2. Define Computer. Explain various components of computer along with a block diagram. Compare the functioning of Computer with human being by taking any suitable example.

Unit I

1. Compulsory Questions

(a) Write a short note on memory units.

(b) Differentiate between application software and system software.

(c) Write a short note on sorting with suitable example.

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

[Maximum Marks: 80]

Time: Three Hours

Computer AND Programming

Paper: BCA-111

GSEID-22

1161

Total Pages: 02

Roll No. 5,122
1. Give the classification of operating systems. Explain with

   (a) User, Elaborate
   (b) Hardware and Software are the two sides of same

2. Define operating system. Explain various functions

3. Explain secondary storage devices.

4. (a) Explain different types of

5. (b) Why are the applications of computers in various
Unit I

What is an Operating System? Describe various Entertainment Tools.

3. Describe various Entertainment Tools.

(i) Disk Deletion
   (ii) Recycle Bin

4. Explain the following:
   (a) What is an Operating System?
   (b) Describe various

2 x 4 - 8

Compassory questions:

carry equal marks
from each Unit.

Note: Attempt five questions in all selecting one question

Time: Three Hours

Maximum Marks: 80

BCA-112

WINDOS AND PC SOFTWARE

GSE/D-22

ROLL NO. 02

TOTAL PAGES: 02
Unit II

4. Explain various steps to Scan a disk using ScanDisk Tool.

5. How can you install Printer? Explain various steps to share a Printer on Network or LAN.

6. Explain the various features of MS-Excel.
   (a) Explain various steps to Freeze specific rows or columns in a worksheet.
   (b) What is a Macro? Explain the steps to record and run a Macro.

9. Explain the components of workbook.
9. (a) Solve the differential equation: 

\[
x^2 \frac{d^2 y}{dx^2} + a \frac{dy}{dx} + y = x^2 e^x.
\]

(b) Determine the curve in which the length of the sub-normal is proportional to the square of the ordinate.

(c) Find order and degree of the differential equation:

\[
\frac{d^3 y}{dx^3} - 3 \frac{d^2 y}{dx^2} + 3 \frac{dy}{dx} - y = 0.
\]

(d) Evaluate:

\[
\lim_{x \to \infty} \frac{x^2 - 9x + 20}{x^3 - 6x + 5}.
\]

(e) Solve the differential equation:

\[
\frac{d}{dx} \left( \frac{dy}{dx} \right)^2 = x^2.
\]

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

Time: Three Hours

Maximum Marks: 80

Compulsory Question

B.C.A.-113

MATHMATICAL FOUNDATIONS

Roll No. 1163

Total Pages 04
5. (a) Find \( \frac{dy}{dx} \) if \( y = \sqrt{x^3 + 4x^2} \).

5. (b) Find \( \frac{dy}{dx} \) if \( y = \frac{\sqrt{x^3 + 4x^2}}{x + 1} \).

4. (a) Find the value of \( a \) if the function \( f \) given by

\[
\begin{cases}
2x - 1, & x < 2 \\
2, & x = 2 \\
x + 1, & x > 2
\end{cases}
\]

is continuous at \( x = 2 \).

4. (b) Prove that limit of a function at a point, if exists.

3. (a) Find \( \frac{dy}{dx} \) if \( (x+1)\sqrt{y} + 2xy = 0 \).

3. (b) Find \( \frac{dy}{dx} \) if \( xy + y = 3 + e^x + \cos 2x \).

2. (a) Prove that:

\[ A \cup (B \cap C) = (A \cup B) \cap (A \cup C) \]

2. (b) Show that if \( R_1 \) and \( R_2 \) are equivalence relation on a set \( A \) then \( R_1 \cap R_2 \) is an equivalence relation.

1. (a) Form the differential equation of the equation \( (x-a)^2 + (y-b)^2 = r^2 \) by eliminating the arbitrary constants \( a \) and \( b \).

1. (b) Form the differential equation of the equation \( x^2 + 2x \frac{dy}{dx} + 2y = 0 \).

1. (c) If \( y = x \), show that:

\[ \frac{d^2y}{dx^2} - \frac{1}{x} \frac{dy}{dx} - 2y = 0. \]
L0GICAL ORGANIZATION OF

GRID-22

BCA-114

[Maximum Marks: 80]

Time: Three Hours

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

1. Answer the following questions in brief:

   (a) What is Multiplexer? Draw the diagram for 4 × 1 multiplexer and explain its working.

   (b) Represent 'A' in ASCII and EBCDIC codes.

   (c) What is DeMorgan's laws.

   (d) What is XOR gate? Draw truth table and symbol.

   (e) What is Radix? What are digits of hexadecimal number system?

   (f) What is AND gate? Draw truth table and symbol.

Note: Each question carries equal marks.
Unit III

6. (a) What are NAND and NOR gates? Why are these called as universal gates? Explain.
(b) Simplify the following Boolean function using Karnaugh map:
\[ F(a, b, c, d) = \overline{2}(0, 1, 2, 4, 5, 6, 8, 9, 12, 13, 14) \]

5. (a) What are canonical representation of Boolean functions? Explain POS and SOP form of representing Boolean functions with examples.
(b) Prove the following Boolean theorems using Boolean postulates:
\[ X + X\overline{X} = X \]
\[ X + Y = X + Y \]

4. (a) State the postulates of Boolean algebra.
(b) What are BCD codes? Write self-complementing and cyclic BCD codes with an example.
(c) What are error detecting and correcting codes?
(d) Add \((772)_8\) into binary and hexadecimal number systems.

Unit II

3. (a) What are BCD codes? Explain, with an example.
(b) What are error detecting and correcting codes?
(c) What is the excess-3 BCD code?
(d) Design a circuit to convert \(9421\) BCD code into \(8421\) BCD code.

Unit IV

9. (a) Design a circuit to convert \(8421\) BCD code into \(9421\) BCD code.

8. (a) What is a demultiplexer? Design a 1 \( \times \) 4 demultiplexer circuit.
(b) What is a comparator circuit? Design 3-bit comparator circuit.

7. (b) What is characteristic of combinational circuits? Discuss design procedure of combinational circuits.

(b) What is combinational logic? What is \(A = B + C + D\) using NAND logic only?

Implement \(F = A \cdot B + C + D\) using \(NAND\) logic.
(b) How did Rani lose his "maggie" ball?

2. (a) How did Holz suffer in the 7th

How did Gandhiji impart the teaching of spirit?

I. According to Narayan, the blacksops of our...
3. Read the passage and answer the questions that follow:

At a certain university in America, I met an advanced soul. He taught political science. One month before the annual examination, he circulated (or parceled?) the questions and distributed them among his students, who then spent nearly twelve hours a day in the library in the assigned reading room.

What type of man a teacher be?

Unit II

(e) What is the writer's opinion about the examination system?

(f) What does the writer say about the university life?

(g) What does the teacher say about the students?

(h) What did the teacher say about the examination?

(i) What does the teacher say about the students' preparation?

4. Write a letter to the Office of the Principal of ABC College informing that you will be late in joining your duty as an Assistant Professor due to some personal reasons. Compose a text message informing your mother that you will be late in coming home.

5. Do as directed:

(i) He lives in Kanpur.

(ii) His brother is a drunkard.

(iii) He abstains from alcohol.

(iv) I have a dog in my house.

(v) He prayed... God for his success.

(exam)

(article)

(preposition)

(article)

5. Questions:

(a) (i) Why is the teacher called as an advanced soul?

(ii) What did the teacher say...

(iii) Why did the teacher say...

(iv) How much time did they spend in the library?

(v) How much time did they spend in the library?

