

C-1622

Sub. Code

82742

B.Sc. DEGREE EXAMINATION, APRIL 2024.

Fourth Semester

UI Design and Development

WEB APPLICATION DEVELOPMENT

(2019 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Classify the arrays.
2. What is PHP?
3. What do you mean by polymorphism?
4. Outline on cookies.
5. Opine on the purpose of DBMS.
6. Contrast the DDL from DML.
7. What is the purpose of Normalization?
8. Outline on Transactions.
9. What do you mean by AJAX?
10. Classify the web services.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Narrate the functions and methods.

Or

- (b) Explain the file handling.

12. (a) Explain the OOPS with PHP.

Or

- (b) Describe the various Expressions in PHP.

13. (a) Express your understanding on database operations.

Or

- (b) Discuss about constraints of MySQL DB.

14. (a) Describe the stored procedures in detail.

Or

- (b) How would you optimize the database?

15. (a) Analyse the importance of connecting web services.

Or

- (b) Briefly elaborate on the Ajax Script manager.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Demonstrate the concept of Asynchronous method.

Or

- (b) Discuss on the database connectivity with PHP with illustrations.

17. (a) Explain the joins and order with examples.

Or

- (b) Describe the image manipulation with examples.

18. (a) Illustrate on the URL rewriting.

Or

- (b) Explain the form data handling with example.
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C-1623

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82743

B.Sc. DEGREE EXAMINATION, APRIL 2024

Fourth Semester

UI Design and Development

MOBILE APPLICATION DEVELOPMENT

(2019 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. List the tools in JDK.
2. How to implement Multiple Inheritance in Java?
3. Define Break.
4. What is Constructor?
5. Write about MPL.
6. What is the use of Android emulator?
7. Write about user interfaces.
8. Define Toast.
9. Write about text manipulator.
10. Write about score updation.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) How do you compile the Java program? Explain.

Or

(b) What is meant by Encapsulation?

12. (a) What are the advantages of interface?

Or

(b) Explain about Android SDK.

13. (a) Compare the open source vs traditional development methodologies.

Or

(b) Differentiate between IOS and Android.

14. (a) Describe the Activities.

Or

(b) Explain about Web kit browser.

15. (a) Write a note on recourse directories.

Or

(b) Difference between RelativeLayout and LinearLayout.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) What is a widget? How are they created and used?

Or

- (b) Explain about mobile software's and briefly discuss about its development in platform.

17. (a) Discuss in detail about event listener and handler with example.

Or

- (b) What is persistence? How is data stored and retrieved to a database?

18. (a) Explain about Inter process communication mechanism.

Or

- (b) How are debugging and emulators useful in eclipse for programming?

C-1624

Sub. Code

82755A

B.Sc. DEGREE EXAMINATION, APRIL 2024

Fifth Semester

UI Design and Development

INFORMATION ARCHITECTURE

(2019 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is the information architecture?
2. What is the difference between UX and IA?
3. What is Labelling system in information architecture?
4. What is navigation system in information management?
5. What is card sorting?
6. What is swim lanes?
7. What is web page design?
8. What are the four types of web pages?
9. What is search engine?
10. What are search strings and operators?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) What are the five steps of information architecture?

Or

- (b) What is labelling system in information architecture?

12. (a) What are different types of navigation?

Or

- (b) Discuss on IA search systems.

13. (a) Discuss briefly on usability testing.

Or

- (b) Illustrate the concepts of blue prints.

14. (a) What are the components of a web page?

Or

- (b) Explain briefly on metadata in DBMS.

15. (a) Explain briefly how a search engine works.

Or

- (b) Discuss on search engine architecture.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the taxonomies and meta data.

Or

- (b) Explain the content inventory in information architecture.

17. (a) Discuss the stake holder interviews in information architecture.

Or

- (b) With necessary illustrations explain the information architecture strategy.

18. (a) Explain the controlled vocabulary strategies in web page design.

