

**SECTION-A**

**Answer all questions**

**(10X1=10)**

1. OOP language supports object-based features, inheritance and \_\_\_\_\_. **CO1**  
A. Encapsulation. B. Polymorphism. C. Object identity. D. Functions.
2. \_\_\_\_\_ is the fundamental building block of object-oriented programming language. **CO1**  
A. Module. B. Code. C. Object. D. Function.
3. \_\_\_\_\_ function is a function in which expansion of the function takes place rather than execution.  
A. Friend. B. Inline. C. Recursive. D. Member. **CO2**
4. \_\_\_\_\_ function has access to all private and protected members of the class for which it is a friend.  
A. Friend. B. Member. C. Non-member. D. Void. **CO2**
5. Which of the following is not a type of inheritance?  
A. Multiple. B. Multilevel. C. Distributive. D. Hybrid. **CO3**
6. The \_\_\_\_\_ term refers to the value that is used to call a function.  
A. parameter. B. argument C. variable. D. pointer. **CO3**
7. A Stack is called as a \_\_\_\_\_ Structure.  
A. LIFO B. Top C. FIFO D. None **CO4**
8. The logical or mathematical model of a particular organization of data is called a \_\_\_\_\_.  
A. data structure B. algorithms C. structure D. logic structure **CO4**
9. Data structure which is capable of expressing more complex relationship than that of physical adjacency is called \_\_\_\_\_.  
A. linear data structure. B. linked list. C. nonlinear data Structure D. data structure. **CO5**
10. A tree is a data structure which represents hierarchical relationship between individual \_\_\_\_\_.  
A. data items B. fields C. nodes D. linked list **CO5**

**SECTION-B**

**Answer any FIVE questions**

**(5X2=10)**

- 11) Any two difference between with C and C++? **CO1**
- 12) Define Class. **CO2**
- 13) Write the benefits of OOP **CO1**
- 14) Define Object **CO2**
- 15) What is linear Data structure **CO4**
- 16) Define Encapsulation **CO3**
- 17) Define Inheritance **CO3**

**SECTION-C**

**Answer any THREE questions**

**(3X6=18)**

- 18) Explain about constructor **CO2**
- 19) Discuss about Destructor **CO2**
- 20) Discuss about the Inline Function **CO2**
- 21) Explain about single inheritance **CO3**
- 22) Write short notes on Bubble sort **CO5**

**SECTION-D**

**Answer any ONE question**

**(1X12=12)**

- 23) Briefly explain about the Stack and Queue **CO4**
- 24) Explain about Basic Concepts of Object-Oriented Programming **CO1**

**VIVEKANANDA COLLEGE, TIRUVEDAKAM 625 234**  
**I Year B.Sc. Computer Science – Sessional Examination – III**

**Time: 2 Hours**

**Maximum Marks:50**

**Date: 11.04.2019**

**MICROPROCESSOR & INTERFACING TECHNIQUES-10CT22**

**SECTION – A**

**ANSWER ALL QUESTIONS**

(10 × 1 = 10)

1. In 8086 microprocessor one of the following statements is not true? **CO3**  
A. coprocessor is interfaced in max mode.      B. coprocessor is interfaced in min mode.  
C. I/O can be interfaced in max / min mode.      D. supports pipelining
2. Address line for TRAP is? **CO5**  
A. 0023H      B. 0024H      C. 0033H      D. 0099H
3. Access time is faster for \_\_\_\_\_ **CO5**  
A. ROM      B. SRAM      C. DRAM      D. ERAM
4. The First Microprocessor was \_\_\_\_\_ **CO4**  
A. 8080      B. 8085      C. 4008      D. Intel 4004
5. Status register is also called as \_\_\_\_\_ **CO3**  
A. accumulator      B. stack      C. counter      D. flags
6. Which of the following is not a basic element within the microprocessor? **CO5**  
A. Microcontroller      B. Arithmetic logic unit (ALU)      C. Register array      D. Control unit
7. Which method bypasses the CPU for certain types of data transfer? **CO3**  
A. Software interrupts      B. Interrupt-driven I/O  
C. Polled I/O      D. Direct memory access (DMA)
8. Which bus is bidirectional? **CO5**  
A. Address bus      B. Control bus      C. Data bus      D. None of the above
9. The first microprocessor had a(n) \_\_\_\_\_ **CO5**  
A. 1 – bit data bus      B. 2 – bit data bus      C. 4 – bit data bus      D. 8 – bit data bus
10. Which microprocessor has multiplexed data and address lines? **CO5**  
A. 8086      B. 80286      C. 80386      D. Pentium

