

PD-177-S.E.-CV-19
M.Sc. COMPUTER SCIENCE (1st Semester)
Examination, Dec.-2020
Paper-IV
ADVANCE OPERATING SYSTEM

Time : Three Hours]

[Maximum Marks : 80

[Minimum Pass Marks : 29

नोट : दोनों खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित हैं।

Note : Answer from both the Sections as directed. The figures in the right-hand margin indicate marks.

Section-A

1. Answer the following questions in short:- 2x10=20
- (a) Define batch processing operating system.
 - (b) Draw the memory hierarchy diagram.
 - (c) What do you mean by PCB?
 - (d) Define multithreading.
 - (e) What is virtual memory?
 - (f) Define virus.
 - (g) What is mutual exclusion?
 - (h) Define file system.
 - (i) Define malicious software.
 - (j) What is cache memory?

Section-B
UNIT-I

12x5=60

Attempt all question.

2. What is operating system? Explain the objectives and functions of operating system.

OR

Explain programmed I/O and interrupt-driven I/O.

UNIT-II

3. Define process. Explain process state diagram in detail.

OR

What is deadlock? Explain banking algorithm for deadlock avoidance.

4. Explain different types of page replacement algorithms.

OR

Explain the concept of paging and segmentation in detail.

5. Explain scan and c-scan disk scheduling algorithm with suitable example.

OR

Explain file organization and different types of file accessing method.

6. Explain the following:-

(a) Distributed deadlock (b) Intrusion detection

OR

Explain the following:-

(a) Authentication and Access control (b) eCos and Tiny o s