M.Tech 1st Semester Cyber Forensics and Information Security Examination,

December–2017

OPERATING SYSTEM AND SECURITY

Paper-MTCF-103

Time allowed : 3 hours] *[Maximum marks : 100*

Note : *Attempt* ***five*** *questions in total, selecting* ***one*** *question from each section and* ***Question No. 1 which is compulsory.*** *All questions carry equal marks.*

1. (a) Explain Process Control Block (PCB) and its elements. 5×4=20

(b) Describe briefly goals of I/O software.

(c) Write a note on Birth of a Thread.

(d) Write a note on Biometrics Authentication.

Section–A

2. Differentiate between program and process. Explain process life cycle with the help of suitable diagram. Explain any one method for process synchronization in detail. 20

3. What do you mean by process scheduling ? List and explain Scheduling Criteria. Explain SJF and Priority Scheduling algorithm with preemption using suitable examples. 20

Section–B

4. What do you mean by virtual memory ? Explain the concept of Demand Paging in detail with the help of suitable diagram. 20

5. Write short note on following : 20
   (a) Interrupt Handlers
   (b) File System Implementation

Section–C

6. What do you mean by Registry ? Explain the following with respect to registry : 20
   (a) Viewing and changing the registry.
   (b) Registry usage.
   (c) Registry logical structure

7. Write and explain Multiprocessor Thread Scheduling Algorithm in detail. 20

Section–D

8. Describe the following : 20
   (a) Server Message Block protocol (SMB Protocol).
   (b) Trusted System and trusted computing Base.

9. Write note on following : 20
   (a) Anti-virus Techniques.
   (b) Next-Generation Secure Computing Base (NGS CB).