

SEAT No. \_\_\_\_\_

No. of Printed Pages: 02

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**Sardar Patel University**  
**Post Graduate Diploma in Computer Applications (PGDCA)**  
**Semester – II External Examinations**  
**PGDCA-201 Operating Systems**  
**Monday, 10th April, 2017**

Time: 2:00 p.m. to 5:00 p.m.

Max Marks: 70

**Q-1 Choose the most appropriate option for each question:**

[8]

- i. Full form of JCL \_\_\_\_\_
- A. Job Command Language      B. Job Common Language  
C. Job Control Language      D. None of these
- ii. A stack section of a process contains \_\_\_\_\_ variables
- A. Global      B. Dynamic  
C. Local      D. None of these
- iii. A process control block (PCB) is also called \_\_\_\_\_ control block.
- A. Task      B. Program  
C. Job      D. None of these
- iv. The \_\_\_\_\_ counter indicates the address of the next instruction to be executed for this process.
- A. Line      B. Page  
C. Program      D. None of these
- v. A Base register is also called \_\_\_\_\_ register.
- A. Registration      B. Removal  
C. Reference      D. None of these
- vi. The \_\_\_\_\_ register can be written by the host to start a command or to change the mode of a device.
- A. Status      B. State  
C. Control      D. None of these
- vii. \_\_\_\_\_ is the collection of related data.
- A. Directory      B. File  
C. Register      D. None of these
- viii. During \_\_\_\_\_ lock other process can read a file but cannot write.
- A. Write      B. File  
C. Read      D. None of these

**Q-2 Answer the following questions (Any Seven):**

[14]

- i What is a System call?  
ii Define: Context Switch  
iii Explain Kernel Mode.

- iv Define: a) Logical Address b) Physical Address
- v List the fields in the each element of a linked list of Hashed tables.
- vi Define following : i) Synchronous device ii) Sequential access mode
- vii List and explain attributes of the file.
- viii List the necessary conditions for deadlock.
- ix Define Following: i) Logical Resources ii) Physical Resources

**Q-3 Answer the following questions:**

- A. Define the term "Operating System". Discuss history and evolution of it. [6]
- B. Write a note on different types on user interfaces in operating system. [6]

**OR**

- B. Write a note on Unix Operating System. [6]

**Q-4 Answer the following questions:**

- A. Write a note on virtual memory. [6]
- B. Explain basic page replacement algorithm with diagram. [6]

**OR**

- B. Find average waiting time using Round Robin scheduling algorithm. (Time quantum=5ms) [6]

| Process | Arrival Time | Burst Time (in ms) |
|---------|--------------|--------------------|
| P1      | 0            | 10                 |
| P2      | 5            | 15                 |
| P3      | 9            | 23                 |
| P4      | 10           | 5                  |

**Q-5 Answer the following questions:**

- A. Discuss Block and Character Devices in detail. [6]
- B. List and Explain different types of File Access Methods. [6]

**OR**

- B. What do you mean by the term "directory"? Explain any two types of it. [6]

**Q-6 Answer the following questions:**

- A. Explain Deadlock Prevention and Deadlock avoidance techniques. [6]
- B. Write a note on inter-process communication. [6]

**OR**

- B. Discuss typical PC bus structure with diagram [6]

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SEAT No. \_\_\_\_\_

**SARDAR PATEL UNIVERSITY**

Post Graduate Diploma in Computer Applications II Semester Examinations

**PGDCA-203 (Object Technology)**

Date: 15/04/2017

Time: 2:00 pm to 5:00 pm

Marks: 70

**Q-1 Select the appropriate answer for the following questions: [08]**

1. Full form of JVM is \_\_\_\_\_.
  - (a) Java Valid Machine
  - (c) Java Virtual Machine
  - (d) Java Valid Mechanism
  - (e) None of these
2. Binary link associates \_\_\_\_\_ entities.
  - (a) 1
  - (b) 2
  - (c) 3
  - (d) Many
3. \_\_\_\_\_ is used to reduce effective multiplicity.
  - (a) Meta data
  - (b) Role name
  - (c) Qualifier
  - (d) None of these
4. Output of a java compiler is \_\_\_\_\_.
  - (a) Big data
  - (b) Virtual data
  - (c) Key data
  - (d) Byte code
5. Java is \_\_\_\_\_.
  - (a) Platform independent
  - (b) Object oriented
  - (c) Robust
  - (d) All of these
6. Return type of a constructor in java is \_\_\_\_\_.
  - (a) void
  - (b) int
  - (c) exception
  - (d) None of these
7. Java program visible in a browser is called java \_\_\_\_\_.
  - (a) Applet
  - (b) Application
  - (c) Thread
  - (d) None of these
8. \_\_\_\_\_ is an access modifier in java.
  - (a) Private
  - (b) Protected
  - (c) Public
  - (d) All of these