**SECTION – B**

**ANSWER ANY FIVE QUESTIONS**

(5 × 2 = 10)

- 11) Write any processor? **CO3**
- 12) Expand AMD. **CO5**
- 13) What is BUS Cycle? **CO3**
- 14) What is Arithmetic group? **CO4**
- 15). What are the functions of data transfer instruction? **CO4**
- 16) What is status register. **CO3**
- 17) Draw the diagram of 8086 based computer in minimum mode configuration. **CO4**

**SECTION – C**

**ANSWER ANY THREE QUESTIONS**

(3 × 6 = 18)

- 18) Write about Bus Interface and execution Unit **CO4**
- 19) Write about 8086 Read and write bus cycle **CO4**
- 20) Explain about i) Pentium ii) AMD **CO5**
- 21) Write a short note on Alpha and Cyrix **CO5**
- 22) Write about DMA controller **CO3**

**SECTION – D**

**ANSWER ANY ONE QUESTIONS:**

(1 × 12 = 12)

- 23) Explain about Programmable keyboard Interface Intel 8279 **CO3**
- 24) Explain about Instruction Group and 8086 Instruction? **CO5**

\*\*\*\*\*ALL THE BEST\*\*\*\*\*

**VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST**  
**II Year B.Sc. Computer Science – Sessional Examination – III**

**Date: 09.04.2019**

**Time: 2 Hours**

**Maximum Marks: 50**

**Operating System 10CT41**

**SECTION-A**

**ANSWER ALL THE QUESTIONS**

**10\*1=10**

- 1) Which buffer holds the output for a device?  
a) spool                      b) output                      c) status                      d) magic
- 2) process is moved to wait queue when I/O request is made with  
a) non-blocking I/O    b) blocking I/O              c) asynchronous I/O              d) synchronous I/O
- 3) I/O hardware contains  
a) Bus                      b) Controller                      c) I/O port and its registers    d) All of the mentioned
- 4) The host sets \_\_\_\_\_ bit when a command is available for the controller to execute.  
a) write                      b) status                      c) command-ready              d) control
- 5) For large data transfers, \_\_\_\_\_ is used.  
a) dma                      b) programmed I/O              c) controller register              d) none of the mentioned
- 6) In the ..... file organization, data are collected in the order in which they arrive where each record consists of one burst of data.  
a) pile                      b) sequential                      c) indexed sequential              d) indexed
- 7) In ..... file organization, a fixed format is used for records where all records are of the same length, consisting of the same number of fixed length fields in a particular order.  
a) pile                      b) sequential                      c) indexed sequential              d) indexed
- 8) The ..... maintains the key characteristic of the sequential file: Records are organized in sequence based on a key field.  
a) pile                      b) sequential file                      c) indexed sequential file              d) indexed file
- 9) The ..... retains one limitation of the sequential file: effective processing is limited to that which is based on a single field of the file.  
a) pile                      b) sequential file                      c) indexed sequential file              d) indexed file
- 10) ..... are used mostly in applications where data are rarely processed exhaustively.  
a) pile                      b) sequential file                      c) indexed sequential file              d) indexed file

**SECTION-B**

**Answer any FIVE questions**

**(5X2=10)**

- 11) Define cpu headway?
- 12) What is file system?
- 13) What is I/O traffic controller ?
- 14) Define data management ?
- 15) What is file system ?
- 16) What is SFS?
- 17) Define Information management ?

**SECTION-C**

**Answer any THREE questions**

**(3X6=18)**

- 18) Write a note on the techniques for device management.
- 19) Explain the functions of device management.
- 20) Explain in brief about I/O scheduler and I/O device management.
- 21) Explain channels and control units briefly.
- 22) Explain access control matrix and access control lists.

**SECTION-D**

**Answer any ONE Question**

**(1X12=12)**

- 23) Explain the storage devices.
- 24) Explain the general model of the file system in detail.

