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(Revision-2015)

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Reg.No.....

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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, APRIL-2020

OPERATING SYSTEMS

[Maximum marks: 75] (Time: 2.15 Hours)

PART – A

(Answer any ***three*** questions in one or two sentences. Each question carries 2 marks)

I. (1). What is assembler.

(2). Define thread.

(3). Define co-operating process.

(4). List various fragmentation methods.

(5). Define virtualization. . (3 x 2 = 6)

PART – B

(Answer any ***four*** of the following questions. Each question carries 6 marks)

II. (1). Write short note on real time operating systems.

(2). Differentiate between thread and process.

(3). Define scheduler and different types of schedulers.

(4). List and explain different address binding methods.

(5). Briefly explain indexed allocation with a neat diagram.

(6). Write short note on dynamic memory allocation methods.

(7). What is virtual box and mention its uses. (4 x 6= 24)

PART – C

(Answer ***any of the three units*** from the following. Each question carries 15 marks)

UNIT –I

III. (a). Discuss the activities of an OS for the management of

(i). Memory. (ii). Process. (iii). Device. (iv). File. (10)

(b). Differentiate between compiler and interpreter. (5)

OR

IV. (a). Compare multiprogramming and multiprocessing operating systems. (8)

(b). Discuss advantages and disadvantages of batch operating systems. (7)

UNIT-II

V. (a). Describe the structure of a PCB with a neat diagram. (8)

(b). Discuss various scheduling criteria. (7)

OR

VI. (a). Explain FCFS with an example. Mention its advantages also. (8)

(b). Explain the *four* necessary conditions for the occurrence of deadlock. (7)

UNIT-III

VII. (a). Consider a reference string: 4, 7, 6, 1, 7, 6, 1, 2, 7, 2 the number of frames in the memory is 3. Find out the number of page faults respective to; (i). Optimal (ii) FIFO (8)

(b). Discuss segmentation with a neat diagram. (7)

OR

VIII.(a). Explain page fault and write the steps to handle page fault. (9)

(b). Explain the concept of thrashing. (6)

UNIT-IV

IX. (a). Explain hardware virtualization. (6)

(b). Explain single and two level directory structures with example. (9)

OR

X. (a). Explain different types of file access methods. (7)

(b). Explain desktop and storage virtualization. (8)