PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BVoc DEGREE EXAMINATION DECEMBER 2024
(First Semester)

Branch – NETWORKING AND MOBILE APPLICATIONS
PROBLEM SOLVING TECHNIQUES USING C

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which of the following is NOT a characteristic of a good algorithm? a) Definiteness b) Input and Output c) Ambiguity d) Finiteness	K1	CO1
	2	What is the purpose of a flowchart? a) To display the data in graphical form b) To represent the steps involved in solving a problem c) To create a database d) To analyze a mathematical equation	K2	CO1
2	3	In which year was the C programming language developed? a) 1969 b) 1972 c) 1983 d) 1991	K1	CO1
	4	Which of the following languages influenced the development of C? a) COBOL b) Python c) B d) Fortran	K2	CO1
3	5	Which of the following is NOT a selection statement in C? a) if b) for c) switch d) if-else	K1	CO1
	6	What is the correct syntax for an if statement in C? a) if (condition) { statements; } b) if condition { statements; } c) if { condition; statements; } d) if (condition) statements;	K2	CO1
4	7	Which operator is used to get the memory address of a variable in C? a) * b) & c) % d) @	K1	CO1
	8	What does the * operator do when used with a pointer variable? a) Declares the pointer variable b) Increments the pointer c) Accesses the value stored at the pointer's address d) Assigns a new address to the pointer	K2	CO1
5	9	What is a structure in C? a) A built-in data type b) A user-defined data type that groups different data types together c) A function used for memory management d) A keyword to define constants	K1	CO1
	10	Which keyword is used to define a structure in C? a) struct b) class c) enum d) union	K2	CO1

SECTION - B (35 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Analyze the advantages and disadvantages of using algorithms in problem-solving.	K4	CO5
		(OR)		
	11.b.	Analyze the role of sequences in pseudocode when designing algorithms. Explain how sequences ensure the correct flow of execution and the importance of proper sequencing in achieving the desired outcome.		
2	12.a.	Explain the historical development of the C programming language.	K3	CO4
		(OR)		
	12.b.	Explain about storage class specifiers.		
3	13.a.	Create a C program that uses a for loop to solve a problem involving the generation and analysis of a series of numbers.	K6	CO5
		(OR)		
	13.b.	Design a C program that utilizes a switch statement to simulate a simple calculator.		
4	14.a.	Analyze the use of pointers to dynamically allocate memory for an array of integers.	K5	CO5
		(OR)		
	14.b.	Explain about functions in C with example.		
5	15.a.	Analyze and design a C program that utilizes both arrays and structures to manage a list of products in a store.	K4	CO5
		(OR)		
	15.b.	Analyze the concept of unions in C programming and explain their role in memory management and data representation.		

SECTION -C (30 Marks)
Answer **ANY THREE** questions
ALL questions carry **EQUAL** Marks   (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Discuss the importance of translating an algorithm into code in a programming languages.	K4	CO5
2	17	Evaluate the role of identifiers in C programming by analyzing their significance in different contexts.	K5	CO5
3	18	Develop and implement a C program that effectively demonstrates the use of all four jump statements goto, break, continue, and return.	K3	CO4
4	19	Analyze the potential risks associated with recursion, such as stack overflow, and suggest strategies for mitigating these risks.	K4	CO5
5	20	Design and implement a C program that showcases advanced file handling techniques using both text and binary file operations.	K5	CO5

Z-Z-Z   END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMBER 2024
(First Semester)