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**VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST**  
**II Year B.Sc. Computer Science – Sessional Examination – III**

**Time: 2 Hours**  
**Date: 10.04.2019**

**Maximum Marks: 50**

**Relational database management system 10CT42**

**SECTION – A**

**ANSWER ALL QUESTIONS**

(10 × 1 = 10)

1. SQL is a \_\_\_\_\_ language  
A. Database Languages    B. Declarative Languages    C. Both    D. None
2. SQL outputs a single table known as the \_\_\_\_\_  
A. view    B. column    C. Table space    D. Result set
3. Which algebra is widely used in computer science  
A. Arithmetic algebra    B. Relational algebra    C. Both    D. None
4. Data is passed to a program environment through \_\_\_\_\_:  
A. DBMS    B. SQL    C. DDL    D. SDL
5. TCL stands for:  
A. Transaction control languages    B. Transaction command languages  
C. Transaction connect languages    D. None of these
6. Which is that part of SQL that allows a database user to create and restructure data base objects:  
A. DBMS    B. SQL    C. DDL    D. SDL
7. \_\_\_\_\_ commands in SQL allow controlling access to data within database:  
A. Database    B. Data    C. Data control    D. All of these
8. Which product is returned in a join query have no join condition:  
A. Equijoins    B. Cartesian    C. Both    D. None
9. It refers to set of one or more columns that designates the \_\_\_\_\_ key in a referential integrity constraint:  
A. Select key    B. Foreign key    C. Write key    D. None of these
10. Which constraint that requires that the column contain a value when it is initially inserted into the table:  
A. IS NULL    B. NOT NULL    C. UNIQUE    D. NONE

**SECTION – B**

**ANSWER ANY FIVE QUESTIONS**

(5 × 2 = 10)

- 11) Write any two-aggregate function?    ``
- 12) Define CLIENT SERVER system.
- 13) What is commit?
- 14) What is rollback?
- 15). Define Trigger.
- 16) Define deadlock.
- 17) Write the syntax for check constraints.

**SECTION – C**

**ANSWER ANY THREE QUESTIONS**

(3 × 6 = 18)

- 18) Explain on creating triggers
- 19) Explain about locking technique used for protect our database
- 20) What is deadlock? Explain deadlock prevention and detection methods
- 21) Write the advantages of client server approach
- 22) Discuss about the advantage and disadvantages of distributed database.

**SECTION – D**

**ANSWER ANY ONE QUESTIONS:**

(1 × 12 = 12)

- 23) Discuss about various component of ER-diagram with example?
- 24) Give the block structure of PL/SQL. what are the advantages of PL/SQL?

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**SECTION-A**

**Answer all questions**

**(10X1=10)**

1. Which control is an example of an object in VB.NET?  
A. Button.                      B. Label.                      C. Textbox.                      D. All of the above.
2. Properties are used to represent \_\_\_\_\_.  
A. actions.                      B. classes.                      C. data.                      D. events.
3. \_\_\_\_\_Property is used to set the maximum length of a text, a textbox can hold.  
A. Length                      B. Multiline                      C. MultiLength                      D. MaxLength
4. Anything in VB.NET that has a property or method is \_\_\_\_\_.  
A. a class.                      B. a control.                      C. an object.                      D. Both a and b.
5. Which is a valid statement for declaring a variable?  
A. Const Form As Integer                      B. ConstmyForm As Integer  
C. Dim Form As Integer                      D. Dim myForm As Integer
6. The first event triggered in an .aspx page is \_\_\_\_\_.  
A. Page\_Init()                      B. Page\_Load()                      C. Page\_Render()                      D. Page\_Click()
7. File Extension for web controls in .NET Framework is \_\_\_\_\_.  
A. .ascx                      B. .aswx                      C. .asmx                      D. .aspx
8. The .NET Framework provides a run time environment called \_\_\_\_\_.  
A. CLR                      B. RC                      C. RCT                      D. RTE
9. Find the ODD One Out.  
A. RequiredField Validator                      B. Regular Expression Validator  
C. Custom Validator                      D. Text Validator
10. \_\_\_\_\_ is the folder that contains web applications in a web server.  
A. Root Folder                      B. Web Folder                      C. Virtual Folder                      D. Program Folder

**SECTION-B**

**Answer any FIVE questions**

**(5X2=10)**

- 11) Define ASP.Net?
- 12) discuss about the any two important features of ASP.Net?
- 13) What is timer control.
- 14) Define VB.Net variable.
- 15) Different between label and link label.
- 16) Explain the Radio button with example.
- 17) What is text box with sample example.

**SECTION-C**

**Answer any THREE questions**

**(3X6=18)**

- 18) Discuss about important properties for Rich text box.
- 19) Write a program in Fibonacci series using constructor and destructor.
- 20) Explain the dialog boxes in VB.NET.
- 21) Explain the List Box with example.
- 22) Discuss about the web server control.

