशील रूप से बदलती जरूरतों को पूरा करने के लिए वित्तीय नवाचार का कार्य करना होगा।" वित्तीय सेवा क्षेत्र में हाल के दिनों में पेश किए गए विभिन्न नवीन उत्पादों के प्रकाश में उपर्युक्त कथन पर चर्चा कीजिए।

3. "The bribe-for-loan scam has exposed the weaknesses in lending practices. It's time for banks to look at more transparent ways of extending loans." Critically discuss this statement and also discuss the various Pre issue and post issue obligations performed by Merchant Bankers in India? 16

"ऋण के बदले रिश्वत घोटाले ने ऋण देने की प्रथाओं में कमजोरियों को उजागर कर दिया है।" अब बैंकों के लिए ऋण देने के अधिक पारदर्शी तरीकों पर विचार करने का समय आ गया है। इस कथन की आलोचनात्मक चर्चा कीजिए और भारत में मर्चेन्ट बैंकरों द्वारा निष्पादित विभिन्न प्री इश्यू और पोस्ट इश्यू दायित्वों पर भी चर्चा कीजिए।

4. Explain the following : 16
 - (a) Factoring vs. Forfeiting
 - (b) Exchange traded funds
 - (c) Portfolio Management
 - (d) Stock Broking.

निम्नलिखित को समझाइए :

- (अ) फ़ैक्टरिंग बनाम जब्ती
- (ब) एक्सचेंज ट्रेडेड फंड
- (स) पोर्टफोलियो प्रबंधन
- (द) स्टॉक ब्रोकिंग ।

5. "SEBI is only a watchdog not a bloodhound." Comment on the statement considering Stock Market Scams and Role of SEBI in tackling such scams. 16

"सेबी केवल एक निगरानी करने वाली संस्था है, कोई शिकारी कुत्ता नहीं।" स्टॉक मार्केट घोटालों और ऐसे घोटालों से निपटने में सेबी की भूमिका पर विचार करते हुए कथन पर टिप्पणी कीजिए ।

6. "As times change, credit card technology follows suit. But while change brings benefits, it also means that fraudsters have more tools at their disposal than ever before and that these tools have evolved in order to combat the ever-changing protective measures put into place to make criminals' jobs harder." Discuss the statement in light of various credit cards scams and protective measures to overcome the happening of same. 16

"जैसे-जैसे समय बदलता है, क्रेडिट कार्ड तकनीक भी उसी के अनुरूप हो जाती है। लेकिन जब परिवर्तन लाभ लाता है, तो इसका आशय यह भी है कि धोखेबाजों के पास पहले से कहीं अधिक उपकरण उपलब्ध हैं और ये उपकरण लगातार बदलती सुरक्षा का मुकाबला करने के लिए विकसित हुए हैं अपराधियों के काम को कठिन बनाने के लिए उपाय किए गए।" विभिन्न क्रेडिट कार्ड घोटालों और उनकी घटनाओं पर काबू पाने के लिए सुरक्षात्मक उपायों के प्रकाश में कथन पर चर्चा कीजिए।

7. A mutual fund is a type of investment vehicle that pools money from multiple investors to invest in a diversified portfolio of stocks, bonds, and other securities. Do you think that Mutual Funds are misusing poor investors of India? Critically examine and also discuss different types of mutual funds. 16

म्यूचुअल फण्ड एक प्रकार का निवेश माध्यम है जो स्टॉक, बॉण्ड और अन्य प्रतिभूतियों के विविध पोर्टफोलियो में निवेश करने के लिए कई निवेशकों से धन एकत्र करता है। क्या आपको लगता है कि म्यूचुअल फण्ड भारत के गरीब निवेशकों का दुरुपयोग कर रहे हैं? विभिन्न प्रकार के म्यूचुअल फण्डों का आलोचनात्मक परीक्षण और चर्चा भी कीजिए।

8. Solve the following case :

16

ACC Ltd. is considering acquiring an additional computer to supplement its timesharing services. It has two options :

- (i) To purchase the computer for ₹ 22,00,000,
- (ii) To lease the computer on an annual rental (payable at the end of the year) of ₹ 5,00,000 plus 10% of gross revenue from time sharing services. An amount of ₹ 6,00,000 is also payable at the end of year 3.