BRANCH- NETWORKING AND MOBILE APPLICATION

FUNDAMENTALS OF NETWORKS AND INDUSTRIAL SAFETY

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	What is the term for the data communication system within a building or campus? a) MAN b) LAN c) PAN d) WAN	K1	CO1
	2	Interpret the most common protocol used to retrieve email from a mail server a) FTP b) IMAP c) HTML d) TELNET	K2	CO1
2	3	Relate the layer responsible for process-to-process delivery in a general network model. a) network layer b) transport layer c) session layer d) data link layer	K2	CO2
	4	Which one is preferred for short distance? a) Un-Guided b) Guided c) Indirect d) Direct	K1	CO2
3	5	Why is digital data not easily affected by noise? a) High power transmission b) Cannot easily change binary 1 to 0 c) High frequency transmission d) Low frequency transmission	K1	CO3
	6	Select the following devices used in the network layer. a) Gateway b)Router c) Repeaters d) All the above	K2	CO3
4	7	Relate valid email address format. a) userName@website@com b) userName.website.com c) userName.website@com d) userName@website.com	K2	CO4
	8	Which of the following is the audio streaming application by Microsoft? a) Hangout b) Skype c) Voice d) All of the mentioned	K1	CO4
5	9	What type of hazard is dust and fumes? a) Physical hazards b) Ergonomic hazards c) Chemical hazards d) Mechanical hazards	K1	CO5
	10	Select the one, in case of an accident, the victim should immediately be _____. a) Asked to take rest b) Enquired about the accident c) Attended to d) Left to himself without treatment	K2	CO5

SECTION - B (35 Mark

Answer **ALL** questions

ALL questions carry **EQUAL** (5x7=35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Outline the uses of Computer Networks.	K2	CO1
		(OR)		
	11.b.	Explain Network Protocols.		
2	12.a.	Identify the three major types of guided transmission media used to transmit data.	K3	CO2
		(OR)		
	12.b.	Identify the types of errors in data transmission.		
3	13.a.	Construct the fundamental distinctions between Analog vs. Digital signal.	K3	CO3
		(OR)		
	13.b.	Organize the primary tasks carried out by the Internet's network layer.		
4	14.a.	Examine DNS in Application layer.	K4	CO4
		(OR)		
	14.b.	Classify the three broad categories of streaming Audio/Video.		
5	15.a.	Examine the important factors which are responsible for safety and occupational health.	K4	CO5
		(OR)		
	15.b.	List out the various safety objectives.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Categorize the different types of Networks.	K4	CO1
2	17	List the functions of each layer in OSI reference model with a neat block diagram.	K4	CO2
3	18	Examine the following: i. Transmitting analog data with analog signals ii. Transmitting analog data with digital signals	K4	CO3
4	19	Examine the working and importance of E-mail system.	K4	CO4
5	20	Discover various safety measures while working on plants.	K4	CO5

Z-Z-Z END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BVoc DEGREE EXAMINATION DECEMBER 2024
(Second Semester)

Branch – **NETWORKING AND MOBILE APPLICATIONS**

OBJECT ORIENTED PROGRAMMING USING JAVA

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer ALL questions

ALL questions carry EQUAL marks   (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which of the following is not a principle of Object-Oriented Programming (OOP)? a) Encapsulation b) Abstraction c) Inheritance d) Compilation	K1	CO1
	2	In Java, which of the following defines the state and behavior of an object? a) Class b) Method c) Object d) Variable	K2	CO1
2	3	What type of inheritance is not supported in Java? a) Single inheritance b) Multiple inheritance using classes c) Multilevel inheritance d) Hierarchical inheritance	K1	CO1
	4	If class B inherits class A, and class C inherits class B, what type of inheritance is this? a) Single inheritance b) Multiple inheritance c) Multilevel inheritance d) Hierarchical inheritance	K2	CO1
3	5	Which of the following is the parent class of all exceptions in Java? a) Throwable b) Exception c) RuntimeException d) Error	K1	CO1
	6	Which of these keywords is used to handle exceptions in Java? a) try b) catch c) finally d) All of the above	K2	CO1
4	7	Which class is used to read from a file in Java? a) FileReader b) FileInputStream c) BufferedReader d) All of the above	K1	CO1
	8	The FileOutputStream class in Java is used for: a) Writing byte data to a file b) Reading byte data from a file c) Writing character data to a file d) Reading character data from a file	K2	CO1
5	9	Which of the following is the base class for applets in Java? a) AppletContext b) AppletStub c) Applet d) JApplet	K1	CO1
	10	Which of the following method is called only once during the applet's lifecycle? a) start() b) init() c) paint() d) destroy()	K2	CO1

