CBCS SCHEME

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Fourth Semester B.E./B.Tech. Degree Examination, June/July 2024 Analysis and Design of Algorithms

Time: 3 hrs.

Max. Marks: 100

		Module – 1	M	L	С
Q.1	a.	What is an algorithm? Explain the fundamentals of algorithmic problem solving.	10	L2	CO1
	b.	Develop an algorithm to search an element in an array using sequential search. Calculate the best case, worst case and average case efficiency of this algorithm.	10	L3	CO1
		OR			
Q.2	a.	Explain asymptotic notations with example.	10	L2	CO1
	b.	Give the general plan for analyzing the efficiency of the recursive algorithm. Develop recursive algorithm for computing factorial of a positive number. Calculate the efficiency in terms of order of growth.	10	L3	CO1
		Module – 2			
Q.3	a.	Explain Strassen's matrix multiplication approach with example and derive its time complexity.	10	L3	CO2
	b.	What is divide and conquer? Develop the quick sort algorithm and write its best case. Make use of this algorithm to sort the list of characters: E, X, A, M, P, L, E.	10	L2	CO2
		OR			
Q.4	a.	Distinguish between decrease & conquer and divide & conquer algorithm design techniques with block diagram. Develop insertion sort algorithm to sort a list of integers and estimate the efficiency.	10	L3	CO2
2	b.	Define topological sorting. List the two approaches of topological sorting and illustrate with examples.	10	L2	CO2
-		Module – 3		A STATE OF THE STA	Ana
Q.5	a.	Define AVL tree with an example. Give worst case efficiency of operations on AVL tree. Construct an AVL tree of the list of keys: 5, 6, 8, 3, 2, 4, 7 indicating each step of key insertion and rotation.	10	L3	CO3
	b.	Define Heap. Explain the bottom-up heap construction algorithm. Apply heap sort to sort the list of numbers 2, 9, 7, 6, 5, 8 in ascending order using array representation.	10	L3	CO3
		OR			
Q.6	a.	Define 2-3 tree. Give the worst case efficiency of operations on 2-3 tree. Build 2-3 tree for the list of keys 9, 5, 8, 3, 2, 4, 7 by indicating each step of key insertion and node splits.	10	L3	CO3
	b.	Design Horspool algorithm for string matching. Apply this algorithm to find the pattern BARBER in the text: JIM SAW ME IN A BARBERSHOP	10	L3	CO3
	-	Module – 4			
Q.7	a.	Apply Dijkstra's algorithm to find the single source shortest path for given graph [Fig.Q7(a)] by considering 's' as source vertex. Illustrate each step.	10	L3	CO4
		1 of 2			

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		$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			
5	b.	Define transitive closure. Write Warshall's algorithm to compute transitive closure. Illustrate using the following directed graph. Fig.Q7(b)	10	L3	CO4
Q.8	a.	Define minimum spanning tree. Write Kruskal's algorithm to find minimum spanning tree. Illustrate with the following undirected graph. 3 5 5 Fig.Q8(a)	10	L3	CO4
	b.	Construct Huffman Tree and resulting code for the following: Character A B C D - Probability 0.4 0.1 0.2 0.15 0.15 (i) Encode the text: ABACABAD (ii) Decode the text: 100010111001010	10	L3	CO4
0.0	T	Module – 5	10	L2	CO5
Q.9	b.	Explain n-Queen's problem with example using backtracking approach. Solve the following instance of the knapsack problem by the branch-and-bound algorithm. Construct state-space tree. Item Weight Value	10	L3	CO5
		1 4 \$ 40 2 7 \$ 42 3 5 \$ 25 4 3 \$ 12	5		
		1 4 \$ 40 2 7 \$ 42 3 5 \$ 25			
Q.10	a.	1 4 \$ 40 2 7 \$ 42 3 5 \$ 25 4 3 \$ 12 The knapsack's capacity W is 10.	10	L3	CO5