The revenues from time sharing services are estimated at ₹ 22,50,000, ₹ 25,00,000 and ₹ 27,50,000 for 3 years.

The computer has a salvage value of ₹ 10,00,000 at the end of 3rd year.

Annual operating cost (excluding depreciation and lease rent) is estimated at ₹ 2,00,000 per annum and an additional revenue expense of ₹ 2,00,000 is payable for training in the beginning of the 1st year (both these costs are to be borne by the lessee in case of lease). Funds for purchase are to be acquired at the rate of 16% and are repayable ₹ 5,00,000, ₹ 8,50,000 and ₹ 8,50,000 at the end of 3 years respectively. The firm pays tax at the rate of 50% and provides depreciation at straight line method.

निम्नलिखित मामले को हल कीजिए :

ACC लिमिटेड अपनी टाइमशेयरिंग सेवाओं के पूरक के लिए एक अतिरिक्त कम्प्यूटर प्राप्त करने पर विचार कर रहा है। इसके दो विकल्प हैं :

- (i) 22,00,000 में कम्प्यूटर खरीदना।
- (ii) कम्प्यूटर को 5,00,000 के वार्षिक किराये (वर्ष के अंत में देय) और टाइम शेयरिंग सेवाओं से सकल राजस्व का 10% पर पट्टे पर देना। वर्ष 3 के अंत में ₹ 6,00,000 की राशि भी देय है।

टाइम शेयरिंग सेवाओं से 3 वर्षों के लिए अनुमानित राजस्व ₹ 22,50,000, ₹ 25,00,000 और ₹ 27,50,000 है। तीसरे वर्ष के अंत में कम्प्यूटर का साल्वेज मूल्य ₹ 10,00,000 है।

वार्षिक परिचालन लागत (मूल्यहास और पट्टा किराया को छोड़कर) प्रति वर्ष ₹ 2,00,000 अनुमानित है और पहले वर्ष की शुरुआत में प्रशिक्षण के लिए ₹ 2,00,000 का अतिरिक्त राजस्व व्यय देय है (इन दोनों लागतों को वहन किया जाना है) पट्टे के मामले में पट्टेदार)। खरीद के लिए धनराशि 16% की दर से प्राप्त की जानी है और 3 वर्ष के अंत में क्रमशः ₹ 5,00,000, ₹ 8,50,000 और ₹ 8,50,000 चुकानी होगी। फर्म ₹ 8,50,000 की दर से कर का भुगतान करती है और सीधी रेखा पद्धति पर मूल्यहास प्रदान करती है।

9. (a) Discuss the brief history and features of MS-DOS.

10

एम.एस.-डॉस के संक्षिप्त इतिहास और विशेषताओं पर चर्चा कीजिए ।

- (b) What is a shell ? Discuss various shells in UNIX.

6

शैल क्या है ? UNIX में विभिन्न शैलों पर चर्चा कीजिए ।

Roll No.

Total Pages : 04

VSDE/M-24

12239

OPERATING SYSTEMS-II

BVSD-21

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

प्रत्येक इकाई से एक प्रश्न चुनते हुए, कुल पाँच प्रश्नों के उत्तर दीजिए । प्रश्न संख्या 1 अनिवार्य है । सभी प्रश्नों के अंक समान हैं ।

Compulsory Question (अनिवार्य प्रश्न)

1. (a) What is a File ? Discuss various types of files. 4
फाइल क्या है ? विभिन्न प्रकार की फाइलों पर चर्चा कीजिए ।
- (b) Is nesting of critical sections possible in the system ?
Explain. 4
क्या सिस्टम में क्रिटिकल सेक्शन का नेस्टिंग संभव है ?
व्याख्या कीजिए ।