**Q-2 Answer the following questions (ANY SEVEN) [14]**

1. Write java statements that define (i) one integer called 'i' and one character called 'c'.
2. Give structure of java application.
3. Explain if control statement in java.
4. What java package? Name any two popular java packages.
5. What is a thread? Give two mechanisms in java to create a thread.
6. Define Stream in java. Also list basic operations on java streams.
7. List the three key success factors for object technology.
8. Explain polymorphism by giving an example.
9. Define metadata with example.

**Q-3[A] Define and discuss in brief the concepts of (i) encapsulation, (ii) inheritance and (iii) polymorphism. [06]**

**[B] Find key concepts and key mechanisms in a typical bank account management system. [06]**

**OR**

**[B] Find key concepts and key mechanisms in typical student monitoring system. [06]**

**Q-4[A] What is aggregation? Discuss in detail all the types of aggregation. [06]**

**[B] What is generalization? Explain generalization in detail by giving examples. [06]**

**OR**

**[B] Give any one class diagram in proper format. Also provide two instances of it. [06]**

**Q-5[A] Describe features of java programming language in detail. [06]**

**[B] Explain switch programming statement of java by giving its general structure. [06]**  
Also give an example of the same.

**OR**

**[B] Write a java program that defines a 3\*3 matrix call MAT containing integer numbers, prints the matrix in proper format and produces sum of all 9 elements in the matrix. Consider data as follows. [06]**

**MAT = {{1,2,3}, {4,5,6}, {7,8,9}}**

**Q-6[A] Write a parameterized constructor of an Account class with all parameters such as account code, account name, and balance. Use this constructor in method to create two instances of the Account class with new() operator. [06]**

**[B] Define: (i) final class, (ii) final method, and (iii) final variable in java programming language. [06]**

**OR**

**[B] Explain java access specifies (i) public, (ii) private and (iii) protected. [06]**

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**SARDAR PATEL UNIVERSITY**

POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS (PGDCA)

SEMESTER – II

PGDCA-204 (VISUAL PROGRAMMING)

18<sup>TH</sup> 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.

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

- (i) Visual Basic is a -  
 [A] Visual Programming Language [B] Function-oriented Language  
 [C] Low-level Language [D] None of these
- (ii) In VB, we can declare a function using \_\_\_\_\_ keyword.  
 [A] dim [B] sub [C] function [D] None of these
- (iii) In VB, which one of the following controls has Text property?  
 [A] Label [B] TextBox [C] Image [D] None of these
- (iv) OLE stands for  
 [A] Object Linking & Embedding [B] Object Linking & Enhancing  
 [C] Object Listening & Enhancing [D] Object Listening & Embedding
- (v) The \_\_\_\_\_ control is used to select only one option from the given options.  
 [A] Checkbox [B] Optionbutton [C] Frame [D] None of these
- (vi) The \_\_\_\_\_ control is used display the picture.  
 [A] PictureBox [B] TextBox [C] Label [D] None of these
- (vii) Which one of the followings is not a valid property of a Timer control?  
 [A] Interval [B] Text [C] Index [D] Enabled
- (viii) In VB, which one of the followings is not a looping statement?  
 [A] for [B] while [C] do while [D] with

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

**(14)**

- i. What is VB? Write down the benefits of using VB.
- ii. Differentiate: PictureBox control and Image Control.
- iii. Write the full-form of GUI, SDI, MDI and ADO.
- iv. List down any four mouse events.
- v. Explain the use of ReDim statement with an example.
- vi. What is Variable? How can we declare a variable in VB?
- vii. Write only names of any four data types available in VB.
- viii. Differentiate : ListBox and ComboBox control.
- ix. Write down the purpose of Me, End, Const and Option Explicit keywords.