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	b.	Define transitive closure. Write Warshall's algorithm to compute transitive closure. Illustrate using the following directed graph. Fig.Q7(b)	10	L3	CO4
Q.8	a.	OR Define minimum spanning tree. Write Kruskal's algorithm to find	10	L3	CO4
Q to	b.	minimum spanning tree. Illustrate with the following undirected graph. Spanning tree. Illustrate with the following undirected graph. Fig.Q8(a) Construct Huffman Tree and resulting code for the following:	10	L3	CO4
		Character A B C D -			
		Module – 5			
Q.9	a.	Explain n-Queen's problem with example using backtracking approach.	10	L2	CO5
	b.	Solve the following instance of the knapsack problem by the branch-and-bound algorithm. Construct state-space tree. Item Weight Value	10	L3	CO5
	7	OR			
Q.10	a.	Differentiate between Branch and Bound technique and Backtracking. Apply backtracking to solve the following instance of subset-sum problem $S = \{3, 5, 6, 7\}$ and $d = 15$. Construct a state space tree.	10	L3	CO5
	b.	Explain greedy approximation algorithm to solve discrete knapsack problem.	10	L2	CO5

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CBCS SCHEME

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BCG402

Fourth Semester B.E./B.Tech.Degree Examination, June/July 2024 Computer Graphics and Visualization

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M: Marks, L: Bloom's level, C: Course outcomes.

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		Module – 1	M	L	С
Q.1	a.	What is computer graphics? Explain applications of computer graphics with examples.	10	L2	CO1
	b.	Explain in detail graphics pipeline architecture.	10	L2	CO1
		OR #	1		
Q.2	a.	With necessary steps explain Bresenham's line drawing algorithm. Consider the line from (6, 6) to (12, 8). Use the algorithm to rasterize the line.	10	L3	CO1
	b.	Explain the various graphics functions with example.	10	L2	CO1
		Module – 2		1	
Q.3	a.	Explain 2D geometric transformations in detail.	10	L2	CO ₂
	b.	Develop openGL program to create and rotate a triangle about the origin and fixed point.	10	L3	CO2
		OR	1		0
Q.4	a.	Explain homogeneous co-ordinate representation.	10	L2	CO ₂
	b.	Develop openGL program to create and rotate cube.	10	L3	CO2
	•	Module – 3			
Q.5	a.	Explain in detail various logical devices.	10	L2	CO3
and a second	b.	Explain traditional animation technique in detail with example.	.10	L2	CO3
		OR	•	•	
Q.6	a.	Explain input modes in detail with neat diagram.	10	L2	CO3
	b.	Explain character animation and periodic motions in detail.	10	L2	CO3
		Module – 4			-
Q.7	a.	Explain Cohen-Sutherland algorithm with example and neat diagram.	10	L3	CO4
	b.	Explain in detail, The Phong Lighting model.	10	L2	CO4
	1	OR	-		
Q.8	a.	Explain color models.	10	L2	CO4
	b.	Write a short note on,			
		(i) Normalization and View port transformation.	06	L4	CO3
		(ii) 2D point clipping.	04		
		Module – 5			
Q.9	a.	Explain the concept of hidden surface removal.	10	L2	CO5
	b.	Explain perspective projection with neat diagram.	10	L2	CO5
		OR			
Q.10	a.	Develop openGL program to draw a polygon and allow user to move the camera suitably to experiment with perspective viewing.	10	L3	CO5
	b.	Explain orthographic and axonometric projection. Bring out the differences.	10	L2	CO5
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BCS403

Fourth Semester B.E./B.Tech. Degree Examination, June/July 2024 Database Management Systems

