

STD: XI

Time: 3.00 Hrs.

**JULY MONTHLY TEST  
COMPUTER SCIENCE  
PART-I**

Lessons: 4 - 6

Marks: 70

Note: i) Answer all the questions.

15 X 1 = 15

ii) Choose the most suitable answer and write the code with corresponding answer.

1. Pick the odd one out.
  - a) Windows
  - b) Linux
  - c) MS- Dos
  - d) UNIX
2. \_\_\_\_ is a physical component of computer.
  - a) software
  - b) Hardware
  - c) operating
  - d) all of these
3. \_\_\_\_ involves the allocation of specific blocks to individual programs based on user demands.
  - a) Memory Management
  - b) Process management
  - c) User Interface
  - d) Security management.
4. How many types of scroll bars.
  - a) 1
  - b) 2
  - c) 3
  - d) 4
5. Which short cut key used to delete permanently user data,
  - a) Ctrl +delete
  - b) Alt +delete
  - c) Shift +delete
  - d) Ctrl +Shift+ delete
6. \_\_\_\_ short cut key bring the focus on the first menu of the menu bar.
  - a) Alt
  - b) F10
  - c) Both A and B
  - d) F5
7. A modeling an entity only by its essential properties is known as \_\_\_\_
  - a) Decomposition
  - b) Composition
  - c) Abstraction
  - d) Specification
8. Which of the following operating system support mobile devices
  - a) Windows 7
  - b) Linux
  - c) BOSS
  - d) iOS
9. The file management system used by Linux is
  - a) Ext2
  - b) NTFS
  - c) FAT
  - d) NFTS
10. The shortcut key used to rename the file in windows
  - a) F2
  - b) F4
  - c) F5
  - d) F6
11. Which is the default folder for many windows application to save your file
  - a) My documents
  - b) My pictures
  - c) Document and setting
  - d) My computer
12. which of the following activities is not a algorithmic in nature
  - a) multiply two numbers
  - b) draw a kolam
  - c) walk in the park
  - d) swaping of two numbers
13. If  $I = 5$  before the assignment  $i := i - 1$  after the assignment, the value of  $i$  is
  - a) 5
  - b) 4
  - c) 3
  - d) 2
14. Identify the usage of operating systems
  - a) Easy interaction between the human and computer
  - b) Controlling input & output devices
  - c) Managing use of main memory
  - d) All of these
15. Ensuring the input – output relation is
  - a) The responsibility of the algorithm and the right of the user
  - b) The responsibility of the user and the right of the algorithm
  - c) The responsibility of the algorithm but not the right of the user
  - d) The responsibility of both the user and the algorithm

**PART-II****Answer any six Questions. Q. No. 24 is compulsory.****6 X 2 = 12**

16. List out the prominent operating system.
17. List out any two uses of operating system?
18. How will you rename a file?
19. List out the various options Logging off a computer.
20. Define an icon with give an example.
21. What is Multi tasking with an example operating system?
22. Define an algorithm.
23. Write about RR scheduling algorithm.
24. Write short note about i) = ii) = = and give an example.

**PART-III****Answer any six Questions. Q. No. 33 is compulsory.****6 X 3 = 18**

25. Advantages of distributed operating system.
26. Write a note on Multiprocessing.
27. Write a note on Recycle bin.
28. How will you Deleting files and folders with a short cut keys.
29. Write about the Security Management system. And its access level.
30. List out the key features of operating system.
31. When do you say that a problem is algorithmic in nature?
32. Write the steps to Moving a files and folders with shortcut keys?
33. List out the various Disk Drive icons.

**PART-IV****Answer the following questions:****5 X 5 = 25**

34. a) Short answer on the following  
 i) Hardware ii) Software ii) Fault Tolerance iv) GUI v) Time –sharing (OR)  
 b) Explain the process management algorithms in operating system.
35. a) List out the some of the functions of windows operating system. (OR)  
 b) Explain detail about various versions of windows operating system.
36. a) Explain the different ways of finding a file or folder. (OR)  
 b) Write the specification of an algorithm hypotenuse whose inputs are the lengths of the two shorter sides of a right angled triangle, and the output is length of the third side.
37. a) Explain detail about Building Blocks of Algorithms. (OR)  
 b) Write the procedure to create shortcut in windows operating system.
38. a) Write the advantages and disadvantages of Time-sharing features. (OR)  
 b) Write the few uses of operating system.

