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1 SEM PGDCA (R) FoC 1

2019

(January)

COMPUTER APPLICATION

Paper : 101

(Fundamentals of Computer)

Full Marks : 60

Pass Marks : 24

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Answer **any five** : 5×2=10
- (a) What is the importance of Cache memory?
 - (b) What is BCD code ?
 - (c) What is binary language ?
 - (d) What is application software ? Give example.

Contd.

(e) What is DBMS?

(f) What is booting?

2. (a) Write down the differences between application and system software. 5

(b) Explain the different classifications of computer. 5

Or

What is firmware? Give its applications.

3. (a) Explain the functions of Operating System. 5

Or

Explain the main features of Linux and Unix Operating System.

(b) Write down the steps to create — $2 \times 2\frac{1}{2} = 5$

(i) a chart in MS Excel

(ii) a hyperlink in MS Word.

4. (a) Explain the different types of impact and non-impact printers. $2\frac{1}{2} \times 2 = 5$

(b) What is RAM? Explain different types of RAM. $1 + 4 = 5$

Or

Explain the working of magnetic disk with proper diagram.

5. (a) Convert the following : **(any five)** $5 \times 1 = 5$

(i) $(101110.1110)_2$ into decimal

(ii) $(A1E)_{16}$ into octal

(iii) $(1239)_{10}$ into hexadecimal

(iv) $(786)_{10}$ into octal

(v) 12345.48 into hexadecimal

(vi) $(256)_{10}$ into binary.

(b) Explain the different generations of languages with examples. 5

6. (a) Write down the differences : **(any two)** $2\frac{1}{2} \times 2 = 5$

(i) RAM and ROM

(ii) Compiler and Interpreter

(iii) Internet and Intranet.

(b) Explain about the single-user multitasking and multi-user multitasking operating system.

5

Or

Write down the steps to insert pictures and header and footer in MS PowerPoint.

5

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1 SEM PGDCA (R) PWC

2019

(January)

COMPUTER APPLICATION

Paper : 102

(Programming with C)

Full Marks : 60

Pass Marks : 24

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. (a) What is the size of int? 1
- (b) What is a flowchart? 1
- (c) What is the significance of stdio.h? 1

Contd.

2. Answer **any eight** of the following questions : $2 \times 8 = 16$

- (a) Define variable. Give example.
- (b) Why do we use # define in our program ?
- (c) Draw the basic structure of a C program.
- (d) Explain switch statement.
- (e) Define array.
- (f) Draw the flowchart for maximum of two numbers.
- (g) Write **any two** string functions with their actions.
- (h) What are Pointers ? How to use Pointers ?
- (i) Explain in brief, the nested if statement.

3. (a) Explain storage classes in brief. 3
- (b) Briefly explain the increment and decrement operators. 4

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(c) Explain the stages in array initialization. 4

4. Answer **any five** from the following :

- (a) Differentiate between : **(any three)** $2 \times 3 = 6$
- (i) while loop and do-while loop
 - (ii) break statement and continue statement
 - (iii) array and variable
 - (iv) call by value and call by reference.
- (b) Defines structure. Write C code for declaring a structure for 30 students. Assume your own data members. $2+4=6$
- (c) Explain in brief, the concept of recursion. Write a C program using recursion. $2+4=6$
- (d) Describe the different kinds of loops available in C. 6
- (e) Briefly explain the concept of file handling in C. 6

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Contd.

(f) Write a C program to find the sum of all the elements present in an array. 6

(g) Write a C program to find the largest of three numbers using function. 6

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1 SEM PGDCA (R) RDBMS 3

2019

(January)

COMPUTER APPLICATION

Paper : 103

(Relational Database Management System)

Full Marks : 40

Pass Marks : 16

Time : Two hours

The figures in the margin indicate full marks for the questions.

1. Answer the following questions : 2x5=10
 - (a) Define the following :
 - (i) Database
 - (ii) DBMS
 - (b) What is the use of primary key ?
 - (c) Write two advantages of SQL.

Contd.

(d) What is a view?

(e) Define the terms Metadata and Schema.