Time: 3 hrs. Max. Marks: 100

		Module – 1	M	L	С
Q.1	a.	Define database. Elaborate component modules of DBMS and their interactions.	10	L2	CO1
	b.	Describe the three-schema architecture. Why do we need mappings among schema levels?	06	L2	CO1
	c.	Explain the difference between logical and physical data independence.	04	L2	CO1
		OR			
Q.2	a.	Draw an ER diagram for an COMPANY database with employee, department, project as strong entities and dependent as weak entity. Specify the constraints, relationships and ratios in the ER diagram.	10	L3	CO3
	b.	Define the following terms with example for each using ER notations: Entity, attribute, composite attribute, multivalued attribute, participation role.	10	L3	CO3
		Module – 2			
Q.3	a.	Discuss the update operations and dealing with constraint violations with suitable examples.	08	L2	CO2
	b.	Illustrate the relational algebra operators with examples for select and project operation.	06	L2	CO2
	c.	Discuss the characteristics of relations that make them different from ordinary table and files.	06	L2	CO2
****		OR	L	L	L
Q.4	a.	Perform (i) Student U instructor (ii) Student Student	04	L3	CO2
	b.	Ernest Gilbert Consider the following relational database schema and write the queries in relational algebra expressions: EMP(Eno, Ename, Salary, Address, Phone, DNo) DEPT(DNo, Dname, DLoc, MgrEno) DEPENDENT(Eno, Dep_Name, Drelation, Dage) (i) List all the employees who reside in 'Belagavi'. (ii) List all the employees who earn salary between 30000 and 40000 (iii) List all the employees who work for the 'Sales' department (iv) List all the employees who have at least one daughter (v) List the department names along with the names of the managers	10	L3	CO2

	c.	Consider the two tables T ₁ and T ₂ shown below:	06	L3	CO2
		T_1 T_2			
		PQRABC			
		10 a 5			
		15 b 8 25 c 3			
		25 a 6 10 b 5			
		Show the results of the following operations:			
			1		
		$(i) T_1 T_{1,P=T_2,A} T_2$			
		$(ii) T_1 \bowtie_{T_1,Q=T_2,B} T_2$			
		(iii) $T_1 \bowtie_{(T_1.P=T_2.A \text{ AND } T_1.R=T_2.C)} T_2$			
		Module – 3			
Q.5	a.	Discuss the informal design guidelines for relation schema design.	08	L2	CO4
	b.	Define 1NF, 2NF, and 3NF with examples.	06	L2	CO ₄
	c.	Write the syntax for INSERT, UPDATE and DELETE statements in SQL	06	L2	CO ₃
		and explain with suitable examples.			
		OR			
Q.6	a.	Discuss insertion, deletion and modification anomalies. Why are they	10	L2	CO3
		considered bad? Illustrate with examples.			
	b.	Illustrate the following with suitable examples:	10	L2	CO3
		(i) Datatypes in SQL			
		(ii) Substring Pattern Matching in SQL.			
		Module – 4			
Q.7	a.	Consider the following relations:	10	L3	CO3
		Student(Snum, Sname, Branch, level, age)			
		Class(Cname, meet_at, room, fid)			
		Enrolled(Snum, Cname)			
		Faculty(fid, fname, deptid)			
		Write the following queries in SQL. No duplicates should be printed in any			
		of the answers.			
		(i) Find the names of all Juniors (level = JR) who are enrolled in a			
		class taught by I. Teach.			
		(ii) Find the names of all classes that either meet in room R128 or			
		have five or more students enrolled.			
		(iii) For all levels except JR, print the level and rthe average age of			
		students for that level.			
		(iv) For each faculty member that has taught classes only in room			
		R128, print the faculty member's name and the total number of			
		classes she or he has taught.			
		(v) Find the names of students not enrolled in any class.			
	b.	What do understand by correlated Nested Queries in SQL? Explain with	04	L2	CO3
		suitable example.			
	c.	Discuss the ACID properties of a database transaction.	06	L2	CO ₄
		OR	,	,	,
Q.8	a.	What are the views in SQL? Explain with examples.	04	L3	COS
	b.	In SQL, write the usage of GROUP BY and HAVING clauses with suitable	06	L2	CO3
		examples.			
	c.	Discuss the types of problems that may encounter with transactions that run	10	L2	CO5
		concurrently.			
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BCS403

