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Term-I Examination

 Computer Science(Code083)

 Class: XI Date:

 Time:3hrs Marks:70

 General Instructions:

 1.This question paper contains two parts A and B.Each part is Compulsory.

 2.Both Part A and Part B have choices.

 3.Part-A has 2 sections:

a.Section-I is short answer questions,to be answered in one word or one line.

b.Section-II has two case studies questions.Each case study has 4 case-based sub-parts.An examinee is to attempt any 4 out of the 5 subparts.

 4.Part-B is Descriptive paper

 5.Part-B has three sections

 a.Section-I is short answer question of 2 marks each in which two question have internal options.

 b.Section-II is long answer questions of 3 marks each in which two questions have internal options.

c.Section-III is very long answer questions of 5 marks each in which one question has internal option.

## Part-A

# Section-I

 **This section consists of 21 Questions (1 to 21). Attempt any 15 questions from this section.**

 **Choose the best possible option.**

**1.A 1.Computer takes \_\_\_\_\_\_\_\_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ it and gives \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. 1**

a.process,input,output b.input,output,process

c.input,process,output d.None of above

 **2.The ICs are made up of \_\_\_\_\_\_\_\_\_\_\_\_\_ materials. 1**

**a.Conductor b.Insulator c.Resistor d.Semiconductor**

 **3.To calculate perform calculation and store data computer user ………. number system. 1**

**a.Decimal b. Hexadecimal c. Octal d. Binary**

 **4. The largest unit of storage is……………. 1**

**a.GB b. KB c. MB d. TB**

 **5.The Arithmetic Logic Unit performs which arithmetical operation? 1**

**a.(+ , – , \* , / ) b. ( True. False ) c. ( <, >, =,> =,<>) d. All of these**

**6.………….. is approximately one billion bytes. 1**

**a.Kilobyte b. Bit c.Gigabyte d. Megabyte**

 **7.How many bits are represented in one byte? 1**

**a. 8 b. 16 c. 64  d. 256**

 **8.DE Morgan’s law states that 1**

**a. (AB)’ = A’ + B’ b. (A + B)’ = A’ \* B c. A’ + B’ = A’B’  d.(AB)’ = A’ + B**

 **9. A \_\_\_\_\_\_\_\_\_\_ gate gives the output as 1 only if all the inputs signals are 1. 1**

**a. AND  b. OR c. EXOR d. NOR**

 **10.One kilobyte makes from ………….. 1**

**a. 612 b.1024 c. 2048 d.4096**

**11.The symbol + in Boolean is also known as the \_\_\_\_\_\_\_\_\_\_\_\_ operator. 1**

**a.AND b. OR  c. EXOR d. NOR**

 **12.How many digits are there in binary number system? 1**

**a. One b. Two c. Three d.Four**

**13.The base of hexadecimal number system is 1**

**a.6 b. 8 c. 16  d. 10**

**14.…….. shows off’ state of current in binary code. 1**

**a. 1 b. 0 c. 3 d. 2**

**15.Personal computers use no. of chips mounted on a main circuit board. The main board is known as-**

**a.Chip b. Motherboard  c. Masterboard d .Fastboard**

**16.Group of eight bits 10010110 or 01100101 is called ……………….**

**a.Nibble b.Byte c. Bit d. Robote**

**17.Which of the following are the sub units that make the CPU?**

**a.ALU b. Control Unit c. Both a & b  d. None of these**

**18.What is logic gate ?**

**a.A software b. A type of circuit c. A special Cd d. A computer game**

**19.What is an algorithm?**

**a. A set of steps to solve a problem b.Software that analyses data**

**c.A hardware device that stores data d.All of these**

**20.What is decomposition?**

**a.Breaking code down once it has been run**

**b.Breaking a problem down into smaller,more manageable sections**

**c.Breaking a problem into subroutines**

**d.Breaking big data into small data**

**21.Which of the following activities is algorithmic in nature?**

**a.Assemble a bicycle b.Describe a bicycle**

**c.Label the parts of a bicycle d.Explain how a bicycle works.**

**22.Octal to Hexadecimal Conversion:**

**a.(115) base of 8**

**=1\*8 base of 2 +1\*\_\_\_\_ base of 1+ 5\*8 base of\_\_\_\_**

**=\_\_\_\_\_\_\_\_ + 8 + \_\_\_\_\_**

**=(\_\_\_\_\_\_\_)base of 10**

**23.Fill in the blanks in DeMorgan’s First Theorem**

**(X+Y)+(X’Y’)=1**

**(X+Y)+X’Y’=((X+Y)+\_\_\_\_\_).((X+\_\_\_\_)+Y’)**

 **=(X+\_\_\_\_+Y).(X+Y+Y’)**

 **=(1+Y).(\_\_\_\_+1)**

 **=\_\_\_\_\_\_\_\_**

 **=1**

**24.What functions are performed by the control unit? Can we call it the control centre of computer system?Why?**

**25.What are ASCII and ISCII?Why are these used?**

**26.How is UTF-8 encoding scheme different from UTF-32 encoding scheme?**

**27.What are some number systems used by computers?**

**28.State and verify using truth table: (i) X.X’=0 (ii)X+1=1**

**29.How are software libraries useful? Name some software libraries of python?**

**30.Find the complement of Boolean expression:A’+(B’+C).**

**31.State and verify Absorption law in Boolean Algebra.**

**(i) X+XY=X (II)X(X+Y)=X**

**32.How do you obtain a dual of a Boolean expression?**

**33.What is testing and debugging?**

**Discuss two common tools for developing an algorithm?**

**34.What are RAM and ROM?How are they alike?How are they different?What are EEROM,PROM and EPROM?**

**35.Define each of the following:**

**a.byte b.gigabyte c.Kilobyte**

**36.Express the following decimal numbers into hexadecimal numbers.**

**a.548**

**b.58**

**37.Give examples for each of system software and application software.Explain the function of each type?**

**38.Find the complement of expression(x’+y’)(xy’z+x’z’).**

**39.Draw a flow chart to find the sum of first 50 natural numbers.**

**Draw a flow chart to calculate the factorial of a number(N).**

**Write down the boolean expression for output Y of a system shown in figure**

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**a.AB’+A’B b.(A’+B’)(A+B) c.A’B’+AB d.A.B+(A’+B’)**

**Do the following conversions from decimal number to other number systems.**

**a.(54) base of 10= (?) base of 2 b.(76) base of 10=(?) base of 8**

**c.(789) base of 10=(?) base of 16 d.(108) base of 10=(?) base of 16**

**e.(120) base of 10=(?) base of 2**

**Discuss briefly about Mobile System Organization?**