(vi) How much time did they spend in the library?

(vii) How much time did they spend in the library?

(viii) How much time did they spend in the library?

(ix) How much time did they spend in the library?

(x) How much time did they spend in the library?
UNIT IV

1. Write a letter to ABC Technologies to change the details they have delivered.

2. Currency:

(a) Population Explosion
(b) Importance of Computers

3. Write a paragraph in about 150 words on

(a) How you live
(b) How you think
(c) How you feel

4. Rewrite using positive tense:

(a) I wrote the article on the highest peak of the world.
(b) She is the intelligent girl at the school.
(c) Reported speech

5. My mother said, "Where you live long." (Reported speech)

6. (Change the voice)

(a) He told me, "Do you know my name?"
(b) He is easy.
(c) He could hit the ball.
(d) He always goes home late.
(e) He just drinks tea when I knocked at the door.

7. What do you understand by RNI act? How does the act help in making the system transparent?

8. You are visiting a railway station to reserve your ticket. Write a conversation that took place between you and the reservation clerk.

9. Write an application to the Head of your Institution seeking his permission to organize a reception in the institute.
1. (a) What is the role of comments? How comments can be written in C?

(b) How are arrays in C initialized?

(c) Why do you need the continue statement?

(d) How do you define a function in C?

(e) How do you define a structure in C?

(f) How do you define a union in C?

(g) How do you define a class in C++?

(h) How do you define a function in C++?

(i) How do you define a method in C++?

(j) How do you define a class in C++?

(k) How do you define a structure in C++?

(l) How do you define a union in C++?

(m) How do you define a function in C++?

(n) How do you define a method in C++?

(o) How do you define a class in C++?

(p) How do you define a structure in C++?

(q) How do you define a union in C++?

(r) How do you define a function in C++?

(s) How do you define a method in C++?

(t) How do you define a class in C++?

(u) How do you define a structure in C++?

(v) How do you define a union in C++?

(w) How do you define a function in C++?

(x) How do you define a method in C++?

(y) How do you define a class in C++?

(z) How do you define a structure in C++?

{t} How do you define a union in C++?

[Maximum Marks: 80 Total Pages: 03]
UNIT II

8. Explain various I/O functions in C using suitable examples.

Examples of suitable examples.

9. How can we declare variables in C?

Example: Declare suitable variables.

UNIT III

8. Write a program in C to find the sum of the digits of a given number.

Example: Write a program to calculate the sum of digits.

UNIT IV

4. Describe various operators in C along with their hierarchy.

Examples: Study of various operators and their hierarchy.

UNIT V

8. Describe various types of loops in C with the help of suitable examples.

Examples: Loop structures in C.

UNIT VI

8. Explain various data types in C along with the help of suitable examples.

Examples: Suitable examples for various data types in C.
I = ?

z

= ;

z

??-t

= ;

l

€

igEg'ae*iu???E?*,=g*

'aEiii;eea,'iaR
tgFii€;

3

€

en ?

gE
e

505x81

-nt

---

(1) Compulsory question.

1. Differentiate between static polymorphism and polymorphism. Explain is types.

(ii) What do you mean by stream? What is the purpose of buffer?

(iii) Explain the rules of operator overloading.

(iv) Explain the rules of operator overloading.

(v) Explain the rules of operator overloading.

(vi) Explain the rules of operator overloading.

(vii) Define local class ()

(viii) Explain array () with example.

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

Maximum Marks: 80

Time: Three Hours

BCA 231
Example: How do you mean by friend function? Explain it with an example.

Unit III

Example:

Give an example to illustrate copy constructor.

Example:

Distinguish between object and class. Also explain scope resolution operator with its significance by giving suitable example.

Unit IV

How are they used?

Example: Discuss the various forms of get() functions.
Unit I

Computer Question

Carry equal marks from each Unit. No. I is compulsory. All questions carry equal marks. Please answer five questions in all, selecting one question from each unit.

Maximum Marks: 80

Time: Three Hours

BCA-232
DATA STRUCTURES

GSM/D-22

ROLL NO. 02

TOTAL PAGES: 02
UNIT II

UNIT III
GSE/D-22

COMPUTER ARCHITECTURE

BCA-233

Time: Three Hours

[Maximum Marks: 80]

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

1. Write notes on the following:
   (a) Interrupt controlled data transfer
   (b) Register reference instructions
   (c) Register transfer language
   (d) RISC.

Section A

2. (a) What do you mean by Instruction Code? Explain its various components.
   (b) Explain the various Input/Output Reference Instructions.

3. (a) Explain various approaches of Control Unit Design and Implementation.
Section C
6. What do you mean by Instruction Format? What are the various types of instruction formats? Explain with suitable examples.

7. (a) What are the various features, advantages and disadvantages of CISC architecture?
(b) POP operations

Section B
5. (a) Explain the various components of microinstruction.
(b) Microword

4. (a) What do you mean by Microoperation? Explain the hardware implementation of logic implemented by microoperations.
(b) Mapped I/O

Section D
9. (a) Distinguish between Memory Mapped I/O and I/O Mapped I/O.
(b) Explain the various methods of strobe control.

8. (a) What is Locality of Reference? Explain its types.
(b) Explain its advantages and disadvantages.

Section C
4. (a) What are the various addressing modes of basic computer? Explain.
(b) What do you mean by Address Sequencing?
2. (a) What are components of software? Discuss how a software differs from a program.

(b) Define Software Metrics.

(c) Define Software lexical tree.

(d) Define Software prototyping.

(e) Differentiate between prototyping and product.

(f) What are the basic issues of SRS?

(g) What is the need of Software?
16. How to implement SDP
16. Explain various Software testing strategies by giving

Unit IV

(c) Decision Table
(b) Structured English
(a) Data Dictionary

7. Write short notes on the following:
8. Explain decision tree with suitable example.
8. Explain various. Write your answer as advantages and its
6. State the model of a data dictionary and its

Unit III

16. Explain the need of a SRS document in software
8. What is Requirement Analysis?
8. Describe:
4. Explain various information gathering tools in

Unit II

16. Software development
16. Compare the Whitney model and the spiral model of
GSM/D-22 1171
FUNDAMENTALS OF DATABASE SYSTEM
Paper : BCA-235

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. (i) Define Record and File.
   (ii) Describe duties of Database Designers.
   (iii) What are three levels of DBMS?
   (iv) Define Integrity rules.
   (v) Define tuple, attribute and domain.
   (vi) Distinguish between Primary key and Secondary Key.
   (vii) Define Relational Algebra.
   (viii) Explain various DBMS Languages. 8x2=16

Unit I

2. (a) Define data and information. Differentiate between traditional file based system and database approach. 8

(6-00/15) L-1171

P.T.O.
UNIT I

8. What are various properties of relations?

9. Explain various integrity constraints over relations.

UNIT II

4. Explain various advantages and disadvantages of DBMS.

5. What is Data Independence? Explain logical and physical data independence.

6. Explain various types of data models along with their purpose.

7. Explain Entity, Entity set, Attribute, Relationship.

8. Explain various ER model types and compare the differences.

UNIT III

8. Draw ER diagram based on the concept of ER model.

9. Discuss the positions used.

10. Explain client-server architecture of DBMS.
1. Attempt the following questions in short:

(a) Explain Bisection's method.
(b) Discuss order of convergence of Newton-Raphson.
(c) Write Taylor's series formula.
(d) Explain the orthogonal properties of Chebyshov polynomials.
(e) Define interpolation and approximation.
(f) Discuss the types of errors that occur in numerical computations.
(g) Explain Predictor-Corrector method.

