SEAT No._____ *[No of Pages: 02]*

[A-47]

# SARDAR PATEL UNIVERSITY
## POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS (PGDCA)
## FIRST SEMESTER
## PGDCA-101 (PC SOFTWARE)
## 11th April 2017

**Time: 2 PM to 5 PM** **Marks: 70**

**Q1. Choose the appropriate option:** **[08]**

i. The database file MCA.DBF having memo field creates _____ file
   a. MCA.DBF b. MCA.FPT c. MCA.MEM d. None of given

ii. Excel displays the address of the active cell in the _____.
   a. Status bar b. Toolbar c. Formula bar d. None of given

iii. The number of rows in Excel 2007 is _____.
   a. 1048576 b. 10488567 c. 1047576 d. None of given

iv. The extension of the Microsoft Powerpoint 2007 file is _____.
   a. ppt b. pps c. pptx d. None of given

v. MODI COMM GEB creates _____ file.
   a. GEB.DBF b. GEB.PRG c. GEB.TXT d. None of given

vi. In Excel every formula will start with _____ sign.
   a. & b. $ c. = d. . None of given

vii. In Excel, if, the cell address is relative then the row number and column name will be preceded with _____ sign.
   a. = b. & c. $ d. None of given

viii. In FoxPro, Sort command creates another file having _____ extension.
   a. dbf b. mem c. fpt d. . None of given

**Q2. Answer the following: [Any 7]** **[14]**

i. List out the four main functions of a computer.
ii. What do you mean by a spreadsheet? Write at least two names of well known spreadsheet package.
iii. What do you mean by the term 'DBMS'?. Write the name of 2 well known DBMS.
iv. Differentiate clearly : INPUT and ACCEPT commands of FoxPro.
v. Explain briefly Macro feature of Microsoft Excel
vi Explain briefly @ SAY...GET command
vii. Write commands to open two database file named TDCA.DBF and TMCA.DBF in different work area.
viii. What is the use of format file?

**Q3. Answer the Following Questions.**

[A] Write at least four features of PowerPoint 2007. **[06]**

[B] Define the term Office Automation. Draw the model of automated office. **[06]**

**OR**

[B] Explain briefly the main characteristics of a computer. **[06]**

**Q4. Answer the Following Questions.**

**[A] Do as directed.**

i. Explain briefly the different cell addressing scheme of Microsoft Excel. **[04]**

ii. Differentiate clearly Advanced filter and Auto filter. **[02]**

**[B]** Explain with example(s) the following Excel functions:**[Any TWO]** **[06]**

i. =IF() ii. =ROUND() iii. =LEN()

**OR**

**[B]** Write short note on features (at least SIX) of MS Word. **[06]**

**Q5. Answer the Following Questions.**

**[A]** Explain the following FoxPro commands with example(s). **[06]**

i. IF ii. REPLACE

**[B]** Explain with example SORT and DELETE command. **[06]**

**OR**

**[B]** Explain the concept of handling multiple database files in FoxPro with example(s). **[06]**

**Q6. Answer the Following Questions.**

**[A] Do as directed:**

i. Differentiate clearly : LIST and DISPLAY ALL commands of FoxPro. **[02]**

ii. Explain briefly the following FoxPro commands/functions: **[04]**

USE command and =ABS()

**[B]** Explain briefly the following FoxPro built in function with example. **[Any TWO]** **[06]**

i. PROPER() ii. CEILING() iii. MOD()

**OR**

**[B]** Write the steps to design a custom screen of your choice in FoxPro. **[06]**

*GOOD LUCK*

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# SARDAR PATEL UNIVERSITY

POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS (PGDCA)

SEMESTER – I

PGDCA-102 (C AND DATA STRUCTURE)

13TH APRIL, 2017

**Time : 2:00 p.m. to 5:00 p.m.** **Marks : 70**

**Note : Answers of all the questions (including multiple choice questions) should be written in the provided answer book only.**

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**Q-1 Pick up the most appropriate answer from the given alternatives and write in your answer book.** **(8)**