SECTION - B (35 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks   (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain in details about basic concept of OOPs.	K2	CO2
		(OR)		
	11.b.	Illustrate the concept of constructor with example.		
2	12.a.	Develop the concept of inheritance with example.	K3	CO2
		(OR)		
	12.b.	Construct the concept of method overriding with example.		
3	13.a.	Discuss how exception handling is fundamental in managing object construction in Java.	K3	CO5
		(OR)		
	13.b.	Develop a comprehensive understanding of the Java thread model.		
4	14.a.	Examine how event handling mechanism works in java.	K4	CO5
		(OR)		
	14.b.	Analyze the concept character stream class with example.		
5	15.a.	Examine the basic concepts of Java applets and their lifecycle methods.	K4	CO5
		(OR)		
	15.b.	Analyze the applet architecture with example.		

SECTION -C (30 Marks)
Answer ANY THREE questions
ALL questions carry EQUAL Marks   (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Examine the various methods provided by the String class in Java for handling and manipulating strings.	K4	CO5
2	17	Analyze how to importing a package in java? Explain with proper example.	K4	CO5
3	18	Analyze the different types of exceptions in Java. Discuss the distinction between checked and unchecked exceptions.	K5	CO5
4	19	Evaluate the event listener mechanism in java and how it supports event-driven programming.	K5	CO5
5	20	Analyze the structure and lifecycle of an applet in Java. Construct a complete applet skeleton, explaining each component and its role.	K5	CO5

Z-Z-Z   END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMBER 2024
(Second Semester)

Branch – **NETWORKING AND MOBILE APPLICATIONS**

OPERATING SYSTEM CONCEPTS

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer ALL questions

ALL questions carry EQUAL marks   (10 × 1 = 10)

Question No.	Question	K Level	CO
1	Recall that scheduling is a problem in ------ processing a) Serial b). Multiprogrammed c.) Time-sharing d.) parallel	K1	CO1
2	Show that a process is in main memory and awaiting an event means it is in ---- state a) Ready b) Blocked c) suspend d)Exit	K2	CO2
3	Match from the following that refers to the ability of OS to support concurrent paths of execution within a single process a)Multithreading b) Multiprocessing c) symmetric d) parallel	K1	CO1
4	Show the first state in thread lifecycle a) Spawn b).block c.) Unblock d.) finish	K2	CO2
5	Recall that a fixed-length block of main memory is called as ----- a) Segment b). Page c.) Frame d.) program	K1	CO1
6	Relate the following that refers to the interval of time between the submission of a process and its completion a) Turnaround Time b). Response time c.) Throughput d.) Deadline	K2	CO2
7	Label from the following that takes over control of system bus for transferring data to and from memory a) Programmed I/O b). DMA c.) Interrupt – driven I/O d.) I/O devices	K1	CO1
8	Show that RAID scheme consists of ----- levels a) 4 b). 10 c.) 7 d.) 2	K2	CO2
9	Which of the following refers to collection of related fields a) field b). Record c.) file d.) database	K1	CO1
10	Interpret the file allocation method that chooses unused group that is of sufficient size a) First fit b). Best fit c.) Nearest fit d.) worst fit	K2	CO2

SECTION - B (35 Marks)
Answer ALL questions

ALL questions carry EQUAL Marks   (5 × 7 = 35)

Question No.	Question	K Level	CO
11.a.	Compare Multiprogrammed batch system and Time sharing system.	K2	CO2
	(OR)		
11.b.	Summarize on process and process control block.		

12.a.	Identify the types of threads.	K3	CO3
	(OR)		
12.b.	Make use of the principles of Deadlock.		
13.a.	Apply paging technique for memory management.	K3	CO3
	(OR)		
13.b.	Utilize the three types of processor scheduling.		
14.a.	Categorize the techniques used for performing I/O.	K4	CO4
	(OR)		
14.b.	Examine the need of Disk Cache.		
15.a.	Analyze the issues involved in file sharing.	K4	CO4
	(OR)		
15.b.	List and explain commonly used file allocation methods.		