**MOUNT CARMEL MISSION MATRIC HR. SEC. SCHOOL – KALLAKURICHI****STD: XI****JULY MONTHLY TEST****LESSON: 4 – 6****TIME: 3 : 00 Hrs****COMPUTER SCIENCE****MARK: 70****Part – I****I. CHOOSE THE CORRECT ANSWER:****15 X 1 = 15**

1. c) Ms – Dos
2. b) Hardware
3. a) Memory Management
4. b) 2
5. c) Shift + Delete
6. a) Alt
7. c) Abstraction
8. d) iOS
9. a) Ext2
10. a) F2
11. a) My documents
12. c) walk in the park
13. b) 4
14. d) All of these
15. a) The responsibility of the algorithm and the right of the user

**PART – II****II. ANSWER ANY SIX QUESTIONS Q. No: 24 IS COMPULSORY:****6 X 2 = 12****16. List out the prominent Operating System.****Ans:** Prominent OS are as follows:

- UNIX
- Microsoft Windows
- Linux
- iOS
- Android

**17. List out any two uses of Operating system.****Ans:** They are,

- Operating System ensures that a computer can be used to extract what the user wants it do.
- Easy interaction between the users and computer.
- Starting computer operation automatically when power is turned on (Booting).

**18. How will you rename a file?****Ans:** Rename a file:

- Select the File to Rename.
- File → Rename (or) Press F2 (or) Right Click → Rename
- Type in the new file name and press Enter.



**19. List out the various options Logging off a computer.**

**Ans:** There are

- Click Start → log off or Start → shutdown
- Switch User
- Log off
- Lock
- Restart
- Sleep
- Hibernate



**ICONS**

**20. Define an icon with give an example.**

**Ans:** Icon is a graphic symbol representing the window elements like files, folders, shortcuts etc., Icons play vital role in GUI based applications. Examples are Standard Icons, Shortcut Icons, Disk Drive Icons.

**21. What is multi tasking with an example operating system?**

**Ans:** Multiple applications can execute simultaneously in Operating System and this is known as “Multitasking”. (Example: Windows)

**22. Define an Algorithm.**

**Ans:** An Algorithm is a sequence of step-by-step statements intended to solve a problem. When executed with an input data, it generates a computational process, and ends with an output data, satisfying the specified relation between the input data and the output data.

**23. Write about RR (Round Robin) scheduling algorithm.**

**Ans:** The RR (Round Robin) scheduling algorithm is designed especially for time sharing systems. Jobs (processes) are assigned and processor time in a circular method.

**24. Write short note about i) = ii) == and give an example.**

**Ans:** i) = is an Assignment operator.

Change the variable value.

Assign expression value to variable.

**Syntax:**

Variable = expression

**Example:**

m = 5 ( stores 5 in m )

ii) == is an Equality operator.

Does not change the variable value.

Compares variable value and expression value for equality.

**Syntax:**

Variable = expression

**Example:**

m = 4; (Assign the value form ‘m’ as 4)

m == 5; (Here ‘m == 5’ value checks whether ‘m’ is equal to 4, if yes means return ‘True’ otherwise returns ‘False’)

**PART – III****III. ANSWER ANY SIX QUESTIONS Q.No: 33 IS COMPULSORY:****6 X 3 = 18****25. Advantages of Distributed Operating System.**

**Ans:** i) A user at one location can make use of all the resources available at another location over the network.

- ii) Many computer resources can be added easily in the network.
- iii) Improves the interaction with the customers and clients.
- iv) Reduces the load on the host computer.

