

श्री जैन (पी.जी.) कॉलेज, बीकानेर

BC-204

B.C.A. (Part-II) Examination, 2017

Paper : BCA-204

(Operating System)

Time allowed : Three hours

Maximum Marks : 50

Attempt Any five questions in all, selecting at least one question from each Unit. All questions carry equal marks.

UNIT-I

1. Using an examples explain the FCFS and SJF scheduling.

[10]

2. Differentiate between the following :

(a) Multilevel Queue scheduling and multilevel feedback Queue scheduling. [5]

(b) Hard Real time system and soft real time systems. [5]

UNIT-II

3. What do you understand by page replacement ? Explain LRV and FIFO Page replacement algorithm with example. [10]

4. Discuss Banker's algorithm in deadlock with the help of an example. [10]

UNIT-III

5. What is disk scheduling ? Explain various disk scheduling algorithm with example. [10]
6. Differentiate between network operating system and distributed operating system. [10]

UNIT-IV

7. What is Unix ? How is Unix different from other operating systems ? Explain. [10]
8. Explain briefly : [10]
- (a) Getty and login process
 - (b) Shell and Kernel

UNIT-V

9. What is VI editor ? Write commands in VI editor for operating, inserting, modifying, deleting and saving a file. [10]
10. Write a shell program to generate Fibonacci series. [10]

BC - 348

B.C.A. (Part-II) Examination, 2018

(OPERATING SYSTEM)

Paper-BCA-204

Time allowed : Three hours

Maximum Marks : 50

Attempt any five questions in all, selecting at least one question from each Unit. All questions carry equal marks.

UNIT - I

1. (a) What is process ? Explain different process states. (5)
- (b) What is process scheduling ? Explain different scheduling criteria. (5)

OR

2. (a) Describe system calls. (5)
- (b) Describe Round-Robin scheduling with suitable example. (5)

UNIT - II

3. What is deadlock ? Explain Banker's algorithm for deadlock avoidance with a suitable example. (10)

OR

4. Explain :
- (a) Optimal page replacement algorithm with example. (5)
 - (b) Virtual Memory. (5)

UNIT - III

5. What are the different features and applications of Network Operating System ? (10)

OR

6. Explain :
- (a) Distributed Operating System (2.5)
 - (b) Disk Security (2.5)
 - (c) Disk Scheduling (2.5)
 - (d) Method of accessing data of a disk (2.5)

UNIT - IV

7. (a) Explain i-node and block storage structure of UNIX OS ? (5)
- (b) Write down the steps to create and delete a group in Linux Operating System. (5)

OR

8. (a) Describe different file permission of a Linux file and write the command with example to change file permissions. (5)
- (b) Briefly explain :
- (i) Date command (1)

- (ii) ls command (1)
- (iii) mv command (1)
- (iv) rmdir command (1)
- (v) cat command (1)

UNIT - V

9. (a) Write command to backup and restore files in Linux. (5)
- (b) Write a shell script that accept three numbers from user and display largest number. (5)

OR

10. (a) What is shell variables ? Explain types of shell variables in Linux with examples. (5)
- (b) Write a shell script to print given number is prime or not prime ? (5)

BC-390

B.C.A. (Part-II) Examination, 2019

BCA-202

OPERATING SYSTEM

Time allowed : Three hours

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Maximum Marks : 70

SECTION – A

(Marks : 2 × 10 = 20)

Answer all **ten** questions. (Answer limit **50** words) Each question carries **02** marks.

खण्ड – अ

(अंक : 2 × 10 = 20)

समस्त दस प्रश्नों के उत्तर दीजिए । (उत्तर सीमा 50 शब्द) । प्रत्येक प्रश्न 02 अंक का है ।

SECTION – B

(Marks : 4 × 5 = 20)

Answer all **five** questions. Each question has internal choice (Answer limit **200** words).
Each question carries **04** marks.

खण्ड – ब

(अंक : 4 × 5 = 20)

समस्त पाँच प्रश्नों के उत्तर दीजिए । प्रत्येक प्रश्न में विकल्प का चयन करें । (उत्तर सीमा 200 शब्द) । प्रत्येक प्रश्न 04 अंक का है ।

SECTION – C

(Marks : 10 × 3 = 30)

Answer any **three** questions out of **five**. (Answer limit **500** words) Each question carries **10** marks.

खण्ड – स

(अंक 10 × 3 = 30)

पाँच में से किन्हीं तीन प्रश्नों के उत्तर दीजिए । (उत्तर सीमा 500 शब्द) । प्रत्येक प्रश्न 10 अंक का है ।

SECTION – A

1. Attempt **all** questions. Answer should not exceed **50** words in each question. (2 × 10 = 20)

- (i) What is a process ?
- (ii) What is meant by context switch ?
- (iii) What is preemptive and non-preemptive scheduling ?
- (iv) Define Throughput.
- (v) What is a semaphore ?

- (vi) Define deadlock.
- (vii) What is virtual memory ?
- (viii) Define Paging.
- (ix) What do you mean by file permissions in Linux ?
- (x) What are the rules for declaring a variable in Linux shell ?

SECTION – B

(4 × 5 = 20)

2. What are the different states of process ? Discuss.

OR

What are the different Operating Systems ? Explain any two of them.

3. What are the CPU scheduling algorithm criteria ?

OR

What is MLQ Scheduling ?

