INVERTIS UNIVERSITY BAREILLY

NAAC

Invertis University, Bareilly

PO Attainment

Faculty Name: Dr. Akash Sanghi

Course Name: IT Infrastructure Management

Class/Sem: B.TECH(CSE)/3 Academic Year: 2022-23

Course Code: BCS-302 Program Name: B.TECH(CSE)

CO-PO MAPPING:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	1	3			2	3	2	3			
CO2	1	1	1		3	3	1	3	3	1	2	1
CO3	1		1	1	3	2	2	3	2		1	
CO4	2	1	3	1		1	3	1			2	
CO5	3	1	2	1	2		1	1	1	2	1	2

CO ATTAINMENT:

IT Infrastructure Management	Att. Level
CO1	3.00
CO2	3.00
CO3	3.00
CO4	2.89
CO5	2.89

PO ATTAINMENT :

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Overall PO Attainment	2.9	2.9	2.9	2.9	3.0	3.0	3.0	3.0	3.0	2.9	2.9	2.9

Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123 UP

Faculty Signature

Dean
Faculty of Engineering & Technology
Invertis University

Registrar
Invertis University
Bareilly

INVERTIS UNIVERSITY BAREILLY

Invertis University, Bareilly

CO Attainment

Faculty Name: Dr. Akash Sanghi

Course Name: IT Infrastructure Management

Class/Sem: B.TECH(CSE)/3 Academic Year: 2022-23

Course Code: BCS-302 Program Name: B.TECH(CSE)

			First Unit Test	Second Unit Test	First Class Test	Second Class Test	Best One From Unit Test	Best One Form Class Test	Internal Marks Scheme			Total Internal Marks	End Sem Exam Marks	Total Marks
S. No.	University Reg. No.	Student Name	Theory (25)	Theory (25)	Theory (10)	Theory (10)	Theory (25)	Theory (10)	Unit Test(UT) 10	Attendance(AT) 10	Teacher Assessment(TA) 5	Theory (25)	Theory (50)	Theory (75)
1	BCS2021130	AADIL	23	18	8	6	23	8	9	9	4	22	37	59
2	BCS2021061	ABHI YADAV	25	20	8	6	25	8	10	9	4	23	31	54
3	BCS2021013	ABHISHEK KUMAR	25	20	8	6	25	8	10	10	4	24	34	58
4	BCS2021018	ABHISHEK KUMAR	20	16	8	6	20	8	8	8	4	20	32	52
5	BCS2021029	ABHISHEK KUSHWAHA	13	10	4	3	13	4	5	5	2	12	23	35
6	BCS2021017	AJAY SHAKYA	23	18	8	6	23	8	9	8	4	21	31	52
7	BCS2021141	AKANSHA MAHESHWARI	25	20	10	8	25	10	10	10	5	25	43	68
8	BCS2021072	AKIMUL WAZNA	23	18	8	6	23	8	9	8	4	21	37	58
9	BCS2021077	AKRITI GUPTA	25	20	8	6	25	8	10	10	4	24	39	63
10	BCS2021052	AKSHAT SAXENA	20	16	6	5	20	6	8	7	3	18	31	49
11	BCS2021112	AMAAN ANSARI	25	20	8	6	25	8	10	9	4	23	38	61
12	BCS2021048	AMAN CHANDRA JOSHI	23	18	8	6	23	8	9	8	4	21	30	51
13	BCS2021132	AMASH HASAN ANSARI	20	16	8	6	20	8	8	8	4	20	24	44
14	BCS2021030	AMIT KUMAR	25	20	8	6	25	8	10	9	4	23	33	56
15	BCS2021055	ANAMIKA DWIVEDI	25	20	8	6	25	8	10	9	4	23	38	61
16	BCS2021091	ANANT CHITRANSHI	25	20	8	6	25	8	10	9	4	23	30	53
17	BCS2021098	ANANT KUMAR SARASWAT	25	20	8	6	25	8	10	10	4	24	40	64
18	BCS2021004	ANSHIKA VERMA	23	18	8	6	23	8	9	9	4	22	37	59
19	BCS2021108	ANUBHAV TRIPATHI	25	20	8	6	25	8	10	9	4	23	38	61
20	BCS2021040	ANURAG SINGH YADAV	25	20	8	6	25	8	10	10	4	24	41	65
21	BCS2021135	ARSHAN	25	20	8	6	25	8	10	9	4	23	36	59
22	BCS2021127	ASHUTOSH KUMAR	23	18	8	6	23	8	9	8	4	21	36	57
23	BCS2021041	ASHUTOSH PANDEY	23	18	8	6	23	8	9	9	4	22	31	53
24	BCS2021104	AYUSH SHARMA	25	20	8	6	25	8	10	10	4	24	38	62
25	BCS2021008	BADAL MISHRA	25	20	8	6	25	8	10	9	4	23	38	61
26	BCS2021012	DEVANSH OJHA	20	16	6	5	20	6	8	8	3	19	34	53
27	BCS2021053	GAURAV SINGH KABDWAL	25	20	8	6	25	8	10	10	4	24	33	57
28	BCS2022193	HARSHIT MAHESHWARI	25	20	8	6	25	8	10	10	4	24	28	52
29	BCS2021102	HARSHITA AWASTHI	25	20	8	6	25	8	10	10	4	24	37	61
30	BCS2021037	HEMANT GANGWAR	25	20	8	6	25	8	10	9	4	23	33	56
31	BCS2021024	JUHI AWASTHI	25	20	8	6	25	8	10	10	4	24	33	57
32	BCS2021050	KARTIK YADAV	25	20	8	6	25	8	10	9	4	23	34	57
33	BCS2021134	KASHISH VARSHNEY	25	20	10	8	25	10	10	10	5	25	43	68
34	BCS2021122	KAUSHAL BHARTI	25	20	8	6	25	8	10	9	4	23	32	55
35	BCS2021047	MANVI CHATURVEDI	25	20	8	6	25	8	10	10	4	24	36	60
36	BCS2021036	MANYATA CHAUDHARY	25	20	8	6	25	8	10	9	4	23	34	57
37	BCS2021082	MOHAMMAD SHUJA KHAN	25	20	8	6	25	8	10	9	4	23	43	66
38	BCS2021097	MOHD MUZEEB ANSARI	23	18	8	6	23	8	9	9	4	22	38	60
39	BCS2021031	MRITUNJAY SINGH	25	20	8	6	25	8	10	10	4	24	33	57
40	BCS2021120	NAVYA SHARMA	25	20	10	8	25	10	10	10	5	25	43	68
41	BCS2021045	NIKHIL YADAV	25	20	8	6	25	8	10	9	4	23	40	63
42	BCS2021099	NITIN GOLEY	25	20	8	6	25	8	10	9	4	23	32	55
43	BCS2021125	NIZAM FAROOQUI	25	20	8	6	25	8	10	9	4	23	38	61
44	BCS2021068	PARAS GANGWAR	23	18	8	6	23	8	9	8	4	21	30	51
45	BCS2021124	PARAS KANDPAL	20	16	8	6	20	8	8	8	4	20	27	47
46	BCS2021021	PARV BANSAL	25	20	8	6	25	8	10	10	4	24	37	61
47	BCS2021043	PRAKHAR AWASTHI	25	20	8	6	25	8	10	9	4	23	31	54
48	BCS2021065	PRASHANT DIXIT	23	18	8	6	23	8	9	9	4	22	32	54
49	BCS2021123	PRASHANT RATHOUR	25	20	8	6	25	8	10	10	4	24	37	61
50	BCS2021044	PRATYUSH MISHRA	16	6	5	20	6	8	8	3	19	25	44	
51	BCS2021063	PRINCE TOMAR	25	20	8	6	25	8	10	9	4	23	32	55

Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123 UP

Registrar
Invertis University
Bareilly

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123 U

92	BCS2021022	PRINSIKA SINGH	23	18	8	6	23	8	9	8	4	21	36	57
93	BCS2021091	PRIYANKA CHAUHAN	25	20	8	6	25	8	10	10	4	24	44	68
94	BCS2021009	RAJ SINHA	23	18	8	6	23	8	9	8	4	24	36	57
95	BCS2021069	RAVI KUMAR	23	18	8	6	23	8	9	6	4	22	29	51
96	BCS2021050	RITESH KUMAR	25	20	8	6	25	8	10	9	4	23	36	59
97	BCS2021026	SACHIN NISHAD	24	20	8	6	25	8	10	9	4	23	26	49
98	BCS2021139	SAYED SHAZIB MEHMOOD	20	16	6	5	20	6	8	8	3	19	28	47
99	BCS2021049	SHAGUN KAUSHAL	23	20	8	6	25	8	10	10	4	24	32	56
100	BCS2021073	SHAHBAZ AHMAD KHAN	13	10	4	3	13	4	5	5	2	12	34	46
101	BCS2021071	SHRADHEY RASTOGI	25	20	8	6	25	8	10	10	4	24	30	54
102	BCS2021078	SIRTAJ RAZA KHAN	20	16	8	6	20	8	8	8	4	20	35	55
103	BCS2021081	SIDDHARTH SAXENA	25	20	8	6	25	8	10	9	4	23	42	65
104	BCS2021084	SUBHASH KUMAR	23	18	8	6	23	8	9	9	4	22	33	55
105	BCS2021086	SUDHANSHU NANDAN	25	20	8	6	25	8	10	9	4	23	28	51
106	BCS2021094	SUDHANSU SHARMA	23	18	8	6	23	8	9	9	4	22	33	55
107	BCS2021066	SUHANI AGRAWAL	25	20	10	8	25	10	10	10	5	25	32	57
108	BCS2021039	TANU AGARWAL	25	20	8	6	25	8	10	10	4	24	33	57
109	BCS2021137	UJJAWAL KUMAR	25	20	8	6	25	8	10	10	4	24	44	68
110	BCS2021086	VAIBHAV SHARMA	23	18	8	6	23	8	9	8	4	21	28	49
111	BCS2021010	VAIBHAV VASHISHTHA	25	20	10	8	25	10	10	10	5	25	40	65
112	BCS2021055	VARUN PRATAP SINGH	25	20	8	6	25	8	10	10	4	24	41	65
113	BCS2021015	VISHAL SINGH RAWAT	25	20	8	6	25	8	10	9	4	23	32	55
114	BCS2021100	VATSH SHARMA	25	20	8	6	25	8	10	9	4	23	38	61
115	BCS2021143	SALMAN HUG	20	16	8	6	20	8	8	8	4	20	41	61
116	BCS2022229	ASHUTOSH YADAV	18	14	6	5	18	6	7	7	3	17	33	50
117	BCS2022251	AYSHA PARVEEN ALAM	25	20	8	6	25	8	10	9	4	23	39	62
118	BCS2021089	ABDUL MUSTFA	10	8	4	3	10	4	4	4	2	10	AB	10
119	BCS2021133	ABHASH GANGWAR	10	8	4	3	10	4	4	4	2	10	35	45
120	BCS2021096	ADITYA SINGH	13	10	4	3	13	4	5	5	2	12	29	41
121	BCS2021107	AKHILESH YADAV	20	16	8	6	20	8	8	8	4	20	21	41
122	BCS2021110	ALAKH PANDEY	20	16	8	6	20	8	8	8	4	20	31	51
123	BCS2021138	AMIT	15	12	6	5	15	6	6	6	3	15	16	31
124	BCS2021038	ANKIT KUMAR	10	8	4	3	10	4	4	4	2	10	21	31
125	BCS2021118	ANURAG GANGWAR	20	16	6	5	20	6	8	7	3	18	29	47
126	BCS2021088	ARJUN SINGH	15	12	4	3	15	4	6	5	2	13	32	45
127	BCS2021075	ARUN RAJPOOT	10	8	4	3	10	4	4	4	2	10	AB	10
128	BCS2021111	ASHISH KUMAR VERMA	10	8	4	3	10	4	4	4	2	10	AB	10
129	BCS2021140	AVINASH KUMAR	10	8	4	3	10	4	4	4	2	10	31	41
130	BCS2021142	BIRESH RAWAL	0	0	0	0	0	0	0	0	0	0	0	0
131	BCS2021106	DIVYANSH MISHRA	10	8	4	3	10	4	4	4	2	10	AB	10
132	BCS2021025	HARENDRA PRATAP	20	16	8	6	20	8	8	8	4	20	31	51
133	BCS2021098	JAY NARAYAN MISHRA	13	10	4	3	13	4	5	5	2	12	32	44
134	BCS2021128	MOHD AADIL HUSAIN	10	8	4	3	10	4	4	4	2	10	29	39
135	BCS2021007	MOHD MUSTAKEEM	10	8	4	3	10	4	4	4	2	10	30	40
136	BCS2021121	MOHD TAKREEM	10	8	4	3	10	4	4	4	2	10	23	33
137	BCS2021114	MOHD ZAID	10	8	4	3	10	4	4	4	2	10	AB	10
138	BCS2021136	MOHD SHABBAR	10	8	4	3	10	4	4	4	2	10	AB	10
139	BCS2021062	NISHA DEVI	0	0	0	0	0	0	0	0	0	0	0	0
140	BCS2021131	NOMAN AHMAD	23	18	8	6	23	8	9	9	4	22	24	46
141	BCS2021078	PARV CHITRANSH	10	8	4	3	10	4	4	4	2	10	29	39
142	BCS2021090	PRIYANSH	25	20	8	6	25	8	10	9	4	23	29	52
143	BCS2021076	RITESH SINGH	18	14	6	5	18	6	7	7	3	17	AB	17
144	BCS2021019	RUPAM PANDEY	18	14	6	5	18	6	7	7	3	17	20	37
145	BCS2021115	SAIF WARSI	15	12	4	3	15	4	6	5	2	13	30	43
146	BCS2021035	SAMRIDDHI PAL	10	8	4	3	10	4	4	4	2	10	AB	10
147	BCS2021054	SHOAIB KHAN	13	10	4	3	13	4	5	5	2	12	27	39
148	BCS2021119	SHUJAL DEVAL	10	8	4	3	10	4	4	4	2	10	AB	10
149	BCS2021074	SIDDHANT TOMAR	18	14	6	5	18	6	7	6	3	16	21	37
150	BCS2021087	SOM DIXIT	10	8	4	3	10	4	4	4	2	10	AB	10
151	BCS2021006	SURYA PRATAP SINGH	20	16	8	6	20	8	8	8	4	20	28	48
152	BCS2021032	UDAY PRATAP SINGH	20	16	6	5	20	6	8	7	3	18	25	43
153	BCS2021103	VAIBHAV GANGWAR	20	16	6	5	20	6	8	7	3	18	38	56
154	BCS2021028	VANSH ASHISH	10	8	4	3	10	4	4	4	2	10	AB	10
155	BCS2021058	VIKAS MISHRA	10	8	4	3	10	4	4	4	2	10	34	44
156	BCS2021113	VINAYAK SINGH	15	12	4	3	15	4	6	5	2	13	31	44
157	BCS2021101	VIPIN SAGAR	10	8	4	3	10	4	4	4	2	10	AB	10
158	BCS2021104	DANISH ULLAH KHAN	10	8	4	3	10	4	4	4	2	10	23	33

Head
Department of Computer Science
& Engineering
Invertis University
Bareilly-243123 UP

Dean
Faculty of Engineering & Technology
Invertis University

Registrar
Invertis University
Bareilly

119	BCS302229	SNEHA TRIVEDI													
		Students appeared for the examination	119	119	119	119	119	119	119	119	119	23	107	119	
		Target / satisfactory mark set as benchmark	10	10	4	4	10	4	4	4	2	12	20	39	
		Students scored above the target set	116	96	116	88	116	116	116	116	116	12	103	104	
		% Students scored above the target set	97%	81%	97%	74%	97%	97%	97%	97%	97%	18	96%	87%	
		Attainment Level	3	3	3	3	3	3	3	3	3	15	3	3	

