

2011000105060001
EXAMINATION APRIL 2025
BACHELOR OF COMPUTER APPLICATIONS (FIFTH SEMESTER)

506 - PRACTICAL AND MINOR PROJECT

[Time: As Per Schedule]

[Max. Marks: 140]

Duration Q-1 to Q-4(Including Evaluation) : 4 Hours
Q-5(Minor Project Presentation and viva-voce) : 1 Hours

Instructions:

- 1. Fill up strictly the following details on your answer book**
 - a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATIONS (FIFTH SEMESTER)**
 - b. Name of the Subject : **506 - PRACTICAL AND MINOR PROJECT**
 - c. Subject Code No : **2011000105060001**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.
5. The 506-Practical and Minor Project is of total 140 marks.
6. Students are required to carry their Practical journal/E-journal.
7. Students must carry their exam hall ticket and id-card.

Seat No:

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Student's Signature

- Q.1** A) Write a shell script to calculate the total number of vowels, digits and consonants of the file entered by the user. **20**
- B) Do as directed **10**
1. List the files which have only read permission for user and write permission for others.
 2. Write a command to convert all capital alphabets to small alphabets on emp file.
 3. Count the no of words from first 10 lines of file.
 4. Display only those words of file fl whose length greater than 10-characters.
 5. Displays all file of working directory whose file name consist of only alphabets.
- Q.2** Make a small web application in php for student. **30**
- 1) Registration page for student
 - 2) Session management
 - 3) Add marks in five subjects
 - 4) Result

- Q.3** Design website which allow to order online foods. **30**
New hotels and food items should be added through admin panel.
Users can allow searching foods with their Descriptions.
- Q.4** Viva + Journal (For Q.-1 to Q.-3) **15**
- Q.5** Minor Project Viva / Presentation **35**

2011000105020001
EXAMINATION MARCH 2025
BACHELOR OF COMPUTER APPLICATIONS (FIFTH SEMESTER)
UNIX & SHELL PROGRAMMING (502)

[Time: As Per Schedule]

[Max. Marks: 70]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATIONS (FIFTH SEMESTER)**
- b. Name of the Subject : **UNIX & SHELL PROGRAMMING (502)**
- c. Subject Code No : **2011000105020001**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Answer in short (Any seven)

14

1. What happen when cd command is executed without argument?
2. What is the importance of init process?
3. Write about the structure of /etc/passwd file.
4. List out functions of kernel.
5. Differentiate between \$@ and \$*.
6. What is sticky bit?
7. List features of shell.
8. What is kill command?
9. Explain touch command.

Q.2 Answer the following. (Any two)

14

1. Explain features of Unix OS.
2. Explain different types of file permissions, how they can be change?
3. Explain booting process of UNIX.

Q.3 Answer the following. (Any two)

14

- (a) Write a note on grep utility.
- (b) Explain conditional execution in Shell programming.
- (c) **Write a command of following for file F1 using 'awk' utility. (Any seven)**
 - 1. Display average of 1st, 2nd, and 3rd fields of file.
 - 2. Display content of file from line number 3 to line number 50.
 - 3. Print odd number of words from each row of file.
 - 4. Print those words which consist of only alphabets.
 - 5. Display all lines of file in uppercase.
 - 6. Display lines of file in reverse order.
 - 7. Count number of vowels in file.
 - 8. Count the occurrences of word 'THE' in whole file.
 - 9. Display all words whose length is less than 10.

Q.4

- (a) Write a script to input file name and check whether entered file is directory or not. If it is an ordinary file then display its content.

7

OR

- (a) Explain expr and backup commands using suitable example.
- (b) **Write a command for following using grep or sed utility. (Any 7)**
 - 1. Display lines from student file which contains "TYBCA" word.
 - 2. Display students who have patel as their surname from student file.
 - 3. Remove all permissions of all users of the student file.
 - 4. Sort the student file on C1 and C2 columns.
 - 5. Insert a blank line before each line of student file.

7

7

6. Display different cities (assume city as column number 2) from a student file.
7. Replace all occurrences of 'unix' with 'OS' in student file.
8. Count number of characters in a first line of student file.
9. Display the processes of user 'VNSGU1'.