**SECTION-D**

**Answer any one**

**(1X12=12)**

- 23) Explain about the validation server control with example.
- 24) Write a program in Employee details using Inheritance.

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**SECTION A**

**Answer ALL**

**( 10x1=10)**

1. To use the .NET Framework Data Provider for SQL Server, an application must reference the \_\_\_\_\_ namespace.  
a) System.Data.Client b) System.Data.SqlClient c) System.Data.Sql d) None of the mentioned
2. Which of the following is enumeration for ADO.net with SQL Server ?  
a) SqlInfo b) SqlBulkCopyOptions c) SqlNotification d) All of the mentioned
3. Syntax for closing and opening the connection in ADO.net is :  
a) sqlConn.Open() and sqlConn.close() b) sqlConn.open() and sqlConn.Close()  
c) sqlConn.Open() and sqlConn.Close() d) None of the mentioned
4. The main features of dotConnect for SQL Server includes :  
a) Extra data binding capabilities b) Ability of monitoring query execution  
c) Supports the latest versions of SQL Server d) All of the mentioned
5. . \_\_\_\_\_ object is used to fill a DataSet/DataTable with query results in ADO.net.  
a) DataReader b) Dataset c) DataAdapter d) DataTables
6. What is the name of the property of ASP.NET page that you can query to determine that a ASP.NET page is being requested not data being submitted to web server?  
a) FirstGet b) Initialized c) IncludesData d) IsPostBack
7. For separating server-side code from client-side code on a ASP.NET page, what programming model should you use?  
a) Separation model b) Code-Behind model c) In-Line model d) Client-server model
8. To perform asynchronous data access, what must be added to the connection string?  
a) BeginExecute=trueMultiThreaded=true b) MultipleActiveResultSets=true  
c) Asynchronous=true d) Asynchronous=false
9. The first event triggered in an .aspx page is \_\_\_\_\_  
A. Page\_Init() B. Page\_Load() C. Page\_Render() D. Page\_Click()
10. File Extension for web controls in .NET Framework is \_\_\_\_\_  
A. .ascx B. .aswx C. .asmx D. .aspx

**SECTION B**

**Answer any FIVE**

**(5x2=10)**

11. What is request and response?
12. Define frames
13. Define array
14. Define cookies
15. How to set background image on webpage
16. Expand SMTP, OLEDB
17. Write syntax of alert box

**SECTION C**

**Answer any THREE**

**(3x6=18)**

18. Write notes on event handlers
19. Write browser objects in JavaScript
20. Explain anchor controls in Asp.net
21. Explain window and document objects in JavaScript
22. Explain about cookies

**SECTION D**

**Answer any ONE**

**(1x12=12)**

23. Discuss about event handling in JavaScript
24. Explain different controls in Asp.net

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**SECTION-A**

**Answer all questions**

**(10X1=10)**

1. What is the full form of WLAN?
  - a) Wide Local Area Network
  - b) Wireless Local Area Network
  - c) Wireless Land Access Network
  - d) Wireless Local Area Node
2. What is the name of 300 MHz of unlicensed spectrum allocated by FCC in ISM band?
  - a) UNII
  - b) Unlicensed PCS
  - c) Millimetre wave
  - d) Bluetooth
3. Which of the following specifies a set of media access control (MAC) and physical layer specifications for implementing WLANs?
  - a) IEEE 802.16
  - b) IEEE 802.3
  - c) IEEE 802.11
  - d) IEEE 802.15
4. Which of the following is not a standard of WLAN?
  - a) HIPER-LAN
  - b) HIPERLAN/2
  - c) IEEE 802.11b
  - d) AMPS
5. Which of the following is the 802.11 High Rate Standard?
  - a) IEEE 802.15
  - b) IEEE 802.15.4
  - c) IEEE 802.11g
  - d) IEEE 802.11b
6. What does WAP means?
  - a. Wired Application Protocol
  - b. Wireless Application Protocol
  - c. Wired Automatic Program
  - d. Wireless Authentication Protocol
7. Which language is used in WAP?
  - a. WML
  - b.XML
  - c. HTML
  - d.DHTML
8. WAP is used for
  - a. Web browser
  - b.Macro- Browser
  - c.Micro-Browser
  - d. Mobile Browser
9. The pages created in WAP are called?
  - a. WAP – Pages
  - b. Decks
  - c. Cards
  - d. Web-pages
10. The Extension of WAP file
  - a. .WML
  - b. .WAP
  - c. . WMLS
  - d. .XML