															Overall
CO1	3		3		3	3	3	3	3		15	3	3		3.00
CO2	3		3		3	3	3	3			15	3	3		3.00
CO3		3			3		3	3		3	15	3	3		3.00
CO4		3		2	3	3	3	3	3	3	15	3	3		2.89
CO5		3		2	3	3	3	3	3	3	15	3	3		2.89

Overall attainment	2.96

Rubrics	
% Students	Level
<50%	1
50-75%	2
>75%	3

Faculty Signature

Head
Department of Computer Scienc
& Engineering
Invertis University
Bareilly-243123, UP

Dean
Faculty of Engineering & Technology
Invertis University

Registrar
Invertis University
Bareilly

INVERTIS UNIVERSITY BAREILLY

NAAC

ODD Semester Examination 2022-23

B.TECH(CSE)- III Semester

Course/Code:IT Infrastructure Management (BCS-302)

Maximum Marks :50; Duration: 3 Hours

Q.No	Questions	Marks (50)	CO	BL
	Answer the following:			
1-I	Explain the role of accumulator.	01	CO1	L2
1-II	In which computer generation, transistors are used?	01	CO2	L1
1-III	Write the full form of NLP	01	CO2	L2
1-IV	Explain the use of proxy server.	01	CO2	L1
1-V	Explain hash function.	01	CO2	L1
	Answer the following:			
2-I	What is a logic bomb?	01	CO1	L1
2-II	What is a boot sector virus?	01	CO1	L1
2-III	Name the branches of computer forensics.	01	CO1	L1
2-IV	Write the full form of GSM.	01	CO1	L2
2-V	What is better in terms of range- Bluetooth or infrared?	01	CO1	L1
3-I	a). Explain the generations of computer system, clearly stating the technologies used in each generation. Or b).Explain cluster computing along with all the categories of cluster.	5	CO2	L2
3-II	a).Differentiate between SLA and OLA. Or b).Describe the IT service continuity management process in brief.	5	CO2	L3
4-I	a).Differentiate between problem management and incident management. Or b). Briefly explain the seven safe harbor principles	5	CO3	L5
4-II	a). Briefly discuss the goals of security. Or b). Write short notes on: (i) Mesh topology (ii) Bus topology (iii) Star topology	5	CO3	L3
5	a). Explain the term cryptography. Discuss public key cryptography and specify process to implement confidentiality in it. Or b). Explain computer forensics. Briefly describe the characteristics of electronic evidences. Discuss the steps to handle electronic evidences at the crime scene.	10	CO4	L4
6	a). Define ecommerce and its types. Discuss the process flow of ecommerce with the help of a diagram. Or b). Write notes on: (i) Digital Signature (ii) Trademark (iii) Trojan Horse (iv) Cyber bullying	10	CO5	L4

BL – Bloom's Taxonomy Levels

(1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)

CO – Course Outcomes PO – Program Outcomes; PI Code – Performance Indicator Code

Level	Marks
Level1	7
Level2	8
Level3	10
Level4	20

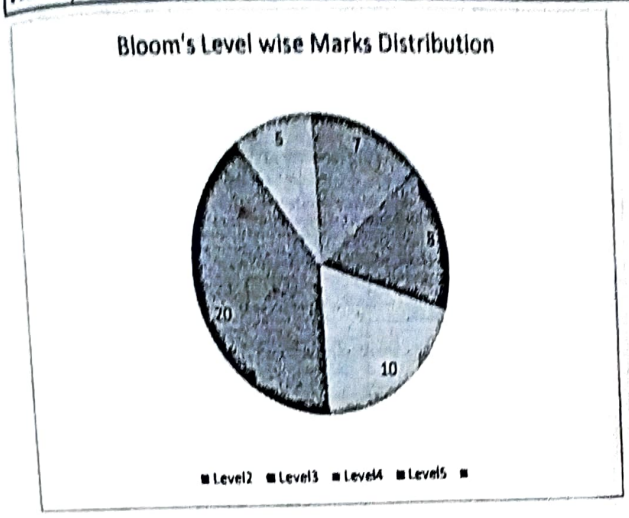
CO	Marks
CO1	6
CO2	14
CO3	10
CO4	10

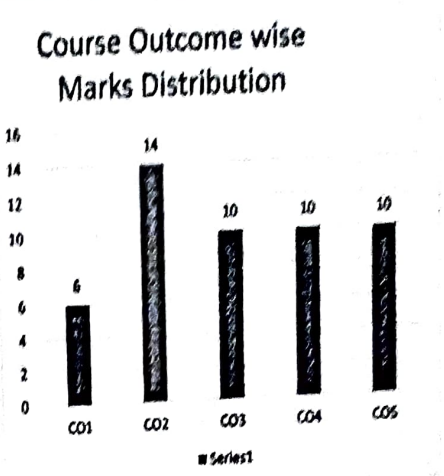
Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123 UP

Dean
Faculty of Engineering & Technology
Invertis University

Registrar
Invertis University
Bareilly

Level5	5	CO5	10
Total	50	Total	50





Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123, UP

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123, UP

Registrar
Invertis University
Bareilly

INVERTIS UNIVERSITY BAREILLY

NAAC

First Class Test 2022-23

B.TECH(CSE)- III Semester

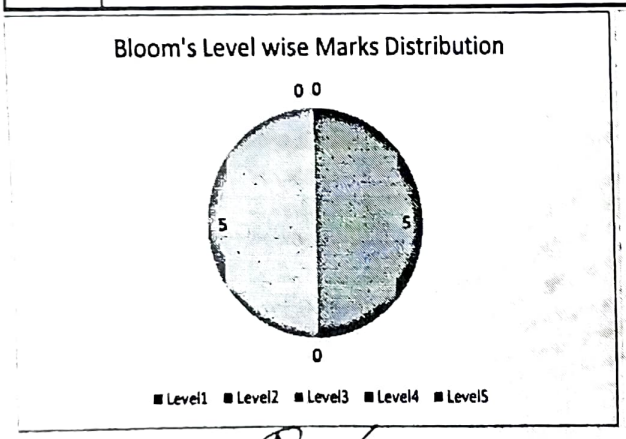
Course/Code: IT Infrastructure Management (BCS-302)

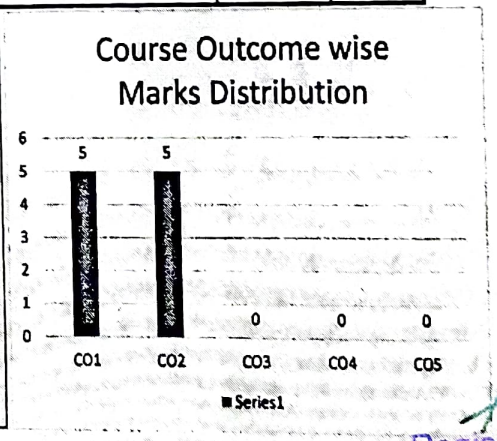
Maximum Marks :10; Duration: 30 Minutes

Q.No	Questions	Marks (10)	CO	BL
1	Write Down the short note on computer hardware	05	CO1	L3
2	What do you mean by network topologies? Explain	05	CO2	L1

BL – Bloom's Taxonomy Levels
(1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)
CO – Course Outcomes PO – Program Outcomes; PI Code – Performance Indicator Code

Level	Marks	CO	Marks
Level1	5	CO1	5
Level2	0	CO2	5
Level3	5	CO3	0
Level4	0	CO4	0
Level5	0	CO5	0
Total	10	Total	10





Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123 UP

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123 UP

Registrar
Invertis University
Bareilly

INVERTIS UNIVERSITY BAREILLY

NAAC

Second Class Test 2022-23

B.TECH(CSE)- III Semester

Course/Code: IT Infrastructure Management (BCS-302)