Q.5 Answer the following: (Any two)

14

1. Explain mail, mesg, and wall user communication commands.
2. Explain any 4 built-in functions of awk.
3. Explain array in awk.

2011000105030001
EXAMINATION MARCH 2025
BACHELOR OF COMPUTER APPLICATIONS
(FIFTH SEMESTER)
NETWORK TECHNOLOGIES (503)

[Time: As Per Schedule]

[Max. Marks: 70]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATIONS (FIFTH SEMESTER)**
- b. Name of the Subject : **NETWORK TECHNOLOGIES (503)**
- c. Subject Code No : **2011000105030001**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.
5. Write to the point.

Seat No:

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Student's Signature

Q.1 Select an appropriate option.

10

1. What is the full form of UDP?
a) Uniform Data Protocol b) Universal Datagram Protocol
c) User Datagram Protocol d) User Direct Protocol
2. Which network topology requires HUB or central controller device?
a) Bus b) Ring c) Star d) Mesh
3. Which of the following protocol is considered as unreliable and connection less protocol?
a) UDP b) TCP c) IP d) None of these
4. Router operates in which layer of OSI model?
a) Physical layer b) Data Link layer
c) Network layer d) Transport layer
5. What does MANET stand for?
a) My Access Network b) Mobile Ad hoc Network
c) Modem Access Network d) Media Ad hoc Network

6. What is Internet?
- a) Combination of LANS
 - b) Group of unrelated computers
 - c) Group of WANS
 - d) An Internal Network
7. OSI stands for _____.
- a) Open system interconnection
 - b) Operating system interface
 - c) Optical service implementation
 - d) Open service Internet
8. Application layer offers _____ service.
- a) End to end
 - b) Process to process
 - c) Both a & b
 - d) None of the mentioned
9. Which protocol is used for Electronic mail?
- a) SMTP
 - b) HTTP
 - c) FTP
 - d) SIP
10. Which network device operates at the Data Link Layer (Layer 2) of the OSI model?
- a) Router
 - b) Hub
 - c) Firewall
 - d) Switch

Q.2 Answer the following (Any four)

24

1. Write a note on types of networks.
2. What is a Topology? Explain Bus, Ring and Star topologies.
3. List different network devices and explain Router and Switch.
4. List out types of cables used for networking. Explain Fiber Optic Cables.
5. Explain Application layer protocols: SMTP, DNS and POP.
6. Write a short note on Network and Transport layers of OSI reference model.

Q.3 Answer the following (Any four)

24

1. Write a note on architecture of internet.
2. Write a short note on Physical and Data Link layers of OSI reference model.
3. Write comparison between UTP and Co-axial cables.
4. Write a short note on MANET.
5. Differentiate: a) TCP & UDP b) HTTP & HTTPS
6. Write a note on concepts and working of email.

Q.4 Write short notes on following (Any two)

12

1. Presentation layer protocols: FTP, SSL, HTTP.
2. Search Engines.
3. Unicast, Broadcast and Multicast.

2011000105050001
EXAMINATION MARCH 2025
BACHELOR OF COMPUTER APPLICATIONS
(FIFTH SEMESTER)
ASP.NET (505)

[Time: As Per Schedule]

[Max. Marks: 70]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATIONS (FIFTH SEMESTER)**
- b. Name of the Subject : **ASP.NET (505)**
- c. Subject Code No : **2011000105050001**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Select appropriate option

10

1. Which component of the .NET Framework provides the execution environment for managed code?
 - A) Common Type System (CTS)
 - B) Base Class Library (BCL)
 - C) Common Language Runtime (CLR)
 - D) .NET Class Library (NCL)

2. Which of the following is NOT an Object-Oriented Concept?
 - A) Encapsulation
 - B) Inheritance
 - C) Polymorphism
 - D) Scripting

3. Which control is best suited for displaying hierarchical data in ASP.NET?
 - A) Grid View
 - B) Repeater
 - C) Tree View
 - D) Data List

4. Which ASP.NET control is used to validate a user's input to ensure it matches a specified pattern?
 - A) Compare Validator
 - B) Range Validator
 - C) Regular Expression Validator
 - D) Required Field Validator

5. Which object in ADO.NET is used to read data in a forward-only, read-only manner?
 - A) Data Set
 - B) Data Adapter
 - C) Data Reader
 - D) Data Table