Or

- (b) Explain the search engine algorithms.
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C-2363

Sub. Code

82715

B.Sc. DEGREE EXAMINATION, APRIL 2024.

First Semester

UI Design and Development

COMMUNICATION AND MEDIA DESIGN

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. What is the primary purpose of communication in any context?
 - (a) To convey information
 - (b) To entertain
 - (c) To confuse
 - (d) To complicate

2. Which of the following is NOT a type of communication?
 - (a) Verbal communication
 - (b) Nonverbal communication
 - (c) Monologue communication
 - (d) Written communication

3. HCI stand for _____.
 - (a) High Computational Integration
 - (b) Human-Cantered Intelligence
 - (c) Human-Computer Interaction
 - (d) High-Caliber Interface

4. Which of the following is NOT a fundamental principle of User Interface (UI) design?
 - (a) Consistency
 - (b) Feedback
 - (c) Complexity
 - (d) Efficiency

5. What does Research Methodology primarily involve in the field of UX?
 - (a) Conducting market research to identify trends
 - (b) Systematic approaches to collect and analyze user data
 - (c) The design of user interfaces
 - (d) Developing marketing strategies

6. What is the role of Design Management in UX design?
 - (a) Managing finances for design projects
 - (b) Overseeing the design team's schedule
 - (c) Ensuring design aligns with business objectives and user needs
 - (d) Handling technical implementation of design concepts

7. What is the primary goal of a pilot study in the context of idea generation and content creation?
 - (a) To generate initial content ideas
 - (b) To test and refine ideas before full-scale implementation
 - (c) To create a final product or service
 - (d) To analyze market trends

8. Which technique is used to visually represent and organize ideas or concepts in a non-linear fashion?
- (a) Pilot study (b) Mind map
(c) 6 thinking hats (d) Ergonomics
9. What is Agile software development primarily known for?
- (a) A highly structured and rigid approach to development
(b) Emphasizing adaptability, collaboration, and frequent iterations
(c) Rapidly completing projects with minimal planning
(d) A focus on individual work over teamwork
10. What is a key concept in the future trends of ubiquitous computing?
- (a) Centralized computing
(b) Isolated devices with no connectivity
(c) Seamless integration of technology into everyday life
(d) A decrease in technological advancements

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain the significance of effective communication in various aspects of life, and provide examples of verbal and nonverbal communication types.

Or

- (b) Define user-centric design and explain its importance in creating user-friendly interfaces for multimedia applications.

12. (a) Describe the key characteristics of interactive and new media.

Or

- (b) Discuss the elements of a well-designed user interface.

13. (a) Explain the importance of user-centered design in the context of UX.

Or

- (b) Discuss the key elements of UX.

14. (a) Explain with suitable examples the process of idea generation in content creation.

Or

- (b) Discuss how mind mapping techniques aid in stimulating creativity and organizing ideas.

15. (a) Explain the significance of defining clear project objectives in project management.

Or

- (b) Describe the User Experience Design (UXD) process in software development.

Part C

(5 × 8 = 40)

Answer **all** questions.

16. (a) Explore the case study of Skinner's Box and its implications for behavioral psychology and communication.

Or

- (b) Define artificial language and natural communication. Compare and contrast these two forms of communication, highlighting their characteristics and applications.
17. (a) Explain the importance of patents in the digital era. How do patents protect intellectual property in the world of software and technology?

Or

- (b) What is the purpose of software rating boards? How do they contribute to the responsible use of digital content and applications?
18. (a) Explain the fundamental principles of User Experience (UX). How do these principles guide UX designers in creating effective and meaningful experiences for users?

Or

- (b) Differentiate between User Interface (UI) design and Interaction Design (IxD). How do these two disciplines work together to create intuitive and engaging user experiences?

19. (a) Define ergonomics in the context of multimedia design. How does ergonomic design impact user experience and engagement with multimedia content?

