Q. P. Code: C21DCAD02

(For candidates admitted from 2021 onwards)

Diploma in Computer application and Designing Technology
Examinations, March 2026

OOPS AND PROGRAMMING WITH C++

Time: Three Hours **Maximum: 100 marks**

Section A (10 x 2 = 20 marks)
Answer all questions

1. What are the benefits of Object-Oriented Programming?
2. Recall the important uses of Polymorphism.
3. List any four Operators available in C++.
4. Tell the rules for naming identifiers in C++.
5. How is a static member function different from a regular member function?
6. What is a destructor and when is it called?
7. How do you overload a binary operator using a friend function?
8. What are the limitations of operator overloading in C++?
9. How does compile-time polymorphism work in C++?
10. What is a derived class in C++?

SECTION B – (5 x 6 = 30 marks)

11. (a) Explain in detail about applications of Object-Oriented Programming.

(Or)

(b) What is the role of the #include directive in a C++ program? Provide an example of a program using this directive.

12. (a) Outline the basic data types in C++ with examples.

(Or)

(b) Summarize the importance of scope resolution operator in C++.

13. (a) What is the difference between passing an object by value and by reference? Justify your answer with an example.

(Or)

(b) Explain the concept of dynamic constructors in C++.

14. (a) What are the rules for overloading operators in C++? Discuss the restrictions and limitations with examples.

(Or)

(b) Outline the concept of type conversion in C++ with suitable illustrations.

15. (a) Define inheritance in C++ and explain how it supports code reuse.

(Or)

(b) Write a C++ program to demonstrate the use of "*this*" pointer.

SECTION C – (5 x 10 = 50 marks)

16. (a) Describe the structure of C++ program with sample program segment.

(Or)

(b) Discuss the advantages of using C++ for object-oriented programming and its common applications.

17. (a) Illustrate the process of declaring and initializing variables in C++. How can you initialize a variable dynamically?

(Or)

(b) What are the different types of tokens in C++? Explain each type with examples.

18. (a) Explain private member functions in C++. How do they differ from public member functions, and why are they used?

(Or)

(b) Write a C++ program to generate a Fibonacci Series using Copy Constructor.

19. (a) Discuss the difference between overloading operators as member functions and friend functions with examples.

(Or)

(b) Explain the process of overloading the assignment operator (=) for a class with an example.

20. (a) Summarize the concept of pure virtual functions with an example.

(Or)

(b) Explain in detail about function overriding in C++ with an example.

Q. P. Code: C21DCAD01

(For candidates admitted from 2021 onwards)

Diploma in Computer application and Designing Technology Examinations, March 2026

COMPUTER FUNDAMENTALS

Time: Three Hours **Maximum: 100 marks**

Section A (10 x 2 = 20 marks)
Answer all questions

1. What is an Integrated Circuit (IC) used for in Computers?
2. Which technology is emphasized in the Fifth Generation of Computers?
3. Define Throughput.
4. Recall the main purpose of Windows NT in Enterprise Environments.
5. List the salient features of Local Area Network (LAN).
6. Tell the important characteristics of a Ring Topology.
7. Why data fragmentation is important in Distributed Databases?
8. Where Object-Oriented Databases are commonly used in Real-World Applications?
9. How does Multimedia play a role in Medical Imaging and Healthcare Applications?
10. Choose the type of content that can be created using Multimedia Authoring Tools.

SECTION B – (5 x 6 = 30 marks)

11. (a) Summarize the role of Computers in maintaining Security in Modern Society.

(Or)

(b) What is a minicomputer, and how does it differ from a microcomputer?

12. (a) Identify the important functions of an Operating System.

(Or)

(b) Outline the advantages and disadvantages of Batch Processing in an Operating System.

13. (a) Discuss the role of Search Engines in the Modern Digital World.

(Or)

(b) Illustrate the importance of Teleconferencing with suitable examples.

14. (a) Explain the concepts of a Primary Key and Foreign Key in an ER model.

(Or)

(b) Organize the key components of Distributed Databases.

15. (a) How does Multimedia impact the Entertainment Industry? Discuss.

(Or)

(b) Analyze the role of Multimedia in Corporate Communication.

SECTION C – (5 x 10 = 50 marks)

16. (a) Describe the organization of a basic Computer System with suitable sketch.

(Or)

(b) Discuss the role of Computers in Education and their impact on Traditional Teaching Methods.

17. (a) Enumerate the differences between System Software and Application Software with suitable examples.

(Or)

(b) Outline the Overview of Windows Operating System with suitable illustrations.

18. (a) Explain the role of a Web Browser and how it interacts with Web Servers to display Web Pages.

(Or)

(b) Define Blog. Discuss the various types of blogs and how they serve different purposes on the Internet.

19. (a) What is Normalization in database design? Explain its importance and benefits in organizing a database.

(Or)

(b) Identify the key features of an Object-Oriented Database. How do these features differ from traditional relational databases?

20. (a) Explain the role of Multimedia in Modern Education. How does it enhance the learning experience for students?

(Or)

(b) How storage devices play a crucial role in Multimedia Applications? Discuss the types of storage devices and their importance in storing large multimedia files like videos, images, and audio.