6. Which of the following is NOT a method of the SqlCommand class?
 - A) ExecuteReader()
 - B) ExecuteScalar()
 - C) ExecuteDataSet()
 - D) ExecuteNonQuery()

7. Which ASP.NET object is used to send output to the client's browser?
 - A) Request
 - B) Session
 - C) Application
 - D) Response

8. Which method is used to send a Query String from one ASP.NET page to another?
 - A) Response.Redirect()
 - B) Server.Transfer()
 - C) Server.Execute()
 - D) Response.Write()

9. What is the purpose of the Web.config file in an ASP.NET application?
 - A) To handle client-side scripting
 - B) To manage application and session settings
 - C) To define the layout of a web page
 - D) To control database access

10. Which ASP.NET control is used to display the hierarchical navigation structure of a website?
 - A) TreeView
 - B) Menu
 - C) SitemapPath
 - D) TabControl

Q.2 Answer the following

15

- a. Explain .NET framework in detail
- b. What do you mean by Developer Productivity in ASP.NET? Explain in detail.
- c. Explain Event-Driven Programming in ASP.NET.

OR

- a. Explain ASP Page Life Cycle in Detail.
- b. What are Validation Controls? Explain Required Field Validator in detail.
- c. Explain Repeater Control with example.

Q.3 Answer the following

15

- a. What is the use of Master Page in ASP.NET.
- b. Explain Form view control with example.
- c. Explain Command Builder in ADO.NET.

OR

- a. What is use of command object?
- b. Explain ADO.NET connected data model in brief.
- c. Explain Database connectivity with Data Grid View using Data Set

Q.4 Answer the following

15

- a. Explain the differences between client-side and server-side state management.

- b. Describe the communication process between a web browser and a server in ASP.NET. How does ASP.NET handle requests and responses?
- c. Explain Query string in Detail.

OR

- a. Explain Data Set in ADO.NET.
- b. What is Theme? How to Create Theme in ASP.NET?
- c. Explain Response object in Detail.

Q.5 Answer the following (Any Three)

15

- a. What is User Control? What is the Limitation of User Controls?
- b. Explain Web Services in Detail.
- c. Explain Error Handling in Detail.
- d. What is the use of Sitemap path Server Control?
- e. Explain Code sharing techniques in ASP.NET

2211000105010002
EXAMINATION MARCH 2025
BACHELOR OF COMPUTER APPLICATIONS (FIFTH SEMESTER)
ADVANCED WEB DESIGNING

[Time: As Per Schedule]

[Max. Marks: 70]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATIONS (FIFTH SEMESTER)**
- b. Name of the Subject : **ADVANCED WEB DESIGNING**
- c. Subject Code No : **2211000105010002**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Answer the following questions in short. (Any 7)

14

1. Write the use of render() in ReactJS
2. Write the use of limit () and skip () methods in MongoDB.
3. What is JSX?
4. State the purpose of AngularJS directives: \$invalid and \$dirty.
5. Differentiate upsert (), insert () and update () method of MongoDB.
6. What do you mean by 'props' in ReactJS.
7. What is Virtual DOM?
8. What is the use of \$route Provider
9. Write meaning of **var ngApp = angular. module ('myApp', []);** with respect to AngularJS.

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

14

1. Explain the features of NOSQL databases.
2. What is a component in React? Explain class components with an example

3. Define: hooks in React. Also explain how hooks are used to maintain state in functional component.

Q.3 Attempt the following questions. (Any 2) 14

1. What is a module in AngularJS? Give an example of how to create module and its controller in AngularJS.
2. Explain with an example the AngularJS directives: ng-app, ng-init, ng-controller, ng-model and ng-repeat, ng-class and ng-bind.
3. Write in detail: Expressions and filters in AngularJS with example.

Q.4 (A) Use the collection student(rollno, name, age, gender, class, course) and 10

Write the following MongoDB queries (any 5).

1. Display list of all the students of class 'TY'.
2. Sort the collection in descending order of age of students.
3. Display only first 2 documents from collection.
4. Update the documents of course 'BCA' with 'BBA' for all students.
5. Display the documents having age > 17 and course is 'BCA'.
6. Rename the field 'course' to 'selectedcourse'.
7. Remove all documents from the collection.

