

A

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(20622)

Roll No. ....

BCA - IV Sem.

**18017**

**B.C.A. Examination, June-2022**

**OPERATING SYSTEM**

**[BCA-402]**

*Time : Three Hours ]*

*[Maximum Marks : 75*

**Note :** Attempt **all** the Sections as per instructions.

**Section-A**

**(Very Short Answer Type Questions)**

**Note :** Attempt all the **Five** questions. Each question carries **3** marks. Very short answer is required not exceeding 75 words.  $3 \times 5 = 15$

1. Define different a file system.
2. What is purpose of system calls?

**P.T.O.**

3. What is the Principle advantage of multiprogramming?
4. What is hard and soft semaphore?
5. How measure reliability for H/W disk?

**Section-B**

**(Short Answer Types Questions)**

**Note :** Attempt any **two** questions out of the following **three** questions. Each question carries **7½** marks. Short answer is required not exceeding 200 words.  $2 \times 7\frac{1}{2} = 15$

6. On a system using paging and segmentation, The virtual address space consists of up to 8 segments where each segment can be up to 229 bytes long. The hardware page each segment into 256 bytes pages. How many bits in the virtual address specify the:

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- (a) Segment number?
  - (b) Page number
  - (c) Offset within Page?
  - (d) Entire virtual address?
7. Discuss characteristics of device which effect on supervisor call interface?
8. What methods determines how a file's records are allocated into blocks?

### Section-C

#### (Detailed Answer Questions)

**Note :** Attempt any **Three** questions out of the following **five** questions. Each questions carries **15** marks. Answer is required in detail.  $3 \times 15 = 45$

9. Define multiprocessor system. What are difference between symmetric and asymmetric multiprocessing? Explain, advantages and disadvantage of multiprocessor systemes?

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P.T.O.

10. Write short notes on following:

- (a) Deadlock Prevention
- (b) Disk Swap-space management
- (c) Real time System
- (d) Page Replacement

11. (a) What Computer Bus? Different list different type of Bus.

- (b) What is architecture of Peripheral Component Interconnect Bus?

12. What is demand paging? How page fault occures? What are factors that affect the determination of the page size?

13. What is Thread? Discuss different approaches for implementation of Process Threads.

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