Maximum Marks :10; Duration: 30 Minutes

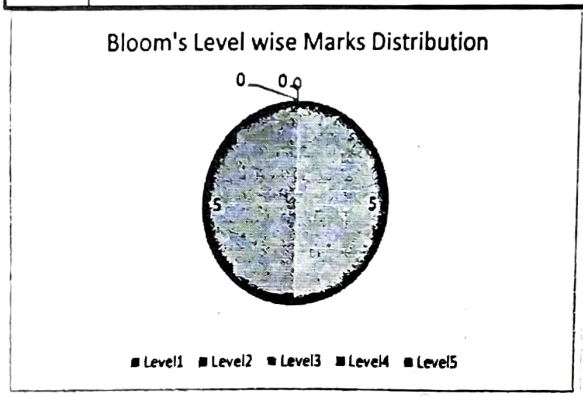
Q.No	Questions	Marks (10)	CO	BL
1	What do you mean by Intellectual Property rights?	05	CO4	L2
2	how to Archive & Retrieve?	05	CO5	L1

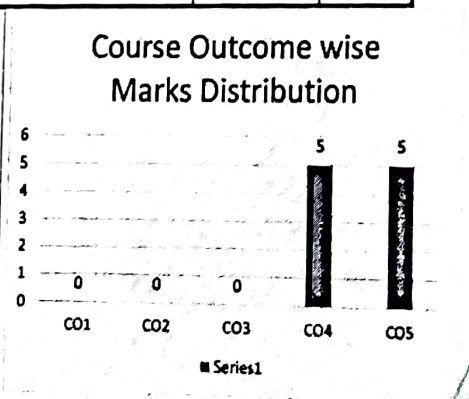
BL – Bloom's Taxonomy Levels

(1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)

CO – Course Outcomes PO – Program Outcomes; PI Code – Performance Indicator Code

Level	Marks	CO	Marks
Level1	5	CO1	0
Level2	5	CO2	0
Level3	0	CO3	0
Level4	0	CO4	5
Level5	0	CO5	5
Total	**10**	**Total**	**10**





Head
Department of Computer Science & Engineering
Invertis University
Bareilly

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123, U.P.

Registrar
Invertis University
Bareilly

Filling the Roll No is

INVERTIS UNIVERSITY BAREILLY

NAAC

First Unit Test 2022-23

B.TECH(CSE)- III Semester

Course/Code:IT Infrastructure Management (BCS-302)

Maximum Marks :25; Duration: 1.5 Hours

Q.No	Questions	Marks (25)	CO	BL
	Explain the following in very short -			
1-I	Explain four stages of LCA	01	CO1	L1
1-II	Which steps are required in developing a Green IT strategy	01	CO1	L1
1-III	Describe the key facilities and IT components within data centres	01	CO2	L2
1-IV	What are the different power states of a hard disk	01	CO1	L2
	Explain the following function -			
2	a). What is a green data centre and why should it be on the radar screen for companies? Or b). Explain the hierarchy of sustainability models.	05	CO1	10
3	a). Discuss Primary sustainability dimensions of IT. Or b). What is difference between strategic thinking and strategic planning .	06	CO2	L1
4	a).) Describe the quality attributes of Software Or b).How can companies implement sustainable IT services development practices.	10	CO2	L2

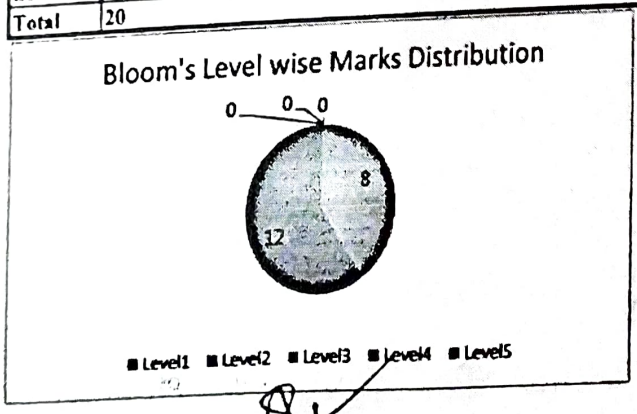
BL – Bloom's Taxonomy Levels

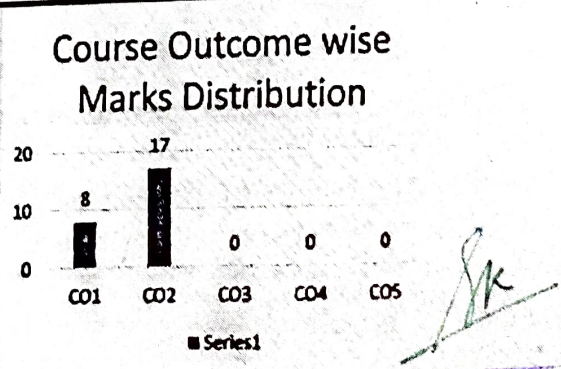
(1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)

CO – Course Outcomes PO – Program Outcomes; PI Code – Performance Indicator Code

Level	Marks
Level1	8
Level2	12
Level3	0
Level4	0
Level5	0
Total	20

CO	Marks
CO1	8
CO2	17
CO3	0
CO4	0
CO5	0
Total	25





Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123 UP

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123, UP

Registrar
Invertis University

INVERTIS UNIVERSITY BAREILLY

NAAC

Second Unit Test 2022-23

B.TECH(CSE)- III Semester

Course/Code:IT Infrastructure Management (BCS-302)

Maximum Marks :25; Duration: 1.5 Hours

Q.No	Questions	Marks (25)	CO	BL
	Write short notes on			
1-I	Explain the term computer security.	01	CO3	L1
1-II	Name the branches of computer forensics.	01	CO3	L1
1-III	Give the full form of CAPTCHA.	01	CO3	L2
1-IV	Explain the term authentication	01	CO3	L1
	Explain the following function -			
2	a).Briefly explain the goals of security. Or b). Explain the term malicious software. Briefly describe trojan horse and worm.	05	CO3	L2
3	a). Explain the term IT ethics. Briefly explain copyright. Or b). Write short notes on: (i) Patent(ii) Trade secret.	06	CO4	L3
4	a).) Explain private key and public key cryptography with the help of a diagram. Or b).Explain the term computer forensics. Write the steps to be followed while collecting evidences at the crime scene.	10	CO5	L4

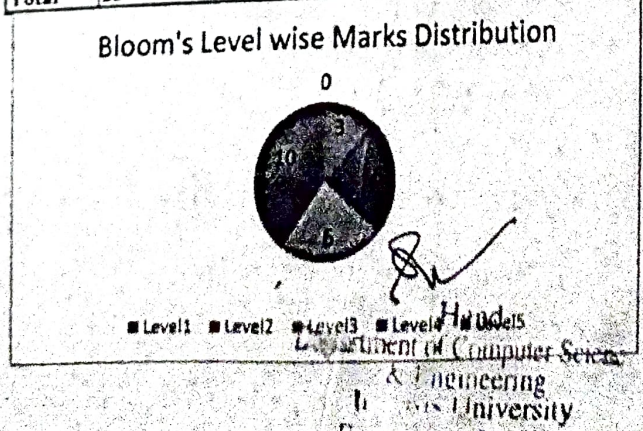
BL – Bloom's Taxonomy Levels

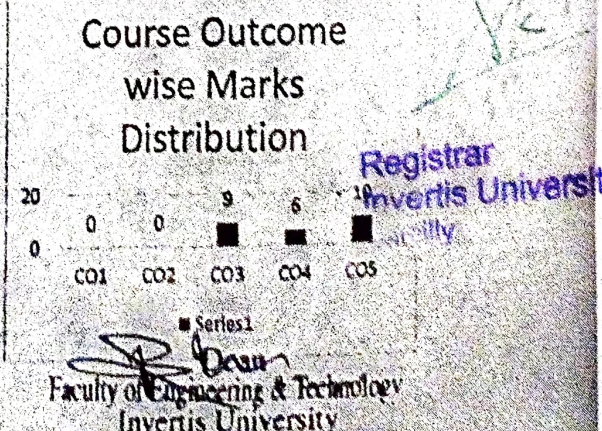
(1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)

