



BRAINWARE UNIVERSITY

Term End Examination 2023
Programme – MCA-2020/MCA-2021
Course Name – Operating Systems
Course Code - MCA202
(Semester II)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Explain Dynamic loading
- | | |
|--|---|
| a) loading multiple routines dynamically | b) loading a routine only when it is called |
| c) loading multiple routines randomly | d) none of the mentioned |
- (ii) Explain the _____ must design and program the overlay structure
- | | |
|--------------------|--------------------------|
| a) programmer | b) system architect |
| c) system designer | d) none of the mentioned |
- (iii) Explain the _____ swaps processes in and out of the memory.
- | | |
|-------------------|---------|
| a) Memory manager | b) CPU |
| c) CPU manager | d) User |
- (iv) Identify which information is recorded magnetically on platters.
- | | |
|-------------------|---------------------|
| a) magnetic disks | b) electrical disks |
| c) assemblies | d) cylinders |
- (v) Define the platform OS provides to run
- | | |
|--|------------------------|
| a) System Software | b) Appliacion Software |
| c) System Software and Appliacion Software | d) None of these |
- (vi) Define DOS
- | | |
|--------------------|------------------|
| a) Frame bit | b) Page number |
| c) System Software | d) None of these |
- (vii) Identify an application software
- | | |
|--------|------------------|
| a) OS | b) MS WORD |
| c) DOS | d) None of these |

- (viii) select the answer, Hard real time operating system has _____ jitter than a soft real time operating system
- a) Less
 - b) more
 - c) equal
 - d) none
- (ix) Focus The size of a page is typically _____
- a) varied
 - b) power of 2
 - c) power of 4
 - d) none of the mentioned
- (x) Explain the thing paging there is no _____ fragmentation.
- a) nternal
 - b) external
 - c) either type of
 - d) none of the mentioned
- (xi) Identify To recover from failures in the network operations _____ information may be maintained.
- a) operating system
 - b) ip address
 - c) stateless
 - d) state
- (xii) Express a program in execution
- a) Process
 - b) Instruction
 - c) Procedure
 - d) Function
- (xiii) Estimate one of the following approaches that do not require knowledge of the system state?
- a) Deadlock detection.
 - b) Deadlock prevention.
 - c) Deadlock avoidance
 - d) None of these
- (xiv) Choose the correct answer, A _____ a set of wires and a rigidly defined protocol that specifies a set of messages that can be sent on the wires.
- a) port
 - b) node
 - c) bus
 - d) none of the mentioned
- (xv) Choose the correct answer, In rate monotonic scheduling _____
- a) shorter duration job has higher priority
 - b) longer duration job has higher priority
 - c) priority does not depend on the duration of the job
 - d) none of the mentioned

Group-B

(Short Answer Type Questions)

3 x 5=15

- 2. Illustrate Contiguous memory allocation (3)
- 3. Explain mutual exclusion (3)
- 4. Explain CPU Scheduling. (3)
- 5. Describe Multi program (3)
- 6. Justify how we prevent Deadlock (3)

OR

Compare different types of semaphore. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

- 7. Compare between logical address and physical address (5)
- 8. Explain Internal and external fragmentation. (5)
- 9. Explain Turn around time and Response time (5)
- 10. Explain Gnatt chart with example (5)
- 11. Compare between page hit and page miss (5)

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12. Define Main Function of Operating system

OR

Define Multitasking Operating system with an example

(5)

(5)