		Module – 5			- 8
Q.9	a.	What is the two phase locking protocol? How does it Guarantee serializability.	06	L2	CO5
	b.	Describe the wait-die and wound-wait protocols for deadlock prevention.	08	L2	CO5
	c.	List and explain the four major categories of NOSQL system.	06	L2	CO3
	1	OR			
Q.10	a.	What is Multiple Granularity locking? How is it implemented using intension locks? Explain.	10	L2	CO5
	b.	Discuss the following MongoDB CRUD operations with their formats: (i) Insert (ii) Delete (iii) Read	06	L2	CO4
E	c.	Briefly discuss about Neo4j data model.	04	L2	CO4

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Fourth Semester B.E./B.Tech. Degree Examination, June/July 2024 Discrete Mathematical Structures

Time: 3 hrs. Max. Marks: 100

		Module – 1	M	L	С
Q.1	a.	Define tautology. Prove that for any propositions p, q, r the compound proposition. $[(p \land \exists q) \to r] \to [p \to (q \lor r)] \text{is a tautology}$	06	L2	CO1
	b.	Test whether the following is a valid argument: If Ram studies then he will pass 12 th . If Ram passes 12 th then his father gifts him a bike. If Ram doesn't play video game then he will pass 12 th . Ram did not get a bike. ∴ Ram played video game.	07	L3	CO1
	c.	Give direct proofs of the statements: i) If k and l are odd then k + l is even. ii) If k and l are odd then k l is odd.	07	L2	CO1
Q.2	a.	Define (i) Proposition (ii) Open statement (iii) Quantifiers	06	L2	CO1
	b.	Using the laws of logic, prove the following logical equivalence: $[(1p \lor 1q) \land (F_0 \lor p) \land p] \Leftrightarrow p \land 1q$	07	L2	CO1
	c.	Write the following statement in symbolic form and find its negation: "If all triangles are right angled then no triangle is equilateral".	07	L2	CO1
	***************************************	Module – 2			
Q.3	a.	Prove by using mathematical induction. $1^{2} + 2^{2} + \dots + n^{2} = \frac{n(n+1)(2n+1)}{6}$	06	L2	C01
	b.	How many words can be made with or without meaning from the letters of the word "STATISTICS"? In how many of these a and c are adjacent? In how many vowels are together?	07	L3	CO2
	c.	Find the coefficient of x^3y^8 in the expansion of $(2x - y)^{11}$.	07	L2	CO2
		OR			
Q.4	a.	Obtain the recursive definition for the sequence in each of the following cases: (i) $a_n = 5n$ (ii) $a_n = 3n + 7$ (iii) $a_n = n^2$ (iv) $a_n = 2 - (-1)^n$	06	L2	CO2
-	b.	A woman has 11 close relations and wishes to invite 5 of them to dinner. In how many ways can she invite them if (i) there is no restriction on her choice. (ii) 2 persons will not attend separately (iii) 2 persons will not attend together.	07	L3	CO2
	c.	In how many ways can we distribute 7 apples and 5 oranges among 3 children such that each child gets atleast one apple and one orange?	07	L3	CO2

