Total No. of Questions – [09] Total No. of Printed Pages: 02

G.R. No.	

P118-132 (ESE)

DECEMBER 2018 / END-SEM

F. Y. M. TECH. (COMPUTER ENGINEERING) (SEMESTER - I)

COURSE NAME: OPERATING SYSTEM DESIGN

COURSE CODE: CSPA11182

(PATTERN 2018)

Time: [3 Hour] [Max. Marks: 50]

(*) Instructions to candidates:

1) **Answer Q.1, Q.2, Q.3, Q.4 OR Q.5, Q.6 OR Q.7, Q.8 OR Q.9**
2) **Figures to the right indicate full marks.**
3) **Use of scientific calculator is allowed**
4) **Use suitable data where ever required**

Q.1) a) Why is r0 always 0 ? How is this useful ? [3]

OR

b) Why does a read advance the file location? [3]

Q.2) a) Why does the operating system need a stack? [3]

OR

b)Explain what process dispatching is? [3]

Q.3) a) Explain the terms new and malloc. [2]

OR

b) What is internal fragmentation? [2]

Q.4) a) Explain emulation, simulation and virtualization [6]

b) Explain full virtualization and paravirtualization [8]

OR

Q.5) a) What are the advantages and disadvantages of virtualization? [6]

b) What are the different types of virtualization? [4]

c) Explain Server virtualization. [4]

Q. 6) a) What are the duties of the logical and physical file systems? [6]

b) What is the use of file system consistency checker? [4]

c) What are the advantages of a keyed file?[4]

OR

Q.7a) What are the advantages and disadvantages of compressed files ?[6]

b)File aliases are usually implemented by keeping the path name of the real file in the alias file .But this can lead to "dangling references", where the path name in an alias file is not valid. Explain how this can happen .Give a possible solution to the problem. [8]

Q.8) a)What are the advantages of accessing memory through the file interface? [6]

b) What is a device number? [4]

c) Why is disk caching better for reading than writing? [4]

OR

Q.9) a)Why is a RAM disk good for temporary files that are written, read, and then deleted? [6]

b) What do we mean by a disk model? [4]

c)What is double buffering? Why is it useful?[4]