- (B) Write a code to create a form using ReactJS for inputting the fields (rollno, name and class). On submitting the form, display the details which are given as input. 4**

OR

- (B) Write a code to create 2 radio buttons(show and hide) and a paragraph tag using AngularJS. While clicking on 'show' button, paragraph will be displayed on browser and clicking on 'hide' button will hide the paragraph. 4**

Q.5 Write a short note on following (Any 2)

14

1. MongoDB comparison operators
2. Features of ReactJS
3. HTML DOM directives of AngularJS
4. CRUD in MongoDB

*****END*****

2211000105010003
EXAMINATION MARCH 2025
BACHELOR OF COMPUTER APPLICATIONS (FIFTH SEMESTER)
ADVANCED MOBILE COMPUTING

[Time: As Per Schedule]

[Max. Marks: 70]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATIONS (FIFTH SEMESTER)**
 - b. Name of the Subject : **ADVANCED MOBILE COMPUTING**
 - c. Subject Code No : **2211000105010003**
2. Sketch neat and labelled diagram wherever necessary.
 3. Figures to the right indicate full marks of the question.
 4. All questions are compulsory.
 5. Mention your option clearly.

Seat No:

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Student's Signature

Q.1 Write answer in short (Any 7)

14

1. What are the main differences between val and var in Kotlin.
2. How do you define a property in Kotlin?
3. In which situations would you use the internal modifier in Kotlin?
4. How do you register a click event listener for a button in Kotlin?
5. What does JSON stand for? List its features.
6. What is the role of startActivityForResult in opening the camera app for taking a picture?
7. What is the use of execSQL().
8. Which file needs to be modified for specifying permission in Android application.

Q.2 Answer the following in detail (Any Two)

14

1. Explain to apply constraints to widget in the Constraint Layout? Explain with example to position widget within the layout.
2. Explain Open Class in Kotlin and its importance.

3. Write a note on Lists in Kotlin.

Q.3 Answer the following in detail (Any Two) 14

1. Explain Logcat Pane and how can we use for debugging and logging purposes.
2. Discuss activity lifecycle in detail.
3. Explain JSON Array in detail

Q.4 Answer the following in detail (Any Two) 14

1. Explain similarities and dissimilarities between JSON and XML.
2. Write a note on Intents and their applications with its types.
3. Explain default and named parameters in Kotlin.

Q.5 Answer the following in detail (Any Two) 14

1. Describe how to connect Android based App with Database.
2. Write steps to create android application to access user's current location.
3. Give the steps to create and insert data into SQLite database.

*****END*****

2211000105040002
EXAMINATION MARCH 2025
BACHELOR OF COMPUTER APPLICATIONS
(FIFTH SEMESTER)
WEB FRAMEWORK AND SERVICES

[Time: As Per Schedule]

[Max. Marks: 70]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATIONS (FIFTH SEMESTER)**
- b. Name of the Subject : **WEB FRAMEWORK AND SERVICES**
- c. Subject Code No : **2211000105040002**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Answer the following: (Any Seven)

14

- 1) What is open source?
- 2) What is difference between == and ===?
- 3) Which attribute of FORM tag, will be required for file uploading?
- 4) What is the meaning of ?, * and + character in regular expression?
- 5) What is the meaning of JSON encoding?
- 6) Write about status of ready State property of XMLHttpRequest.
- 7) Explain work of isdir() and isfile() functions.
- 8) What is WSGI?

Q.2 Answer the following: (Any Two)

14

- (1) Write about different PHP tags. Also explain isset(), unset() and unlink() functions.
- (2) Explain PHP data types in detail.
- (3) Explain any seven mathematical functions.

Q.3 Answer the following: (Any Two) 14

- (1) Explain \$_GET, \$_POST and \$_REQUEST.
- (2) Write about directory functions.
- (3) Explain PHP filters in detail.

Q.4 Answer the following: (Any Two) 14

- (1) Explain subprocess module functions.
- (2) Explain Flask App Routing with example.
- (3) Explain Flask Cookie handling in detail

Q.5 Write short note on the following: (Any Two) 14

- (1) Multidimensional Array.
- (2) Session.
- (3) Working of AJAX