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0.5	T	Module – 3	0.0	12	CO2
Q.5	a.	State pigeon hole principle. Using pigeon hole principle find the minimum number of persons chosen so that atleast 5 of them will have their birthday	06	L3	CO3
		in the same month.			
	b.	Let $A = \{a, b, c, d\}$ and $B = \{1, 2, 3, 4, 5\}$. Find the number of 1-1	07	L2	CO3
	ļ	functions and onto functions from (i) A to B (ii) B to A	9		
	c.	Let $A = \{1, 2, 3, 4, 5\}$. Define a relation R on $A \times A$ by $(x_1, y_1) R (x_2, y_2)$	07	L2	CO3
		$\inf x_1 + y_1 = x_2 + y_2.$			
		(i) Verify that R is an equivalence relation			
	1	(ii) Determine the equivalence class of [(2, 4)]			
<u> </u>		OR	100	T.0	000
Q.6	a.	Consider the functions f and g from R to R defined by $f(x) = 2x + 5$ and $g(x) = \frac{1}{2}(x - 5)$. Prove that g is inverse of f.	06	L2	CO3
	b.	Let $A = \{1, 2, 3, 4\}$ and R be the relation on A defined by xRy if and only	07	L2	CO3
		if $x < y$. Write down R as a set of ordered pairs. Write the relation matrix			
		and draw the digraph. List out the in degrees and out degrees of every			
		vertex.			
	c.	Let $A = \{1, 2, 3, 6, 9, 12, 18\}$ and define R on A by xRy iff 'x divides y'.	07	L2	CO3
		Prove that (A, R) is a POSET. Draw the Hasse diagram for (A, R).			
	_	Module – 4			
Q.7	a.	How many integers between 1 and 300 (inclusive) are divisible by	06	L3	CO4
		(i) at least one of 5, 6 or 8. (ii) None of 5, 6 and 8.			
	b.	At a restaurant 10 men handover their umbrellas to the receptionist, In how	07	L3	CO4
		many ways can their umbrellas be returned so that (i) no man receives his			
		own umbrella. (ii) atleast one gets his own umbrella. (iii) atleast two gets			
	-	their own umbrellas.			
	c.	The number of virus affected files in a system is 1000 (to start with) and	07	L3	CO4
		this increases by 250% every 2 hours. Use a recurrence relation to			
		determine the number of virus affected files in the system after 12 hours.		ļ.,	
0.0	T	OR	0.6	¥ 0	664
Q.8	a.	In how many ways one can arrange the letters of the word	06	L3	CO4
		"CORRESPONDENTS" so that there are (i) no pair (ii) atleast 2 pairs of			
	la la	consecutive identical letters.	07	T 2	604
	b.	4 persons P_1 , P_2 , P_3 , P_4 who arrive late for a dinner party find that only one chair at each of five tables T_1 , T_2 , T_3 , T_4 and T_5 is vacant. P_1 will not	07	L3	CO4
		sit at T_1 or T_2 . P_2 will not sit at T_2 . P_3 will not sit at T_3 or T_4 . P_4 will not sit		=	
		at T_4 or T_5 . Find the number of ways they can occupy the vacant chairs.			
	c.	Solve the recurrence relation	07	L2	CO4
		$a_n - 6a_{n-1} + 9a_{n-2} = 0$ for $n \ge 2$ with $a_0 = 5$, $a_1 = 12$.	07	1.2	004
	1	Module - 5			
Q.9	a.	If * is an operation on Z defined by $xy = x + y + 1$, prove that $(Z, *)$ is an	06	L2	CO5
٧.>		abelian group.	00		COS
	b.	Explain Klein-4 group with example.	07	L2	CO5
	c.	State and prove Lagrange's theorem.	07	L2	CO5
		OR	U/	14	003
Q.10	a.	Prove that intersection of two subgroups of a group G is also a subgroup of	06	L2	CO5
		G.			
	b.	Prove that $(Z_4, +)$ is a cyclic group. Find all its generators.	07	L2	CO5
		Let $C = S$, $C = S = \begin{pmatrix} 1 & 2 & 3 & 4 \end{pmatrix}$	07	L3	CO5
	c.	Let $G = S_4$ for $\alpha = \begin{pmatrix} 1 & 2 & 3 & 4 \\ 2 & 3 & 4 & 1 \end{pmatrix}$			
		Find the subgroup $H = \langle \alpha \rangle$ determine the left cosets of H in G.			
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CBCS SCHEME

USN							BBOC407

Fourth Semester B.E./B.Tech. Degree Examination, June/July 2024 Biology for Engineers (CSE)

Time: 3 hrs.