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

Maximum Marks: 80

Time: Three Hours
8 Gaussian Quadrature.
9 Numerical differentiation and integration

9. Explain the following:
   (i) Simpson's rule
   (ii) Simpson's rule
   (iii) Simpson's rule

9. Evaluate \( \int_1^2 \frac{x+1}{x} \, dx \) by using

Unit IV

6. Use Newton's formula for interpolation to find the new

9. Find \( x \) for \( y = 0 \) by using Euler's method:

9. Solve the following equations by Gauss elimination

9. Explain algorithms of Gauss-Elimination methods

Unit V

9. Explain Cubic spline polynomials.

9. Explain Cubic spline polynomials. Prove the recursion

9. Evaluate \( \int_{0.0172}^{0.0437} \frac{x+1}{x} \, dx \) by using

9. How are floating point numbers represented in

Unit I

9. Discuss Arithmetic operations with normalized

9. Compute: How are floating point numbers represented in
Unit I

1. What is WWW? Explain the history of WWW.

2. What is WWW? Explain the search engine.

3. What are the web casting techniques? Explain the search tools.

Unit II

4. What is a homepage? Explain planning and designing of a website.
UNIT III

5. Explain web publishing in detail.

6. Explain formatting of text in HTML. With example.

7. Explain page layout feature in HTML.

8. What is a Table? How do we insert rows and columns in HTML?

9. What are Frames? Explain their creation and layouts in HTML.
3. Explain the terms: Batch, Timesharing, Parallel and Distributed with reference to Operating System.

16

2. Define Operating System. Explain its characteristics and components.

16

1. With reference to the operating system, answer the following:

(i) Multiprocessing
(ii) Distributed
(iii) FCFS
(iv) Process
(v) Semaphore
(vi) Deadlock
(vii) Swapping
(viii) LRU

2x8=16

COMPULSORY QUESTION

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

Time: Three Hours

Maximum Marks: 80
11. Explain various file allocation methods.


5. Explain FCS, SR, Priority, Multi-level Queue scheduling.


Unit III
1. (i) Define artificial intelligence.
(ii) What is an expert system?
(iii) State any two applications of AI.
(iv) What is meant by state space search?
(v) What does NLP stand for?
(vi) Heuristic Search?

2. (a) State and explain various applications of AI.
(b) What does Local Maximum means?
(c) 8-2=16

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

(Compulsory Question)
6. What is Natural Language Processing? What is its need?
1. (Compulsory Question)

How many types of networking models are there?

List them.

What are the factors which are considered while using topology?

What is the unit of measuring signal rate and data rate in data communication?

Token management protocols are used for... topology.

Full form of CRC

Define Encryption and Protocol.

Explain the concept of Half-Duplex Communication.

(viii) Explain MAC Address.

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

Time: Three Hours

Maximum Marks: 80

Paper : BCA-354

COMPUTER NETWORKS

Total Pages : 03

680/D-22

L-1176

(6425)
1. Write short notes on the following:
   (i) NIC and PC cards
   (ii) Bridges
   (iii) Switches
   (iv) Router
   (v) Topology
   (vi) Multiplexing techniques
   (vii) Modulation

2. Explain the OSI model in detail.

3. Explain the following techniques of congestion control:
   (i) Traffic Shaping
   (ii) Load Shedding
   (iii) Choke Packet

4. Explain the following types of Topologies with their diagrams:
   (a) Bus
   (b) Ring
   (c) Star
   (d) Hybrid
   (e) Mesh

5. Explain Multiplexing techniques using Next and Clean diagrams.

6. Explain Sliding window protocols in detail.

7. Write the frame format of Ethernet and explain the technology in detail.

8. What is congestion? How does congestion occur?

9. What is VQ? Explain various models of VQ using examples.
I. Explain the following:

1. What is IDE? Explain the components of Visual Basic

2. What is IDE? Explain the components of Visual Basic

3. Explain the following:

Integrated Development Environment

Unit I

(d) Actual and Formal Parameters
(c) Nested Control Structure
(b) Named and Intrinsic Constants
(a) Literal Handler

I. Explain the following:

(Computation Question)

compute equal marks. carry equal marks. If you are compulsory, all questions from each unit. No. 1 is compulsory. All questions Note: Attempt five questions in all, selecting one question.

Maximum Marks: 80

Time: Three Hours

BCA-35
PROGRAMMING USING VISUAL BASIC

690-D-22

177

Roll No. 0

Total Pages: 02
1. What is the factorial of a number?

2. How can we pass an array to a function in VB?

8. What is a function and how does it differ from a procedure?

8. What is the difference between do loop and while loop?

8. Explain with suitable example.

7. How will you declare a two-dimensional array in case students with the help of example?

6. What are the decision statements in VB? Explain separately:

Unit III

(c) Print Statement

(p) Message Box

(e) Input Box

4. Explain the following:

5. a variable, its scope, and lifetime of variables.

16. What is a variable declaration? How can we declare?
1. (a) What is MPEG standard?
   (b) What is NTSC?
   (c) What is DPCM?
   (d) What do you mean by Raster Image?
   (e) What is digital audio?
   (f) What do you understand by video compression?

   (Compulsory Question)

2. What is Multimedia? Discuss various multimedia software tools.
3. Write short notes on the following:
   (a) Multimedia authoring tools
   (b) History of VRML

4. Explain the following digital video standards:
   (a) Chroma subsampling
   (b) CCIR standards

5. What do you mean by a data type? Explain various
graphics/image data types.

6. What is a digital audio? Differentiate between analog
and digital audio.

7. What do you mean by coding of audio? Explain pulse
code modulation in detail.

8. What do you understand by data compression?
   Differentiate between run-length coding and variable
   length coding.

9. Differentiate between the following:
   (a) MPEG-1 and H.261
   (b) MPEG-1 and MPEG2

L-1/78
Unit II

4. Explain the following:

Unit I

3. What is the processing speed of a computer? How is it measured?

(b) Explain the components of a Digital Computer

(a) What are the characteristics of a computer system?

I. Write short notes on the following:

(c) Sign Magnitude Representation

(d) Video Disk

(e) Barcode Reader

(f) Addressing Capability

Note: Carry equal marks.

From each Unit, Q. No. 1 is compulsory. All questions attempt five questions in all selecting one question from each unit. Three hours.

Maximum Marks: 80

B.V.S.D.-II

COMPUTER FUNDAMENTALS

B.S.D. D-22

12086

Total Pages: 02

Roll No. 02
1232 + 3654 using BCD coding method.

9. Write short notes on the following:

- Complement representation of numbers. Differentiate between 1's complement and 2's complement representation of binary numbers.

UNIT I

7. Explain the following:

- Happy Disk: DVD, Physical structure of storage devices.

UNIT III

5. Differentiate the following:

- Printer and Speaker
- Inkjet and Laser Printers

6. What are primary and secondary data storage devices?
Explain the following the commands:
4×4=16

(a) Move

3. What is the window explorer? What are its features?

(b) Which is the window explorer? What are its functions of control panel?

Unit 1

3. What is Quicken in MS-Excel?

(c) What is Quicken in MS-Excel?

3. Write the steps to change the wall paper of the system.

(d) Write the steps to align text in MS-Word.

3. Presentation?

(e) How to place a picture on slide in PowerPoint.

4. Write the steps to search the folder in Windows.

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

Total Marks: 80

Maximum Marks: 80

B.S.D. 12
PC SOFTWARE
12087
B.S.D/D-22

Roll No. 03

Time: Three Hours
Unit II

4. (a) Explain the components of the Word document window. What do you mean by Formating? Explain character paragraph and page formatting in detail.