CO – Course Outcomes PO – Program Outcomes; PI Code – Performance Indicator Code

Level	Marks
Level1	3
Level2	6
Level3	6
Level4	10
Level5	0
Total	25

CO	Marks
CO1	0
CO2	0
CO3	9
CO4	6
CO5	10
Total	25





Registrar
Invertis University
Bareilly

Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123, UP

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123, U

INVERTIS UNIVERSITY BAREILLY

NAAC

Invertis University, Bareilly

PO Attainment

Faculty Name: Dr. Akash Saxena

Course Name: OPERATING SYSTEMS

Class/Sem: B.TECH(CSE)/4 Academic Year: 2022-23

Course Code: BCS-403 Program Name: B.TECH(CSE)

CO-PO MAPPING:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	1	3			2	3	2	3			
CO2	1	1	1		3	3	1	3	3	1	2	1
CO3	1		1	1	3	2	2	3	2		1	
CO4	2	1	3	1		1	3	1			2	
CO5	3	1	2	1	2		1	1	1	2	1	2

CO ATTAINMENT:

OPERATING SYSTEMS	Att. Level
CO1	2.56
CO2	2.56
CO3	2.83
CO4	2.56
CO5	2.56

PO ATTAINMENT :

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Overall PO Attainment	2.6	2.6	2.6	2.6	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6

Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123 UP

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123 UP

Faculty Signature

Registrar
Invertis University
Bareilly

INVERTIS UNIVERSITY BAREILLY

Invertis University, Bareilly
CO Attainment

Course Name: OPERATING SYSTEMS

Class/Sem: B.TECH(CSE)/4 Academic Year: 2022-23

Course Code: BCS-403 Program Name: B.TECH(CSE)

S. No.	University Reg. No.	Student Name	First Unit Test	Second Unit Test	First Class Test	Second Class Test	Best One From Unit Te	Best One From Class T	Internal Marks Scheme			Total Internal Marks	End Sem Exam Marks	Total Marks
									Unit Test(UT)	Attendance(AT)	Teacher Assessment			
			Theory (25)	Theory (25)	Theory (10)	Theory (10)	Theory (25)	Theory (10)	12	12	6	Theory (25)	Theory (50)	Theory (75)
1	BCS2021061	ABHI YADAV	21	17	7	5	21	7	10	10	4	24	43	67
2	BCS2021013	ABHISHEK KUMAR	21	17	7	5	21	7	10	9	4	23	46	69
3	BCS2021018	ABHISHEK KUMAR	15	12	5	4	15	5	7	7	3	17	47	64
4	BCS2021133	ABKASH GANGWAR	21	17	7	5	21	7	10	9	4	23	33	56
5	BCS2021017	AJAY SHAKYA	21	17	7	5	21	7	10	10	4	24	31	55
6	BCS2021141	AKANSHA MAHESHWARI	21	17	8	7	21	8	10	10	5	25	48	73
7	BCS2021107	AKHILESH YADAV	17	13	5	4	17	5	8	7	3	18	20	38
8	BCS2021077	AKRITI GUPTA	21	17	7	5	21	7	10	9	4	23	33	56
9	BCS2021052	AKSHAT SAXENA	21	17	7	5	21	7	10	10	4	24	45	69
10	BCS2021048	AMAN CHANDRA JOSHI	21	17	7	5	21	7	10	9	4	23	34	57
11	BCS2021132	AMASH HASAN ANSARI	17	13	5	4	17	5	8	7	3	18	38	56
12	BCS2021030	AMIT KUMAR	21	17	7	5	21	7	10	9	4	23	40	63
13	BCS2021055	ANAMIKA DWIVEDI	21	17	7	5	21	7	10	10	4	24	39	63
14	BCS2021091	ANANT CHITRANSHI	21	17	7	5	21	7	10	10	4	24	39	63
15	BCS2021098	ANANT KUMAR SARASWAT	21	17	7	5	21	7	10	9	4	23	40	63
16	BCS2021004	ANSHIKA VERMA	21	17	7	5	21	7	10	9	4	23	37	60
17	BCS2021108	ANUBHAV TRIPATHI	19	15	7	5	19	7	9	8	4	21	37	58
18	BCS2021040	ANURAG SINGH YADAV	21	17	7	5	21	7	10	10	4	24	39	63
19	BCS2021135	ARSHAN	21	17	7	5	21	7	10	10	4	24	39	63
20	BCS2021104	AYUSH SHARMA	17	13	7	5	17	7	8	8	4	20	45	65
21	BCS2021008	BADAL MISHRA	21	17	7	5	21	7	10	9	4	23	39	62
22	BCS2021012	DEVANSH OJHA	21	17	7	5	21	7	10	9	4	23	39	62
23	BCS2021053	GAURAV SINGH KABDWAL	21	17	7	5	21	7	10	10	4	24	43	67
24	BCS2022193	HARSHIT MAHESHWARI	19	15	7	5	19	7	9	9	4	22	40	62
25	BCS2021024	JUHI AWASTHI	21	17	7	5	21	7	10	10	4	24	43	67
26	BCS2021050	KARTIK YADAV	21	17	7	5	21	7	10	9	4	23	44	67
27	BCS2021134	KASHISH VARSHNEY	21	17	7	5	21	7	10	9	4	23	44	67
28	BCS2021122	KAUSHAL BHARTI	21	17	7	5	21	7	10	9	4	23	40	63
29	BCS2021047	MANVI CHATURVEDI	21	17	8	7	21	8	10	10	5	25	44	69
30	BCS2021036	MANYATA CHAUDHARY	21	17	7	5	21	7	10	9	4	23	45	68
31	BCS2021082	MOHAMMAD SHUJA KHAN	19	15	7	5	19	7	9	9	4	22	39	61
32	BCS2021007	MOHD MUSTAKEEM	8	7	3	3	8	3	4	4	2	10	23	33
33	BCS2021031	MRITUNJAY SINGH	21	17	7	5	21	7	10	10	4	24	47	71
34	BCS2021120	NAVYA SHARMA	21	17	8	7	21	8	10	10	5	25	45	70
35	BCS2021124	PARAS KANDPAL	19	15	7	5	19	7	9	8	4	21	25	46
36	BCS2021021	PARV BANSAL	21	17	7	5	21	7	10	10	4	24	46	70
37	BCS2021043	PRAKHAR AWASTHI	19	15	7	5	19	7	9	8	4	21	35	56
38	BCS2021065	PRASHANT DIXIT	21	17	7	5	21	7	10	9	4	23	26	49
39	BCS2021123	PRASHANT RATHOUR	21	17	7	5	21	7	10	9	4	23	43	66
40	BCS2021044	PRATYUSH MISHRA	21	17	7	5	21	7	10	10	4	24	37	61
41	BCS2021063	PRINCE TOMAR	21	17	7	5	21	7	10	9	4	23	41	64
42	BCS2021022	PRINSIKA SINGH	21	17	7	5	21	7	10	9	4	23	43	66
43	BCS2021090	PRIYANSH	13	10	3	3	13	3	6	5	2	13	33	46
44	BCS2021005	RAJ SINHA	21	17	7	5	21	7	10	9	4	23	44	67
45	BCS2021069	RAVI KUMAR	19	15	7	5	19	7	9	9	4	22	44	66
46	BCS2021059	RITESH KUMAR	19	15	7	5	19	7	9	9	4	22	40	62
47	BCS2021026	SACHIN NISHAD	8	7	3	3	8	3	4	4	2	10	46	56
48	BCS2021139	SAYED SHAZEB MEHMOOD	17	13	5	4	17	5	8	8	3	19	32	51
49	BCS2021049	SHAGUN KAUSHAL	21	17	7	5	21	7	10	10	4	24	46	70
50	BCS2021073	SHAHBAZ AHMAD KHAN	13	10	3	3	13	3	6	5	2	13	46	59
51	BCS2021054	SHOAIB KHAN	8	7	3	3	8	3	4	4	2	10	27	37
52	BCS2021071	SHRADHEY RASTOGI	21	17	7	5	21	7	10	9	4	23	33	56
53	BCS2021079	SIBTAIN RAZA KHAN	11	8	3	3	10	3	5	5	2	12	22	34

Head,
Department of Computer Science
& Engineering
Invertis University
Bareilly-243123, UP

