S.Y. B.SC (COMPUTER SCIENCE) – SEM-III
SUB:PRINCIPLE OF OPERATING SYSTEM
PUNE VIDHYARTHI GRIHA'S
COLLEGE OF SCIENCE & TECHNOLOGY

Q.P CODE: USCS101   (TIME :2 ½ Hrs.)   TOTAL MARKS :75

N.B:-

1. All questions are compulsory.
2. Answers to the same question must be written together.
3. Numbers to the right indicate full marks.
4. Draw neat labeled diagrams wherever necessary.
5. Use of Non-programmable calculators are allowed.

Q1) Attempt the following (ANY FOUR) (Each of 5 marks)   [20M]

A) What Are The Benefits Of Multithread Programming?

B) Explain The Various Types Of Multithreading Models In Detail.

C) What Are The Five Areas Of The Challenges In Programming For Multi –Core System?Expain In Detail.

D) What Are The Two Differences Between User Level Threads And Kernel Level Threads? Explain In Detail,

E) Explain The General Structure Of Typical Process.

F) Explain In Detail The Critical Section Process.

Q2) Attempt the following (ANY FOUR) (Each of 5 marks)   [20M]

A) Define The O.S. Services.

B) Which Operating System Services Provides The Functions Helpful For The Users?

C) Explain The System Calls In O.S

D) List And Explain The Six Major Categories Of System Calls In O.S.

E) What Is The Purpose Of The Common Interpreter In O.S?

F) Explain The Operating System Structure In Detail.

Q3) Attempt the following (ANY FOUR) (Each of 5 marks)　　　　|20M|

A) Explain The Algorithm For Critical Section Problem In Detail.

B) What Is The Peterson's Solution ?Explain It In Detail.

C) Expain The Classic Problem Of Synchronization In Detail.

D) Write A Short Note On Monitor.

E) Explain The Semaphone In Detail.

F) Define And Explain The Following Terms In Detail : 1) Co-Operating Process. 2)Independent Process .3) Race Condition . 4) Critical Section. 5)Semaphone

Q4) Attempt The Following (Any FIVE) (Each Of 3 Marks)　　　　|15M|

A) Describe The Difference Between Short Term,Medium Term And Long Term Schedulling

B) Explain The Shared Memory System In Detail.

C) Explain The Operations On Process In Detail.

D) Explain The Messege Passing Model In Interprocess Communication.

E) Expalin The Concept Of Threads In Detail.

F) Explain The Concept Of Multicore Programming.