**SECTION-B**

**Answer any FIVE questions**

**(5X2=10)**

- 11) Define Bluetooth
- 12) Define WAP
- 13) What is meant by WML?
- 14) Define piconet
- 15) Write about PPP
- 16) Expand TCP, UDP, IP
- 17) Write Bluetooth Protocol

**SECTION-C**

**Answer any THREE questions**

**(3X6=18)**

- 18) Explain about characteristics of Bluetooth
- 19) Discuss about components of WAP
- 20) Draw the neat diagram of Bluetooth architecture
- 21) Explain about Wireless LAN Technology
- 22) Discuss about WML and WML Structure

**SECTION-D**

**Answer any one**

**(1X12=12)**

- 23) Briefly explain about Bluetooth Protocol architecture
- 24) Explain about Wireless Application Protocol.

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**SECTION-A**

**ANSWER ALL QUESTIONS**

1\*10=10

- 1) <B> tag indicates \_\_\_\_\_  
(a) Bold (b) Font (c)Text (d) paragraph
- 2) <TR> tag used to represent \_\_\_\_\_  
(a) Table row (b) table column (c)table width (d) none
- 3) Which one of the following is unordered list tag?  
(a) <UL> (b) <OL>(c) <LI> (d) <DL>
- 4) Which tag is used for adding image?  
(a) <a href> (b) <img src> (c) <Text> (d) <Frame>
- 5) Which tag is used for linking documents?  
(a) <Body> (b) <Head> (c) <a href> (d) <HTML>
- 6) An Xpath expression is specified using \_\_\_\_\_  
A. curly braces.    B. square braces.    C. parenthesis.    D. location node.
- 7) Ever. \_\_\_\_\_ element creates a new checkbox in the form.  
A. type='checkbox'    B. type='chkbox'.    C. type='check box'.    D. type='chk box'.
- 8) \_\_\_\_\_ in a form causes changes to server data.  
A. Method = 'post'.    B. Method = 'get'.    C. Method = 'change'.    D. Method = 'action'.
- 9) \_\_\_\_\_ is intended to define the content of the document.  
A. CSS.    B. HTML.    C. XML.    D. DHTML
- 10) The action attribute in the \_\_\_\_\_ tag is the path to a script that processes the form data.  
A. type.    B. form.    C. text.    D. select.

**SECTION-B**

**Answer any FIVE questions**

**(5X2=10)**

- 11) Briefly discuss about the structure of HTML
- 12) write a short note on <marquee>.
- 13) EXPAND HTML and HTTP?
- 14) What is INTERNET?
- 15) EXPAND WWW?
- 16) Write any two-browser name?
- 17) Write a paragraph tag with an example?

**SECTION-C**

**Answer any THREE questions**

**(3X6=18)**

- 18) What is list? Explain with types?
- 19) Discuss about unordered list with example program
- 20) Explain about heading tags with suitable example program
- 21) How to create a table? Explain with a simple program
- 22) briefly discuss about font tag with example.

**SECTION-D**

**Answer any one**

**(1X12=12)**

- 23) How to create table using its various attributes? explain with an example program
- 24) Write a HTML program to display your Bio-Data using form tag

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**SECTION-A**

**Answer all questions**

**(5X1=5)**

1. Which command is used by the shell for manipulating positional parameters?

- a. set              b. cut              c. case              d. paste

2. \_\_\_\_ statement is used for shifting arguments left.

- a. set              b. shift              c. cut              d. paste

Answer: b

3. Which one of the following is an internal command?

- a. cut              b. expr              c. set              d. Is

4. Which symbol is used with the set command for command substitution?

- a. -              b. —              c. ??              d. \_

5. The \_\_\_\_ allows us to read data from the same file containing the script.

- a.>>              b.<<              c. !!              d. —

**SECTION-B**

**Answer any TWO questions**

**(2X2=4)**

6. what is a shell program?

7. Discuss the shell keywords?

8. Explain the For structure.

9. what is operator in shell with example.

**SECTION-C**

**Answer any THREE questions**

**(1X6=6)**

10. Write a shell program to add two numbers.

11. Explain shell variable and rules.

**SECTION-D**

**Answer any one**

**`(1X10=10)**

12) Explain the loop control structures.

13) Define functions and user define function.