Dean
Faculty of Engineering & Technology
Invertis University
243123

Registrar
Invertis University
Bareilly

54	BCS2021084	SUBHASH KUMAR	15	12	5	4	15	5	7	7	3	17	37	54
55	BCS2021080	SUDHANSHU NANDAN	19	15	7	5	19	7	9	8	4	21	38	59
56	BCS2021060	SUHANI AGRAWAL	21	17	7	5	21	7	10	9	4	23	41	64
57	BCS2021039	TANU AGARWAL	21	17	7	5	21	7	10	10	4	24	40	64
58	BCS2021137	UJJAWAL KUMAR	21	17	8	7	21	8	10	10	5	25	43	68
59	BCS2021086	VAIBHAV SHARMA	19	15	7	5	19	7	9	9	4	22	40	62
60	BCS2021010	VAIBHAV VASHISHTHA	21	17	8	7	21	8	10	10	5	25	49	74
61	BCS2021057	VARUN PRATAP SINGH	21	17	7	5	21	7	10	10	4	24	48	72
62	BCS2021058	VIKAS MISHRA	17	13	7	5	17	7	8	8	4	20	36	56
63	BCS2021113	VINAYAK SINGH	13	10	5	4	13	5	6	6	3	15	30	45
64	BCS2021015	VISHAL SINGH RAWAT	21	17	7	5	21	7	10	10	4	24	44	68
65	BCS2021100	YATISH SHARMA	19	15	7	5	19	7	9	8	4	21	20	41
66	BCS2021143	SALMAN BEG	15	12	5	4	15	5	7	7	3	17	39	56
67	BCS2022225	ASHUTOSH YADAV	8	7	3	3	8	3	4	4	2	10	18	28
68	BCS2022253	AYSHA PARVEEN ALAM	21	17	7	5	21	7	10	10	4	24	45	69
69	BCS2021130	AADIL	21	17	7	5	21	7	10	10	4	24	41	65
70	BCS2021029	ABHISHEK KUSHWAHA	10	8	3	3	10	3	5	5	2	12	27	39
71	BCS2021056	ADITYA SINGH	17	13	5	4	17	5	8	8	3	19	28	47
72	BCS2021072	AKIMUL WAZNA	19	15	7	5	19	7	9	8	4	21	30	51
73	BCS2021110	ALAKH PANDEY	13	10	3	3	13	3	6	5	2	13	27	40
74	BCS2021112	AMAAN ANSARI	21	17	7	5	21	7	10	9	4	23	45	68
75	BCS2021138	AMIT	8	7	3	3	8	3	4	4	2	10	27	37
76	BCS2021038	ANKIT KUMAR	8	7	3	3	8	3	4	4	2	10	15	25
77	BCS2021118	ANURAG GANGWAR	8	7	3	3	8	3	4	4	2	10	27	37
78	BCS2021088	ARJUN SINGH	13	10	3	3	13	3	6	5	2	13	27	40
79	BCS2021127	ASHUTOSH KUMAR	21	17	7	5	21	7	10	10	4	24	39	63
80	BCS2021041	ASHUTOSH PANDEY	21	17	7	5	21	7	10	10	4	24	47	71
81	BCS2021140	AVINASH KUMAR	17	13	5	4	17	5	8	8	3	19	33	52
82	BCS2021142	BIBESH RAWAL	8	7	3	3	8	3	4	4	2	10	20	30
83	BCS2021025	HARENDRA PRATAP	21	17	7	5	21	7	10	9	4	23	29	52
84	BCS2021102	HARSHITA AWASTHI	21	17	7	5	21	7	10	9	4	23	41	64
85	BCS2021037	HEMANT GANGWAR	19	15	7	5	19	7	9	9	4	22	43	65
86	BCS2021096	JAY NARAYAN MISHRA	8	7	3	3	8	3	4	4	2	10	28	38
87	BCS2021128	MOHD AADIL HUSAIN	10	8	3	3	10	3	5	5	2	12	25	37
88	BCS2021097	MOHD MUZEEB ANSARI	15	12	5	4	15	5	7	6	3	16	30	46
89	BCS2021121	MOHD TAKREEM	8	7	3	3	8	3	4	4	2	10	23	33
90	BCS2021136	MOHD. SHABBAR	8	7	3	3	8	3	4	4	2	10	AB	10
91	BCS2021045	NIKHIL YADAV	21	17	7	5	21	7	10	9	4	23	39	62
92	BCS2021062	NISHA DEVI	19	15	7	5	19	7	9	8	4	21	37	58
93	BCS2021099	NITIN GOLEY	17	13	5	4	17	5	8	8	3	19	38	57
94	BCS2021125	NIZAM FAROOQUI	19	15	7	5	19	7	9	9	4	22	29	51
95	BCS2021131	NOMAN AHMAD	13	10	3	3	13	3	6	5	2	13	23	36
96	BCS2021068	PARAS GANGWAR	19	15	7	5	19	7	9	9	4	22	27	49
97	BCS2021078	PARV CHITRANSH	8	7	3	3	8	3	4	4	2	10	10	20
98	BCS2021093	PRIYANKA CHAUHAN	21	17	7	5	21	7	10	9	4	23	46	69
99	BCS2021019	RUPAM PANDEY	13	10	3	3	13	3	6	5	2	13	20	33
100	BCS2021115	SAIF WARSI	8	7	3	3	8	3	4	4	2	10	AB	10
101	BCS2021074	SIDDHANT TOMAR	8	7	3	3	8	3	4	4	2	10	23	33
102	BCS2021081	SIDDHARTH SAXENA	21	17	7	5	21	7	10	9	4	23	41	64
103	BCS2021094	SUDHANSU SHARMA	17	13	5	4	17	5	8	8	3	19	41	60
104	BCS2021066	SURYA PRATAP SINGH	10	8	3	3	10	3	5	5	2	12	17	29
105	BCS2021032	UDAY PRATAP SINGH	10	8	3	3	10	3	5	5	2	12	15	27
106	BCS2021103	VAIBHAV GANGWAR	8	7	3	3	8	3	4	4	2	10	25	35
107	BCS2021144	DANISH ULLAH KHAN	8	7	3	3	8	3	4	4	2	10	17	27
108	BCS2022279	SNEHA TRIVEDI	10	8	3	3	10	3	5	5	2	12	27	39
		Students appeared for the examination	108	108	108	108	108	108	108	108	108	22	106	108
		Target / satisfactory mark set as benchmark	10	10	4	4	10	4	5	5	2	12	28	40
		Students scored above the target set	92	86	80	80	92	80	92	92	80	12	79	84
		% Students scored above the target set	85%	80%	74%	74%	85%	74%	85%	85%	74%	18	75%	78%
		Attainment Level	3	3	2	2	3	2	3	3	2	18	3	3

														Overall
CO1	3		2		3	2	3	3	2	15	2	3	2.56
CO2	3		2		3	2	3	3	2	15	2	3	2.56
CO3		3			3		3	3		15	2	3	2.83
CO4		3		2	3	2	3	3	2	15	2	3	2.56
CO5		3		2	3	2	3	3	2	15	2	3	2.56
Overall attainment													

Rubrics

Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123 UP

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly

Registrar
Invertis University
Bareilly

% Students	Level
<50%	1
50-75%	2
>75%	3

Faculty Signature

Head
Department of Computer Scienc
& Engineering
Invertis University
Bareilly-243123, UP

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly 243123 (Up)

Registrar
Invertis University
Bareilly

INVERTIS

End Semester Examination 2021-22

B.Tech II(CSE) IV Semester

Course/Sub: OPERATING SYSTEM(BCS-403)

Maximum Marks :50, Duration: 3 Hrs.

