COMMON QUARTERLY EXAMINATION – SEPTEMBER 2017

STANDARD 11

COMPUTER SCIENCE

I.CHOOSE THE BEST ANSWER:

1. Integrated Circuit

2. Star word

3. Super computer

4. 2^50 bytes

5. 0,1

6. Optical Mark Reading and Recognition

7. Display screen

8. A

9. Electronic work bench

10. Distributed operating system

11. Resident monitor

12. Infrared

13. Freeware

14. Windows 3.11

15. Start menu

II. Answer any six of the following . Question No.24 is compulsory:

16. What is a computer?

Computer:

- ✓ A computer is an **electronic machine**, capable of performing **basic operations** like **addition, subtraction, multiplication, division**, etc.
- ✓ The computer is also **capable of storing information**, which can

be used later.

- ✓ It can **process millions** of instructions in a few seconds and at the same time with **high accuracy**.

17. Define algorithm.

Algorithm:

- ✓ Algorithm is defined as a **step-by-step procedure** or **formula for solving a problem** i.e. a **set of instructions** or **procedures for solving a problem.**
- ✓ It is also defined as a mathematical procedure that can **Data Processing Information** usually be explicitly encoded in a set of computer language instructions that manipulate data.

18. Add: 11011001 + 1011101 = 100110110

101110 – 1011 = 100011

19. What is stored program concept?

The essentials of the stored program concept are
- the program and data are stored in a primary memory (main memory)
- once a program is in memory, the computer can execute it automatically without manual intervention.
- the control unit fetches and executes the instructions in sequence one by one.
- an instruction can modify the contents of any location in The stored program concept is the basic operating principle for every computer.

20. What is half adder and full adder?

A unit that adds two binary digits is called a half adder and the one that adds together three binary digits is called a full adder

21. What is an operating system? Give example.

- Operating System is one program running at all times on the computer.
- The Operating System is the intermediary between the user and computer hardware. (or) it is an Operating System is an interface between the user and hardware.

Example: Windwos XP , DOS , LINUX etc.

22. What is modem?

- The process of converting Sound or Data into a signal that can flow through the telephone wire is called **Modulation.**
- The process of converting signal that can flow through the telephone wire into Sound or Data is called **DeModulation.**
- The device that accomplishes **modulation – demodulation** process is called a modem.

23. How will you turn off your computer?

To shut down the computer you have to follow these steps,
(1) Save all your unsaved documents
(2) Click the **Start** button.
(3) Click **Turn Off Computer** button .
Some computers especially new ones will automatically shut down the computers. We can also Turn Off the computer by the key combinations of Alt+F4 and then click **Turn Off** button.

24. What are the different parts of a window?

- At the top of each window is the **Title Bar.** As the name indicates, the title bar tells you the name of the application.
- It also contains three of the following four **Sizing buttons**, at the top of the right corner.
- **Minimize Button:** The minimize button is used to reduce the size of the window to a button on the taskbar
- **Maximize Button:** Clicking on this button enlarges the window to fill the entire
- **Restore Button:** This button is used to restore the window to its original size
- **Close Button:** This button is used to close a window.
- Below the title bar is the **Menu Bar**. This displays the different menus available to you.

PART – C

III. ANSWER ANY SIX OF THE FOLLOWING. QUESTION NO.32 IS COMPULSORY:

25. Explain application software with an example.

Application Software:

- ✓ An Application Software consists of **programs designed to solve a user problem.**

- ✓ Application software are in turn, **controlled by system software** which manages hardware devices.
- ✓ Some typical examples are : **railway reservation system, gameprograms, word processing software, weather forecasting programs**.

26. Explain (a) slide Rule and Napier Bone.

1633 AD – The Slide Rule

- The Slide Rule was invented by William Oughtred.
- It is based on the principle that actual distance from the starting point of the rule is directly proportional to the logarithm of the numbers printed on the rule.
- The slide rule to perform multiplication and division by a method of addition and subtraction.

1614 AD – Napier's Bones

- The Napier's Bones was invented by John Napier, a Scottish mathematician as an aid to multiplication.
- A set of bones consisted of nine rods, one for each digit 1 through 9 and a constant rod for the digit '0'.
- A rod is similar to one column of a multiplication table.

27. Simplify the following Boolean Expression:

$\bar{A}\bar{B}\bar{C}+\bar{A}BC+A\bar{B}\bar{C}$

$=(\bar{A} + A)\bar{B}\bar{C}+\bar{A}BC$

$=\bar{B}\bar{C}+\bar{A}BC$

$=\bar{A}(\bar{B}\bar{C} + BC)$

28. Explain the hierarchy of memory.

The hierarchy of memory:

- The registers (internal memory) are used to hold the instruction and data for the execution of the processor. Eventually the top of the hierarchy goes to the registers.
- The memory closest to the processor is known as a cache. It is a high speed memory that is much faster than the main memory.
- The next is the main memory which is also known as the primary memory.
- The low end of the hierarchy is the secondary memory.

29. Explain the steps involved in designing the logic circuit:

steps involved in designing the logic circuit

There are many steps in designing a logic circuit. First, the problem is stated (in words). Second, from the word description, the inputs and outputs are identified, and a block diagram is drawn. Third, a truth table is formulated which shows the output of the system for every possible input. Fourth, the truth table is converted to a Boolean function. Fifth, the boolean function is converted to a logic circuit diagram. Finally, the logic circuit is built and tested.

31. Explain: (a) TCP (b) NIC (c) Packet switching

TCP:

- TCP stands for transmission control protocol.
- TCP breaks up the data to be sent into little packets.
- It guarantees that any data sent to the destination computer reaches intact.
- It makes the process appear as if one computer is directly connected to the other providing what appears to be a dedicated connection.

NIC:

- The device that coordinates the data transfer is called Network interface card (NIC).
- NIC is fixed in the computer and communication channel is connected to it.
- Ethernet, Arcnet and token ring are the examples for the NIC

Packet switching:

- A sending computer breaks an electronic message into packets.
- The various packets are sent through a communication network-often by different routes, at different speeds and sandwiched in between packets from other messages.
- Once the packets arrive at the destination, the receiving computer reassembles the packets in proper sequence.
- The packet switching is suitable for data transmission.

32. How many types of dialog boxes are available in windows XP? Explain any two.

The dialog boxes available in windows xp is Text Boxes, List Boxes, Drop-down lists, Radio Buttons, Check boxes, Buttons, Tabs, Sliders.

(Explain any tow)

33. Differentiate clipboard and clip book.

Clipboard:

- The Clipboard can hold only one set of data.

- When you copy or move a file or folder to the Clipboard, it overwrites whatever was stored there earlier.

Clipbook:

- you can store 24 different items in the ClipBook and you can paste them one by one.

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