**26. Write a note on Multiprocessing.**

**Ans:** Multi-processing is a one of the features of Operating System. It has two or more processors for a single running process (job). Processing takes place in parallel is known as parallel processing. Since the execution takes place in parallel, this feature is used for high speed execution which increases the power of computing.

**27. Write a note on Recycle Bin.**

**Ans:** Recycle Bin is a special folder to keep the files or folders deleted by the user.

The user cannot access the files or folders available in the Recycle Bin without restoring it.

- **To restore file or folder or Empty Recycle Bin**

- Open Recycle Bin (Double click on Recycle bin Icon).
- Right click on a file or folder to be restored and select 'Restore' option from the pop-up menu.
- To restore multiple files or folders, select 'Restore All' items.
- To delete all files in the Recycle Bin: Select 'Empty the Recycle Bin'.

**28. How will you Deleting files and folders with a short cut keys.**

**Ans:** - When you delete a file or folder, it will move into the Recycle Bin.

To delete a file or folder:

Select the file or folder you wish to delete.

- Right click the file or folder, select 'Delete' option from the pop-up menu or click File →

Delete key from the keyboard.

- The file will be deleted and moved to the Recycle Bin.

**29. Write about the Security Management System. And its access level.**

**Ans:** The Operating System provides 3 levels of securities to the user end. They are

- i. File Access Level
  - ii. System Level
  - iii. Network Level
- i. File Access Level: In order to access the files created by other people, you should have the access permission. Permissions can either be granted by the creator of the file or by the administrator of the system.
  - ii. System Level: In this level security is offered by the password in a mulri-user environment. Both windows and Linux offer the password facility.
  - iii. Network Level: In this level security is an indefinable one. So people from all over the world try to provide such a security.

**30. List out the key features of Operating System.**

**Ans:** Key features of operating system are,

- User interface
- File management
- Memory management
- Fault tolerance
- Process management
- Security management

**31. When do you say that a problem is algorithmic in nature?**

**Ans:** A problem is algorithmic in nature when its solution involves the construction of an algorithm. Also when the

- i. Input data and output data of the problem is specified and
- ii. Relation between the input data and the output data is specified.

**32. Write the steps to moving a files and folders with shortcut keys?**

**Ans:** Method – I – Cut and Paste:

- Click on Edit → Cut or Ctrl + X or right click → cut from pop-up menu.
- To move the files or folders in the new location, navigate to the new location and paste it using click Edit → Paste from edit menu or Ctrl + V using keyboard.
- Or Right click → Paste from pop-up menu. The file will be pasted in the new location.

**33. List out the various Disk Drive Icons.**

**Ans:** The Disk Drive icons graphically represented 5 disk drive options.

- i) Hard Disk
- ii) CD – ROM / DVD Drive
- iii) Pen Drive
- iv) Other removable storage such as mobile, smart phone, tablet etc.,
- v) Network drives if your system is connected with other system.

**PART – IV****IV. ANSWER THE FOLLOWING QUESTIONS:****5 X 5 = 25****34. a) Short answer on the following:**

**i) Hardware ii) Software iii) Fault Tolerance iv) GUI v) Time – sharing**

**Ans:** i) Hardware: Hardware is the physical component of a computer like motherboard, memory device, monitor, keyboard etc.,

ii) Software: A software is set of instructions that perform specific task. It interacts basically with the hardware to generate the desired output.

iii) Fault Tolerance: The Operating System is robust only when the OS supports fault tolerance. When there is a fault, the Operating System should not crash, instead the Operating System have fault tolerance capabilities and retain the existing state of system.

iv) GUI: The GUI (Graphical User Interface) is a window based system with a pointing device to direct I/O, choose from menus, make selections and a keyboard to enter text. Its vibrant colours attract the user very easily.

v) Time – sharing: It allows execution of multiple tasks or processes concurrently. For each task a fixed time is allocated.

**b) Explain the process management algorithms in operating system.**

**Ans:** Process management is function that includes creating and deleting processes (program) and providing mechanisms for processes to communicate and synchronize with each other.

Example: A system task of sending output to a printer.