Q No	Questions	Marks (50)	CO	BL
	Answer the following:			
1-I	Name any three operating system	01	CO1	L2
1-II	What is real time operating system?	01	CO2	L1
1-III	Explain the term critical section	01	CO2	L2
1-IV	Explain the term caching	01	CO2	L1
1-V	Explain the term response time	01	CO2	L1
	Answer the following			
2-I	Explain the term multiprogramming	01	CO1	L1
2-II	Explain the role of job scheduler	01	CO1	L1
2-III	Arrange in order of speed from highest to lowest: RAM, Registers, Cache, Hard disk.	01	CO1	L1
2-IV	Name the three page replacement algorithms	01	CO1	L2
2-V	What is Belady's anomaly?	01	CO1	L1
3-I	a) Explain the various functions of operating system. Or b) What is a multiprocessor system? Write the advantages of multiprocessor system.	5	CO2	L2
3-II	a) What is PCB? Explain the role of PCB when CPU switches between two processes. Or b) Explain the four necessary conditions for deadlock.	5	CO2	L3
4-I	a) What is a process? How it changes states in a system? Or b) Explain the Peterson's solution for critical section problem.	5	CO2	L5
4-II	a). Consider the following set of processes, with the length of CPU burst time given in milliseconds: Process Arrival Time Burst Time P1 0 8 P2 1 4 P3 2 2 P4 3 1 P4 4 3 P5 5 2 Using Shortest-Remaining-Time-First (SRTF) scheduling, obtain the Gantt chart and compute average waiting time and average turnaround time. or b) Explain the term thrashing with the help of a graph.	5	CO3	L3
5	a)) Consider the following snapshot of a system: Process Allocation Max Available A B C A B C A B C P0 1 1 2 4 3 3 2 1 0 P1 2 1 2 3 2 2 P2 4 0 1 9 0 2 P3 0 2 0 7 5 3 P4 1 1 2 1 1 2 Answer the following questions using the banker's algorithm: (i) What is the content of the matrix Need? (ii) Is the system in a safe state? If yes, then what is the safe sequence? or b). Consider the following page reference string: 4, 7, 6, 1, 7, 6, 1, 2, 7, 2, 1, 4, 6 Assume 3 page frames and pure demand paging. How many page faults would occur for following algorithms: (i) FIFO (ii) LRU (iii) OPTIMAL	10	CO4	L4

Head
Department of Computer Science
& Engineering
Invertis University
Bareilly-243123, UP

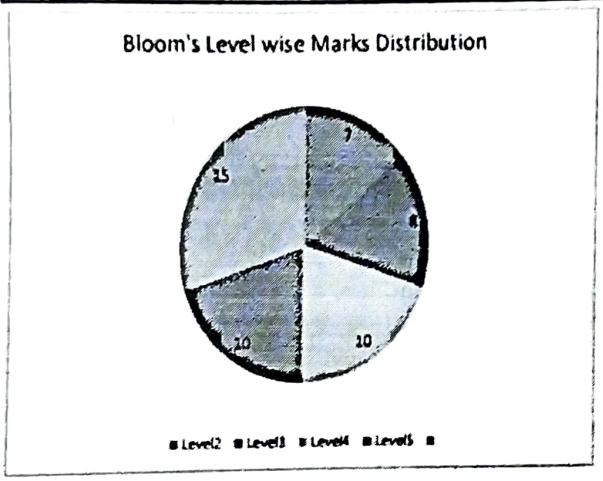
Registrar
Invertis University

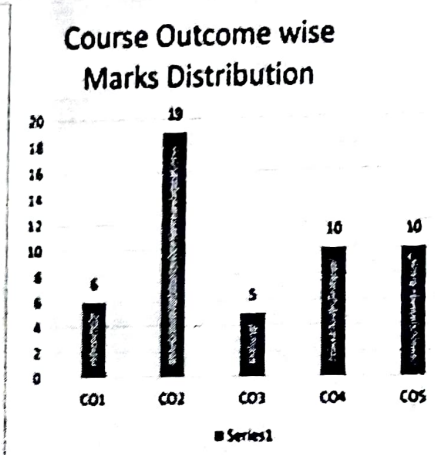
Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123, UP

6	a). Consider a disk system with 100 cylinders. The requests to access the cylinders occur in following sequence- 4, 34, 10, 7, 19, 73, 2, 15, 6, 20 Assuming that the head is currently at cylinder 50. Calculate the total head movement to satisfy these requests for following disk scheduling algorithms: (i) FCFS (ii) SSTF (iii) SCAN Assume direction to be towards cylinder 0. OR b). Write short notes on: (i) Sleeping Barber problem (ii) Internal fragmentation (iii) Context switch (iv) File system	10	CO5	L5

BL – Bloom's Taxonomy Levels
(1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)
CO – Course Outcomes PO – Program Outcomes; PI Code – Performance Indicator Code

Level	Marks	CO	Marks
Level1	7	CO1	6
Level2	8	CO2	19
Level3	10	CO3	5
Level4	10	CO4	10
Level5	15	CO5	10
Total	50	Total	50





Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123 UP

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123, UP

Registrar
Invertis University
Bareilly

INVERTIS UNIVERSITY BAREILLY

NAAC

First Unit Test 2022-23

B.TECH(CSE)- IV Semester

Course/Code: OPERATING SYSTEMS(BCS-403)

Maximum Marks :25; Duration: 90 Minutes

Q.No	Questions	Marks (25)	CO	BL
	Explain the following in very short -			
1-I	Name any three operating system.	01	CO1	L1
1-II	what are Batch systems?	01	CO1	L1
1-III	What is meant by Time-sharing Systems?	01	CO1	L2
1-IV	Arrange in order of speed from highest to lowest: RAM, Registers, Cache	01	CO1	L2
	Attempt any two			L1
2-I	Explain the four necessary conditions for deadlock.	05	CO2	
2-II	Define schedulers?		CO2	L2
2-III	What is a process? How it changes states in a system?		CO2	L1
3	**Attempt any two parts:** a) Explain Operating System Structures? b) Explain System Programs? c) Explain briefly concept of virtual machines	06	CO1	L2
4	**Attempt any two parts:** a) Explain different types of system calls with suitable example. b) What are the functionalities of Operating Systems? Explain in detail c) Explain difference between Multitasking and Multi Programming?	10	CO2	L2

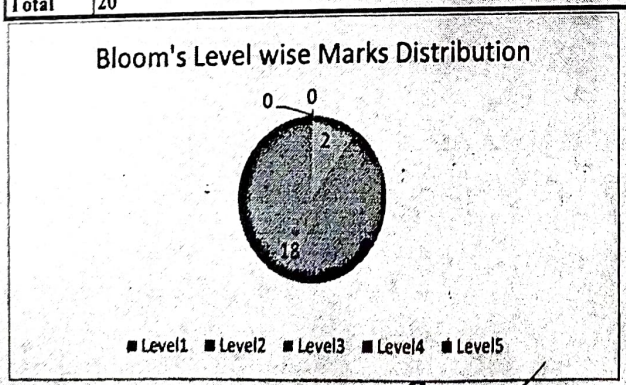
BL – Bloom's Taxonomy Levels

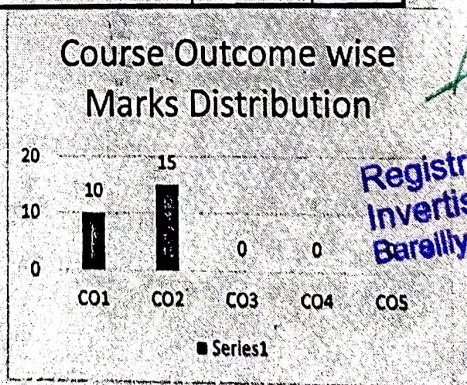
(1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)

CO – Course Outcomes PO – Program Outcomes; PI Code – Performance Indicator Code

Level	Marks
Level1	2
Level2	18
Level3	0
Level4	0
Level5	0
Total	20

CO	Marks
CO1	10
CO2	15
CO3	0
CO4	0
CO5	0
Total	25





Registrar
Invertis University
Bareilly

Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123, UP

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123, UP

INVERTIS UNIVERSITY BAREILLY

NAAC

Second Unit Test 2022-23

B.TECH(CSE)- IV Semester

Course/Code: OPERATING SYSTEMS(BCS-403)

