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1 SEM PGDCA (R) FOC 101

2021

(held in April, 2022)

COMPUTER APPLICATION

Paper : 101

(Fundamentals of Computers)

Full Marks : 60

Pass Marks : 24

Time : Three hours

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

1. Answer the following : **(any five)**

2×5=10

- (a) Define BIT and BYTE.
- (b) State *two* features of MS Word.
- (c) What are the basic operations of computer ?
- (d) Differentiate between analog and digital computers.

Contd.

- (e) What are the different components of a computer system? 5
- (f) What is volatile and non-volatile memory? 5
2. (a) With the help of a block diagram explain the basic organization of a computer system. 5
- (b) Explain five internal and external dos commands. 5

Or

- (c) What is mail merge? Give the basic steps in using mail merge in MS Word. 1+4=5
3. (a) Explain the different generations of computers in detail. 5
- (b) Differentiate between application and system software. 5

Or

- (c) Differentiate between machine language and high level language. 5
4. (a) Describe the page formatting tools in MS Word. 5

- (b) Convert the following : **(any two)** $2\frac{1}{2} \times 2 = 5$

- (i) $(4D.C8)_{16} = (\underline{\quad})_2$
- (ii) $(178.92) = (\underline{\quad})_8$
- (iii) $(10110.1110)_2 = (\underline{\quad})_{10}$
5. (a) Explain the different functions of an Operating System. Write down the advantage of using Linux operating system. 3+2=5
- (b) Define the terms : **(any two)** $2\frac{1}{2} \times 2 = 5$
- (i) Compiler
- (ii) 4GL
- (iii) BCD
6. (a) Explain the different classification of computer. 5
- (b) Explain different types of computer memory. 5

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1 SEM PGDCA (R) PwC 102

2021

(held in April, 2022)

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. Answer the following : 1×5=5
- (a) What is the use of %d in C ?
 - (b) Define C constant.
 - (c) A function cannot be defined inside another function. (State True or False)
 - (d) What is the use of \t in C ?
 - (e) Mention how to write a comment in C.

Contd.

2. Answer the following : **(any five)** $2 \times 5 = 10$

(a) What would be the output of the following program ?

```
main ()
{
    int a=5, b=2;
    int c;
    c=a%b;
    printf("%d", c);
}
```

- (b) What is an array ?
- (c) Write how a variable can be declared in C.
- (d) Write the use of strlen () function.
- (e) What is pointer in C ?
- (f) How many bytes of memory is occupied by a variable declared as float ?

3. Differentiate between : **(any five)** $3 \times 5 = 15$

- (a) C character and C string
- (b) while and do-while loop
- (c) break and continue statement
- (d) built in function and user defined function

(e) increment and decrement operators

(f) getchar () and getch ()

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

(a) Write a C program to add two numbers using pointer variable. 6

(b) What is structure ? Explain the syntax of structure declaration with example. $2+4=6$

(c) Write a C program to find the sum of the elements of an array. 6

(d) Write a C program to find the largest of three numbers. 6

(e) Briefly explain about C operators with example. 6

(f) Define switch in C. Write a C program using switch. $2+4=6$

(g) Write a C program to print all the numbers between 1 and 100 which are divisible by 3. 6

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1 SEM PGDCA (R) RDMS 103

2021

(held in April, 2022)

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 : 2×5=10

(a) What is a database ?

(b) What is meta data ?

(c) Define RDBMS.

(d) What is an entity ?

(e) Define 2NF.

Contd.

2. (a) Explain the three-schema architecture of database. 5

(b) Briefly describe about different RDBMS terminologies. 5

Or

(c) Explain the advantages of RDBMS. 5

3. (a) Define DDL, DML and DCL with example. 6

(b) Explain four different data types used in MySQL. 4

Or

(c) Differentiate 1NF from 2NF. 4

4. (a) Briefly write about different components of an ER diagram. 5

Or

(b) Prepare an ER diagram for a Bookstall management system. 5

(c) Explain the procedure of creating views from two different relations. 5

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1 SEM PGDCA (R) DCACN 104

2021

(held in April, 2022)

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

2×5=10

- (a) What is data communication ?
- (b) Why repeater is used in computer network ?
- (c) Write the characteristics of STP.

Contd.

- (d) Define IP address.
- (e) Define bandwidth.
- (f) What is multiplexing?

2. Answer **any six** from the following :

5×6=30

- (a) Explain analog signal and digital transmission in brief.
- (b) Describe simplex, half-duplex and full-duplex mode of communication.
- (c) Compare and contrast between serial and parallel transmission.
- (d) Describe tree topology along with its advantages and disadvantages.
- (e) Explain *any five* layers of OSI model.
- (f) Describe the sliding window technique.
- (g) State the advantages and disadvantages of co-axial cable.
- (h) Describe circuit switching.