SECTION -C (30 Marks)
Answer **ANY THREE** questions
ALL questions carry **EQUAL** Marks   (3 × 10 = 30)

Question No.	Question	K Level	CO
16	Classify different states of a process.	K4	CO5
17	Inspect the ways of performing Deadlock Avoidance and Deadlock Detection.	K4	CO5
18	Analyze Round Robin and shortest process next scheduling algorithms.	K4	CO5
19	Examine the disk scheduling policies.	K4	CO5
20	Discover the ways of file organization and access.	K4	CO5

Z-Z-Z   END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BVoc DEGREE EXAMINATION DECEMBER 2024
(Third Semester)
Branch – NETWORKING AND MOBILE APPLICATIONS
WEB TECHNOLOGY

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Who is the father of HTML? (i)Rasmus Lerdorf (ii) Tim Berners-Lee (iii) Brendan Eich (iv) Sergey Brin	K1	CO1
	2	Interpret the correct tag for hyperlink creation using the options given. (i) <link> (ii)<a> (ii) <h1> (iv) <title>	K2	CO1
2	3	Which one of the following contain information about the author? (i) <footer> (ii) <header> (ii) <head> (iv) <body>	K1	CO2
	4	Illustrate how the default style of a link can be modified using the appropriate option. (i) Java script (ii) CSS (iii) PHP (iv) cannot be changed at all	K2	CO2
3	5	Which element defines a table cell (i)<tr> (ii) <tc> (iii) <td> (iv) <te>	K1	CO3
	6	Classify the provided options to identify how JavaScript is placed inside HTML (i) <js> (ii) <script> (iii) <script1> (iv) <javascript>	K2	CO3
4	7	PHP can be directly embedded in which of the following types of documents (i)HTML only (ii)CSS only (iii) Java script (iv) HTML, CSS&JS	K1	CO4
	8	While loop is an _____ control loop? (i) exit (ii) exist (iii) easy (iv) entry	K2	CO4
5	9	Which type of database management system in MYSQL? (i)Object-oriented (ii) Object-based (iii) Relational (iv) Networking	K1	CO5
	10	Illustrate how to properly remove a table from a database using the correct SQL statement. (i)Delete table (ii) Drop table (iii) Remove table (iv) Clear table	K2	CO5

SECTION - B (35 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Outline the key steps required to create an HTML document.	K2	CO1
		(OR)		
	11.b.	Explain how to add images to an html document.		
2	12.a.	Develop a set of examples demonstrating how to adding comments within a style sheet.	K3	CO2
		(OR)		
	12.b.	Apply the principles of HTML5 to create a layout container for a web page.		
3	13.a.	Build a styled table with a well-designed header and demonstrate the CSS used for styling.	K3	CO3
		(OR)		
	13.b.	Apply the concepts of namespaces, classes, and inheritance to create a structured JavaScript program and provide examples.		
4	14.a.	Analyze how PHP code is embedded within HTML and its impact on web page rendering.	K4	CO4
		(OR)		
	14.b.	Categorize different types of string operators and give examples for each category.		
5	15.a.	Analyze the concept of designing a web database using MySQL and provide examples of each.	K4	CO5
		(OR)		
	15.b.	Examine the process of updating records in MySQL and provide examples of different update scenarios.		