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**SECTION-A**

**I. Answer all questions**

**(5x1=5)**

1. From what location are the 1st computer instructions available on boot up?  
a. ROM BIOS                      b. CPU      c. CONFIG.SYS      d. boot.ini
2. What product is used to clean smudged keys on a keyboard?  
a. TMC solvent      b. Silicone spray      c. Denatured alcohol      d. All-purpose cleaner
3. Main store' of CPU is also called  
a. main memory      b. temporary memory      c. immediate access store      d. both A & C
4. ESD would cause the most damage to which component?  
a. Power supply      b. Expansion board      c. Monitor      d Keyboard
5. Modem is \_\_\_\_\_  
a. Monitor      b. Cable Wire      c. Modulator Demodulator      d. Power supply

**SECTION – B**

**II. Answer Any Two Question**

**(2x2=4)**

6. Define FDD
7. Define HDD
8. Write about CD
9. Define Troubleshooting

**SECTION - C**

**III. Answer Any One Question**

**(1x6=6)**

10. Explain about the mass storage device
11. Briefly discuss about the i) pen drive ii) Tape drive

**SECTION – D**

**IV. Answer Any One Question**

**(1x10=10)**

12. Explain in detail about FDD and HDD
13. Explain about the CD and DVD technology

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**VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST**  
**III Year B.Sc. Computer Science – Sessional Examination – III**

**Date: 05.04.2019**

**Time: 2 Hours**

**Maximum Marks: 25**

**DTP 10SB62**

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**SECTION-A**

**Answer all questions**

**(5x1=5)**

1. \_\_\_\_\_ is used to move an image or a portion of an image from one location to another  
a) Eyedropper Tool   b) Zoom Tool   c) Crop Tool   d) Move Tool
2. The built-in support across different applications is known as \_\_\_\_\_  
a) Text tool   b) Crop tool   c) Move tool   d) Zoom tool
3. \_\_\_\_\_ displays the various shades of the color you have selected in the color slider bar  
a) Color picker   b) Slide Bar   c) Alert   d) Crop
4. What is the shortcut key for Paste a file?  
a) Ctrl+O   b) Ctrl+V   c) Shift + O   d) Ctrl+W
5. PDF Stands for  
a) Portable Document Format   b) Portable Drive Format  
c) Portable Disk Format   d) Photographic Document Format

**SECTION-B**

**Answer any TWO question**

**(2X2=4)**

6. Define Zoom Tool.
7. Define Page layout?
8. What are the toolbar of layer palette?
9. Define colour palette.

**SECTION-C**

**Answer any THREE questions**

**(1X6=6)**

- 10) Explain about Brightness/Contrast Palette
- 11) Discuss about the Shape Masking

**SECTION-D**

**Answer any ONE Question**

**(1X10=10)**

- 12) Give a brief explains about the palettes in Photoshop??
- 13) Give a brief explains about the layers in Photoshop?

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**SECTION-A**

**Answer all questions**

**(5X1=5)**

- 1) \_\_\_\_\_ exploits service flaws in computers to inhibit use by legitimate users
  - a) Service threats
  - b) attacks
  - c) viruses
  - d) none
- 2) \_\_\_\_\_ key is also input to the encryption algorithm
  - a) Plain text
  - b) Secret
  - c) decryption
  - d) Encryption
- 3) Insertion of messages into the network from a fraudulent source is \_\_\_\_\_
  - a) Masquerade
  - b) Content
  - c) DOS
  - d) Key
- 4) \_\_\_\_\_ is an open source freely available software package for E-mail security
  - a) PGP
  - b) S/MIME
  - c) DSS
  - d) DES
- 5) \_\_\_\_\_ are designed to collect information about the attacker's activity
  - a) Honey pot
  - b) Firewall
  - c) Intrusion
  - d) malware

**SECTION-B**

**Answer any two questions**

**(2X2=4)**

- 6) Write note on worms.
- 7) What is HTTPS? Write note on it.
- 8) Write note on firewalls.
- 9) Write about intruders.

**SECTION-C**

**Answer any One questions**

**(1X6=6)**

- 10) Explain about Digital signatures.
- 11) Explain the different phase of virus .

**SECTION-D**

**Answer any one question**

**(1X10=10)**

- 12) Discuss about Cybercrime and Ethical issues in cryptography
- 13) Explain about Malicious Programs and its types.