**(i)** _____is a graphical representation of an algorithm.

[A] Process [B] Flow Chart [C] Program [D] None of these

**(ii)** Which one of the following is a valid keyword in C language?

[A] for [B] FOR [C] FORE [D] For

**(iii)** In C programming language, _____ are used to store values in memory.

[A] operators [B] variables [C] functions [D] None of these

**(iv)** In C language, a++ is equivalent to -

[A] a+1 [B] a+2 [C] a+0 [D] None of these

**(v)** The operations PUSH and POP are related to -

[A] Array [B] Stack [C] Queue [D] List

**(vi)** A linked list is a _____ data structure.

[A] Linear [B] Non-linear [C] Both [A] & [B] [D] None of these

**(vii)** In C programming language, two functions in the same program can never have same _____.

[A] name [B] arguments [C] code [D] None of these

**(viii)** A data structure in which insertion and deletion of an elements occurs at only one end is known as _____.

[A] Queue [B] Tree [C] Graph [D] Stack

**Q-2** Attempt the following: (**ANY SEVEN**) **(14)**

I. What do you mean by compiler? Explain in brief.
II. Define program. Write a C program that prints "Hello World" as output.
III. Write an algorithm to find maximum number out of given two numbers.
IV. List and explain in one line any four data type of C.
V. What is the use of printf() and scanf() functions in C?
VI. Differentiate : break and continue.
VII. Explain ternary operator with an example.
VIII. List down the main operations that are performed on a data structure.
IX. Write a few lines on user-defined function.
X. Explain the use of clrscr() with an example.

| | | | |
|---|---|---|---|
| **Q-3** | **(a)** | Draw and explain the block diagram of computer. | **(6)** |
| | **(b)** | Explain any six operators of a C language with an example. | **(6)** |
| | | **OR** | |
| | **(b)** | Explain high level language and assembly language in detail. | **(6)** |
| **Q-4** | **(a)** | Explain entry control loop and exit control with an example. | **(6)** |
| | **(b)** | Define the term 'Array'. Explain initialization process of 1-dimensional array with an example. | **(6)** |
| | | **OR** | |
| | **(b)** | Write a C program to find and display the factorial of a given number. | **(6)** |
| **Q-5** | **(a)** | Define the term 'data structure'. Discuss various types of a data structures in brief. | **(6)** |
| | **(b)** | Explain switch and break statements with an example. | **(6)** |
| | | **OR** | |
| | **(b)** | What is 'Stack'? Explain various stack operations and applications of a stack. | **(6)** |
| **Q-6** | **(a)** | Explain queue data structure. Write an algorithm to insert an element in queue in front. | **(6)** |
| | **(b)** | Discuss linked list in detail with appropriate example. | **(6)** |
| | | **OR** | |
| | **(b)** | Write a note on file management. | **(6)** |

— X —

SEAT No._____

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No. of printed pages: 02

# SARDAR PATEL UNIVERSITY

## POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS (PGDCA)
## SEMESTER- I EXAMINATIONS, MONDAY, 17th APRIL 2017
## PGDCA - 103 (LOGICAL ORGANIZATION OF COMPUTER)

**Time: 2:00 pm to 5:00 pm** **Total Marks: 70**

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**Q.1 Select the most appropriate answer of the following questions:** [8]

1. The ASCII code uses ____ bits to represent its binary value.
   A. 6 B. 7
   C. 8 D. None of these
2. In hexadecimal number system, C is equal to _____ in decimal number system.
   A. 10 B. 11
   C. 12 D. 13
3. $(1000110111)_2 = (\_\_\_\_\_)_8$
   A. 167 B. 1067
   C. 10067 D. None of these
4. _____ is an output device.
   A. keyboard B. mouse
   C. printer D. None of these
5. In _____ data storage, data is preserved even if the power is turned off.
   A. Primary B. Secondary
   C. Volatile D. None of these
6. An addressing mode for specifying operand's full address in memory is called as _____ addressing mode.
   A. Implicit B. Register
   C. Indirect D. Direct
7. Program counter is a register which has address of _____ instruction to be executed.
   A. current B. next
   C. previous D. None of these
8. The circuit in which state is changed on clock transition is called as _____.
   A. Flip Flop B. Register
   C. Clock Flop D. None of these