Q. P. Code: C21DCAD03

(For candidates admitted from 2021 onwards)

Diploma in Computer application and Designing Technology
Examinations, March 2026

ADOBE PHOTOSHOP

Time: Three Hours

Maximum: 100 marks

Section A (10 x 2 = 20 marks)
Answer all questions

1. How can you access the image size settings in Photoshop?
2. Define the term "cropping" in the context of Photoshop.
3. What is the purpose of the Rectangular Marquee Tool in Photoshop?
4. Name two types of lasso tools available in Photoshop.
5. What is feathering, and how does it affect an image?
6. Tell two color modes used in Photoshop.
7. What is the purpose of the Clone Stamp Tool in Photoshop?
8. Name two painting tools available in Photoshop.
9. How hue/saturation adjustments affect an image?
10. List two toning tools available in Photoshop.

SECTION B – (5 x 6 = 30 marks)

11. (a) How do you navigate within Photoshop to work efficiently on large images?

(Or)

(b) Discuss the importance of image resolution and how it affects image quality.

12. (a) How do you copy selections and create new layers from them?

(Or)

(b) Discuss the importance of layer arrangement and how it affects image editing.

13. (a) Explain the differences between grayscale and bitmap modes in Photoshop.

(Or)

(b) Describe how defringing is used to improve image quality.

14. (a) How do filters enhance images in Photoshop? Provide examples.

(Or)

(b) Discuss the differences between merging layers and flattening layers, including when to use each option.

15. (a) Describe the process of adjusting brightness and contrast and analyze its effect on image quality.

(Or)

(b) Illustrate how to use levels adjustment layers to correct color and exposure issues.

SECTION C – (5 x 10 = 50 marks)

16. (a) Compare and contrast raster and vector graphics in terms of their characteristics, advantages, and typical use cases.

(Or)

(b) Describe the cropping tool in Photoshop, including how to use it effectively and the differences between cropping and resizing images.

17. (a) Provide a detailed explanation of how to use the Rectangular and Elliptical Marquee Tools, including their advantages and best-use scenarios.

(Or)

(b) Describe the process of transforming layers in Photoshop and how this can be useful in image editing.

18. (a) Compare and contrast color modes (RGB, CMYK, etc.) in terms of their use in digital and print media.

(Or)

(b) Describe the role of feathering in image editing, including how it can be applied to create smooth transitions in selections.

19. (a) Outline the features of painting tools in Photoshop and evaluate their effectiveness in creating digital art.

(Or)

(b) Demonstrate how to add and customize text in Photoshop, including the use of type layers.

20. (a) Explain the process of using hue/saturation adjustments to enhance image colors and assess their effectiveness in different scenarios.

(Or)

(b) Compare various toning tools in Photoshop, evaluate their advantages and limitations, and recommend the best tool for specific image adjustments.

Q. P. Code: C21DCAD04

(For candidates admitted from 2021 onwards)

Diploma in Computer application and Designing Technology
Examinations, March 2026

GRAPHIC DESIGNING USING CORELDRAW

Time: Three Hours **Maximum: 100 marks**

Section A (10 x 2 = 20 marks)
Answer all questions

1. How to select an object in CorelDRAW?
2. Identify the function of the arrange tools in CorelDRAW.
3. Recall the tool used for flipping objects in CorelDRAW.
4. List two ways to format objects in CorelDRAW.
5. What is the purpose of the Contour Effect in CorelDRAW?
6. Name two types of special effects available in CorelDRAW.
7. Tell two options available for customizing the CorelDRAW interface.
8. What is the tool used to work with paragraph text in CorelDRAW?
9. Name two advanced effects available in CorelDRAW.
10. Identify the tool used for tracing bitmaps in CorelDRAW.

SECTION B – (5 x 6 = 30 marks)

11. (a) Describe the process of moving around and viewing drawings in CorelDRAW.

(Or)

(b) Demonstrate basic drawing skills by creating simple shapes and explain the steps involved.

12. (a) Explain the process of adding and selecting text in CorelDRAW, including key steps.

(Or)

(b) Illustrate how to apply basic transformations like rotating, skewing, and flipping on objects.

13. (a) Narrate the process of adding perspective to a drawing and explain when it is useful.

(Or)

(b) Compare the differences between exporting drawings and printing them, including their purposes and file formats.

14. (a) Explain how to customize color settings in CorelDRAW and describe their impact on design.

(Or)

(b) Describe the process of working with layers in CorelDRAW and explain how they help in organizing objects.

15. (a) Explain how to apply styles and templates to a design and describe their impact on consistency.

(Or)

(b) Illustrate how to create custom interactive effects and discuss their use in enhancing designs.

SECTION C – (5 x 10 = 50 marks)

16. (a) Analyze the different drawing and shaping tools in CorelDRAW, compare their features, and recommend which tools are best for specific tasks.

(Or)

(b) Evaluate the importance of arranging objects effectively in a design, including layer management, alignment, and grouping techniques.

17. (a) Construct a poster layout using symbols, clipart, and object formatting to create a balanced and visually appealing design.

(Or)

(b) Develop a graphic design project that incorporates text manipulation, object selection, and advanced shaping techniques effectively.

18. (a) Demonstrate how to apply artistic media and the Contour Effect to create a stylized graphic.

(Or)

(b) Apply the Envelope Effect to transform a text object into a custom shape and evaluate the design outcome.

19. (a) Construct a design that uses layers effectively to manage complex objects and elements.

(Or)

(b) Develop a project that incorporates special text effects, custom layouts, and layer arrangements for a professional look.

20. (a) Illustrate a design that incorporates bitmap editing and tracing using CorelTRACE, ensuring high-quality vector output.

(Or)

(b) Demonstrate a creative project that utilizes Corel R.A.V.E. for animation effects, combined with custom creation tools.