KATHMANDU UNIVERSITY
End Semester Examination
February 2023

Marks Scored:

Level : B.Pharm.
Year : I
Course : COMP 101
Semester: I

Exam. Roll No. :
Time: 30 mins.
F.M. : 10

Registration No.:
Date : 23 feb-023

SECTION "A"
[20Q. × 0.5 = 10 marks]

Mark [×] for the most appropriate option.

1. The components that provide internal storage to the CPU are _____.
   [ ] Registers [ ] Controllers
   [ ] Internal chips [ ] Program Counters

2. A computer is accurate, but if the result of a computation is false, what is the main reason for it?
   [ ] Power Failure [ ] The compiler fault
   [ ] Incorrect data entry [ ] The computer circuit

3. Which of the following is used to hold running program instructions?
   [ ] Primary Storage [ ] Internal Storage
   [ ] Virtual Storage [ ] Secondary Storage

4. Which one of the following software applications would be the most appropriate for performing numerical and statistical calculations?
   [ ] Database [ ] Document processor
   [ ] Spreadsheet [ ] PowerPoint

5. Which of the following memory cannot be directly accessed?
   [ ] Primary Memory [ ] RAM
   [ ] Secondary Memory [ ] ROM

6. The four bits are called _____.
   [ ] Byte [ ] Nibble [ ] Octet [ ] Bit

7. _____ helps users to configure, analyze, optimize and maintain a computer.
   [ ] Application Software [ ] System Software
   [ ] Utility Software [ ] User

8. _____ is used to extend transmissions so that the signal can cover longer distances or be received on the other side of an obstruction.
   [ ] Firewall [ ] Repeater [ ] Router [ ] Bridge

9. What is the binary value for the decimal value 44?
   [ ] 101101 [ ] 110100 [ ] 101100 [ ] 111100

10. What is IoT?
    [ ] Network of physical objects embedded with sensors
    [ ] Network of sensors
    [ ] Network of physical objects
    [ ] Ring like structure of network objects

11. _____is a cyber attack where a malicious actor sends messages pretending to be a trusted person or entity.
[ ] Phishing [ ] Farming [ ] Stalking [ ] Identity theft

12. _____are equations that perform calculations on values in your worksheet.
[ ] Functions [ ] References [ ] Formulas [ ] Constants

13. _____means guarding against improper information modification or destruction, and includes ensuring information non-repudiation and authenticity.
[ ] Access control [ ] Confidentiality
[ ] Availability [ ] Integrity

14. Which of the following is a network security device that monitors and filters incoming and outgoing network traffic based on an organization's previously established security policies?
[ ] Antivirus [ ] Firewall
[ ] Theft monitoring [ ] Script

15. _____ is achieved using specialized software which creates partitions of a server into smaller virtual servers to maximize server resources.
[ ] Cloud Computing [ ] Virtualization
[ ] IoT [ ] Green Computing

16. Which of the following is **not** a characteristic of cloud computing?
[ ] Security [ ] High Scalability
[ ] Availability [ ] High cost

17. _____ gives the higher control and increased flexibility while minimizing the risk of security breach as it is deployed within the firewall of the organization.
[ ] Private cloud [ ] Public cloud
[ ] Protected cloud [ ] Hybrid cloud

18. Many corporate IT departments and large tech giants have _____computing initiatives to reduce the environmental effect of their IT operations.
[ ] Cloud [ ] Green [ ] Virtual [ ] Hybrid

19. In mesh topology each device is connected to each other via _____.
[ ] Single and multiple links [ ] No link
[ ] Multi-point link [ ] Point to point link

20. Which of the following is **not** an advantage of IoT?
[ ] Reduced waste [ ] Security
[ ] Enhanced data collection [ ] Improve customer management

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23, February 2023

Level : B.Pharm.
Year : I
Time : 2 hrs. 30 mins.

Course : COMP 101
Semester : I
F. M. : 40

SECTION "B"
[6Q. × 4 = 24 marks]

Attempt *ANY SIX* questions.

1. Discuss and classify the types of computer based upon size, speed and capacity.
2. Explain in detail the different phases of the machine cycle with a suitable diagram.
3. What is the function of memory in computer? Distinguish between primary and secondary memory with example.
4. Explain the CIA triad in detail. Write down the ways to prevent cyber stalking.
5. What is computer software? Explain in detail the different types of system software.
6. What do you mean by big data and data science? Explain the 5 V's of big data.
7. Perform as instructed. [4×1=4]
   a) Convert $(15AF)_{16}$ to decimal.
   b) Convert $(235)_8$ to decimal.
   c) Convert $(4096)_{10}$ to binary.
   d) Convert $(1011001)_2$ to decimal.

SECTION "C"
[2Q. × 8 = 16 marks]

Attempt *ANY TWO* questions.

8. Briefly explain the different types of computer area networks. What do you understand by the term network topology? Discuss and classify different network topology with suitable figure.
9. Write short notes on:
   a) RAM and ROM
   b) Components of CPU
   c) Unauthorized access and use of computers
   d) Computer generations
10. What do you understand by cloud computing and green computing? Discuss on the types of cloud computing? How do you achieve green computing? What is Internet of Things (IoT)? What are the four fundamental components of an IoT system?