P3640

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T.E. (Information Technology)
COMPUTER NETWORK TECHNOLOGY
(2015 Pattern) (Semester - II) (314450)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right side indicate full marks.*
4) *Assume Suitable data if necessary.*

Q1) a) For a given class C network 195.188.65.0. Design the equal subnets in such a way that each subnet has at least 50 nodes. **[6]**

b) Explain the three way handshake algorithm for TCP connection establishment. **[4]**

OR

Q2) a) What is DNS Server? Explain lookup methods used by the DNS to resolve the remote names. **[6]**

b) Explain Network Layer services with example. **[4]**

Q3) a) How Nagle algorithm helps in TCP transmission policy? Explain the Clark's solution to overcome the silly window syndrome. **[6]**

b) What is MIME? Discuss its role in SMTP? **[4]**

OR

Q4) a) Write short note on POP3 and IMAP. **[6]**

b) Explain TCP header format. **[4]**

Q5) a) Explain the issues in designing a routing protocol for Ad-hoc Wireless Network. **[8]**

b) Explain the basic architecture of WLAN and various components in it.**[8]**

OR

Q6) a) What are the functions of the security sub layer in 802.16? **[8]**

b) Describe Bluetooth protocol stack with suitable diagram. **[8]**

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Q7) a) Explain operations of Split TCP. Explain its advantage and disadvantages.**[8]**

b) Explain AODV & DSDV in details. **[8]**

<div align="center">OR</div>

Q8) a) What is Adhoc Network? Explain challenges in designing Routing Protocol for Adhoc wireless networks. **[8]**

b) Explain MACAW protocol in details. **[8]**

Q9) a) Explain the architecture of SDN in details. **[10]**

b) Write a short note on

   i) Network Function Virtualization

   ii) Network Neutrality. **[8]**

<div align="center">OR</div>

Q10) a) Explain IOT architecture in detail. What are the issues and challenges in Internet of Things? **[10]**

b) Compare LEO, MEO and GEO Satellite. **[8]**

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