**Q.2 Answer the following questions: [Any Seven]** [14]

1. List characteristics of simple computer.
2. Convert hexadecimal number 2A3B to binary and octal number system.
3. Add two binary numbers 11011 + 01111 and give result in decimal value.
4. Differentiate between Volatile and Non-Volatile memory.
5. Mention steps for fetch-decode-execute cycle.
6. Explain OPCODE in brief.
7. Draw OR gate for two inputs and one output and give its truth table.
8. What is multiplexer? Give uses of multiplexer.
9. What is a register? Give its use.

| | | | |
|---|---|---|---|
| **Q.3** | **A** | Draw block diagram of a simple computer and explain its functional unit in detail. | **[06]** |
| | **B** | Explain ASCII and EBCDIC character codes in detail. | **[06]** |
| | | **OR** | |
| | **B** | Discuss IEEE Floating Point representation in detail. | **[06]** |
| **Q.4** | **A** | Write a note on input/output devices. | **[06]** |
| | **B** | Explain any one technique of Processor Level Parallelism in detail. | **[06]** |
| | | **OR** | |
| | **B** | Explain any one technique of Instruction Level Parallelism in detail. | **[06]** |
| **Q.5** | **A** | Define trap and interrupt. Mention difference between trap and interrupt. Give uses for trap and interrupt. | **[06]** |
| | **B** | State and prove De-Morgan's law. | **[06]** |
| | | **OR** | |
| | **B** | What is a truth table? Give truth table for NAND gate with three inputs A, B and C. | **[06]** |
| **Q.6** | **A** | Write a note on Integrated circuits. | **[06]** |
| | **B** | Discuss half-adder and full-adder circuits in detail. | **[06]** |
| | | **OR** | |
| | **B** | Write a note on latches. | **[06]** |

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SEAT No._____

No. of Printed Pages: 2

# Sardar Patel University

## Post Graduate Diploma in Computer Applications (PGDCA)

SEMESTER – I Examination

PGDCA-104 : Network Fundamentals

Wednesday, 19th April, 2017

Time: 02:00 PM to 05:00 PM

Max Marks: 70

**Q1. Choose the most appropriate option for each question.** [8]

i. In ____mode of transmission both stations can transmit and receive, but not same time.
   A) Simplex B) Duplex
   C) Half-Duplex D) Full-Duplex

ii. In _____topology, every device has a dedicated point-to-point connection with only the two devices on either side of it.
   A) Ring B) Mesh
   C) Star D) Bus

iii. _____ is a set rule that govern data communications.
   A) Network B) Protocol
   C) Transmission D) None of these

iv. Which of the following is a light source in fiber optics?
   A) LED B) LCD
   C) Halogen D) None of these

v. Which of the following is not an example of guided media?
   A) Twisted Pair Cable B) Fiber Optic cable
   C) Satellite D) None of these

vi. Which of the following connector is used with coaxial cable?
   A) RJ45 B) RJ11
   C) BNC D) RJ35

vii. The full form of URL is_____.
   A) Uniform Resource Locator B) Universal Resource Locator
   C) Unidentified Resource Locator D) Unanimous Resource Locator

viii. Which of the following networking device is used at network layer of TCP/IP model?
   A) Hub B) Router
   C) Bridge D) Switch

**Q2. Answer the following questions (Any seven):** [14]

i. What is point-to-point network?

ii Define the term computer networks.

iii. What do you mean by bit-rate and byte-rate?

iv. What do you mean by MODEM?

v. Write full form of TCP/IP. How many layers does TCP/IP model have?

vi. What is the main difference between synchronous and asynchronous transmission?

vii. What is the main advantage of multiplexing?

viii. Explain in brief about Local Area Network.

ix. Write full form of OSI and HTTP.