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STATISTICS & PROBABILITY - 10AT21

SECTION-A

ANSWER ALL THE QUESTIONS

10\*1=10

1. What is the probability of the event that an even number appears when tossing a fair dice? **CO4**  
a)  $\frac{1}{2}$       b)  $\frac{1}{6}$       c)  $\frac{1}{4}$       d)  $\frac{2}{3}$
2. 'A' speaks truth in 50% cases and 'B' in 60% cases. In what % of cases are they likely to contradict each other in stating the same fact? **CO4**  
a)  $\frac{1}{3}$       b)  $\frac{1}{2}$       c)  $\frac{3}{10}$       d)  $\frac{1}{5}$
3. What is the probability that there should be 53 Sundays in a non-leap year? **CO4**  
a)  $\frac{2}{7}$       b)  $\frac{1}{7}$       c)  $\frac{53}{365}$       d)  $\frac{312}{365}$
4. One card is selected at random from 50 cards numbered 1 to 50. What is the probability that the drawn card ends in digit 2? **CO4**  
a)  $\frac{1}{10}$       b)  $\frac{1}{5}$       c)  $\frac{3}{10}$       d) None of these
5. In a rowing race, the odds that A will win is 2 to 3 and the odds that B will win is 1 to 4. What is the probability that A or B wins the race? **CO4**  
a)  $\frac{3}{5}$       b)  $\frac{1}{5}$       c)  $\frac{2}{5}$       d)  $\frac{4}{5}$
6. Let A and B be events with  $P(A) = \frac{3}{8}$ ,  $P(B) = \frac{5}{8}$  and  $P(A \cup B) = \frac{3}{4}$ . Find  $P(A/B)$ . **CO5**  
a)  $\frac{1}{4}$       b)  $\frac{2}{3}$       c)  $\frac{2}{4}$       d)  $\frac{2}{5}$
7. A coin is tossed until a tail turns up. Let Z be the function representing the required number of tosses. Here sample space  $S = \{T, HT, HHT, HHHT, HHHHT, \dots\}$ .  $Z(T) = 1$ ,  $Z(HT) = 2, \dots$   
What is the range set of Z? **CO5**  
a)  $\{1, 2, 3, \dots\}$       b)  $\{0, 1, 2, 3, \dots\}$       c)  $\{1, 2, 3\}$       d) None of these
8. Let X be the number of tails obtained on tossing 3 coins.  
 $S = \{HHH, HHT, HTH, THH, HTT, THT, TTH, TTT\}$ . X takes values 0, 1, 2 and 3. If F is the distribution function of the random variable X, what is  $F(2)$ ? **CO5**  
a)  $\frac{1}{8}$       b)  $\frac{1}{2}$       c)  $\frac{7}{8}$       d) 1
9. A random variable is said to be discrete if its range set is **CO5**  
a) Finite      b) Countably infinite      c) Either (a) or (b)      d) Neither (a) nor (b)
10. Two dice are rolled. Let X is the maximum of the numbers that turns up. If  $P(X)$  represents the probability mass function, what is  $P(X=3)$ ? **CO5**  
a)  $\frac{1}{36}$       b)  $\frac{5}{36}$       c)  $\frac{3}{36}$       d)  $\frac{7}{36}$

SECTION-B

ANSWER ANY FIVE QUESTIONS

(5X2=10)

- 11) Define Event ? **CO4**
- 12) Define Sample space? **CO4**
- 13) Write about continuous random variable? **CO4**
- 14) Define probability? **CO4**
- 15) Define Random variable? **CO4**
- 16) Draw a venn diagram for  $A \cup B$  ? **CO4**
- 17) Write the formula of baye's theorem? **CO4**

### SECTION-C

#### ANSWER ANY THREE QUESTIONS

3\*6=18

18) Four cards are drawn at random from a pack of 52 cards. Find the probability that **CO4**

(i) They are a king, a queen, a jack and an ace.

(ii) Two are kings and two are queens.

(iii) Two are black and two are red.

(iv) There are two cards of hearts and two cards of diamonds.

19) A letter of the English alphabet is chosen at random. Calculate the probability that the letter so chosen (i) is a vowel, (ii) precedes m and is a vowel, (iii) follows m and is a vowel. **CO4**

20) A) In 2002 there will be three candidates for the positions of principal – Mr.Chatterji, Mr.Ayengar and Dr. Singh – whose chances of getting the appointment are in the proportion 4:2:3 respectively. The probability that Mr. Chatterji if selected would introduce co-education in the college is 0.3. The probabilities of Mr. Ayengar and Dr. Singh doing the same are respectively 0.5 and 0.8. **CO4**

(i) What is probability that there will be co-education in the college in 2003?