4. What are the deadlock conditions ?

OR

What are the methods of recovery from deadlock state ?

5. What are the differences between Paging and Segmentation ?

OR

Write short notes on :

- (a) SHELL
- (b) KERNEL

6. What is a shell script ? Discuss.

OR

Explain the following Linux commands :

- (a) mkdir
- (b) rmdir
- (c) pwd

SECTION – C

(10 × 3 = 30)

Attempt any **three** questions out of five. Answer should not exceed **500** words in each question.

7. What is PCB ? What is the information given by PCB ?
8. Find the Average Waiting Time and Average Turn Around Time using FCFS scheduling algorithm.

PROCESS	BURST TIME	ARRIVAL TIME
P ₁	5	0
P ₂	3	1
P ₃	8	2
P ₄	6	3

9. What do you mean by a critical section problem ? What are the requirements for a solution to the critical section problem ?
 10. Explain Paging with Segmentation.
 11. Write a shell program to print Factorial of a number.
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Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

UGP-296

B.C.A. (Part-II) Examination, 2021

OPERATING SYSTEM

श्री जैन (पी.जी.) कॉलेज, बीकानेर

Paper - BCA 202

Time : 1½ Hours]

[Maximum Marks : 70

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit 50 words). Each question carries 2 marks.

(खण्ड-अ)

(अंक : 2 × 10 = 20)

नोट :- सभी दस प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 50 शब्द)। प्रत्येक प्रश्न 2 अंक का है।

Section-B

(Marks : 4 × 5 = 20)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit 200 words). Each question carries 4 marks.

(खण्ड-ब)

(अंक : 4 × 5 = 20)

नोट :- सभी पाँच प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न में विकल्प का चयन कीजिए। (उत्तर-सीमा 200 शब्द)। प्रत्येक प्रश्न 4 अंक का है।

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit 500 words). Each question carries 10 marks.

(खण्ड-स)

(अंक : 10 × 3 = 30)

नोट :- पाँच में से किन्हीं तीन प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 500 शब्द)। प्रत्येक प्रश्न 10 अंक का है।

BI-1306

(1)

UGP-296 P.T.O.

Section-A

1. Attempt all *ten* questions. Answer should not exceed **50** words in each question.
- (i) What is Operating System ?
 - (ii) Write the names of Process States.
 - (iii) What is Turnaround Time ?
 - (iv) What is Response Time ?
 - (v) Write the names of all Deadlock Conditions.
 - (vi) What is Critical Section Problem ?
 - (vii) What is Virtual Address Space ?
 - (viii) What is Kernel ?
 - (ix) Write the syntax of Chmod Command.
 - (x) Write the syntax of Cat Command.

Section-B

Note :- Answer all *five* questions (Answer limit **200** words).

2. What is Thread ? Explain different types of Thread.

Or

What is System Call ? Explain the work of system call.

3. Explain the Priority Scheduling with example.

Or

Explain the SJF Scheduling with example.

4. How to avoid Deadlock ? Explain.

Or

What is Semaphore ? Explain the work of semaphore.

5. Explain the features of Linux.

Or

Write the steps of Linux Installation.

6. Explain the different types of Shell Variable.

Or

Explain the syntax of for and while loop with example.

Section-C

Note :- Answer any *three* questions out of five (Answer limit **500** words).

7. Explain the different types of Schedulers.

8. Explain the FCFS and Round-Robin Scheduling with example.

9. Explain the Bankers Algorithm.

10. Explain the Page-replacement Technique with example.

11. Write a shell program to print Fibonacci Series.

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BC-284

BCA (Part-II) Examination, 2022

OPERATING SYSTEM

Paper - BCA-202

Time : 3 Hours]

[Maximum Marks : 70

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit 50 words). Each question carries 2 marks.

Section-B

(Marks : 4 × 5 = 20)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit 200 words). Each question carries 4 marks.

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit 500 words). Each question carries 10 marks.

Section-A

1. (i) What do you mean by Threads ?
- (ii) Define Context Switch.
- (iii) Define shell variables.
- (iv) Write one major difference between pre-emptive scheduling and non-pre-emptive scheduling.

- (v) Define throughput in your words.
- (vi) Write one major characteristics of deadlock.
- (vii) What does 'uname' command do in Linux ?
- (viii) What do you mean by semaphores ?
- (ix) What is the main advantage of using paging ?
- (x) Define virtual memory.

Section-B

2. Explain the different process states with a suitable diagram.

Or

Explain the types of schedulers.

3. Take any suitable example of FCFS algorithm explain how to find out the turnaround time of the system.

Or

Explain the concept of round robin scheduling with suitable example.

4. Explain the requirements for a solution to the critical section problem.

Or

Explain the procedure of deadlock prevention.

5. Explain the benefits of segmentation.

Or

Describe the directory structure in Linux.

6. Write a shell script to find the factorial of a number.

Or

Explain the procedure to install packages in Linux.

Section-C

7. Explain the layered structure of an Operating System.
8. Describe the following :
 - (a) Response Time
 - (b) MLQ Scheduling
9. Explain the Banker's algorithm using suitable example.
10. Describe the page replacement technique, FIFO with suitable illustration.
11. Explain the following commands :
 - (a) chmod
 - (b) apt
 - (c) man
 - (d) expr