**Q-3 (a)** What is Form? Explain various properties, methods and events associated with a form object. (6)

**(b)** Explain CheckBox control and OptionButton control. (6)

**OR**

**(b)** Explain TextBox control and Label control. (6)

**Q-4 (a)** Explain Select Case statement and Do While loop with an example. (6)

**(b)** What is Array? How can we declare it in VB? Explain with an example the use of 1-Dimensional array. (6)

**OR**

**(b)** Explain the concept of Control Arrays in VB by taking suitable example. (6)

**Q-5 (a)** What is Procedure? Explain various types of procedures available in VB with an example. (6)

**(b)** Explain – Modules in Visual Basic. (6)

**OR**

**(b)** What is File? List down different type of Files. Explain Type...End Type statement with an example. (6)

**Q-6 (a)** Define the meaning of Bug and Debugging. Explain different types of errors that can be found in VB's program with an example. (6)

**(b)** Explain – 'Database Processing using ADO in Visual Basic' (6)

**OR**

**(b)** Explain QBColor(), RGB() and MID() functions with an example. (6)

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SEAT No. \_\_\_\_\_

No. of printed pages: 02

**SARDAR PATEL UNIVERSITY**

POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS (PGDCA)  
SEMESTER- II EXAMINATION  
20<sup>th</sup> APRIL 2017 (THURSDAY)  
PGDCA - 205 (INTERNET AND WEB DESIGNING)

**Time: 2:00 pm to 5:00pm**

**Marks: 70**

**Q.1 Select the appropriate answer of the following questions:**

**[8]**

1. A giant network of network is called as \_\_\_\_\_.  
A. Intranet B. Internet  
C. Extranet D. None of these
2. A client program on user's computer which connects to server is called as \_\_\_\_\_.  
A. Web Browser B. Web Server  
C. Web Directory D. None of these
3. The full form of URL is \_\_\_\_\_.  
A. Uniform Resource Locator B. Unreal Resource Location  
C. Universally Rectified Location D. None of these
4. The full form of HTML is \_\_\_\_\_.  
A. Hilarious Text Multipurpose Language B. Hyper Text Multinational Language  
C. Hyper Text Markup Language D. None of these
5. To write in new line \_\_\_\_\_ tag is used.  
A. <hr> B. <br>  
C. <tr> D. None of these
6. The effect "Close" is created with the help of \_\_\_\_\_ tag.  
A. <cut>Close</cut> B. <cancel>Close</cancel>  
C. <stop>Close</stop> D. <strike>Close</strike>
7. The full form of CSS is \_\_\_\_\_.  
A. Create Style Selection B. Create Selection Sheet  
C. Cascading Style Sheet D. Classless Style Sheet
8. A collection of frames in browser window is known as \_\_\_\_\_.  
A. frameset B. groupset  
C. orderset D. All of the above

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

**[14]**

1. Define intranet and give its use.
2. What is the difference between browsing and information retrieval?
3. List any four browser software.
4. List the advantages of automatic web searching.
5. What is hypermedia? Give any two uses of hypermedia.
6. Define HTML generator. Give names of any two HTML generators.
7. Explain paragraph tag with its align attribute.

8. How many levels of header tags are available in HTML document?  
9. Mention any two uses of hyperlink tag.

- Q.3** A Explain TCP/IP model in detail. [06]  
B Write a note on Internet. [06]

**OR**

- B Discuss in detail how audio and video communication is carried out. [06]

- Q.4** A Explain the structure of HTML document. Give uses of HTML for internet usage. [06]  
B Discuss <img> tag in detail with all of its attributes. [06]

**OR**

- B List and explain in detail with example any four text formatting tags of HTML. [06]

- Q.5** A Explain table in HTML document in detail with appropriate example. [06]  
B Write a note on types of Lists in HTML document. [06]

**OR**

- B Explain types of CSS with their roles in HTML. [06]

- Q.6** A Which tag is used to create drop down list in HTML. Write a HTML code that [06]  
creates a dropdown list with names of any five fruits.  
B Define frame in HTML document. Explain how frames are used to open multiple [06]  
web pages in the same HTML document with example.

**OR**

- B Discuss form tag in HTML document and mention its uses. [06]

\*\*\*\*\*BEST OF LUCK\*\*\*\*\*