

PAN AFRICA CHRISTIAN UNIVERSITY

BACHELOR OF BUSINESS INFORMATION TECHNOLOGY

END OF SEMESTER EXAMINATION

DEPARTMENT: COMPUTING & INFORMATION TECHNOLOGY

COURSE CODE: BIT 103

CAMPUS: ROYSAMBU

COURSE TITLE: OPERATING SYSTEM (SPECIAL)

EXAM DATE: JULY 2020

TIME:

INSTRUCTIONS

- This exam carry a total of SIX Questions of [40 Marks]
- Section A Compulsory
- Section B Attempt any THREE Questions
- All questions carry [10 Marks] each.
- Read all questions carefully before attempting.

Section A (Compulsory)

Question 1

Discuss your understanding of the following scheduling algorithms;

a) Long Term Scheduler [5 Marks]

b) Short term scheduler [5 Marks]

Section B

Question 2:

a) Compare and contrast between multiprogramming and Uni-processing in real operational case scenario. [2 Marks]

b) Come up with your own example of a system deadlock and how you will choose to overcome it. [2 Marks]

c) Given the FCFS Scheduling below, calculate both the waiting time and ratio for each Job. [6 Marks]

Job	Est Run Time	Waiting	Ratio
K	5		
X	60		
Y	1		

Question 3:

a) Ojode sends 50 Page document to a printer and realizes that there are no printing papers on the printer tray, He quickly fills the tray and resumes the printing process. After 25Pages are fully printed, he again runs out of printing ink which he resolves before completion of the task. In reference to scheduling algorithms, highlight how many schedulers are involved and at which stages, [4 Marks]

b) Discuss the Dining Philosophers problem as it relates to systems deadlocks [6Marks]

Question 4:

a) Outline real case application of NTFS file system over FAT file system. [6 Marks]

b) Describe the visible differences between the following:

i. SJF and SRT

ii. FCFS and Round Robin

[4 Marks]

Question 5:

- a) Discuss any merits and demerits of TWO operating systems of choice. **[5 Marks]**
- b) In any computing environment discuss where a Pre-emptive and Non-pre-emptive mechanism is applied **[5 Marks]**-

Question 6:

Discuss **TWO** resources managed by computer operation systems [10 Marks]

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