(b) Describe the concept of Mail Merge by giving suitable example.

5. (a) What are Auto Text and Auto Correct Utility in MS-Word? Explain with example.

(b) Explain the components of chart. How to change chart layout and chart style.

6. Explain the following in MS-Excel:

(a) Auto Fill

(b) Freezing Worksheet Pans

(c) Steps to protect a work sheet

(d) Hiding rows and columns

7. Unit III

4x4=16

8. (a) Explain the components of a slide in PowerPoint

(b) How to change the presentation in PowerPoint

(c) How to animate text and objects in PowerPoint

(d) Rename Delete

The processes are assumed to have arrived in the order P1, P2, P3, P4, P5 all at time 0.

<table>
<thead>
<tr>
<th>Process</th>
<th>Burst Time</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>P2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>P3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>P4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>P5</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

a. Draw four Gantt charts illustrating the execution of these processes using FCFS, SJF, a non-preemptive priority (a smaller priority number implies a higher priority) and RR (quantum = 1) scheduling.

4. (a) Differentiate between short-term, medium-term and long-term scheduling.

5. What are the criteria for comparing CPU-scheduling algorithms? Consider the following set of processes with the help length of the CPU-burst time given in milliseconds:

<table>
<thead>
<tr>
<th>Process</th>
<th>Burst Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>10</td>
</tr>
<tr>
<td>P2</td>
<td>5</td>
</tr>
<tr>
<td>P3</td>
<td>1</td>
</tr>
<tr>
<td>P4</td>
<td>2</td>
</tr>
<tr>
<td>P5</td>
<td>1</td>
</tr>
</tbody>
</table>

   (b) What is interrupt processing? Explain.

8. (a) Find the turnaround time of each process for each of the scheduling algorithms in part (i).

9. Discuss various structuring techniques and interface for the operating systems that enable I/O devices to be treated in a standard, uniform way.

10. Discuss various implementation issues in device management. Explain.

11. Discuss various page replacement algorithms.

12. What is segmentation? Discuss segmentation hardware with the help of diagram. What type of fragmentation can be caused by segmentation?

13. Which of the algorithms results in the minimal average waiting time (over all processes)?

14. Find the waiting time of each process for each of the scheduling algorithm in part (i).
(a) Draw a flow chart to check whether the input number is prime or not.
(b) Describe the various symbols used in a flowchart.
(c) Decision table? Explain using suitable examples.
(d) What is a decision table? How can you draw a decision table?

Unit 1

(1) Pointer assignment
(2) Recursion
(3) History of C language
(4) Computer languages

1. Explain the following in brief:

All questions carry equal marks.
Questions exactly selecting one question from each Unit.
Note: Q. No. 1 is compulsory. In addition, attempt four more.

Maximum Marks: 80

Time: Three Hours

B.V.S.D-I

PROGRAMMING FUNDAMENTALS AND C
12809

TOTAL PAGES: 03

ROLL NO: 8201196497
7. What is a function? How can you categorize functions in C? Write a user-defined function to return the highest number from a given array passed to a function.

8. (a) Write a program in C to search a number from a given list of numbers.

(b) Scope and Lifetime of Variables.

(c) Automatic and Static Variables.

6. (a) Distinguish between the following:

(b) Describe the IF statement and its variations using suitable examples in C.

5. Explain various types of operators in C along with their hierarchy and associativity. Use suitable examples to describe operators.

4. (a) Explain the data types in C language.

(b) What is meant by documentation and debugging in programming?

3. (a) Differentiate between Assembler, Compiler and Interpreter.

II

Unit II

8. Write a program in C to sort a given list of strings using pointers, structures and unions in C.

9. Differentiate between arrays, pointers, structures and unions in C.

IV

Unit IV
1. (a) What is database integrity and extension?
(b) What is the purpose of percentage data type?
(c) Explain with suitable examples.

2. (a) List the rules proposed by Dr. E.F. Codd.
(b) What is a spurious tuple? How is it generated?
(c) Write SQL syntax to sort data in descending order.
(d) State some features or programming constructs supported by PL/SQL.
(e) What do you mean by bit map index?
(f) Differentiate between full and partial functional dependency.
Unit I

2. What are the important properties of Database Management System (DBMS)? Discuss DBMS advantages and disadvantages.

3. What is Data Model? Draw a comparison between hierarchical and network data models.

4. What is need of relational algebra? Explain select, project and union operations of relational algebra with example.

5. What is Normalization? Why we need normalization? Draw and explain the similarities and dissimilarities between third normal form and BCNF. Which of the normal form is stronger among them?

Unit II

8-4=16

8. (a) Write the purpose and syntax of using update and alter statement with add, modify, drop and rename.

(b) What are Constraints? How do you implement primary key, foreign key and check constraints?

(c) Write the purpose and syntax of the following SQL functions:

(i) ROUND()
(ii) TRUNC()
(iii) ADD_MONTHS()
(iv) SUBSTR()

7. Write a PL/SQL block to implement implicit cursor.

8. What is labeling a PL/SQL loop? How PL/SQL loops iterate? Write a PL/SQL block using FOR-LOOP statement. Discuss logical block structure of PL/SQL. How do you assign SQL query result to PL/SQL variables?

9. What do you mean by cursor? Write a specimen PL/SQL block to implement implicit cursor.
The advantages and limitations of this model when types of applications it should be used. Also explain.

2. Discuss the waterfall model of software development. In

Unit I

(a) What is validation testing?

(b) What are follow-ups? Who is responsible for requirements.

(c) Differentiate between behavioral and non-behavioral development. Discuss the need of an effective approach to software engineering. What do you mean by software engineering? What

Complimentary Question

From each List 0 No. is compulsory.

Note: Attempt five questions in all; selecting one question.

Max. Marks: 80

Time: Three Hours

B.V.ED-33
SOFTWARE ENGINEERING

12092  BSD/D-22

Roll No. 03

Total Pages: 03
Unit I

1. Discuss the characteristics of various types of software maintenance. Also discuss various techniques used in software maintenance.

2. Discuss the steps involved in code inspection and walkthroughs.

3. (a) What is Software Crisis? State its significance.

Unit II

4. Discuss various types of inspections.

(a) Alpha Testing
(b) System Testing
(c) Validation Testing

5. Provide concise definition for each of the quality attributes of software.

6. (b) Discuss the quality attributes of software with reference to software engineering discipline.

Unit III

7. What is functional testing? Discuss various functional processes.

8. (b) Discuss the steps involved in code inspection and walkthroughs.

9. (a) What are the benefits and limitations of code reviews?
2. Explain the following using suitable examples:

(a) Explain Static data member and member function

(b) Explain Data Hiding and Encapsulation using suitable example

Unit I

1. Attempt any four of the following:

(a) Explain the use of template class.

(b) Write syntax of constructors and destructors.

(c) Explain inline function.

(d) Explain ‘new’ and ‘delete’ operators.

(e) Explain the use of template class.

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

4x4=16

[Maximum Marks: 80]

Time: Three Hours]

BSVD-34

Total Pages: 02

BS/D/D-22

12093
function using template class.

9. What is Template Class? Write a program to overload

16

exception handling. Write a program to catch all handlers.

8. Explain the various types of errors. Also explain the

Unit IV

9. Importance using suitable example.

16

Explain the role of constructors and destructors in

16 function.

many operator overloading with and without friend

6. What is Operator overloading? Also write a program for

Unit III

8

(b) Explain Formatted and Unformatted I/O.

8

5. (a) Explain new and delete operators.

16 Explain the role and various types of constructors.

Unit II

16 employee and use friend function in it.

