

P.G.D.C.A. DIPLOMA EXAMINATION, MAY 2011

First Semester

Computer Applications

FUNDAMENTALS OF DIGITAL COMPUTER

(Non-CBCS—2004 onwards)

Time : 3 Hours

Maximum : 100 Marks

Part A (15 × 1 = 15)

Answer **all** questions.

1. What is a program ?
2. What is byte ?
3. What is ASCII ?
4. What is non-volatile memory ?
5. What is Register ?

6. Subtract the following Binary Numbers :-

$$10101 \cdot 1010 - 10001 \cdot 0011.$$

7. Write the switching postulates of Boolean Algebra.

8. Give the symbols for AND and OR Gates.

9. Define Bus.

10. What is Multi programming ?

11. What is Virtual Memory ?

12. What is DMA ?

13. Define the term "Source Program".

14. What are the facilities provided by the OS ?

15. What are digital signal processors ?

Part B

(5 × 5 = 25)

Answer **all** questions.

16. (a) Draw a block diagram of computer. Explain the function of each block.

(Or)

(b) Write a procedure to find the occurrence of a digit in the given sequence.

17. (a) What is the advantage of using Hexadecimal Numbers ?

(Or)

(b) Evaluate : (i) $11010 - 10111$, (ii) 110×111 .

18. (a) What is the difference between a Video graphic terminal and a Graph plotter ?

(Or)

- (b) Explain the operation of a flip-flop.

19. (a) List the operation codes.

(Or)

- (b) Show that $X \cdot Y + X \cdot Z + X \cdot Y \cdot Z = X \cdot Y + X \cdot Z$

20. (a) Explain how demand paging Algorithm works.

(Or)

- (b) What do you understand by UNIX pipes ?

Part C

(5 × 12 = 60)

Answer **all** questions.

21. (a) How will you represent integers and fractions ?

(Or)

(b) Explain input methods.

22. (a) Explain any two drives in detail.

(Or)

(b) How will you represent 2's Complement Numbers? Explain.

23. (a) Explain the canonical forms of Boolean Functions.

(Or)

(b) Explain the Memory Communication.

24. (a) Write about high level languages.

(Or)

(b) Why do we need operating system ? Write about any two operating systems.

25. (a) Write about the Evolution of Micro computers.

(Or)

(b) Define Smart card. Classify the Generations of Computer.

P.G.D.C.A. DIPLOMA EXAMINATION, MAY 2011**First Semester****Computer Applications****OFFICE AUTOMATION**

(Non-CBCS—2004 onwards)

Time : 3 Hours

Maximum : 100 Marks

Part A (15 × 1 = 15)

Answer **all** questions.

1. How will you restore windows ?
2. What is the process of arranging Icons ?
3. What is Switching of tasks ?
4. What is MS-word ?
5. Write the steps to Edit a document.

6. List the features of Mail Merge.
7. What is worksheet ?
8. How will you print a worksheet ?
9. Define Date and Time.
10. Write any *two* Mathematical functions.
11. How will you define the header and footer ?
12. List the steps to resize and moving a chart.
13. Define a Template.

14. Define Powerpoint views.

15. What is slide sorter view ?

Part B

(5 × 5 = 25)

Answer **all** questions.

16. (a) What is Menu ? List the operations in Menu.

(Or)

(b) What are the functions of program Manager ?

17. (a) Explain the usage of tabs and their types.

(Or)

(b) Explain the templates and wizards.

18. (a) List the steps in Editing the cells and functions.

(Or)

- (b) List the steps in creating charts.
19. (a) Define Powerpoint. List the steps in creating a presentation.

(Or)

- (b) List the steps in printing a presentation.
20. (a) Write about formatting commands.

(Or)

- (b) Write about Multiple worksheets.

Part C

(5 × 12 = 60)

Answer **all** questions.

21. (a) List the steps in creating Multiple windows.

(Or)

(b) How will you run a MS-DOS program ?

22. (a) List the steps in :

(i) Finding

(ii) Replacing

(iii) Spell checking a text.

(Or)

(b) List the features of MS word.

23. (a) List the functions of worksheet.

(Or)

(b) Write about the Addressing modes, Naming ranges.