(ii) If there is coeducation in the college in 2003, what is the probability that Dr.Singh is the principal?

21) state and prove the bays theorem **CO4**

22) State and prove the addition theorem of probability **CO4**

### SECTION-D

#### ANSWER ANY ONE QUESTIONS

1\*12=12

23) A random variable X has the following probability function: **CO5**

Values of X, x:	0	1	2	3	4	5	6	7
P(x):	0	k	2k	2k	3k	$k^2$	$2k^2$	$7k^2+k$

(i) Find k, (ii) Evaluate  $P(X \geq 6)$ , and  $P(0 < X < 5)$ , (iii) If  $P(X \leq a) > 1/2$ , find the minimum value of a, and (iv) Determine the distribution function of X.

24) A problem in statistics is given to three students A, B and C whose chances of solving it are  $1/2$ ,  $3/4$ , and  $1/4$  respectively.

What is the probability that the problem will be solved if all of them try independently? **CO4**

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**NUMERICAL METHODS FOR COMPUTER SCIENCE-10AT41**

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**Section A**

**Answer all**

**(10x1=10)**

1. In which of the following method, we approximate the curve of solution by the tangent in each interval.  
a) Picard's method    b) Euler's method    c) Newton's method    d) Range Kutta method
2. Jacobi's method is also known as  
a) Displacement method    b) Simultaneous displacement method    c) Simultaneous method    d) Diagonal method
3. The number of significant digits in the number 204.020050 is  
a) 5    b) 6    c) 8    d) 9
4. In general the ratio of truncation error to that of round off error is  
a) 2:1    b) 1:1    c) 1:2    d) 1:3
5. The convergence of which of the following method is sensitive to starting value?  
a) False position    b) Gauss seidal method    c) Newton-Raphson method    d) All of these
6. To perform a Chi-square test  
a) Data conform to a normal distribution    b) Data be measured on a nominal scale  
c) Each cell has equal number of frequencies    d) All of these
7. In the Gauss elimination method for solving a system of linear algebraic equations, triangularization leads to  
a) Diagonal matrix    b) Lower triangular matrix    c) Upper triangular matrix    d) Singular matrix
8. Match the following:  
A. Newton-Raphson    1. Integration  
B. Runge-kutta    2. Root finding  
C. Gauss-seidel    3. Ordinary Differential Equations  
D. Simpson's Rule    4. Solution of system of Linear Equations  
The correct sequence is  
a) A2-B3-C4-D1    b) A3-B2-C1-D4    c) A1-B4-C2-D3    d) A4-B1-C2-D3
9. Order of convergence of Regula-Falsi method is  
a) 1.321    b) 1.618    c) 2.231    d) 2.312
10. The expected value of the random variable  
a) Will also be the most likely value of the random variable    b) Is another term for the mean value  
c) Is also called the variance    d) Cannot be greater than 1

### Section B

Answer any FIVE

(5x2=10)

11. Write strilling's first derivatives formula with u
12. Write procedure of iteration method
13. Differentiate  $\cos x - xex$
14. Write formula of newton's Raphson method
15. Write the formaula of Regula falsi method and another name of regula falsi
16. Write strillings's first derivative formula when  $x=x_0$
17. Write strilling's second derivatives formula

### Section C

Answer any THREE

(3x6=18)

18. Given  $y'=-y$  and  $y(0)=1$ , determine the values of at  $x=(0.01)(0.01)(0.04)$  by Euler's method
19. Solve the root of equation  $x^3 - 4x + 1 = 0$  root lies between 1 and 2 by Regula Falsi method
20.  $ex - 3x = 0$  by iteration method
21. Using Newton Raphson's method find the root between 0 and 1 of  $x^3 = 6x - 4$
22. Find the real positive root of  $3x - \cos x - 1 = 0$  by Newton's method correct to 6 decimal Places

### Section D

Answer any ONE

(1x12=12)

23. Using Bi-section method find the negative root of  $x^3 - 4x + 9 = 0$
24. From the following table estimate  $e^{0.644}$  correct to five decimal places using Strling's formula first two derivatives

x	0.61	0.62	0.63	0.64	0.65	0.66	0.67
$e^x$	1.840431	1.858928	1.877610	1.896481	1.915541	1.934792	1.954237

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