Process management algorithms:

- i. FIFO              ii. SJF              iii. Round Robin              iv. Based on Priority

i. FIFO (First In First Out) Scheduling: This algorithm is based on queuing technique.

Technically, the process that enters the queue first is executed first by the CPU, followed by the next and so on. The processes are executed in the order of the queue.

ii. SJF (Shortest Job First) Scheduling: This algorithm works based on the size of the job being executed by the CPU. Example: Suppose, Job A = 6 KB and Job B = 9 KB, then

First the job "A" will be assigned and then job "B" will get its turn.

iii. Round Robin Scheduling: The Round Robin (RR) scheduling algorithm is designed especially for time sharing systems. Jobs (processes) are assigned and processor time in a circular method.

Example: Suppose there are three jobs A, B, C. First the job A is assigned to CPU then job B and Job C and then again A, B and so on.

iv. Based on Priority: The given job (process) is assigned based on a Priority. The job which has higher priority is more important than other jobs.

Example: Suppose there are two jobs,

Job A → Priority = 5

Job B → Priority = 7, then

Job B is assigned to the processor before job A.

**35. a) List out the some of the functions of windows operating system.**

**Ans:** - Access applications (programs) on the computer.

Example: Open word processing, games, spread sheets, calculator etc.

- Load any new program on the computer.

- manage hardware such as printers, scanners mouse, digital cameras etc.

- file management activities

Example: Creating, modifying, saving, deleting files and folders.

- Change computer settings such as colour scheme, screen savers of your monitor, etc.

b) Explain detail about various versions of windows operating sytem.

Ans:

Versions	Year	Specific features
Windows 1.x	1985	<ul style="list-style-type: none"> <li>• Introduction of GUI in 16-bit. processor</li> <li>• Mouse was introduced as an input device.</li> </ul>
Windows 2.x	1987	<ul style="list-style-type: none"> <li>• Supports to minimize or maximize windows.</li> <li>• Control panel feature was introduced with various system settings and customising options.</li> </ul>
Windows 3.x	1992	<ul style="list-style-type: none"> <li>• Introduced the concept of multitasking.</li> <li>• Supported 256 colours which brought a more modern, colourful look to the interface.</li> </ul>
Windows 95	1995	<ul style="list-style-type: none"> <li>• Introduced start button, the taskbar, Windows Explorer and Start menu.</li> <li>• Introduced 32-bit processor and focused more on multitasking.</li> </ul>
Windows 98	1998	<ul style="list-style-type: none"> <li>• Integration of the Web browser (Internet Explorer) with the Operating System.</li> <li>• DOS gaming began to disappear as Windows based games improved.</li> <li>• Plug and play feature was introduced.</li> </ul>
Windows NT		Designed to act as servers in network.
Windows Me	2000	<ul style="list-style-type: none"> <li>• It introduced automated system diagnostics and recovery tools.</li> </ul>
Windows 2000	2000	<ul style="list-style-type: none"> <li>• Served as an Operating System for business desktop and laptop systems.</li> <li>• Four versions of Windows 2000 were released: Professional (for business desktop and laptop systems), Server (both a Web server and an office server), Advanced Server (for line-of-business applications) and Data Centre Server (for high-traffic computer networks)</li> </ul>
Windows XP	2001	<ul style="list-style-type: none"> <li>• Introduced 64 - bit Processor.</li> <li>• Improved Windows appearance with themes and offered a stable version.</li> </ul>
Windows Vista	2006	<ul style="list-style-type: none"> <li>• Updated the look and feel of Windows.</li> </ul>
Windows 7	2009	<ul style="list-style-type: none"> <li>• Booting time was improved, introduced new user interfaces like Aero Peek pinning programs to task bar, handwriting recognition etc. and Internet Explorer 8.</li> </ul>
Windows 8	2012	<ul style="list-style-type: none"> <li>• Windows 8 is faster than previous versions of Windows.</li> <li>• Start button was removed.</li> <li>• Windows 8 takes better advantage of multi-core processing, solid state drives (SSD), touch screens and other alternate input methods.</li> <li>• Served as common platform for mobile and computer.</li> </ul>
Windows 10	2015	<ul style="list-style-type: none"> <li>• Start Button was added again.</li> <li>• Multiple desktop.</li> <li>• Central Notification Center for App notification and quick actions.</li> <li>• Cortana voice activated personal assistant.</li> </ul>