24. (a) List the steps in creating a database in a worksheet.

(Or)

(b) Define Macros. List the steps in creating Macros.

25. (a) How will you view the powerpoint presentation ?

(Or)

(b) List the steps in printing a presentation.

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P.G. D.C.A. DIPLOMA EXAMINATION, MAY 2011**First Semester****Computer Applications****PROGRAMMING IN C**

(Non-CBCS—2004 onwards)

Time : 3 Hours

Maximum : 100 Marks

Part A (15 × 1 = 15)

Answer **all** questions.

1. What are the comments used in string ?
2. How will you represent a Bitwise operator XOR ?
3. Define an Unconditional statement.
4. Explain While loop.

5. What is indirection operator ?
6. Define an Array.
7. Strncat (S1, S2, n). What does the function perform ?
8. How will you declare a function ?
9. What is a pointer ?
10. What is a structure ?
11. What is a Malloc ?
12. What are the advantages of using typedef in a program ?

13. What is a tree ?

14. What are sequential files ?

15. What are command line Arguments ?

Part B

(5 × 5 = 25)

Answer **all** questions.

16. (a) Define Constants. Explain the types with relevant examples.

(Or)

(b) Explain about the following :

(i) Break.

(ii) Continue.

17. (a) How an array name is interpreted ? When it is passed to a function ?

(Or)

(b) Write a program to multiply any two Matrices.

18. (a) What is a stack ? How will you implement it ?

(Or)

(b) How a multi dimensional array defined in terms of a pointer ? Explain

19. (a) Write a factorial program to show the usage of Recursion.

(Or)

(b) Explain binary tree with an example.

20. (a) Write short notes on :

(i) fopen, fclose.

(ii) fread, fwrite.

(Or)

(b) Write about Macros in detail.

Part C

(5 × 12 = 60)

Answer **all** questions.

21. (a) Explain conditional statements with suitable examples.

(Or)

- (b) What are Bitwise operators ? How are they used ?

22. (a) What are multidimensional arrays ? Explain with an example.

(Or)

- (b) Explain the string functions in detail.

23. (a) Distinguish between Structures and Unions.

(Or)

(b) Define List. Write a program to implement list.

24. (a) Explain Recursive Algorithms in detail.

(Or)

(b) Describe tree traversal Algorithm with an example.

25. (a) Write a C program to store text in a file and find the vowels present in the text.

(Or)

(b) Write a C program to implement Macros.

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P.G.D.C.A. DIPLOMA EXAMINATION, MAY 2011**First Semester****Computer Applications****VISUAL PROGRAMMING**

(Non-CBCS—2004 onwards)

Time : 3 Hours

Maximum : 100 Marks

Part A

(15 × 1 = 15)

Answer **all** questions.

1. What is GUI ?
2. What are the different types of Brushes ?
3. Write about WinMain procedure.
4. What is the use of Text Boxes ?
5. Write down the properties of Window usage.

6. What is Single Document ? Interface.
7. When will you use picture box ?
8. Mention any two properties of Data Grid.
9. Write the function which will draw a circle.
10. What is the usage of CWnd function ?
11. Where will you Bitmaps ?
12. What is the use of Icon ?
13. What is DAO ?
14. Write about MFC.

15. Name any two Data Access methods.

Part B

(5 × 5 = 25)

Answer **all** questions.

16. (a) Write notes on Message Processing.

(Or)

(b) What is DLI? write its usage.

17. (a) Write notes on variables and constants in V.B.

(Or)

(b) What is Event procedure ?

18. (a) How will you use DDE Events, DDE methods ?

(Or)

(b) What is OLE ? Explain.

19. (a) What are the resources of MFC ?

(Or)

(b) Write a MFC program to display “WELCOME”

20. (a) Explain the advantages and disadvantages of DAO

(Or)

(b) Write about database applications with multiple document usage.

Part C

(5 × 12 = 60)

Answer **all** questions.

21. (a) Write a SDK program for freehand drawing.

(Or)

(b) Explain the GDI functions.

22. (a) What are the various string functions in VB ?

(Or)

(b) Write notes on (i) Forms (ii) Single Document Interface.

23. (a) Explain about Activex control.