16 example. Write a program to calculate income tax of an

3. What is friend function? Explain by giving suitable
1. (i) Explain the concept of Grid.
(ii) How is grid computing different from cluster and Web Services?
(iii) What are the different versions of the Grid?
(iv) What is the relationship between OGSA, WSRF, and Web Services?
(v) P2P Computing?

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

(Compulsory Question)
UNIT I

8. Explain the concept of Grid Security with examples. 16

9. Explain various scheduling paradigms of Grid Scheduling. 16

UNIT II

2. What is a Cloud Computing? What are some of the key

3. Describe the Cloud Computing Architecture. What are the

4. Some issues with Cloud Computing. 16

UNIT III

(2) Windows Azure Platform

(a) Windows Live

5. Explain the following: 2x8=16

6. What is OSGA & Describe how it extends Web Services

7. Explain Grid Monitoring Architecture

with suitable illustration. 16

8. Which architectural layer is used as a backbone in
How do you market an e-business?

What are web things?

Describe the role of e-commerce in financial services.

What is direct marketing?

Briefly explain electronic banking systems.

Write a note on information technology.

Distinguish between pure and partial e-commerce.

Compulsory Question

Carry equal marks from each unit. Q. No. 1 is compulsory. All questions carry equal marks except the question mentioned.

Note: Attempt five questions in all selecting one question from each unit.

Time: Three Hours

Maximum Marks: 80

Buddhha-25

E-Commerce

12095

BSD/D-22

Total Pages: 03

Roll No. 00
Unit I
2. Define eCommerce. Discuss the features and issues related to eCommerce. Explain customer to customer eCommerce with suitable examples.

Unit II
3. Explain in detail the drivers that promote eCommerce. Explain the generic framework of eCommerce and its applications. Why are they called drivers? Explain the different methods for transferring fund electronically. Discuss the use of payment gateways for consumers in India.

Unit III
4. Card costs and non-card costs.
5. Prepaid and postpaid Electronic Payment System (EPS).
6. Explain the concept of Supply Chain Management in detail. Why is it important to any industry or any organization? Illustrate by citing suitable examples.

Unit IV
7. Write the potential applications of eCommerce. Which are the issues and obstacles that are faced while adopting eCommerce applications?
8. Write a detailed note on information directory and effective search engines. How you can make your search effective?
9. Discuss the following:
   (a) News Groups and Forums
   (b) Customer Communication
   (c) Backup procedure and recovery methods of e-Business transactions

8:4=16
8:4=16
8:4=16
UNIT 1
8 x 2 = 16

(i) Proxy
(ii) Dynamically loaded user controls
(iii) State management
(iv) Session Tracking
(v) Impersonation
(vi) Authentication
(vii) Validation Controls
(viii) ASP.NET

1. Write short notes on the following:

Computer Question

carry equal marks.

Note: Attempt five questions in all selecting one question from each unit.

Maximum Marks: 80

Time: Three Hours

BVD-53
WEB TECHNOLOGY ASP.NET Dot Net
12096
BSD/D-22
Total Pages: 03

ROLL NO.:

UNIT IV

8. Explain the security process for forms authentication.

9. List various characteristics of ASP.NET.

10. Explain the following:

UNIT III

6. What are server-side controls?

10. How to create a simple user control in ASP.NET?

UNIT II

3. Explain the architecture of ASP.NET framework. Also discuss the limitations of ASP.NET.

4. How can you implement event handlers using code?

5. List various user control limitations.

6. Behind classes ?

7. Explain the process to create a web reference proxy.

8. Why is the need of XML web services?

9. What is the need of XML web service.

10. How do you transfer information during navigation?
1. (a) Enlist the various methods used in Applet life-

(c) Enlist the various event classes that exists in
java.awt.event package.

(c) What are the various constructors used to create
file objects?

(b) How can you create a scroll bar in Java?

(a) What is the purpose of using JTree class? 8-2-16
2. Create an applet in Java that receives a number as input and finds the sum of the digits of the number and displays the result in an applet.

Unit I

3. Explain various methods in Graphics class using suitable examples.

4. (a) Write a program in Java to show the use of Component event class.
    (b) Explain delegation event model in detail.

5. Write a program in Java using character stream to count the number of characters and line in a given file.

6. (a) Write a program in Java using Border Layout to write left, right, top and bottom in the four borders and in the center it should display center.
    (b) What is Flow layout? Write a program in Java using Flow layout.

Unit III

7. Describe working of Canvas, Panel, Window and Frame class in AWT.

8. (a) How can you create swing based applet? Explain using suitable examples.
    (b) How are database handled by servlet? Explain using suitable examples.

9. (a) How can you create popup menu using java swing?
    (b) How to create a program by writing a program.
1. (a) Define Business Ethics and their significance.
   
1. (b) Mention the distinguishing features of Cooperative Form of Organisation.

1. (c) Elaborate the various types of company associations.

1. (d) Mention the reasons behind the formation of Trade Association.

Note: Attempt five questions in all. No. 1 is compulsory. All questions carry equal marks.

Maximum Marks: 60

Time: Three Hours
5. What is the scope of business activities of Multinational Corporations? Discuss the contribution of MNCs in India's economic development.

4. Why deciding a form of business organisation is quite relevant for success of any business? Discuss the factors that determine the choice of the form of an organisation.

3. Discuss the rules and procedures regarding the incorporation of a Joint Stock Company. Also mention the key matters to be stated in the prospectus of a Joint Stock Company.

2. What do you understand by Partnership Deed? Explain its main contents. Also highlight the duties and responsibilities of partners involved therein.

1. Why is an agency engaged in non-profit activities? Explain the objectives and functioning of UCCI and ASSOCHAM.

8. Define Values. Why do businesses function according to their Value system? Mention certain examples of values usually pursued by Indian businesses.

7. Define Non-profit Organisation. How is it different from other forms of organisation? What kind of activities are usually they are involved with?

6. Examine the objectives and functioning of UCCI and ASSOCHAM.
PLO

(1) Define the terms "Human Development Index".

(2) How is the Human Development Index computed?

(3) Describe the term "Gibson".

(4) Main industries of USSR

(5) Two benefits of British economy

(6) Cultural Revolution

I. Attempt all questions: 3 x 5 = 15

PART A (1st, 2nd)

Note: Q. No. 1 is compulsory. Attempt four more questions.

Maximum Marks: 120

Time: Three Hours

BBA-103
MANAGERIAL ECONOMICS I
24003

BBA/D-22

Total Pages: 04

PH.

4

1. I. 24003(TF)

4

2. 2440
2. Highlight the major features of transport and communication system of British economy.

Unit II (Paper II)

3. Explain the features and trend of economic development of US economy.

4. Discuss the contribution of entrepreneurship and technology in the overall economic development of Japan.


6. Explain how Glasnost and Perestroika become the causes of disintegration of USSR.

Unit III (Paper III)

7. Bring out the factors of speedy economic growth of Singapore economy.

P.T.O.
1. State and describe the following:

- Concept of conservatism
- Generally Accepted Accounting Principles (GAAP)
- Matching principle
- Rules of accounting (debits and credits only)
- Accounting equation

2. Answer the following questions in all 0. No. 1 is compulsory. All questions carry equal marks.

- Explain the two different standards (IFRS and GAAP) and how are the two (IFRS and GAAP) principles (GAAP) different from the Generally Accepted Accounting Principles (GAAP)?

Maximum Marks: 80

Time: Three Hours

Business Accounting
BBA/D-22
24002

Total Pages: 06

Roll No.: 06
and prepare a trial balance.

Journalize the above transactions and post to the ledger.