**36. a) Explain the different ways of finding a file or folder.**

**Ans:** To find a file or folder:

- i. Click the Start button, the search box appears at the bottom of the start menu.
- ii. Type the name of the file or folder or part of it to search.
- iii. The files or the folders with the specified names will appear, if you click that file, it will directly open that file or the folder.
- iv. There is another option called “See more results” which appears above the search box.
- v. If you click it, it will lead you to a “Search Results” dialog box where you can click and open that file or the folder.

Searching Files or Folders using Computer icon:

- i. Click “Computer Icon” from desktop or from start menu.
- ii. The Computer disk drive screen will appear and at the top right corner of that screen, there is a search box option.
- iii. Type the name of the file or the folder or part of it to search.
- iv. Just click and open that file or the folder.

**b) Write the specification of an algorithm hypotenuse whose inputs are the lengths of the two shorter sides of a right angled triangle, and the output is length of the third side.**

**Ans:** Point to consider

- a, b and h are sides of a triangle, therefore a, b and h are positive.
- hypotenuse(a, b)
- inputs: a, b are real numbers,  $a > 0$ ,  $b > 0$
- outputs: h is real number,  $h > 0$  where  $h^2 = a^2 + b^2$

**37. a) Explain detail about Building Blocks of Algorithm.**

**Ans:** The building block of algorithm are

- Data
- Variables
- Control flow
- Functions
- Data: Algorithms take input data, process the data, and produce output data. computers provide instructions to perform operations on data.
- Variables: Variables are named boxes for storing data. The state of a process can be represented by a set of variables in an algorithm. The state at any point of execution is simply the values of the variables at that point. As the values of the variables are changed, the state changes.
- Control flow: There are 3 important control flow statement to alter the control flow depending on the state.
  - i. Sequential control flow, a sequence of statements are executed one after another in the same order as they are written.
  - ii. Alternative control flow, a condition of the state is tested and if the condition is true, one statement is executed: if the condition is false an alternative statement is executed.
  - iii. Iterative control flow, a condition of the state is tested and if the condition is true a statement is executed. The two steps of testing the condition and executing the statement are repeated until the condition becomes false.

Functions: Algorithms can become very complex. The variables of an algorithm and dependencies among the variables may be too many. Then, it is difficult to built algorithms correctly. In such situations, we break an algorithm in to parts, construct each part separately, and then integrate the parts to the complete algorithm. The parts of an algorithm are known as functions.

**b) Write the procedure to create shortcut in windows operating system.**

**Ans:** Creating Shortcuts on the Desktop:

Shortcuts to most often used folders and files may be created and placed on the Desktop to help automate your work.

- Select the file or folder that you wish to have as a shortcut on the Desktop.
- “Right click” on the file or folder.
- Select “Send” to from the shortcut menu, then select Desktop (create shortcut) from the sub-menu.
- A shortcut for the file or folder will now appear on desktop and we can open it from the desktop in the same way as any other icon.

**38. a) Write the advantages and disadvantages of Time-sharing features.**

**Ans:** Advantages:

- It allows execution of multiple tasks or processes concurrently.
- All the current processes will have their CPU time.
- Switches between the tasks rapidly thus completing other processes even if a process takes long time to complete.

Disadvantages:

- Switching between the tasks becomes sometimes sophisticated.
- May lead to network and security problems.

**b) Write the few uses of operating system.**

**Ans:** The main use of Operating System is,

- To ensure that a computer can be used to extract what the user wants it do.
- Easy interaction between the users and computers.
- Starting computer operation automatically when power is turned on (Booting).
- Controlling Inputs and Outputs Devices.
- Manage the utilization of main memory.
- Providing security to user programs.

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