SECTION -C (30 Marks)
Answer **ANY THREE** questions
ALL questions carry **EQUAL** Marks   (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Examine about embed plug – in content in HTML with example.	K4	CO1
2	17	Compare the different types of Selectors in CSS with suitable example.	K4	CO2
3	18	Analyze how to creating dynamic objects by using the factory pattern with example.	K4	CO3
4	19	Examine the different String Functions in PHP with suitable example	K4	CO4
5	20	Analyze the processes of altering, deleting, and dropping a table in MySQL, providing examples for each action.	K4	CO5

Z-Z-Z   END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BVoc DEGREE EXAMINATION DECEMBER 2024
(Third Semester)

Branch – NETWORKING AND MOBILE APPLICATIONS

DATABASE DESIGN AND DEVELOPMENT

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer ALL questions

ALL questions carry EQUAL marks   (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	What is a primary key in a relational database? (A) A key that uniquely identifies each record in a table (B) A key that allows duplicate values (C) A key used to define relationships between tables (D) A key used to search the entire database	K1	CO1
	2	Which statement is true about DBMS? (A) It is a programming language (B) It manages data in a database (C) It is used to design computer hardware (D) It only supports structured data	K2	CO1
2	3	What does the SQL command 'SELECT * FROM' do? (A) Deletes all records from a table (B) Selects all columns from a table (C) Updates all rows in a table (D) Joins multiple tables together	K1	CO3
	4	What is the use of the GROUP BY clause? (A) To delete duplicate rows in a table (B) To group rows that have the same values into summary rows (C) To join two or more tables (D) To select all columns from multiple tables	K2	CO3
3	5	Choose the correct statement about a View in SQL. (A) A physical table in the database (B) A virtual table based on the result-set of an SQL query (C) A temporary table stored in memory (D) A table that stores only metadata	K1	CO4
	6	Choose one among the following about the difference between a view and a table. (A) A table is a physical structure, whereas a view is a virtual table (B) A view can store data permanently, while a table cannot (C) A table is used for querying, while a view is used for inserting data (D) There is no difference between a view and a table	K2	CO4
4	7	What is an Entity-Relationship model? (A) A diagram that shows relationships between tables (B) A conceptual representation of data (C) A tool used to create indexes in databases (D) A method to perform database backups	K1	CO2

	8	Which type of dependency does Normalization remove? (A) Functional dependency (B) Referential dependency (C) Transitive dependency (D) Multi-valued dependency	K2	CO2
5	9	What is MongoDB used for? (A) A relational database management system (B) A NoSQL database designed for handling large datasets (C) A file storage system for large files (D) A tool for database migrations	K1	CO5
	10	How to perform a query in MongoDB? (A) Using the SQL `SELECT` statement (B) Using `db.collection.find()` (C) Using `db.collection.query()` (D) Using `db.collection.select()`	K2	CO5

SECTION - B (35 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks   (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain the various roles in a database environment.	K2	CO1
		(OR)		
	11.b.	Summarize the advantages of DBMS over file systems.		
2	12.a.	Build SQL queries to implement set operations.	K3	CO3
		(OR)		
	12.b.	Apply ORDER BY clause to sort results of a query.		
3	13.a.	Construct a simple view and explain its advantages.	K3	CO4
		(OR)		
	13.b.	Build a database and table for storing student information.		
4	14.a.	Analyze the different types of normalization in database design.	K4	CO2
		(OR)		
	14.b.	Categorize Weak and Strong Entity types of a database with examples.		
5	15.a.	Classify and explain the different data types available in MongoDB.	K4	CO5
		(OR)		
	15.b.	Examine the process of Inserting, Saving and Updating documents in MongoDB.		

SECTION -C (30 Marks)
Answer ANY THREE questions
ALL questions carry EQUAL Marks   (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Analyze the concept of Database Integrity and its types.	K4	CO1
2	17	Examine the SQL Aggregate Functions and provide examples.	K4	CO3
3	18	Classify PL/SQL control Statements and illustrate with examples.	K4	CO4
4	19	Assume the role of a Database designer and create an ER diagram for a University Database.	K4	CO2
5	20	Discover how to perform Querying in MongoDB with examples.	K4	CO5

Z-Z-Z   END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BVoc DEGREE EXAMINATION DECEMBER 2024
(Third Semester)