- (c) Discuss with an example how a safe state may become unsafe. 4

उदाहरण सहित चर्चा कीजिए कि एक सुरक्षित अवस्था (स्टेट) कैसे असुरक्षित हो सकती है ।

- (d) What is Unix Kernel ? Explain. 4
यूनिक्स कर्नेल क्या है? व्याख्या कीजिए ।

Unit I (इकाई I)

2. Discuss the directory structures and directory protection mechanism. 16

निर्देशिका संरचनाओं और निर्देशिका सुरक्षा तंत्र पर चर्चा कीजिए ।

3. Discuss various file access and allocation methods. 16
विभिन्न फाइल एक्सेस और एलोकेशन विधियों पर चर्चा कीजिए ।

Unit II (इकाई II)

4. (a) What are the characteristics of a protocol for having mutual exclusion in the form of critical section ? 8
महत्त्वपूर्ण अनुभाग के रूप में पारस्परिक बहिष्करण के लिए प्रोटोकॉल की विशेषताएँ क्या हैं ?

- (b) What is Parallel Processing ? Discuss the control structures for indicating parallelism. 8
समानांतर प्रसंस्करण क्या है ? समानता को इंगित करने के लिए नियंत्रण संरचनाओं पर चर्चा कीजिए ।

5. (a) What is a Semaphore ? Discuss various types of semaphores. 8
सेमाफोर क्या है ? विभिन्न प्रकार के सेमाफोरों पर चर्चा कीजिए ।

- (b) Explain Readers-Writers problem along with its solution in detail. 8

पाठक-लेखक समस्या को उसके समाधान सहित विस्तार से समझाइए ।

Unit III (इकाई III)

6. What is Deadlock ? How is it different from starvation ? Discuss the algorithms to avoid a deadlock using example. 16

डेडलॉक क्या है ? यह स्टार्वेशन से किस प्रकार भिन्न है ? उदाहरण का उपयोग करके डेडलॉक से बचने के लिए एल्गोरिदम पर चर्चा कीजिए ।

7. Discuss various methods for deadlock detection and recovery. 16

डेडलॉक का पता लगाने और पुनर्प्राप्ति के लिए विभिन्न तरीकों पर चर्चा कीजिए ।

Unit IV (इकाई IV)

8. Explain the file system and I/O system of Unix operating system. 16

यूनिक्स ऑपरेटिंग सिस्टम के फाइल सिस्टम और I/O सिस्टम की व्याख्या कीजिए ।

Roll No.

Total Pages : 03

VSDE/M-24
WEB DESIGNING
BVSD-22

12240

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. Attempt the following : 8×2=16
- (a) Differentiate between website and web server.
 - (b) Define Internet. Mention its uses in brief.
 - (c) Explain heading tags with the help of examples.
 - (d) Write the steps to insert an image on your webpage.
 - (e) Explain the <FRAME> tag by using example.
 - (f) Discuss advantages and disadvantages of CSS.
 - (g) Explain the following in Dreamweaver :
 - (i) Setting fonts and size
 - (ii) Setting page margins
 - (h) How to create transparent background in Photoshop ?

Unit I

2. Distinguish between Static and Dynamic website. Mention various steps to create a website. What are the requirements to host your website ? 16
3. Discuss the concept of lists and tables. Differentiate between ordered list and unordered list. Write steps to set up nested lists. Also discuss Rowspan and Colspan attributes. 16

Unit II

4. What do you mean by style sheets ? Discuss various kinds of CSS selectors in detail with the help of examples. 16
5. Explain the following : 16
 - (a) Importing and embedding style sheets
 - (b) Class attributes
 - (c) Links and styles
 - (d) Inline style sheet.

Unit III

6. Differentiate between Client side and Server side JavaScript. What are important properties of anonymous functions of JavaScript ? Explain with examples. 16

7. Explain JavaScript style sheets. Explain data types that JavaScript supports in detail. 16

Unit IV

8. What are some important tools in Photoshop ? Explain transformation, layers, masks and enhancing features in Photoshop. 16
9. What is Flash ? Explain various features of Flash. Also discuss various methods to create animation in Flash. 16

Roll No.

