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Roll No. ....

**G-302**

**B. Tech. EXAMINATION, May 2018**

(Seventh Semester)

(B. Scheme) (Re-appear Only)

(IT)

IT403B

**ADVANCED COMPUTER NETWORKS**

*Time : 3 Hours]*

*[Maximum Marks : 75*

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Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

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**Note :** Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

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**P.T.O.**

### Unit I

1. An organization is granted a block of addresses with the beginning address 14.24.74.0/24. The organization needs to have 3 subblocks of addresses to use in its three subnets : one subblock of 10 addresses, one subblock of 60 addresses and one subblock of 120 addresses. Design the subblocks. **15**
2. (a) Explain IPv6 header in detail. **10**  
(b) Explain which field(s) in the IPv6 datagram is (are) responsible for gluing together all fragments belonging to an original datagram. **5**

### Unit II

3. (a) What do you mean by Berkeley Sockets ? **7**  
(b) Explain byte manipulation and address conversion functions for sockets. **8**

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4. (a) What is the difference between the Server Socket class and the socket class in Java ? **7**  
(b) Explain the reason as to why Java uses an instance of a class instead of just an integer to represent an IP address. **8**

### Unit III

5. Explain GPRS architecture in detail. **15**
6. (a) Explain WAP. Why and where is it used ? **7**  
(b) Explain GSM mobility in detail. **8**

### Unit IV

7. (a) Are both AH and ESP needed for IP Security ? Why or Why not ? **7**  
(b) What is the purpose of Record Protocol and Hand shake Protocol in SSL ? **8**
8. Compare and contrast PGP and S/MIME. What are the advantages and disadvantages of each ? **15**

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**80**