1. 2+5+3+4=16

Reck due to Landlord

100

Discount allowed by him

20

January 29 Paid to Passed by Passage

20

January 27 Paid for Stationary

20

January 17 Paid to Sale in full settlement

20

January 13 Received from Zahir in full settlement

20

January 11 Look Goods for personal use

20

January 7 paid by change

200

January 5 Bought Goods from Rami for Cash

200

January 3 Sold Goods to Shamina

200

January 2 Bought Goods from Passed

200

2022

200

3,000

2,700

(Rs. 0.00)

222

4,500, Lall (Ct): Rs. 2,700

2,000, Resad (Ct): Rs. 6,000, Shamina (Dr): Rs. 3,000, Zahir (Ct): Rs. 2,400, Stock: Rs. 2,100, Cash in Hand: Rs. 900, Cash at Bank: Rs. 2,100, Short of A/C & Company:

16

On January 2, 2022, the following were the ledger balances:

2. What do you understand by 'Dual Aspect Concept'?
<table>
<thead>
<tr>
<th>Particulars Amount</th>
<th>Amount</th>
<th>Particulars Amount</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Stock</td>
<td>1,250</td>
<td>Purchase</td>
<td>1,780</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Goods Inwards</td>
<td>4,228</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Capital</td>
<td>6,599</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bank Overdraft</td>
<td>1,589</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commission (C.)</td>
<td>380</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Commission</td>
<td>380</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sales</td>
<td>570</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ledger Balance</td>
<td>2,738</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bills Payable</td>
<td>248</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bills In Hand</td>
<td>1,107</td>
</tr>
</tbody>
</table>

**Accounting:**

The accounts are maintained in accordance with the provisions of the Companies Act, 1956.

1. **Balance Sheet:**
   - Assets
   - Liabilities

2. **Income Statement:**
   - Revenue
   - Expenses

3. **Notes:**
   - Date
   - Amount

4. **Trial Balance:**
   - Debit
   - Credit

5. **Capital Structure:**
   - Shares
   - Ledger Balance

6. **Other Observations:**
   - Compliance
   - Non-compliance
3. From 6 English and 4 India, a committee of 5 is to be formed, so as to include at least one lady.

Solve

If \( p = 2 \), find \( \frac{b}{c} \).

(a) \( (b \land d) \land (b \land d) = (b \iff d) \)

Prove that

(b) \( \forall x \exists y \forall z \).

Find the middle term in the expansion of

(c) \( \left( \begin{array}{c} x \\ 1 + x \end{array} \right) \).

Maximum Marks: 80

Time: Three Hours

Roll No. 20

Total Pages: 04
6. (a) Solve the following system of equations by Cramer’s rule:

\[
\begin{align*}
6x + y - 3z &= 5 \\
2x + y + 4z &= 8
\end{align*}
\]

(b) If \( A = \begin{pmatrix} 2 & 3 \\ 1 & 2 \end{pmatrix} \), show that \( A^2 - 4A + I_2 = 0 \). Hence find \( A^{-1} \).

5. (a) Differentiate the function \( f(x) = (x^2 + 1)^{\frac{1}{2}} \sqrt{x^2 + 2} \) with respect to \( x \).

(b) Find the local maximum and local minimum values of the function:

\[
f(x) = x^2 - 6x^2 + 15
\]

4. (a) Evaluate:

\[
\lim_{x \to 2} \frac{x^2 - 4}{x^2 - 2\sqrt{x^2 + 2}}
\]

(b) If \( y = (x^2 + 1)^{\frac{1}{2}} \sqrt{x^2 + 2} \), find \( \frac{dy}{dx} \).

3. (a) If \( A = \begin{pmatrix} 3 & -1 \\ -4 & 5 \end{pmatrix} \), find the inverse of the matrix \( A \).

(b) Also find \( \text{adj}(AB) \).

2. (a) Find the 2nd and 7th term in the expansion of \( (x^2 + 2)^5 \), and show that:

\[
(AB) = B^A
\]

(b) Find the inverse of the matrix \( A = \begin{pmatrix} 1 & 3 \\ 2 & 4 \end{pmatrix} \), then show that:

\[
(AB) = B^A
\]

1. (a) In a class of 60 girls, there are 45 girls who play tennis and 30 girls play cricket. Also each girl likes to play at least one game. Find how many girls play both the games.

(b) Construct a truth table for \( \neg p \lor q \).
2. हे ग्राम की वनस्पति जाति क्या है?

हे ग्राम की वनस्पति जाति हेवरो (Hevea)

1. ज्ञानिता, विज्ञान, व्यवसाय, और सामाजिक क्षेत्र में भावों के स्तर के साथ किस वनस्पति का विवरण है?

(1) ज्ञानिता (2) विज्ञान (3) व्यवसाय (4) सामाजिक क्षेत्र
1. In order of merit:

To make their meaning clear:

4. Use the following terminologies in your own sentences as:

- (a) Mixed
- (b) System
- (c) Survey
- (d) Executive
- (e) Legal
- (f) Industrial
- (g) Denial
- (h) Official
- (i) Face Value
- (j) Advice
- (k) Certificate
- (l) Mortgage
- (m) Penalty
- (n) General
- (o) Write
- (p) of Society
- (q) On compassionate ground
- (r) According to one's ability
- (s) In case of
- (t) Void of common sense
- (u) As far as practicable
- (v) The above
- (w) In the
- (x) It
- (y) To

3. (a) All the above are in common
- (b) All the above are in opposition
- (c) All the above are in agreement
- (d) All the above are in agreement
- (e) All the above are in agreement
- (f) All the above are in agreement
- (g) All the above are in agreement
- (h) All the above are in agreement
- (i) All the above are in agreement
- (j) All the above are in agreement
- (k) All the above are in agreement
- (l) All the above are in agreement
- (m) All the above are in agreement
- (n) All the above are in agreement
- (o) All the above are in agreement
- (p) All the above are in agreement
- (q) All the above are in agreement
- (r) All the above are in agreement
- (s) All the above are in agreement
- (t) All the above are in agreement
- (u) All the above are in agreement
- (v) All the above are in agreement
- (w) All the above are in agreement
- (x) All the above are in agreement
- (y) All the above are in agreement
- (z) All the above are in agreement

2. (a) Constitution officer
- (b) Black sheep of society
- (c) Arch type of society
- (d) Landmark of society
- (e) In contempt of court
- (f) On compassionate ground
- (g) In case of
- (h) Void of common sense
- (i) As far as practicable
- (j) In order of merit

1. Will you eat bread?
- (a) In hand
- (b) Quarter to be gone
- (c) Issued
- (d) Housing loan
- (e) Study loan
1. (a) What is the difference between CPU and GUI?
(b) What are the various types of margins setting in MS-Word?
(c) What do you mean by IP address?
(d) What are the various types of computer

Note: Attempt Five questions in all. Q. No. 1 is compulsory. Rest 4 questions carry equal marks. In addition to that attempt four more questions. All questions carry equal marks.

Maximum Marks: 50

Time: Three Hours

Roll No. 24007

BBA-106

COMPUTER FUNDAMENTALS

24007
8. Explain the purpose of the following in Excel:
(a) Auto Format
(b) Auto Correct
(c) Auto Text
(d) Auto Auto
(e) Auto Auto
(f) Auto Auto
(g) Auto Auto
(h) Auto Auto

9. (a) Explain the purpose of any four types of slides in detail.
(b) Explain various types of views used in PowerPoint in detail.
(c) Explain various types of charts that can be developed in Excel.
(d) Explain how you can create charts in MS-Excel? Explain in detail.
(e) Explain various steps to add a hyperlink in MS-Word.
1. Describe the working of a computer using block diagram along with major components of a computer. Discuss the various applications and limitations of computer.

