Shri Shankaracharya Institute of Professional Management & Technology, Raipur

Department of Information Technology

Class Test -01 Session- July-Dec 2022 Month-Feb-2022

Sem- 3rd Subject: Object Oriented Concepts & Programming using JAVA

Subject code: B033313 (033))

Time Allowed: 2 hrs. Max Marks: 40

Note: Question no 1 is compulsory and attempt any 2 from question no 2, 3 and 4 from each part

Q. No.	Questions	Marks	Levels of Bloom's taxonomy	Cos
	Part-I			
1.	Differentiate between thro and throws?	[4]	Understanding	CO3
2.	Design a java program to implement user define exceptions in Java.	[8]	Apply	CO3
3.	Describe the any five String and StringBuffer class methods with suitable example?	[8]	Apply	CO3
4.	Define Exception? List out checked and unchecked exceptions with an example?	[8]	Apply	CO3
	Part-II			
1.	Describe the hierarchy of java stream class?	[4]	Understanding	CO4
2.	Define Thread? Also define life cycle of thread with proper block diagram.	[8]	Apply	CO4
3.	What are the two way of creating a thread in java? Explain with the help of java code.	[8]	Apply	CO4
4.	Define File? Write a program to read from a file using BufferedReader class	[8]	Apply	CO4

Shri Shankaracharya Institute of Professional Management & Technology

Department of Information Technology

Class Test – II Session - July – Dec 2022 Month – December

Sem - 3rd (B.tech IT) Sem **Subject-** Computer Networks **Code -** B033314(033)

Time Allowed: 2 hrs. Max Marks: 40

*Note: -**All questions are compulsory***

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
1.	A channel has a bit rate of 4 Kbps and one way propagation delay of 20 msec. The channel uses stop and wait protocol. The transmission time of the acknowledgement frame is negligible. To get a channel efficiency of at least 50%, the minimum frame size should be-	[8]	Applying	CO2
2.	Summarize the following terms: 1. TCP/IP 2. ARP 3. BOOTP 4. ICMP	[8]	Understanding	CO3
3.	Illustrate Network Layer services, roles and responsibilities.	[8]	Understanding	CO3
4.	Compare IPv4 and IPv6 protocols	[8]	Understanding	CO3
5.	Elaborate the services of Transport Layer	[8]	Understanding	CO4

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Department of Information Technology

Class Test – II Session - July – Dec 2022 Month – December

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Shri Shankaracharya Institute of Professional Management & Technology

Department of Information Technology

Class Test – II Session- Jul – Dec, 2022 Month- February 2023

Sem- IT 3rd, Subject- Computer Architecture, Organization and Microprocessor, Code-B033312(033)

Time Allowed: 2 hrs. Max Marks: 40

Note: - All questions are mandatory.

Q.N.	Questions	Marks	Levels of Bloom's taxonomy	COs
	Unit III			
A.	Draw the architecture of 8086 microprocessor and explain the operation of BIU and EU.	04	Understanding	CO3
B.	Explain the concept of memory segmentation of 8086 microprocessor. Also explain flag register of 8086 microprocessor	04	Understanding	CO3
	Unit IV			
A.	Explain PUSH and POP instruction of 8086 microprocessor. Write a program to add first 10 odd numbers and store the result in DX. Register.	08	Applying	CO4
	Unit V			
A.	If a DRAM has 1024 rows in its array of bit cells and a refresh time of 8 ms, how often must a row refresh operation be performed on average? Also, what fraction of the DRAM's time is spent performing refreshes if each row refresh operation takes 100 ns?	[4]	Applying	CO5
B.	Given the reference to the following pages by a program: 0,1,2,3,0,1,2,3,0,1,2,3,4,5,6,7. How many page faults will occur if the program has three-page frames and four frames available in it and uses: **(i)** FIFO replacement **(ii)** Optimal replacement **(iii)** LRU replacement	[8]	Applying	CO5
C.	Illustrate Ram & ROM Chip.	[4]	Understanding	CO5
D.	What is DMA?	[8]	Understanding	CO5

Shri Shankaracharya Institute of Professional Management & Technology

Department of Computer Science & Engineering

Class Test – II Session – July – Dec 2022 Month - January

Semester – CSE (AI), ET & IT III Subject – Mathematics III Code – B000311(014)

Time Allowed: 2 Hours Maximum Marks: 40

Note: Solve Any 5 Questions

Q. N.	Questions	Marks	Level of Bloom's Taxonomy	COs
1.	Solve the partial differential equation $px(z-2y^2)=(z-qy)(z-y^2-2x^3)$.	[8]	Applying	CO2
2.	Solve the homogeneous partial differential equation $\frac{\partial^3 z}{\partial x^3}+\frac{\partial^3 z}{\partial x^2 \partial y}-6\frac{\partial^3 z}{\partial y^3}=y\cdot Cosx$	[8]	Applying	CO2
3.	Using method of separation of variables solve $3\frac{\partial u}{\partial x}+2\frac{\partial u}{\partial y}=0 \; u(x,0)=4e^{-x}$	[8]	Applying	CO2
4.	(i) Prove that $\int_0^\infty \frac{e^{-t}\sin^2 t}{t}dt=\frac{1}{4}\log_e 5.$ (ii) Evaluate $L\left\{t\int_0^t \frac{e^t \sin t}{t}dt\right\}$.	[4+4]	Applying	CO3
5.	(i) Evaluate inverse Laplace transform of $\frac{s+2}{s^2-4s+13}$. (ii) Find the inverse Laplace transform of $\tan^{-1}\left(\frac{2}{s^2}\right)$.	[4+4]	Applying	CO3
6.	Solve the given equation using Laplace transform $ty''+2y'+ty=\cos t, \quad y(0)=1$.	[8]	Applying	CO3

Shri Shankaracharya Institute of Professional Management & Technology
Department of Electronics and Telecommunication Engineering
Class Test – II Session- July-Dec, 2022 Month- February
Sem- ET&T+IT+CSE(AI) 3rd Subject- Digital System Design- B000313(028)
Time Allowed: 2 hrs Max Marks: 40

***Note:* - Attempt any 5.**

Q. NO.	Questions	Marks	Levels of Bloom's taxonomy	COs
1.	Design MOD-8 asynchronous up counter. If the output frequency is 11 kHz what is the clock input?	[8]	Design	CO4
2.	Explain CMOS Logic. Design the followig boolean expression Y= (A+B+CD)'	[8]	Apply	CO5
3.	Convert RS F/F to JK F/F.	[8]	Apply	CO3
4.	Explain Charecteristics of IC's.	[8]	Understanding	CO5
5.	Explain TTL Logic for family 3 input NAND gate .	[8]	Design	CO5
6.	Design a sequence genrator using T F/Fs. 0->1->7->4>2->0	[8]	Design	CO3

Shri Shankaracharya Institute of Professional Management & Technology
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