Branch – **NETWORKING AND MOBILE APPLICATIONS**

E-COMMERCE & E-BUSINESS

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer ALL questions

ALL questions carry EQUAL marks   (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Define e-Commerce. A) Electronic Commerce B) Economic Commerce C) Energy Commerce D) Environmental Commerce	K1	CO1
	2	What is e-Business? A) Economic Business B) Energy Business C) Electronic Business D) Environmental Business	K2	CO1
2	3	Expand EDI. A) Electronic Data Integration B) Electronic Data Interchange C) Economic Data Integration D) Economic Data Interchange	K1	CO3
	4	Which of the following is an example of a consumer-oriented e-commerce application? A)GoogleAnalytics B)SAP C)OracleERP D) Amazon	K2	CO3
3	5	What is a firewall? A) A wall built to prevent fire B) A software that creates barriers in networks C) A protocol used in email communication D) A type of internet connection	K1	CO4
	6	What is the purpose of a digital certificate? A) Proof of identity in electronic transactions B) A type of payment system C) A physical certificate for network administrators D) A record of completed transactions	K2	CO4
4	7	What is E-Banking? A) Banking through email B) Banking using the internet C) Banking through a physical branch D) Banking through letters	K1	CO2
	8	Name one electronic payment system. A) Cash Payment B) Cheque Payment C) E-Cash D) Credit Transfer	K2	CO2
5	9	What is Mobile Computing? A) Computing with mobile devices B) Computing in the cloud C) Computing with desktop computers D) Computing with servers	K1	CO5
	10	Select the correct e-Security issue. A) Poor desktop management B) Lack of proper lighting C) Manual record-keeping D) Firewall Breach	K2	CO5

SECTION - B (35 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain the types of e-Commerce.	K2	CO1
		(OR)		
	11.b.	Evaluate the advantages and disadvantages of e-Commerce.		
2	12.a.	Apply the Mercantile Process Model in the context of e-Commerce.	K3	CO3
		(OR)		
	12.b.	Build an explanation of Affiliate Marketing using Amazon.		
3	13.a.	Identify and discuss different types of networks.	K3	CO4
		(OR)		
	13.b.	Discuss the types of Internet topologies.		
4	14.a.	Compare and contrast Traditional Banking vs. E-Banking.	K4	CO2
		(OR)		
	14.b.	Analyze various risks of e-payment system.		
5	15.a.	Classify the risks involved in e-Commerce security.	K4	CO5
		(OR)		
	15.b.	Compare and contrast the GSM vs GPRS.		

SECTION -C (30 Marks)
Answer **ANY THREE** questions
ALL questions carry **EQUAL** Marks   (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Analyze the business strategies that are fueling the growth of e-Commerce.	K4	CO1
2	17	Assume a business scenario and explain the role of EDI in business applications with examples.	K4	CO3
3	18	Categorize the network security concepts including cryptography, digital signature, and SSL.	K4	CO4
4	19	Compare and contrast different types of electronic payment systems.	K4	CO2
5	20	Discover the importance of mobile computing framework and its role in modern e-business.	K4	CO5

Z-Z-Z   END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BVoc DEGREE EXAMINATION DECEMBER 2024
(Fourth Semester)

Branch – NETWORKING AND MOBILE APPLICATION

FUNDAMENTALS OF PYTHON PROGRAMMING

Time: Three Hours   Maximum: 50 Marks

SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (5 x 1 = 5)

1   Which of the following is the correct extension of the Python file?
     a) .python   b) .pl   c) .py   d) .p

2   Is Python code compiled or interpreted?
     a) Python code is both compiled and interpreted
     b) Python code is neither compiled nor interpreted
     c) Python code is only compiled
     d) Python code is only interpreted

3   Which keyword is used for function in Python language?
     a) Function   b) def   c) Fun   d) Define

4   Python supports the creation of anonymous functions at runtime, using a construct called _____
     a) pi   b) anonymous   c) lambda   d) create

5   Which of the following is the truncation division operator in Python?
     a) | b) //   c) /   d) %

SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks   (5 x 3 = 15)

6   a)   Explain the concept of eval() function with example.
                              OR
     b)   Narrate the purpose of commenting in python.

7   a)   Summarize the use of a function.
                              OR
     b)   Distinguish between the local and global variable.

