KATHMANDU UNIVERSITY
End Semester Examination
February/March, 2019

Marks Scored:

Level: B.Sc./B.Tech./B.Pharm.
Year : I

Course : COMP 101
Semester : I

Exam Roll No. :

Time: 30 mins.

F. M. : 10

Registration No.:

Date MAR 0 1 2019

SECTION "A"
[20 Q. × 0.5 = 10 marks]

Circle the most appropriate answer.

1. Which technology was used in the second generation computers?
   a) Transistors b) Vacuum tubes c) Microprocessors d) Integrated Chips

2. Which of the following is NOT the components of a digital computer?
   a) ALU b) CU c) Memory Unit d) None of the above

3. Which of the following sequence of operations represents the machine cycle?
   a) Fetch-Execute-Decode-Store b) Store-Execute-Fetch-Decode
   c) Fetch-Decode-Execute-Store d) Store-Fetch-Decode-Execute

4. The decoding phase of the instruction cycle is also known as:
   a) Translating b) Interpreting c) Analysing d) Breaking

5. Which of the following technologies is NOT a touch-screen-technology?
   a) Surface wave technology b) Capacitive technology
   c) Resistive technology d) Inductive technology

6. Which of the following units can be used to measure the speed of a printer?
   a) Characters per inch (cpi) b) Pages per minute (ppm)
   c) Dots per inch (dpi) d) All of the above

7. Which of the followoing is NOT a type of magnetic storage system?
   a) Magnetic Tape b) Compact Disk c) Hard Disk d) Floppy Disk

8. What is the medium used in optical storage systems for reading and recording data?
   a) Ultraviolet light b) Laser light
   c) High Energy visible light d) Back light

9. The hexadecimal number 4A9.2B represents the decimal value ____.
   a) 1193.1679 b) 1010.1867 c) 1234.5678 d) 1934.1625

10. What is the result after performing binary addition of -2 and -4 using one's complement system?
    a) 1010 b) 1100 c) 1011 d) 1001

11. _____ is a process used by a software industry to design, development, and test high quality software.
a) Information Technology Development b) Database Management System
c) Software Development Life Cycle d) None of the above

12. A program in which multiple instructions of high-level langauge or assembly langauge instructions are written is generally known as _____.
a) Psuedocode b) Source code c) Object code d) Machine code

13. Which of the following structures does NOT fall into Selection Structure?
a) If-Then b) If-Then-Else c) Case Type d) Repeat-Until

14. Machine language programs are efficient because
a) they are directly executed by the CPU
b) they are very easy to develop
c) their object code is very small in size
d) None of the above

15. What is operating system?
a) Collection of programs that manages hardware resources
b) System service provider to the application programs
c) Link to interface the hardware and application programs
d) All of the above

16. Which of the following provides complete information about a process?
a) Process control block b) Process communication
c) Process state d) Operating system

17. What is the full form of TCP?
a) Transfer Control Protocol
b) Transmit Control Protocol
c) Transmission Control Protocol
d) Transmission Communication Protocol

18. In which network architecture there are no client computers and server computers?
a) CSN network b) PPN network
c) Value added network architecture d) All of the above

19. Which of the following combinations of logic gates is included in the NAND gate?
a) NOT and OR b) AND and OR
c) NOT and AND d) NOT and XOR

20. Which of the following options can be used to express all logical operations?
a) K-map b) Truth table
c) Boolean expression d) All of the above

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SECTION "B"

[6 Q. × 4 = 24 marks]

Attempt *ANY SIX* questions.

1. Explain first generation computer? What were the advantages and disadvantages of first generation computers? [1+3]

2. Draw the block diagram of a computer system and explain its main components like Input, Output, CPU, ALU, CU etc. [1+3]

3. What is meant by input and output devices? What are the importance of an input and output devices in a computer system? Explain with examples. [2+2]

4. What is the difference between a magnetic tape and a magnetic disks? List the advantages and disadvantages of both. [1+3]

5. What is the difference between one's complement and two's complement system? Perform the binary subtraction of 25 and 15 using two's complement system. [1+3]

6. List the different phases of system development life cycle (SDLC). Describe two of them. [1+3]

7. Write short notes on: [2+2]
   a) Optical Disk
   b) Octal Number System

SECTION "C"

[2 Q. × 8 = 16 marks]

Attempt *ANY TWO* questions.

8. Differentiate between a compiler, an assembler, and an interpreter. Write a flowchart for finding the greatest among the given three integer numbers. [3+5]

9. What do you mean by Operating Systems? Explain the functions of an operating system in detail. [2+6]

10. What are different types of network topologies? Explain any four network topologies with suitable illustrations. [1+7]