Or

- (b) Discuss the concept of “the idea of assign” in semiotics. How does it relate to the assignment of meaning to signs and symbols in multimedia?
20. (a) Explain the purpose of a software version control system. How does it enable software development teams to manage changes, track versions, and collaborate effectively?

Or

- (b) Explore the cultural dimension of future trends in ubiquitous computing. How does culture influence the adoption and adaptation of technology in different societies?
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C-2364

Sub. Code

82723

B.Sc. DEGREE EXAMINATION, APRIL 2024

Second Semester

UI Design and Development

UI DEVELOPMENT — I

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. _____ scripting languages is primarily used for client-side scripting.
 - (a) PHP
 - (b) Python
 - (c) Java
 - (d) Ruby

2. The purpose of server-side scripting is _____.
 - (a) Enhancing user interface
 - (b) Executing scripts on the client's machine
 - (c) Processing data on the server
 - (d) Managing client-side interactions

3. In JavaScript, the purpose of a callback function is _____.
- (a) To handle asynchronous operations
 - (b) To manipulate CSS styles
 - (c) To retrieve elements by their class name
 - (d) To validate form input fields
4. In event-driven programming, a listener is _____
- (a) A data structure used to store event handlers
 - (b) A user interface component
 - (c) An object that detects and handles class events
 - (d) A function that triggers an event
5. _____ jQuery function is commonly used to gradually change the opacity of an element.
- (a) Hide ()
 - (b) Fade in ()
 - (c) Fade out ()
 - (d) Show ()
6. The AJAX stand for _____
- (a) Asynchronous JavaScript and XML
 - (b) Advanced JavaScript and XHTML
 - (c) Asynchronous JavaScript and XHTML
 - (d) Advanced JavaScript and XML
7. _____ CSS property is used to control the size of the viewport for a web page.
- (a) Viewport-width
 - (b) Screen-size
 - (c) Page-width
 - (d) Meta-viewport

8. _____ the primary purpose of using responsive design techniques.
- (a) To create visually appealing animations on websites
 - (b) To ensure consistent performance across all devices
 - (c) To optimize websites for search engine ranking
 - (d) To provide an optimal viewing experience across various screen sizes and devices
9. In Bootstrap, _____ class is used to create a responsive image that scales nicely to fit the parent element.
- (a) .img-responsive (b) .responsive-image
 - (c) .img-fluid (d) .fluid-image
10. The purpose of a grid system in a responsive design framework like Bootstrap is _____
- (a) To manage server- side scripting
 - (b) To optimize database queries
 - (c) To apply color schemes to web pages
 - (d) To define the structure and layout of a webpage into rows and columns

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Discuss difference between client-side scripting and server-side scripting.

Or

- (b) Outline the basic structure of a program in a scripting language of your choice.

12. (a) Outline the Document Object Model (DOM) in JavaScript.

Or

(b) Describe the concept of event listeners in JavaScript.

13. (a) Summarize the concept of jQuery functions.

Or

(b) Summarize the process of parsing XML and JSON data in JavaScript.

14. (a) Outline the concept of responsive design and its significance in modern web development.

Or

(b) Explain the concept of grid view in responsive design.

15. (a) Summarize the basics of bootstrap, including its core components and features.

Or

(b) Discuss the implementation of forms in bootstrap.

Part C

(5 × 8 = 40)

Answer **all** questions.

16. (a) Explain the different types of statements in programming, including assignment, conditional, and control statements.

Or

- (b) Discuss the principles of encapsulation, inheritance, and polymorphism in OOP, providing examples to illustrate each principle.
17. (a) Elaborate on difference between one-dimensional and two-dimensional arrays.

Or

- (b) Explain the callback functions in JavaScript and provide examples of where they are commonly used.
18. (a) Discuss the use of animation in web development using JavaScript and jQuery.

Or

- (b) Describe file handling in web development, specifically focusing on importing and exporting data using JavaScript.
19. (a) Explain with provide examples how media queries work.

Or

- (b) Explain how responsive images and videos are implemented using HTML and CSS techniques.