2. (a) What is RDBMS? Explain the concept of DOMAIN and TUPLE with examples. 5

OR

Explain the Aggregate function of SQL with example.

(b) Explain the use of any five data types used in MySQL. Give example. 5

OR

Explain the use of Natural Join with example.

3. (a) Explain the set operators of relational algebra with example. 5

OR

Explain the select and project operations in Relational Algebra.

(b) Discuss DDL, DML and DCL with examples. 5

OR

Explain the use of VIEW statement in SQL. Give example.

4. (a) Explain the elements of an ER diagram with examples. 5

OR

Draw an ER diagram for a hospital with following entities : DOCTOR, PATIENT & TEST.

(b) Explain the concept of 1NF and 2NF. 5

OR

Explain the differences between full functional dependency and partial dependency.

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1 SEM PGDCA (R) DCCN 4

2019

(January)

COMPUTER APPLICATION

Paper : 104

**(Data Communication and Computer
Network)**

Full Marks : 40

Pass Marks : 16

Time : Two hours

**The figures in the margin indicate
full marks for the questions.**

1. Fill in the blanks : 1×5=5
- (a) The three important goals of data communications are correct delivery, accurate delivery and _____ delivery.
- (b) The fundamental basis of data communication is _____.
- (c) In _____, we transmit all the 8 bits at a time.

Contd.

(d) In _____, if a node fails, the whole network cannot function.

(e) As a signal travels through any medium, its strength decreases due to _____.

2. Answer the following questions :

(a) State *two* disadvantages of mesh topology. 1

(b) A signal has a bandwidth of 40Hz and its highest frequency is 100Hz. What is its lowest frequency? 2

3. Answer *any two* from the following :

3×2=6

(a) Compare and contrast parallel and serial transmission methods.

(b) Explain the types of transmission errors.

(c) Explain Time Division Multiplexing.

4. Answer *any three* from the following :

(a) Explain in brief the term bandwidth. Why is it useful? 3+1=4

(b) Briefly explain half-duplex and full-duplex transmissions. 4

(c) Describe the Sliding Window technique. 4

(d) Explain how Vertical Redundancy Check (VRC) works. 4

5. (a) Explain the merits and demerits of ring and bus topologies. 6

OR

(b) Draw a hybrid topology using four ring topology with star as backbone. 6

6. (a) (i) How many parts are there in an IP address? Explain them. 1+3=4

(ii) Explain Transport and Application layer in TCP/IP. 4

OR

(b) Explain the different layers in the OSI model. 8

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2 SEM PGDCA (R) IM 1

2019

(April)

COMPUTER APPLICATION

Paper : 201

(Introduction to Multimedia)

Full Marks : 60

Pass Marks : 24

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Define : **(any five)** 1×5=5

(1) Plotter

(2) Printer

(3) Scanner

(4) Camera

(5) Aspect ratio

(6) Frame size

Contd.

- (7) Dithering
- (8) 2D-Graphics
- (9) Hype Media.
2. (a) What are the different components of Multimedia? Explain them. 5
- (b) Explain the different types of font families. 5
- (c) What are the basic properties of sound? 2
- (d) What are the different audio file formats? Explain them. 5
- (e) What is MIDI? Explain and state the types of ports defined by the MIDI specification. 5
3. (a) What is a color model? Explain the different types of color models. 5
- (b) Write a short note on color palettes. 3
- (c) What is lossy or loseless compression? Explain. 5
- (d) Explain the process of working with selection by using selection tools. 5
4. (a) (i) What is a Video? What are the different types of video signals? Explain them. 5
- Or**
- (ii) Explain the different broadcast video standards. 5
- (b) What are the advantages of Digital representation of a video? 2
5. (a) What are the different types of animation? Explain. 3
- Or**
- (b) Write the steps for designing an animation sequence. 3
6. (a) What is Animation? What are keyframes? 2
- (b) What is Morphing? What are its applications? 3

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2 SEM PGDCA (R) DTP 2

2019

(April)

COMPUTER APPLICATION

Paper : 202

(DTP)

Full Marks : 40

Pass Marks : 16

Time : Two hours

The figures in the margin indicate full marks for the questions.