8   a)   How will you accessing the elements of a list? Explain.
                              OR
     b)   Outline the different types of inheritance.

9   a)   State the various operations on Tuples.
                              OR
     b)   Analyze the steps to create a dictionary with example.

10   a)   Show the uses of text input and output functions.
                              OR
     b)   Elaborate the core concepts of computer graphics.

SECTION -C (30 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 x 6 = 30)

11   a)   Analyze the different types of data types available in Python.
            OR
      b)   Enumerate the while loop statement with syntax and example.

12   a)   Discuss the traversing string with for and while loop.
            OR
      b)   Compare the recursion and lambda function.

13   a)   Identify the python inbuilt functions for lists with example.
            OR
      b)   Examine the self parameter and adding methods to a class.

14   a)   Discover the passing variable length arguments to Tuples.
            OR
      b)   Assume the need of traversing nested dictionaries with example.

15   a)   Develop the Python program to compare two text files.
            OR
      b)   Determine the methods used for drawing shapes in PyGame.

Z-Z-Z   END

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMBER 2024
(Fifth Semester)

Branch – NETWORKING AND MOBILE APPLICATIONS

MAJOR ELECTIVE COURSE – I TCP/ IP PROTOCOL SUITE

Time: Three Hours   Maximum: 50 Marks

SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (5 x 1 = 5)

1   A _____ is a set of rules that governs communication.
(i)   interface   (ii)protocol   (iii)service   (iv) header

2   _____ is a connectionless, unreliable transport protocol.
(i) IP   (ii) TCP   (iii) UDP   (iv) HTTP

3   What is the port number of HTTP protocol?
(i) 21   (ii) 25   (iii) 79   (iv) 80

4   _____ is a reliable transport layer protocol.
(i) TCP   (ii) UDP   (iii) RTP   (iv) HTTP

5   _____ is a strategy used when two computers using IPv6 want to communicate
with each other and the packet must pass through a region that uses IPv4?
(i) encapsulation   (ii) header translation
(iii) Tunneling   (iv) dual stack

SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks   (5 x 3 = 15)

6   a   Summarize the internet standards.
OR
     b   Explain the physical addresses used in TCP/IP protocols.

7   a   Explain the concept of fragmentation.
OR
     b   Identify the UDP services.

8   a   Describe the TCP segment format.
OR
     b   Explain about windows in TCP.

9   a   Explain about DNS in the internet.
OR
     b   Outline the TCP timer.

10   a   Describe in detail about address space allocation of IPV6.
OR
     b   Explain about group membership messages.

SECTION -C (30 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks   (5 x 6 = 30)

11 a   Discuss the layers in the OSI Model.

                  OR

   b   Summarize the layers in the TCP/IP protocol suite.

12 a   Analyze the stop and wait protocol.

                  OR

   b   Discuss about checksum.

13 a   Summarize the TCP services.

                  OR

   b   Discuss the TCP connection management.

14 a   Discuss about TCP package.

                  OR

   b   Analyze about the Domain name space.

15 a   Summarize the packet format of IPV6.

                  OR

   b   Discuss about neighbor discovery messages.

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMBER 2024
(Fifth Semester)

Branch- NETWORKING AND MOBILE APPLICATION

.NET TECHNOLOGIES

Time: Three Hours   Maximum: 50 Marks

SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (5 x 1 = 5)

1   The ____ language allows more than one method in a single class
(i)   C++   (ii)   C#
(iii) JAVA   (iv)   PHP

2   A _____ is an identifier that denotes a storage location
(i)   Constant   (ii)   Reference Types
(iii) Keywords   (iv)   Variables

3   ASP.NET applications can be hosted on _____.
(i)   Windows Server   (ii)   Linux
(iii) MacOS   (iv)   Android

4   ASP.NET Web Forms used for_____
(i)   Building REST APIs   (ii)   Database administration
(iii) Creating dynamic web pages   (iv)   Server management

5   _____object is used to fill a DataSet/DataTable with query results in ADO.net.
(i)   DataReader   (ii)   DataTables
(iii) DataAdapter   (iv)   DataSet

SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks   (5 x 3 = 15)

6   a   Write a role on New features of .NET framework 4.5.
                              OR
     b   Write a program for Creating a simple C# Console Application.