6. What do you mean by e-Mail? How e-Mail is better as compared to normal postal services. Name a few servers that provide facility to create your e-Mail account. Discuss various types of services provided by a standard e-Mail facility provider.

8. (a) Discuss the major features and drawbacks of Windows.

8. (b) Discuss various ways to connect to an internet.
I. Short answer type questions:

What are the main causes of forgetting?

What is the nature of emotions?

Define Learning.

What is the nature and meaning of perception?

What is the nature and meaning of personality?

II. Define behaviour:

Explain the nature of human behaviour with the help of:

(a) $^s'g$

(b) $^s'g$

(c) $^s'g$

(d) $^s'g$

(e) $^s'g$

(f) $^s'g$

What is the nature of human behaviour?

III. Note:

Attempt five questions in all. No. 1 is compulsory.

Time: Three Hours

Maximum Marks: 80

BBA-201
UNDERSTANDING HUMAN BEHAVIOUR
BBA/D-22
2008

Roll No. [ ]

Total Pages: 02
3. Explain social learning theory and its implications for work behavior.

4. What are the different types of emotions? Explain with the help of physiological symptoms of emotions.

5. What is the nature of motivation? Explain two factors.

6. What are the laws of perceptual organization? How do they affect perception? Explain with the help of suitable examples.

7. What is operant conditioning theory of learning? How is it applied in shaping human behavior?

8. Memory and forgetting both go side by side. Discuss.
1. What is the objective of economic planning in India?

2. What are the techniques of environment scanning? Discuss the techniques of environment scanning.

3. Why should social responsibility be social objective of business? How far social objective affects economic objective of the firm?

4. What do you mean by environment scanning? Discuss the techniques of environment scanning.

5. What are the objectives of economic planning in India?

6. Explain the nature of business ethics. What ethical standards modern companies can set in the present times?

7. Discuss the impact of regulatory framework on industrial structure and performance.

8. Write a detailed note on Competition Act. How does it affect the competitive environment of a country?
I. Explain the following in upto 50 words each:

(a) Use of statistics in management decisions
(b) Observation method of data collection
(c) Line chart
(d) Pictorial diagram
(e) Moments and suitability of Mode
(f) Name of Weighted Index Methods

Note: Q. No. 1 is compulsory and each part of it carries 2 marks. Attempt four questions out of the remaining questions. Each question carries 16 marks.

Roll No. 24010
BBA-203
BBA-D-22
Total Paper: 65

Time: Three Hours

Maximum Marks: 80
2. The following table gives the frequency distribution of the weekly wages (in '00 Rs.) of 200 workers in a factory:

<table>
<thead>
<tr>
<th>Weekly Wages</th>
<th>No. of Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>55 - 59</td>
<td>15</td>
</tr>
<tr>
<td>50 - 54</td>
<td>23</td>
</tr>
<tr>
<td>45 - 49</td>
<td>41</td>
</tr>
<tr>
<td>40 - 44</td>
<td>41</td>
</tr>
<tr>
<td>35 - 39</td>
<td>22</td>
</tr>
<tr>
<td>30 - 34</td>
<td>22</td>
</tr>
<tr>
<td>25 - 29</td>
<td>20</td>
</tr>
<tr>
<td>20 - 24</td>
<td>14</td>
</tr>
</tbody>
</table>

Total: 200

Draw the histogram and frequency polygon of the distribution.

3. Calculate the Mode, Median and Arithmetic Mean from the following data:

<table>
<thead>
<tr>
<th>Class</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 10</td>
<td>05</td>
</tr>
</tbody>
</table>

4. Write down formulas of computing the following:
- Arithmetic Mean of a continuous series and discrete series
- Variance
- Coefficient of variation
- Geometric mean

5. Explain meaning and sources of secondary data. Also explain any two methods of collecting primary data.

6. Arithmetic mean, Mode, Median, Standard deviation, Variance.
6. Explain various methods of collecting primary data. Also explain the difference between sample and census method of conducting surveys.

<table>
<thead>
<tr>
<th>Year</th>
<th>Commodity</th>
<th>Base Year Quantity</th>
<th>Current Year Quantity</th>
<th>Price 50</th>
<th>Price 60</th>
<th>Price 70</th>
<th>Price 80</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>A</td>
<td>10</td>
<td>12</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2011</td>
<td>B</td>
<td>6</td>
<td>10</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>2012</td>
<td>C</td>
<td>4</td>
<td>30</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>2013</td>
<td>D</td>
<td>10</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

7. For the following data prove that the Fisher's Ideal Index tests satisfies both the Time reversal test and Factor reversal test.
1. Explain the following in brief:
   (i) Activity Based Costing
   (ii) Cost Sheet
   (iii) Break-even Point
   (iv) Meaning of Budget
   (v) Classification of Cost
   (vi) Accounting

2. Explain any four characteristics of Management Accounting.

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

All questions carry equal marks.

Time: Three Hours

Maximum Marks: 80

Roll No. 24011

BBA-204

MANAGEMENT ACCOUNTING

24011

P.T.O.
1. What is Cost Accounting? What are its objectives? Also explain the methods of costing.

2. What is the meaning of Management Accounting? What are its functions? Also explain the main techniques of Management Accounting.

3. What are the advantages of Responsibility Accounting?

4. What do you mean by Budgetary Control? What are its advantages? Also describe the limitations of budgetary control.

5. Explain the following in brief:

   (i) Flexible Budget
   (ii) Target Costing
   (iii) Five characteristics of Standard Costing

6. What is meant by Responsibility Accounting? What steps are being taken for introducing it? Also discuss the advantages of Responsibility Accounting.

7. Below is the enumerated expenditure for a year in the manufacture of a product:

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount (₹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Material</td>
<td>14,000</td>
</tr>
<tr>
<td>Electric Power</td>
<td>4,800</td>
</tr>
<tr>
<td>Fuel</td>
<td>2,800</td>
</tr>
<tr>
<td>Tax &amp; Insurance (Factory)</td>
<td>800</td>
</tr>
<tr>
<td>Depreciation on Machine</td>
<td>4,300</td>
</tr>
</tbody>
</table>

   Total: ₹ 32,000
Prepare a cost sheet for the year showing cost per unit for each item of expenses and also the total cost of the production.

Units manufactured: 10,000

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost (₹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Wages</td>
<td>1,26,000</td>
</tr>
<tr>
<td>Advertising</td>
<td>4,800</td>
</tr>
<tr>
<td>Lights &amp; Water</td>
<td>1,600</td>
</tr>
<tr>
<td>Repairs</td>
<td>400</td>
</tr>
<tr>
<td>Salesmen’s Commissions</td>
<td>1,600</td>
</tr>
<tr>
<td>Administrative Expenses (Office)</td>
<td>14,000</td>
</tr>
<tr>
<td>4,000 Carriage on Sales</td>
<td></td>
</tr>
</tbody>
</table>

Prepare a cost sheet for the year showing cost per unit for each item of expenses and also the total cost of the production.