Total Pages : 03

VSDE/M-24

12241

NETWORKING AND INTERNET

BVSD-23

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. Explain the following :

- | | |
|------------------------------|---|
| (a) Frame Relay | 4 |
| (b) Communication Satellites | 4 |
| (c) FDDI | 4 |
| (d) WAIS | 4 |

Unit I

2. (a) Define Computer Networks. Explain the various Network Topologies. 8
- (b) Explain the following Networking Models : 8
- (i) Peer-to-Peer Model
 - (ii) Web-based Model.

3. What is the OSI Reference Model ? Explain the working of its various layers in detail. 16

Unit II

4. Explain the following : 16
(i) Representing Data as Analog Signals
(ii) Representing Data as Digital Signals.
5. Describe the following : 16
(i) Digital Carrier Systems
(ii) Multiplexing.

Unit III

6. Explain the various Network Hardware Components Viz. Connectors, Transceivers, Repeaters, Hubs, Network Interface Cards and PC Cards, Bridges, Switches, Routers and Gateways. 16
7. (a) Explain the Sliding Window Protocols. 8
(b) Write a short note on Encryption Methods. 8

Unit IV

8. (a) Write short notes on the following : 8
(i) Internet Services Provider
(ii) Arpanet and Internet.
- (b) What is WWW and how does it work ? 8

9. (a) What is Internet Commerce ? What are its advantages ? 8
(b) Discuss the impact of Internet on Society. 8

Roll No.

Total Pages : 03

VSDE/M-24

12242

WEB PROGRAMMING-PHP

BVSD-24

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. (a) Why is PHP known as scripting language ?
- (b) What is cookie ?
- (c) How are comments written in PHP ?
- (d) Differentiate GET and POST methods ?
- (e) List different data-types available in PHP.
- (f) Is PHP a case sensitive language ? Give example.
- (g) How do you define a constant in PHP ?
- (h) Why do we use `isset()`, `unset()` functions ?

Unit I

2. (a) Outline the key attributes of client-side scripting and provide examples where it's more advantageous compared to serverside scripting ?

- (b) What is the function of "foreach" construct in PHP ?
3. (a) Explain the following :
- (i) Echo vs. Print
 - (ii) Literals
 - (iii) Ternary operator
 - (iv) Break and continue.
- (b) Explain the syntax and usage of various decision making construct available in PHP.

Unit II

4. (a) Write a program in PHP to calculate Square Root of a number.
- (b) What do you understand about Numeric array, Associative array and Multidimensional array ?
5. (a) Explain all possible types of scope of variable.
- (b) Describe different ways of passing arguments to functions, including pass by value and pass by reference.

Unit III

6. Write a script to design a Web-Page having a form with firstname, lastname and a submit button. On clicking the button, form validation should work.

7. Discuss the concept of sessions in PHP. Explain, how sessions are initiated, maintained, and terminated in PHP applications ? Provide examples to illustrate the usage of sessions in managing user authentication and personalization.

Unit IV

8. Discuss the significance of databases in PHP web development. Explain, how do PHP interacts with databases ? Demonstrate CRUD (Create, Read, Update, Delete) operations in PHP with MySQL database connectivity.
9. Explain the concept of database indexing in PHP MySQL applications. Discuss the purpose of indexing, including improving query performance and enforcing uniqueness constraints. Describe different types of indexes such as primary keys and unique keys.

Roll No.

Total Pages : 02

VSDQ/M-24

12247

MOBILE COMPUTING

BVSD-61

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

1. Write short notes on the following :

- (a) Radio Interface
- (b) Transaction Oriented TCP
- (c) Selective indexing techniques
- (d) Networking and Security in MANET.

Unit I

2. What do you mean by MAC layer ? Why is it designed in Mobiles ? Explain the type of terminals used in it.
3. (a) Write a note on Localization and Calling.
(b) Differentiate between TDMA and CDMA.

Unit II

4. Explain the following :
Agent Advertisement and Discovery, Optimizations in Mobile IP.
5. What is Traditional TCP protocol ? Explain the concept of snooping TCP and Mobile TCP using suitable examples.

