

# C. U. SHAH UNIVERSITY

## Summer Examination 2018

Subject Name: **Networks and Internet: Theory and Practical**

Subject Code: **5AHO2NAI2**

Branch: **M.Lib.I.Sc.**

Semester: **2**

Date: **23/04/2018**

Time: **10:30 To 01:30**

Marks: **70**

**Instructions:**

- (1) Use of Programmable calculator and any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

### SECTION-I

**Q. 1 Answer the following.**

- |  |    |
|--|----|
| a) What is Internet?   | 02 |
| b) Give the full form of: VPN, NIC.  | 02 |
| c) Describe Internetworking.   | 02 |
| d) Communication between a computer and a keyboard involves _____ transmission | 01 |
| 1) Simplex      2) Half-duplex      3) Full-duplex      4) Automated           |    |

**Q. 2 Attempt all questions.**

- |  |    |
|--|----|
| a) Write note on Semi-Duplex and Full Duplex.                                | 07 |
| b) What is IP address? What is Subnet? Explain different IP address Classes. | 07 |

**OR**

**Q. 2 Attempt all questions.**

- |   |    |
|---|----|
| a) Explain IPv4 datagram format and importance of each field. | 07 |
| b) Differentiate between IPv4 and IPv6.                       | 07 |

**Q. 3 Attempt all questions.**

- |   |    |
|---|----|
| a) What is network? Explain in brief about LAN and MAN. | 07 |
| b) What is topology? Explain star topology in brief     | 07 |

**OR**

**Q. 3 Attempt all questions.**

- |  |    |
|--|----|
| a) Differentiate between OSI and TCP/IP model on different grounds                 | 07 |
| b) Give Comparison among Circuit switching, Packet switching and Message Switching | 07 |

### SECTION-II

**Q. 4 Answer the following.**

- |  |    |
|--|----|
| a) Justify Analog Network.   | 02 |
| b) Differentiate between Synchronous and Asynchronous communication. | 02 |
| c) What is wireless communication?                                   | 02 |



d) Give the full form of IPv4.

- 1) Intranet Protocol 4  
3) Internet Ping 4

- 2) Internet Protocol Version 4  
4) None of these

01

**Q. 5 Attempt all questions.**

- a) Explain TCP/IP model with key features of each layer.  
b) Compare Hub, Bridges, Switch, Router and Gateways.

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07

**OR**

**Q. 5 Attempt all questions.**

- a) Write note on applications of data communication.  
b) What are the challenges & issues in building home networking applications?

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**Q. 6 Attempt all questions.**

- a) Write note on wired transmission channels.  
b) What is SSL? Which security service does it offers? How does it work?

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**OR**

**Q. 6 Attempt all questions.**

- a) What is network operating system? Enlist the names of network operating system. What is the role of the network operating system?  
b) What is the meaning and uses of Intranet in networking? Differentiate between Intranet and Internet.

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### SECTION-I

**Q. 1 Answer the following.**

- a) ઇન્ટરનેટ એટલે શું?  
b) પુરુનામ જણાવો: VPN, NIC.  
c) ઇન્ટરનેટવર્કીંગનું વર્ણન કરો.  
d) કોમ્પ્યુટર અને કીબોર્ડ વચ્ચેના સંચારમાં \_\_\_\_\_ ટ્રાન્સમિશન સામેલ છે  
1) Simplex 2) Half-duplex 3) Full-duplex 4) Automated

02

02

02

01

**Q. 2 Attempt all questions.**

- a) અર્ધ ડુપ્લેક્સ અને પૂર્ણ ડુપ્લેક્સ પર નોંધ લખો.  
b) IP સરનામું શું છે? સબનેટ શું છે? અલગ આઈપી એડ્રેસના ક્લાસ વિષે સમજાવો

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**OR**

**Q. 2 Attempt all questions.**

- a) IPv4 ડેટાગ્રામ ફોર્મેટ અને દરેક Fields નું મહત્વ સમજાવો.  
b) IPv4 અને IPv6 વચ્ચે તફાવત સમજાવો.

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**Q. 3 Attempt all questions.**

- a) નેટવર્ક શું છે? LAN અને MAN વિશે ટૂંકમાં સમજાવો  
b) ટોપોલોજી શું છે? સંક્ષિપ્તમાં સ્ટાર ટોપોલોજી સમજાવો

07

07

**OR**