8. From the following find out:

- Required sales to earn a profit of ₹ 2,00,000
- Margin of Safety from the sale of ₹ 12,00,000
- Profit for the sale of ₹ 10,00,000
- Break Even Point (B.E.P)
- Sales: Fixed Cost
- Variable Cost
- Net Profit
- Contribution

<table>
<thead>
<tr>
<th>₹</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,00,000</td>
</tr>
<tr>
<td>6,00,000</td>
</tr>
<tr>
<td>2,00,000</td>
</tr>
<tr>
<td>1,40,000</td>
</tr>
<tr>
<td>1,20,000</td>
</tr>
<tr>
<td>40,000</td>
</tr>
<tr>
<td>60,000</td>
</tr>
</tbody>
</table>
brief about DBMS components. Write in
or DBMS over traditional File Based approach. Why in
Management System (DBMS) Explain the advantages
2. What are the important properties of Data Base

(c) Distinguish between Group and Scalar functions
(d) Operators.

(d) Draw comparison among any two types of SQL

(e) Why do we use Group by and Order by clause in
physical and logical data independence

(f) What is data independence? Distinguish between
unique key and foreign key.

(g) What do you mean by keys? Discuss primary key.

Compulsory Question

All questions carry equal marks.

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

Maximum Marks: 80

BB A-205
FUNDAMENTALS OF DBMS & ORACLE
24012
BBA/D-22

Roll No. 02

Page: 02
Distinguish between the following along with its syntax:

8. When are the advantages of report writing/lis and explain:

D. Delete: DROP and TRUNCATE SQL statement

E. ALTER and UPDATE SQL statement

8 + 8 = 16

7. What is SOL? Discuss data types used in SOL. Write the statement:

6. Explain the use of commands for the following:

b) BACKUP and COPY

c) Inertion control system

5. Discuss the use of computers for the following:

1. What is an Oracle model? Distinguish between:

2. What is mean by DATA model? Distinguish between:

3. Outline a neat sketch and explain the mapping amongst

4. Proposed by ANSI-SPIRE:

5. Different views of three-tier architecture of DBMS as
(10) Write a short note on a commercial letter with the following details:

- Subject: Inquiry for goods
- From: ABC LTD
- To: XYZ Trading Co.
- Date: 25th March 2013

(25) What are the essentials of effective listening?

(i) Briefly describe the importance of effective listening.


Compulsory Question (10 marks)

Answer: I will describe the importance of effective listening. Effective listening is crucial in any communication process as it allows the listener to understand the speaker's message accurately. It involves paying close attention to the speaker's words, tone, and body language. Effective listening helps in avoiding misunderstandings and building a strong rapport with the speaker.

Note: Attempt five questions in all, including the compulsory

Maximum Marks: 80

Time: Three Hours
1. Define Organization Communication. Describe the
2. Discuss various aspects of organization writing.
3. Discuss the importance of effective business
4. What are the essential steps for writing academic reports?
5. Discuss the barriers and strategies in communication.
6. Discuss in detail the importance and nature of business
7. Describe the essential elements of business writing.
8. Discuss the importance of effective business
9. What is the role of communication structure?
10. Discuss briefly the role of communication structure.
1. Discuss the rights and duties of a partner.

2. Discuss the liability of a partner.

3. Write a detailed note on contract and contact.

4. Discuss the capacity to make a contract.

   (a) Contract of sale
   (b) Unilateral agreement
   (c) Negotiable instrument
   (d) Agency
   (e) Mistake

5. Write short notes on the following:

   All questions carry equal marks.

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

Maximum Marks: 80

Time: Three Hours

Paper: 301

BUSINESS LAWS-I

BBA/D-22

24014

Roll No. 02

Total Pages: 02
8. Discuss in detail the rights of an unpaid seller.
6. Discuss the criminal liability of a drawer for issuing cheques.
6. Discuss the essentials of the contract of sale.
1. Write short notes on the following:

- Compulsory Question (answer any five)

(a) Bar code technology
(b) Service Retailing
(c) Trading Area Analysis
(d) What is grid layout in retailing?
(e) Factors affecting retailing
(f) What are impulse sales?
6. Explain the importance of Human Resources in a retail organization along with its implications.

5. What is the importance of store location in retail business? Explain the factors affecting the choice of the general location.

4. Describe the social factors that affect the consumer buying decision process in retailing.

3. What is organised and unorganised retailing? Differentiate between organised and unorganised retailing.

2. Define Retailing. What is changing concept of retailing?

What are the major factors affecting retailing?

1. Describe in detail the advantages and disadvantages of using information technology in a retail business.

8. What is Merchandise Management? Explain the process of merchandise planning in detail.
BBA-303
PRINCIPLES OF BANKING
BBA/D-22
2416

Time: Three Hours
Maximum Marks: 80

1. Write down the following:

2. Attempt four questions out of the remaining two.

Note: Q. No. 1 is compulsory and each part of the question carries 16 marks. Attempt four questions out of the remaining two. Each question carries 16 marks.

(a) Explain the following:
(b) Explain the following:
(c) Explain the following:
(d) Explain the following:
(e) Explain the following:
(f) Explain the following:

3. What are the security issues in use of technology in banks?
4. Role of MUDRA Bank in Micro Finance
5. Role of IFSC in banking sector
6. What is credit card?
7. What is mobile banking?
8. What is ATM?
2. Explain the classification of banks. Why banking sector was opened for private entrepreneurs? Whether the objectives of entry of private sector banks have been achieved? Give comments.

3. What are objectives of Cooperative banks? Describe sources of financing these banks. Also explain role of rural banks.

4. Describe the organisational set up and important functions of Reserve Bank of India. Also explain the provisions of Banking Regulation Act, 1949 regarding provisioning and CRR.

5. Define the term 'bank customer' as per the Banking Regulation Act. Explain the special relation between a banker and a customer with suitable examples.

6. Prepare a list of major reforms in India's banking sector since 1991.

7. Describe the following:
   (a) e-Banking
   (b) Role of OTP
   (c) Meaning and functions of 'small banks'
   (d) Tools for evaluating bank performance

(b) Elaborate the role of banks in financing agriculture, small scale industry and rural sector in general.
8. (a) Explain the principles of risk management. Describe risk paradigm.

(b) Is there any difference between risk management and risk control? Discuss controls in risk management.

(c) Why is cryptography necessary for e-commerce?

1. (a) What is meant by e-commerce and e-business?

(b) What are the most commonly used internet services?

(c) Write a detailed note on internet service providers. What are the benefits of e-commerce and e-business?
1. Describe the components of EDI and the various approaches to EDI.

2. What is EDI? Explain the role of EDI in commerce.

3. Discuss the historic evolution of EDI in commerce.

4. Define EDI. Explain briefly the components of EDI systems.

5. What are the types of EDI systems available in the market? Explain.

6. Differentiate between EDI and VAN. Explain the differences.

7. What is EDI? How does EDI work? Discuss the history of EDI.

8. Discuss the importance of EDI in business operations.

9. Differentiate between TCP/IP and OSI. Explain the laws.

10. Draw comparison between traditional EDI and VAN.

11. Explain briefly the components of EDI systems.
PRINCIPLES OF PRODUCTION

Q. No. 1. All questions carry equal marks.
Compulsory Question (compulsory)

1. Discuss briefly the following:

(a) LIFO
(b) FIFO
(c) Economic Order Quantity
(d) Ordering Cost
(e) Warehousing
(f) Inspection

Maximum Marks: 80

Time: Three Hours

Note: Attempt five questions in all, including the compulsory.
1. What do you understand by the term ‘Inventory’? Discuss some of the inventory classification techniques.

2. Discuss the characteristics, features, significance, and usage of Continuous and Intermittent Production Systems.

3. Clarify the concept of a ‘Product’ and discuss different types of products.

4. Throw light on the concepts of Production Planning and Control. Why and how are these done?

5. What is Statistical Quality Control in production? How and why is it used?

6. Why and how is ISO certification done?

7. Discuss the steps followed in purchasing and why is it different in case of Private and Government Organisations.