(Or)

(b) How to use Data control in V.B. application ? Explain with an example.

24. (a) Explain the AFX functions.

(Or)

(b) Write about ODBC.

25. (a) Write a MFC program to display a Bitmap.

(Or)

(b) Explain Dat Access Methods.

P.G.D.C.A. DIPLOMA EXAMINATION, MAY 2011
Second Semester

Computer Applications

OBJECT ORIENTED PROGRAMMING AND C++

(Non-CBCS—2004 onwards)

Time : 3 Hours

Maximum : 100 Marks

Part A (15 × 1 = 15)

Answer **all** questions.

1. Write notes on Software crisis.
2. Write down command structure of a C++ program.
3. What are command line arguments in C++?
4. What is friend function ?
5. Define the various parameter passing mechanisms supported by C++.

6. What is return by reference ?
7. How will you use arguments in C++ ?
8. What is the use of destructors ?
9. What is Binary operators ?
10. What is empty operators ?
11. What is abstract class ?
12. Write the difference of using private and protected member function.
13. Write about “try” statement.

14. What is generic class ?

15. Define Manipulators.

Part B

(5 × 5 = 25)

Answer **all** questions.

16. (a) Write a C++ program using inline function.

(Or)

(b) Explain about control structures in C++.

17. (a) How will you use two dimensional array in C++ ?
Give an example.

(Or)

(b) What is Virtual function ?

18. (a) Explain Operator overloading with example.

(Or)

(b) Write about multiple constructors with an example.

19. (a) Describe the concept of parametrized constructors.

(Or)

(b) Write a C++ program to find whether the given word is palindrome or not ?

20. (a) Explain the file I/O functions.

(Or)

(b) What are generic classes and functions ?

Part C

(5 × 12 = 60)

Answer **all** questions.

21. (a) What is meant by token ? Explain the types of tokens with example.

(Or)

- (b) Explain the control structures in C++.

22. (a) What is a class in C++ ? How does it differ from a structure in C ? Explain with example.

(Or)

- (b) (i) Write a C++ program for friend function.

(ii) Write notes on pointers to members.

23. (a) What are read only objects ? What is the role of a constructor in such objects ?

(Or)

(b) Write about polymorphism.

24. (a) Explain the inheritance concept in detail.

(Or)

(b) How will you use nesting of classes ? Explain.

25. (a) Write about function template with an example.

(Or)

(b) Write about exception handling.

P.G.D.C.A. DIPLOMA EXAMINATION, MAY 2011**Second Semester****Computer Applications****INTERNET PROGRAMMING**

Time : 3 Hours

Maximum : 100 Marks

Part A (15 × 1 = 15)Answer **all** the questions.

1. What are the internet requirements ?
2. What is TCP / IP ?
3. Define IP address.
4. What do you mean by URL ?
5. Define Newsgroup.

6. What is Gopher ?
7. What is the use of 'What is' database ?
8. What is Telnet ?
9. Define IRC.
10. What declarations are required for every Java application ?
11. What are identifiers ?
12. What are calling methods ?
13. Differentiate between exception and error in Java ?

14. How will you concatenate two strings ?

15. What is I/O filter ?

Part B

(5 × 5 = 25)

Answer **all** questions.

16. (a) What is the nature of shell account?

(Or)

(b) Write short notes on – Online information services.

17. (a) Write notes on : Search Engines.

(Or)

(b) How to post your own articles in internet ?

18. (a) How does archie works ?

(Or)

(b) How mailing list is different from usenet news groups ?

19. (a) What are the operators used in Java ? Brief with example.

(Or)

(b) What is Package ? List the use of Package.

20. (a) What is the principle behind inheritance ? List out the advantages of inheritance.

(Or)

- (b) What are Applet's life cycle methods ? Explain them.

Part C

(5 × 12 = 60)

Answer **all** the questions.

21. (a) (i) What do you need in order to use ISDN ? (6)
- (ii) Write short notes on PPP account.

(Or)

- (b) How to use mail from shell account ? Explain in detail.

22. (a) Explain in detail about URL schemes, host names and port names.

(Or)

- (b) Explain Usenet.

23. (a) Explain the usage of FTP client for anonymous FTP.