1. What is DTP ? 1
2. What is PageMaker ? 1
3. Write the function(s) of the following tools in CorelDRAW : 3
 - (i) Text tool
 - (ii) Polygon tool
 - (iii) Mesh Fill tool.

Contd.

6. Describe the workspace of CorelDRAW. 3

OR

What are Dockers? What are the different types of Dockers? Explain. 3

7. What are the different kinds of encoding schemes? Explain each of them in detail. 3

8. Answer the following :

(a) What is the use of Document set-up dialog box? 2

(b) Describe the workspace of Photoshop. 2

(c) What are layer palettes? Describe in brief. 2

(d) Explain in brief, the process of Lithography. 2

(e) Explain the different types of printing processes. 3

4. Answer the following :

(a) Explain the method of creating and using perfect shapes in CorelDRAW. 2

(b) What is Adobe Photoshop? 1

(c) What is Histogram? 1

(d) What is Smart Object? 1

(e) What are the different kinds of Photoshop tools? Explain them in brief. 3

(f) Differentiate between traditional printing and modern typography. 2

5. Define the following : (*any three*) 3

(i) Type Color

(ii) Typography

(iii) Type Design

(iv) Type Style

(v) Dithering

(vi) Photoresists

(vii) Mask making.

9. What are the different tools in PageMaker ?
Explain. 3

OR

Explain the process of defining styles and applying them in PageMaker.

10. Describe the different color styles in CorelDRAW. 2



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2 SEM PGDCA (R) IWT 3

2019

(April)

COMPUTER APPLICATION

Paper : 203

(Internet and Web Technology)

Full Marks : 60

Pass Marks : 24

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following questions : 1×5=5

(a) What is URL?

(b) What is a Web Browser?

(c) What are the three primitive data types in JavaScript?

Contd.

(d) Write the differences between get() and post().

(e) What is session?

2. Answer the following questions: $2 \times 5 = 10$

(a) Write the differences between internet and intranet.

(b) Write the advantages of E-Commerce.

(c) Define Email. What is the use of CC?

(d) What is the use of html form?

(e) Write *two* characteristics of JavaScript.

3. Answer the following questions: $3 \times 5 = 15$

(a) Differentiate Traditional commerce from E-Commerce.

(b) Define the following:

(i) Hypertext

(ii) Markup language

(iii) Web page.

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(c) Enlist and describe any six (html) formatting tags.

(d) What is an event-driven program?

(e) Write php code to begin a session.

4. Answer the following: **(any five)** $5 \times 6 = 30$

(a) Write JavaScript code to count sum of digits.

(b) Write php code to show database connectivity.

(c) Write the differences between JavaScript and PHP.

(d) Write HTML code to create your biodata.

(e) Explain the use of CSS with example of different techniques to implement it with HTML.

(f) Write JavaScript code to calculate the Simple Interest.

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(g) Write HTML code to create a form to input and submit the following information :

Roll number, First Name, Last Name, Age, Sex and Hobbies.

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2 SEM PGDCA (R) MT 4

2019
(April)

COMPUTER APPLICATION

Paper : 204

(Mobile Technology)

Full Marks : 60

Pass Marks : 24

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following : 2x6=12
- (a) Define a mobile device.
 - (b) What is GSM ?
 - (c) State the generations of mobile.
 - (d) Define XSL.
 - (e) State two advantages of Android.
 - (f) What is VoLTE ?

Contd.

2. (a) Compare and contrast 3G with 4G. 6

(b) Explain the advantages of VoLTE over LTE. 6

3. (a) Describe the functions of Operating System. 6

OR

Explain the characteristics of an Operating System. 6

(b) Briefly describe about two popular mobile operating systems. 6

4. Answer **any two** from the following :

6×2=12

(a) Compare Goggle Android OS with iOS with relative advantages and disadvantages.

(b) Explain the advantages of Java over other programming languages.

(c) Describe how to insert audio and video tags in HTML5 with example.

5. Answer **any two** from the following : 6×2=12

(a) Explain how XML data can be displayed using CSS.

(b) Create the XML documents to display information of five different books with book name, author, publisher, price, year of publication.

(c) Explain the benefits of Android Studio in android application development.