

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER – 3 • EXAMINATION – WINTER - 2017

Subject Code:3330701**Date: 07-11-2017****Subject Name: Operating System****Time: 10:30 am to 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

Q.1

Answer any seven out of ten. દશમાંથી કોઇપણ સાતના જવાબ આપો.

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1. What is OS? What is the need of OS?
૧. OS શું છે ? OS ની જરૂરીયાત શું છે ?
2. Define file in file management.
૨. File management માં file ની વ્યાખ્યા આપો
3. Give definition of : Process, Program
૩. વ્યાખ્યા આપો: પ્રોસેસ, પ્રોગ્રામ
4. Write full form : TLB, IPT, FIFO, LRU
૪. પૂર્ણ નામ આપો: TLB, IPT, FIFO, LRU
5. Give meaning of .EXE and .DOCX file extension
૫. .exe અને .docx ફાઇલ એક્સ્ટેન્શન નો અર્થ સમજાવો
6. List out type of directory structure
૬. ડીરેક્ટરી સ્ટ્રક્ચરની ટાઈપ આપો.
7. Differentiate absolute file path and relative file path
૭. એબ્સોલ્યુટ ફાઇલ પાથ અને રીલેટીવ ફાઇલ પાથ નો ડિફરન્સ આપો
8. Explain grep command
૮. Grep કમાન્ડ ઉદાહરણ આપી સમજાવો
9. Define IPC.
૯. વ્યાખ્યા આપો : IPC
10. List out conditions for deadlock to occur
૧૦. ડેડલોક થવા માટેની શરતો નાં પ્રકાર લખો.

Q.2

(a) Explain virtual memory.

03**પ્રશ્ન. ૨**

(અ) Virtual Memory સમજાવો.

03**OR**

(a) Explain multiprogramming OS.

03

(અ) Multiprogramming OS સમજાવો.

03

- (b) Explain race condition 03
(બ) race condition સમજાવો. 03

OR

- (b) Explain file operations in file management 03
(બ) File management માં file operations સમજાવો. 03
(c) Write a short note on operating system services 04
(ક) ટૂંકનોંધ લખો: operating system services 04

OR

- (c) Explain real time OS. 04
(ક) Real time OS સમજાવો 04
(d) Explain process life cycle 04
(ડ) Process life cycle સમજાવો. 04

OR

- (d) Explain FCFS with example. 04
(ડ) FCFS ઉદાહરણ સાથે સમજાવો 04

Q.3

પ્રશ્ન. 3

- (a) Write short note: context switch 03
(અ) ટૂંકનોંધ લખો : context switch 03

OR

- (a) Differentiate long term scheduler and short term scheduler 03
(અ) Long term scheduler Short term scheduler વચ્ચે તફાવત આપો. 03

- (b) Explain preemptive and non-preemptive scheduling with example. 03
(બ) Preemptive and non-preemptive scheduling ઉદાહરણ સાથે સમજાવો. 03

OR

- (b) Write advantages and disadvantages of basic paging method 03
(બ) Basic paging method નાં ફાયદા અને ગેરફાયદા આપો. 03
(c) Explain components of computer system 04
(ક) computer system. નાં components સમજાવો. 04

OR

- (c) Differentiate multi programming and multi processing OS. 04
(ક) Multi programming and multi processing OS નો તફાવત આપો. 04

- (d) Write a short note on file types 04
(ડ) ટૂંકનોંધ લખો: file types. 04

OR

- (d) Explain round robin scheduling algorithm with example 04
(ડ) Round robin scheduling algorithm ઉદાહરણ સાથે સમજાવો 04

Q.4

પ્રશ્ન. 4

- (a) Write a short note on disk space allocation method 03
(અ) ટૂંકનોંધ લખો: Disk space allocation method 03

OR

(a)	Explain any four file operations	03
(અ)	કોઈ પણ ચાર file operations સમજાવો.	03
(b)	Explain following unix command. (i)wc (ii) cat (iii) chmod	04
(બ)	નીચેના unix command સમજાવો (i)wc (ii) cat (iii) chmod	04

OR

(b)	write short note on:deadlock	04
(બ)	ટૂંકનોંધ લખો:Deadlock	04
(c)	Explain segmentation in memory management	07
(ક)	Memory management માં segmentation સમજાવો.	07

Q.5	(a) Write short note on memory relocation and protection	04
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પ્રશ્ન. ૫	(અ) Memory relocation and protection પર ટૂંકનોંધ લખો.	04
	(b) Explain fragmentation	04
	(બ) Fragmentation સમજાવો.	04
	(c) Write a short note on inverted page table.	03
	(ક) Inverted page table પર ટૂંકનોંધ લખો.	03
	(d) Write a shell script to find maximum of 3 numbers	03
	(ડ) Maximum of 3 numbers શોધવા માટે ની shell script લખો.	03
