FACULTY OF INFORMATICS

B.E. 4/4 (IT) I – Semester (Suppl.) Examination, June / July 2015
Subject : Intellectual Property Rights (Elective – II)

Time : 3 hours
Max. Marks : 75

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1. Define intellectual property. 2
2. What is passing off in relation to a trade mark? 3
3. Define industrial design and list out its salient features. 3
4. Define a trade mark and what marks cannot be registered. 3
5. Distinguish between TRIPS and TRIMS. 3
6. What is meant by infringement of copyright? 2
7. State obligations of patentee. 2
8. Define traditional knowledge. 2
9. What are the rights of copyright owners? 2
10. What are the main functions of WTO? 3

PART – B (50 Marks)

11. What is meant by industrial design? Explain the essential characteristics of a design for the purpose of registration.
12. Discuss the powers and functions of WIPO. Explain its role in protection of intellectual property rights.
13. Explain the purpose of protecting trademarks. What are the advantages of its registration.
14. Define licencing and compulsory licencing. Explain the major differences between them.
15. Discuss the procedure to register a trademark.
16. Explain:
   a) Term of validity of copyright in design and term of validity of trademark.
   b) Infringement of trademark.
17. Explain the role of international conventions of IPR.

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B.E. 4/4 (IT) I – Semester (Suppl.) Examination, June / July 2015
Subject : Wireless and Mobile Communications (Elective – II)

Time : 3 hours

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1. Write key specification of leading 2G technologies.
2. Define the terms traffic intensity and grade of service.
3. Differentiate between large scale and small scale propagation models.
4. Define diffraction and fresnel zones.
5. Define the terms absolute bandwidth and 3 dB bandwidth.
6. Write the significance of Pseudo-noise sequences.
7. Name the requirements for mobile IP. Does mobile IP fulfill all of them.
8. Define the terms Foreign Agent (FA) and mobile nodes.
9. Write salient features of GSM.
10. Write features of CDMA digital cellular standard.

PART – B (50 Marks)

11. a) Explain evolution of GPRS for 2.5 G GSM and IS136.
    b) Explain various strategies of Handoff and why they need to be prioritized.

12. Explain practical line budget design using path loss model.

13. a) Explain GMSK technique in detail and write an expression for Pe.
    b) Explain generation and detection of DPSK.

14. a) Explain snooping TCP. Write advantages and disadvantages in extending the function of a foreign agent with snooping TCP.
    b) Compare different types of transmission errors that can occur in wireless and wired networks. What additional role does mobility play?

15. a) Write differences between FDMA, TDMA and CDMA.
    b) Draw the architecture of GSM system and explain.

16. a) Write a brief description about wireless local loop.
    b) Explain partition lasers.

17. Write a short notes on any Two :
    a) Fixed telephone networks
    b) Selective retransmission
    c) SDMA

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PART – A (25 Marks)

1. List any 4 types of wireless technologies.  
2. What is reflection in radio propagation?  
3. Write any 3 functions of TORA.  
4. Distinguish between proactive and on demand protocols.  
5. Write any three design issues of transport layer protocol for adhoc wireless networks.  
6. What is associativity-based adhoc multicast routing?  
7. What is Byzantine attack?  
9. What are the main components of a wireless sensor network?  
10. What are the applications of wireless sensor networks?

PART – B (50 Marks)

11. Discuss about various spectrum allocation methods. 
12. Explain the working of DSDV protocol. Also mention its advantages and disadvantages. 
14. Discuss about the intrusion detection techniques for mobile adhoc networks. 
15. Explain about demand based and contention based MAC protocols for sensor networks. 
17. Write a short note on: 
   a) Differences between cellular and adhoc wireless networks  
   b) Sensor node technology

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B.E. 4/4 (IT) I – Semester (Suppl.) Examination, June / July 2015
Subject : Distributed Systems (Elective – II)

Time : 3 hours

Max. Marks : 75

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1 Define distributed systems. Why is middleware very important?  
2 Describe precisely what is meant by a scalable system.  
3 What are the main applications of message-passing interface?  
4 How are synchronous and asynchronous transmissions different for data streams?  
5 Distinguish between stateful and stateless servers.  
6 What is a “mount point”? How is mounting achieved in a name space?  
7 What is the importance of interoperable object reference in CORBA systems.  
8 How is security addressed in Globe system?  
9 What is the importance of low-latency communication in distributed multimedia systems?  
10 What is “Fair scheduling” in distributed multimedia systems?

PART – B (50 Marks)

11 a) Explain what is meant by transparency. Give examples of different types of transparency.  
   b) What is vertical distribution and horizontal distribution in design of multitiered client-server architectures?

12 a) Distinguish between persistent and transient communication.  
   b) What is the role of message broker in message queuing systems?

13 a) Explain how client-to-server binding can be done using a daemon and using a superserver.  
   b) Explain about iterative name resolution mechanism.

14 Distinguish between CORBA, DCOM and GLOBE based on naming, synchronization and replication features.  

15 a) What are the typical characteristics of multimedia data?  
   b) Explain how bandwidth reservation and statistical multiplexing are useful in admission control.

16 a) Explain about agent technology and use of agents in distributed systems.  
   b) Explain the use of have based approaches in supporting mobile entities.

17 Write short notes on :  
   a) Client-to-server binding in DCE  
   b) Real time scheduling for resource management in distributed multimedia systems.

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