Maximum Marks :25; Duration: 90 Minutes

Q.No	Questions	Marks (25)	CO	BL
	Explain the following in very short -			
1-I	Explain the term waiting time.	01	CO3	L1
1-II	What is Belady's anamoly?	01	CO3	L1
1-III	Explain the internal fragmentation.	01	CO3	L2
1-IV	Write full form of LRU.	01	CO3	L1
	Attempt any two			
2-I	Explain the term demand paging.	05	CO4	L2
2-II	Explain the concept of page and frame.		CO4	L2
2-III	Briefly explain the term swapping.		CO4	L2
3	**Attempt any two parts:** (a) Explain briefly sleeping barber problem. (b) Explain thrashing. (c) Briefly describe the file system.	06	CO4	L3
4	**Attempt any two parts:** (a) Consider the following page reference string: 2, 4, 1, 3, 4, 3, 2, 1, 3, 2, 4, 1, 3, 4 Assume 3 page frames and pure demand paging. How many page faults would occur for following algorithms: (i) FIFO (ii)LRU (iii) OPTIMAL (b) Explain I/O devices briefly. (c) Consider a disk system with 200 cylinders. The requests to access the cylinders occur in following sequence- 95, 52, 186, 54, 162, 65, 33, 117, 28, 167 Assuming that the head is currently at cylinder 65. Calculate the total head movement to satisfy these requests for following disk scheduling algorithms:	10	CO5	L4

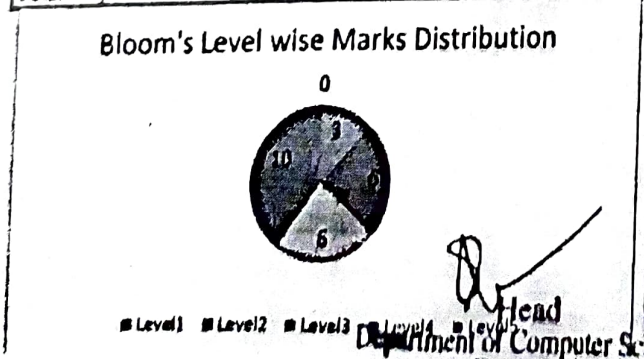
BL – Bloom's Taxonomy Levels

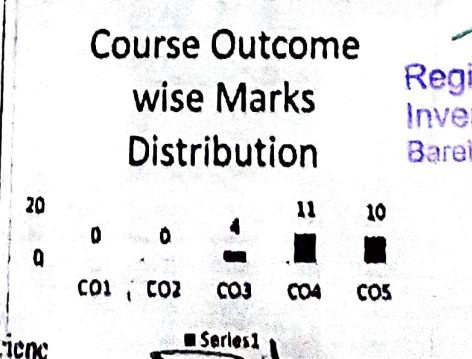
(1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)

CO – Course Outcomes PO – Program Outcomes; PI Code – Performance Indicator Code

Level	Marks
Level1	3
Level2	6
Level3	6
Level4	10
Level5	0
Total	25

CO	Marks
CO1	0
CO2	0
CO3	4
CO4	11
CO5	10
Total	25





Registrar
Invertis University
Bareilly

Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123, UP

Invertis University
Bareilly-243123, UP

INVERTIS UNIVERSITY BAREILLY

NAAC

First Class Test 2022-23

B.TECH(CSE)- IV Semester

Course/Code: OPERATING SYSTEMS(BCS-403)

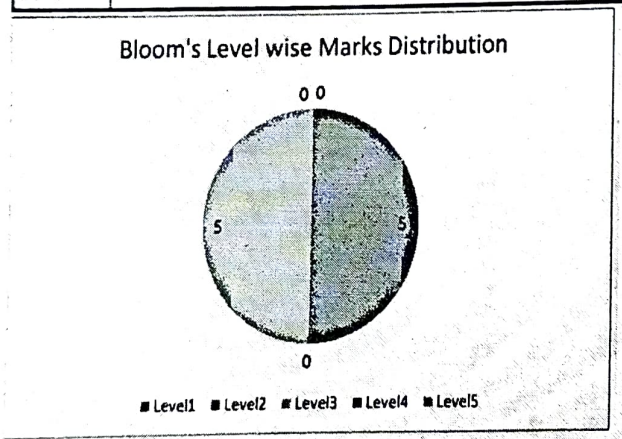
Maximum Marks :10; Duration: 30 Minutes

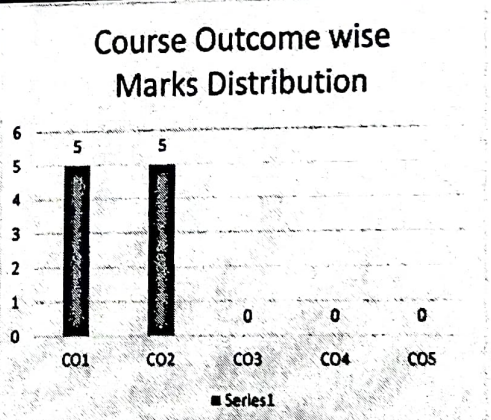
Q.No	Questions	Marks (10)	CO	BL
1	Write down the generations of computer system.	05	CO1	L3
2	what is the concept of virtual machine?	05	CO2	L1

BL – Bloom's Taxonomy Levels
(1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)
CO – Course Outcomes PO – Program Outcomes; PI Code – Performance Indicator Code

Level	Marks
Level1	5
Level2	0
Level3	5
Level4	0
Level5	0
Total	10

CO	Marks
CO1	5
CO2	5
CO3	0
CO4	0
CO5	0
Total	10





Head
Department of Computer Science & Engineering
Invertis University
Bareilly-24[illegible] UP

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly 243123 UP

Registrar
Invertis University
Bareilly

INVERTIS UNIVERSITY BAREILLY

NAAC

Second Class Test 2022-23

B.TECH(CSE)- IV Semester

Course/Code: OPERATING SYSTEMS(BCS-403)

Maximum Marks :10; Duration: 30 Minutes

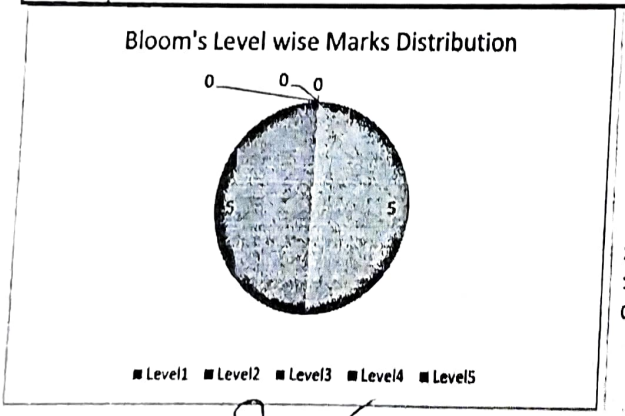
Q.No	Questions	Marks (10)	CO	BL
1	What do you mean by Disk scheduling ? - Explain FCFS, SSTF	05	CO4	L2
2	Explain allocation methods ,contiguous, linked, indexed.	05	CO5	L1

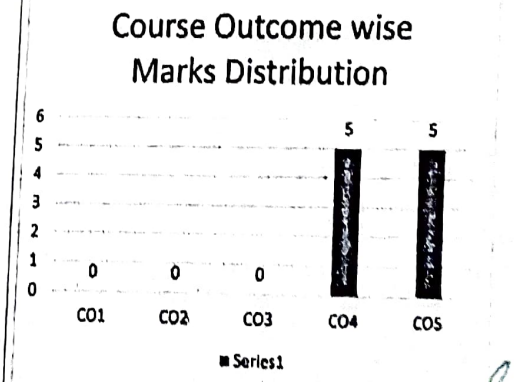
BL – Bloom's Taxonomy Levels

(1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)

CO – Course Outcomes PO – Program Outcomes; PI Code – Performance Indicator Code

Level	Marks	CO	Marks
Level1	5	CO1	0
Level2	5	CO2	0
Level3	0	CO3	0
Level4	0	CO4	5
Level5	0	CO5	5
Total	**10**	**Total**	**10**





Head
Department of Computer Science & Engineering
Invertis University
Bareilly-243123 UP

Dean
Faculty of Engineering & Technology
Invertis University
Bareilly-243123, UP

Registrar
Invertis University
Bareilly