Unit III

6. Explain the following :
 - (a) Client-Server Computing with adaption
 - (b) Classification of new data delivery mechanisms.
7. What do you mean by hybrid mechanisms for data dissemination ? How hoarding techniques becomes an issue in database ? Discuss.

Unit IV

8. What is Routing ? Explain three routing algorithms with examples.
9. (a) Write in detail the security issues in MANET.
(b) Write a short note on Bluetooth and J2ME.

Roll No.

Total Pages : 03

VSDQ/M-24

12248

INFORMATION SECURITY

BVSD-62

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory.
Attempt *four* more questions selecting *one* question
from each Unit. All questions carry equal marks.

1. Answer the following questions in brief ; $4 \times 4 = 16$
- (a) Distinguish between stream ciphers and block ciphers.
 - (b) What do you mean by authentication? How is it different from authorization ?
 - (c) What is meant by ARP poisoning ?
 - (d) What is Birthday Attack on Digital Signatures ?

Unit I

2. (a) What is Cryptography ? Explain triple DES algorithm in detail. 8
- (b) What is public key encryption ? Explain RSA algorithm. 8
3. (a) What is Public Key Infrastructure (PKI) ? Explain the anatomy of PKI. 8

- (b) What is hash function ? What are properties of hash function ? Explain MD5 hash function. 8

Unit II

4. (a) What are different types of authentication methods ? Explain each in brief. 8
- (b) What is Captcha ? Explain different types of Captcha. 8
5. (a) What is Kerberos protocol ? Explain its advantages and disadvantages. 8
- (b) What are discretionary access control methods ? Explain Access Control List (ACL) method in detail. 8

Unit III

6. (a) What are software flaws ? Explain incomplete mediation and race conditions. 8
- (b) Explain the following : 8
- (i) Salami attack
- (ii) Linearization attack.
7. Write short note on the following :
- (a) Software Reverse Engineering 8
- (b) Security Issues in OS. 8

Unit IV

8. (a) Explain about design of enterprise wide network and discuss vulnerabilities in such networks. 8
- (b) Explain the UDP session hijacking in brief. 8
9. (a) How can you carry out network security risk analysis ? Explain. 8
- (b) Explain about IPSec architecture and Security associations. 8

Roll No.

Total Pages : 03

VSDQ/M-24

12250

LINUX AND SHELL PROGRAMMING

BVSD-64

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

(Compulsory Question)

1. Explain the following in brief : 4×4=16
- (i) Inode table
 - (ii) File comparison commands
 - (iii) Bulletin board
 - (iv) Administrative file identification.

Unit I

2. (a) What is an operating system ? Explain various types of operating systems. 8
- (b) Explain the architecture of Unix and Linux. 8
3. What is Linux standard file system ? Explain the process of accessing files by Linux kernel in detail. 16

Unit II

4. Write and explain the following commands and their options : 16
- (i) Cat
 - (ii) Is
 - (iii) rm
 - (iv) pwd
 - (v) more
 - (vi) chmod
 - (vii) tty
 - (viii) lp.
5. (a) What is meant by filters and piping in Linux ? Explain various commands used as filters and in piping using suitable examples. 8
- (b) Explain the following w.r.t. process in Linux : 8
- (i) Setting priority
 - (ii) Abnormal termination
 - (iii) Process status.

Unit III

6. How can you perform the following in vi editor ? 16
- (i) Moving text from one file to another
 - (ii) Filtering text
 - (iii) Yanking text

- (iv) Changing text
- (v) Text deletion
- (vi) Moving text in the same file.

7. What are the various commands used for communication in Linux ? Explain in detail along with the commands for connecting to the remote machines. 16

Unit IV

8. (a) Explain the booting process in Linux in detail. 8
- (b) What are the requirement for installation of Linux ? Explain the installation procedure step by step. 8
9. (a) Comment on the role of system administrator in Linux environment. 8
- (b) Explain various administrative commands related to users and files. 8