1.For a page size of 200 words, What is the page number and offset for a logical address of 1142

1. 5, 142
2. b) 2, 142
3. c) 6, 142
4. d) 7, 140

Ans )(a)5142

2.A counting semaphore was initialized to 9. Then 27P operations and 23V operations were completed on this semaphore. The resulting value of the semaphore is

A)0

b) 5

c) 7

d) 1

Ans) b

3.Consider a file system with a block size of 4 KB and a total disk space of 16 GB. If the file system uses a linked list to store the blocks allocated to a file, what is the maximum number of blocks that can be allocated to a file?

A) 256 blocks

B) 1024 blocks

C) 4096 blocks

D) 16384 blocks

Answer: D) 16384 blocks

4.Which of the following memory allocation algorithms is best suited for systems with fixed-size partitions?

A) First-Fit

B) Best-Fit

C) Worst-Fit

D) Next-Fit

Ans A) First Fit

5.In the ….. algorithm, the disk head moves from one end to the other, servicing requests Along the way. When the head reaches the other end, it immediately returns to the Beginning of the disk without servicing any requests on the return trip.

1. LOOK
2. SCAN
3. C-SCAN
4. C-LOOK

Answer c) C-SCAN

6.Consider a disk queue with I/O requests on the following cylinders in their arriving order:6,10,12,54,97,73,128,15,44,110,34,45. The disk head is assumed to be at cylinder 23 and Moving in the direction of decreasing number of cylinders. Total number of cylinders in the disk is 150. The disk head movement using SCAN –scheduling algorithm is:

a)172

b) 173

c) 151

e)161

Answer:c)151

7.Which of the following is NOT a valid deadlock prevention scheme?

1. Release all resources before requesting a new resource
2. Number the resources uniquely and never request a lower numbered resource than the last one requested.
3. Never request a resource after releasing any resource
4. Request that all required resources be allocated before execution

The answer is c

8.External fragmentation exists when ……. ?

1. Enough total Memory exists To satisfy a Request but it is Not contiguous

b)the total memory is insufficient to satisfy a request

c)A request cannot Be satisfied even when the Total memory is Free

d)none of the mentioned

Answer : a

9.What is the objective of multiprogramming?

1. Have a process running at all time
2. Have multiple programs waiting in a queue ready to run
3. To increase CPU utilization
4. None of the mentioned

Ans :c

10.Which of the following does not interrupt a running process?

1. A device
2. Timer
3. Scheduler process
4. Power failure

answer is C

11.Which scheduling algorithm is non-preemptive?

A) Round Robin

B) Shortest Job Next

C) Priority Scheduling

D) Multilevel Queue

Answer: B) Shortest Job Next

12. Which of the following is a key function of an operating system?

A) Compiling code

B) Managing hardware resources

C) Designing software

D) Networking

Answer: B) Managing hardware resources

13.What is the main disadvantage of the Banker’s Algorithm?

A) It cannot detect deadlocks.

B) It requires a fixed number of processes.

C) It requires prior knowledge of all processes’ resource needs.

D) It allows circular wait conditions.

Answer: C) It requires prior knowledge of all processes’ resource needs.