CB
Batch 2023-24

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BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)
SPECIALIZATION IN CYBER SECURITY (CS)
EXAMINATION : DECEMBER -2023
SEMESTER - I
Sub: Computer & Network Fundamentals
(BCA-23-103 /BCAC 23-103)

Date : 29/12/2023 **Total Marks : 60** **Time: 10.00 am To 12.30 pm**

Instructions:
1. *All questions are compulsory unless and otherwise stated.*
2. *Bold figures to the right of every question are the maximum marks for that question.*
3. *Candidates are advised to attempt questions in order.*
4. *Answers written illegibly are likely to be marked zero.*
5. *Use of scientific calculators, Log tables, Mollier Charts is allowed.*
6. *Draw neat and labelled diagrams wherever necessary.*

Q.1. Fill in the blanks. **(5)**

1. All mail protocols works at_____
   a)transport layer b)application layer
   c) session layer d) network layer
2. IPv4 is _____ bit address
   a) 32 b)128
   c) 64 d) 156
3. Default subnet mask address for Class B IP address is _____
   a)255.255.255.0 b) 255.0.0.0
   c) 255.255.0.0 d) 255.255.255.255
4. _____ are used to make digital copies of existing paper photos, documents, drawings etc.
   a)Printers b)Monitors
   c) Mouse d) Scanners
5. Decimal Equivalent for $(FF)_{16}$ is _____
   a) 255 b)128
   c) 256 d) 1515

Q.2. State True/False. **(5)**

1. In Machine Level Language programs are written into Binary code
2. Repeater works at physical Layer of OSI Model
3. Zero NOR Zero produces Zero.
4. Wi-Fi uses Radio Frequency as its carrier
5. Base of the octal number system is 7

Q.3. Answer the following. (Solve any 5) **(10)**

1. What is router?
2. What is need of subnetting?
3. List various pointing devices.

4. Differentiate between positional and non positional number systems.
5. What is server and client?
6. List the uses of the Internet

Q. 4. Answer the following in detail. (Solve any 6) **(30)**

1. Write a note on WEP Security
2. Define network topology. Explain any two types of network topologies
3. Explain AND and NAND gate.
4. Write a note on printer.
5. Explain working of DHCP server.
6. Convert the following: a) $(110101011)_2 = (?)_{10}$ b)) $(51264)_{10} = (?)_{16}$
7. What is algorithm? What are the different components of flowchart?

Q. 5. Answer the following in detail. (Solve any 1) **(10)**

1. Explain primary storage device
2. Explain OSI reference model