(Or)

(b) Explain the types of internet talk facility.

24. (a) Explain the flow control statements in Java.

(Or)

(b) Brief the usage of interfaces with suitable example.

25. (a) Explain in detail about networking concept of Java language with example.

(Or)

(b) Describe AWT.

P.G.D.C.A DIPLOMA EXAMINATION, MAY 2011**Second Semester****Computer Applications****R.D.B.M.S.**

Time : 3 Hours

Maximum : 100 Marks

Part A

(15 × 1 = 15)

Answer **all** the questions.

1. What is file processing ?
2. What is attribute ?
3. Define data abstraction.
4. List the tools of Oracle.
5. Define Primary key.

6. How constraint is defined in table creation ?
7. What is NULL ?
8. What is the use of Ceil function ?
9. How user is created in SQL * PLUS ?
10. What is Object binding in Oracle ?
11. Give the syntax to create index.
12. Define View.
13. List any two privileges available in Oracle.

14. Who is DBA ?

15. How comments are represented in Report Writer ?

Part B

(5 × 5 = 25)

Answer **all** the questions.

16. (a) Explain Codd's rule.

(Or)

(b) Describe Network model with example.

17. (a) Explain about DML statements.

(Or)

(b) Write short notes on Data types.

18. (a) Explain about Date functions.

(Or)

(b) Write short notes on Sub Queries.

19. (a) Write short notes on object definition in database.

(Or)

(b) Explain about views.

20. (a) Write short notes on Grant.

(Or)

(b) Explain in detail about commit.

Part C

(5 × 12 = 60)

Answer **all** the questions.

21. (a) Explain in detail about Data Models.

(Or)

(b) Describe with sketch about DBMs architecture.

22. (a) (i) Write short notes on logical comparison.

(6)

(ii) Explain Query expression Operator.

(6)

(Or)

(b) Explain SQL statements.

23. (a) Explain about SQL functions.

(Or)

(b) Describe about Join Theory in SQL.

24. (a) Write short notes on :

(i) Sequence.

(ii) Synonyms.

(Or)

(b) Explain in detail about View.

25. (a) How DBA create users and grant privileges in SQL ? Explain with example.

(Or)

(b) Explain about Report writer of SQL.

P.G.D.C.A. DIPLOMA EXAMINATION, MAY 2011**Second Semester****Computer Applications****SOFTWARE ENGINEERING**

Time : 3 Hours

Maximum : 100 Marks

Part A (15 × 1 = 15)Answer **all** the questions.

1. List the Categories of Projects.
2. What do you mean by life cycle Model ?
3. How will you define solution strategy ?
4. Differentiate between design and architectural design.
5. Define Coupling.

6. What is Software metric model ?
7. What do you mean by faults ?
8. What is Reliability of models ?
9. What is the use of database as study tool ?
10. Define Testing Criteria.
11. What is psychology of testing ?
12. Define System testing.
13. What is data abstraction ?

14. Why ADA language is used in project definition ?
15. What is the syntax for defining exception Handling ?

Part B

(5 × 5 = 25)

Answer **all** questions.

16. (a) Describe COCOMO.

(Or)

- (b) Write short notes on team standards.

17. (a) Write short notes on Modularity Concepts.

(Or)

- (b) Explain about Verification Methods.

18. (a) Write short notes on Software reliability.

(Or)

(b) Write short notes on availability models.

19. (a) Write short notes on Boundary value Analysis.

(Or)

(b) Explain about Mutation testing.

20. (a) Explain about Data abstraction.

(Or)

(b) Write short notes on Concurrency Models.

Part C

(5 × 12 = 60)

Answer **all** the questions.

21. (a) Explain about phased Life Cycle model.

(Or)

(b) Explain how you define a Software problem.

22. (a) Explain about design notations.

(Or)

(b) Explain in detail about Software Metrics.

23. (a) Explain the steps involved in preparing Manuals.

(Or)

(b) Explain about software errors, faults, repair and availability of software project.

24. (a) Explain about testing fundamentals.

(Or)

(b) Explain about the Metrics in Reliability estimation.

25. (a) Explain about ADA features and commands.

(Or)

(b) Describe in detail about Software development environments