7   a   Explain about Encapsulation and Polymorphism with example.
                              OR
     b   How to working with Typography? Explain.

8   a   Explain about exploring resources and with example
                              OR
     b   How to creating a sample ASP.NET 4.5 web Application? Explain.

9   a   Write a note on navigation controls.
<div align="center">OR</div>

    b   How to create Sitemap path controls? Explain.

10 a   Illustrate the needs for master pages and themes.
<div align="center">OR</div>

    b   Explain about Data Reader in ADO.NET.

<div align="center">

SECTION -C (30 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 x 6 = 30)

</div>

11 a   Explicate on Evaluation and Benefit of .NET.
<div align="center">OR</div>

    b   Discuss the data types variables and constants in C#.

12 a   Explain the following i) Pointers ii) Delegates
<div align="center">OR</div>

    b   Implicate Array list with example.

13 a   What is WPF Controls? List out the different types of controls in WPF.
<div align="center">OR</div>

    b   Describe the ASP.NET life cycle.

14 a   Elucidate Standard controls in web forms.
<div align="center">OR</div>

    b   Briefly explain about menu controls in web form.

15 a   Explain about Data Access with ADO.NET.
<div align="center">OR</div>

    b   Explain the creation of Command Objects and working with data adapters.

<div align="center">Z-Z-Z   END</div>

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BVoc DEGREE EXAMINATION DECEMBER 2024
(Fifth Semester)

Branch – NETWORKING AND MOBILE APPLICATION

EMBEDDED SYSTEMS

Time: Three Hours   Maximum: 50 Marks

SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (5 x 1 = 5)

1   Which of the following is not an example of small scale embedded system?
    (i)   Electronic Barbie doll   (ii)   Simple calculator
    (iii) Cell Phone   (iv)   Electronic toy car

2   Which of the following is one time programmable memory?
    (i)   SRAM   (ii) PROM
    (iii) FLASH   (iv) NVRAM

3   For a Commercial embedded product the unit cost is high during _____
    (i) Product launching   (ii) Product maturity
    (iii) Product growth   (iv) Product discontinuing

4   Which port of 8051 is true bidirectional?
    (i) Port 0   (ii) Port 1
    (iii) Port 2   (iv) Port3

5   The term model in EDLC represents
    (i)   The various phases in the life cycle of the product
    (ii) the various analysis of the product
    (iii) the various design of the product
    (iv) the various architecture of the product

SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks   (5 x 3 = 15)

6   a Compare General Purpose Computing System Vs Embedded System.
                          OR
    b. List and explain the major application areas of embedded system.

7   a. Compare RISC and CISC processors.
                          OR
    b. Write about Sensors and Actuators.

8   a. Analyze the importance of non-operational quality attributes of Embedded
       Systems.
                          OR
    b. Explain the different communication bases used in automotive application.

9   a Describe the role of 8051 program memory organization.
                          OR
    b Explain the fundamental issues in hardware software co-design.

10 a Write the objectives of EDLC.
OR
    b. Analyze the bottleneck faced by embedded industry.

SECTION -C (30 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks   (5 x 6 = 30)

11 .a Summarize the classification of Embedded Systems.
OR
    b Identify the different purposes of embedded systems.

12 a Explain the general purpose and domain specific processors.
OR
    b Categorize and explain about the program storage memory.

13 a Point out the important characteristics of Embedded Systems.
OR
    b Explain the inner working of Automotive Embedded Systems.

14 a Interpret the important factors to be considered in the selection process of microcontroller.
OR
    b Summarize the different addressing mode supported by 8051.

15 a Explain the various activities involved in requirement analysis phase of EDLC.
OR
    b Discuss the key processor/architecture trends in embedded systems.

Z-Z-Z   END