20. (a) Elaborate on basics of bootstrap, including its core components and features.

Or

- (b) Explain common bootstrap components such as navigation bars, buttons, alerts, modals, and carousels.
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C-2365

Sub. Code

82725

B.Sc. DEGREE EXAMINATION, APRIL 2024

Second Semester

UI Design and Development

UX DESIGN — I

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Section A

(10 × 1 = 10)

Answer **all** questions.

1. _____ principle focuses on creating a clear and obvious focal point on a user interface to guide users' attention.
 - (a) Unity and variety
 - (b) Focal point
 - (c) Association and affordance
 - (d) Responsive Design

2. _____ principle focuses on ensuring that a design responds effectively to different screen sizes and devices.
 - (a) Responsive Design
 - (b) Unity and variety
 - (c) Focal point
 - (d) Interaction

3. _____ method involves evaluating a product or interface against a set of predefined usability principles or heuristics.
- (a) User interview (b) Heuristic review
- (c) Empathy map (d) Focus group
4. _____ method is used to visually represent users thoughts, feelings, and behaviours related to a specific experience or situation.
- (a) User interview (b) Focus group
- (c) Empathy map (d) Quantitative research
5. _____ type of statement defines the specific issue or challenge that a research study aims to address.
- (a) Research Questions
- (b) Hypothesis
- (c) Problem Statement
- (d) User Profile
6. _____ term refers to a detailed description of a fictional character representing a segment of a user population.
- (a) User Profile (b) Research Questions
- (c) Ethnography (d) Persona

7. _____ phase of the UX design process involves identifying the key aspects of a project, such as its scope, objectives, and constraints.
- (a) Project Discovery
 - (b) Brand Presence
 - (c) Competitor’s Analysis
 - (d) Creating the proposal
8. _____ term refers to a fictional representation of a typical user, including demographics, behaviours, and goals.
- (a) Content source
 - (b) Persona/User profile
 - (c) User group analysis
 - (d) Marketing campaign
9. The “empathy map” primarily focus on _____.
- (a) Delivering across devices
 - (b) Flexible architecture
 - (c) Personalizing content
 - (d) Understanding user emotions, behaviours, and motivations
10. _____ tool is used to create a detailed representation of a user segment, including their demographics, goals, and behaviors.
- (a) Content Strategy longevity
 - (b) The empathy maps
 - (c) Advanced personas
 - (d) Flexible content strategies

Section B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Discuss the golden rules of UX design.

Or

- (b) Outline the guiding principles of interaction design in UX design.

12. (a) Discuss the difference between quantitative and qualitative research methods.

Or

- (b) Outline the Heuristic review method in user research.

13. (a) Summarize different methods of data gathering.

Or

- (b) Discuss user observation methods in data gathering.

14. (a) Discuss the various components and stakeholders involved in the UX design process.

Or

- (b) Outline the process of project discovery in UX design.

15. (a) Summarize the concept of content strategy and its importance in the design process.

Or

- (b) Discuss the concept of personalizing content in content strategy.

Section C (5 × 8 = 40)

Answer **all** questions.

16. (a) Explain the principles of unity and variety, focal point, balance and proportion in visual design.

Or

- (b) Discuss the effects of good UX design on user experience.

17. (a) Explain the concept of user research methods and their significance in the design process.

Or

- (b) Explain how empathy maps are used to visualize and understand users thoughts, feelings and behaviors.

18. (a) Discuss in detail about the concept of hypothesis and problem statement in research.

Or

- (b) Elaborate on concept of creating personas in user research.

19. (a) Discuss the concept of Usability Criteria (UF) and Critical Success Factors (CSF) in UX design.

Or

- (b) Explain how project discovery involves researching and gathering information about project parameters.
20. (a) Elaborate on how personas are fictional representations of target user segments and how they help guide content creation.

Or

- (b) Explain how flexible content strategies allow for content to be repurposed and adapted across different channels.
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