**Q3. Answer the following questions:**

a. Write a note on advantages of computer networks. [6]

b. What do you mean by wireless networks? Explain the advantages of wireless networks over wired networks. [6]

**OR**

b. What do you mean by transmission media? Explain twisted pair cables in detail. [6]

**Q4. Answer the following questions:**

a. Which are the popular switching techniques? Explain any one of them in detail. [6]

b. List the layers of OSI reference model. Explain any two of them in detail. [6]

**OR**

b. Write a note on design issues of layers. [6]

**Q5. Answer the following questions:**

a. Explain **any two** topologies in detail : (i) Mesh (ii) Bus (iii) Ring [6]

b. What is multiplexing? Write the differences between FDM and TDM. [6]

**OR**

b. What do you mean by satellite? Explain advantages and disadvantages of using satellite. [6]

**Q6. Answer the following questions:**

a. Write a note on WWW. [6]

b. Write a note on DNS. [6]

**OR**

b. What is E-mail? Explain the architecture and services for the e-mail. [6]

CA-143 SEAT No._____

# SARDAR PATEL UNIVERSITY

**Post Graduate Diploma in Computer Applications I Semester Examinations**

**PGDCA-105: SYSTEMS ANALYSIS AND DESIGN**

**Date: 21/04/2017** **Time: 2:00 pm to 5:00 pm** **Marks: 70**

**Q.1 Select an appropriate answer for each the following questions: [08]**

**1) _____ is a feature that separates a system from its environment.**
a) Boundary
b) Input / Output
c) Processes
d) None of these

**2) Open systems interacts with its _____.**
a) Customers
b) Environment
c) Users
d) All of these

**3) _____is a fact finding technique.**
a) Interviewing
b) Questionnaire
c) Record inspection
d) All of these

**4) _____ is a mixed blessings.**
a) Requirements anticipation
b) Requirements investigation
c) Requirements documentation
d) All of these

**5) _____ is an example of an integrated tool.**
a) Programming languages
b) Screen generator
c) CASE tool
d) All of these

**6) _____is a type of system that handles routine and structured transactions of a business.**
a) MIS
b) TPS
c) DSS
d) None of these

**7) _____ is a major quality control.**
a) Coding
b) Testing
c) Analysis
d) None of these

**8) _____ method for systems development initiates with known requirements and has quick and iterative nature.**
a) SDLC
b) Prototype
c) Structured development
d) None of these

**Q.2 Answer following questions in brief. [ANY SEVEN] [14]**

1) Define systems development.
2) What is an economic feasibility?
3) Define role of systems analyst in a big firm.
4) Give full form and one line description of MIS. Also list outputs of a typical MIS.
5) Describe observation as a fact finding techniques in brief.
6) Define steering committee approach to develop a system.
7) Explain process of post implementation review in brief.
8) What are the objectives of good design? List any two with one line description of each.
9) Define peak load testing.

**Q.3 [A]** Describe concept of system with suitable diagram in detail. **[06]**

**[B]** Explain decision tree by taking a suitable example. **[06]**

**OR**

**[B]** Write a short note on end users systems development approach. **[06]**

**Q.4 [A]** Define tool. Give advantages of computerized tool. Also list and explain various tools that are used for systems development. **[06]**

**[B]** Explain various symbols used in DFDs by giving its detail descriptions. **[06]**

**OR**

**[B]** Draw FDD, context level DFD and detailed DFD for a system for typical diet monitoring system. **[06]**

**Q.5 [A]** Describe of prototype as a method for system development approach. **[06]**

**[B]** What is structured approach for systems development? What are the advantages of it? Explain in detail. **[06]**

**OR**

**[B]** Write a short note on data dictionary. **[06]**

**Q.6 [A]** Describe various conversion methods to convert the old system into new system. **[06]**

**[B]** Write a short note on output design. **[06]**

**OR**

**[B]** List and explain various types of testing methods you know. **[06]**

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