Max. Marks: 100

		Module – 1	M	Promoti	С
Q.1	a.	Discuss the various components of Eukaryotic cells.	10	L3	CO1
	b.	Identify the applications of stem cells.	5	L2	CO1
	c.	Explain the functions of vitamins.	5	L2	CO1
	<u> </u>	OR			
Q.2	a.	Compare Prokaryotic and Eukaryotic cells.	10	L3	CO1
	b.	Explain the properties of Carbohydrates.	5	L2	CO1
	c.	Explain the functions of Lipids.	5	L2	CO1
	L	Module – 2			
Q.3	a.	Highlighting the properties of cellulose, justify cellulose as an effective water filter.	10	1.3	COI
	b.	Explain the working and development of DNA vaccines by taking suitable example.	10	L2	CO1
		OR	,		T
Q.4	a.	What are Bioplastics? Justify the use of PHA as Bioplastic mentioning its properties and applications.	10	L3	COI
	b.	Discuss the following: (i) Meat analogs of protein. (ii) Lipids as cleaning agents.	10	L2	COI
		Module – 3		l	
Q.5	a.	What is Electro Encephalogram (EEG)? Discuss the types of Brain activity detected with EEG. Write any three applications.	A ()	L3	CO2
	b.	What are Pace Makers? Explain basic design and construction of Pace Makers.	10	1,2	CO2
		OR	1	T	
Q.6	a.	Justify Lungs as purification system.	10	L3	CO2
	b.	Explain architecture of Rod and Core cells with suitable diagram.	10	L2	CO2
		Module – 4		1-2-2	
Q.7	a.	What is ultrasonography? Explain the uses and working principle.	10	L2	CO:
	b.	What is lotus leaf effect? Explain the mechanism and applications of super Hydrophobic effect.	10	L2	CO3
		. OR			
Q.8	a.	The structure and design of Kingfisher beak lead to the design of Bullet trains. Explain.	10	L2	CO.
	b.	Explain the working and applications of Bionic Leaf Technology.	10	L2	CO:

BBOC407

		Module – 5		,	
Q.9	10	L2	CO4		
***	b.	Explain the advantages and limitations of Artificial Intelligence for disease diagnosis.	10	L2	CO4
		OR			
Q.10	a.	Explain Bioengineering solutions for muscular dystrophy and Osteroporosis.	10	L2	CO4
	b.	Explain most commonly used Bioprinting Techniques.	10	L2	CO4

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Fourth Semester B.E. Degree Examination, June/July 2024 UI/UX

Γime	:: 1 hr.]	[Max. Marks: 50
	INSTRUCTION	IS TO THE CANDIDATES
1.	Answer all the fifty questions, each	question carries one mark.
2.	Use only Black ball point pen for w	vriting / darkening the circles.
3.	For each question, after selecting	your answer, darken the appropriate circle
	corresponding to the same questio	n number on the OMR sheet.
4.	Darkening two circles for the same of	question makes the answer invalid.
5.		hiteners on the OMR sheets are strictly
	prohibited.	*
_		
1.	Usability is an established, as a part of t a) Technology World	b) Computation World
	c) Designer's World	d) None of these
2.	Example of extracting a requirement sta	otement for
4.	a) Ticket Kiosk system	b) Software system
	c) Website design system	d) All of these
3.	The term translate each user need into o	one or more introduction design that is
	a) Extracting statement	b) Requirement statement
	c) Requirement structure	d) Terminology statement
4.	What UX encompasses of	
••	a) Only visual elements	b) Only functional element
	c) Both visual and functional element	d) Either visual nor functional element
5.	A business – a – case a user experience	typically includes
	a) Technical specification of the produc	
	b) Analysis of competitor pricing strate	
	c) Justification of investment based on o	
	d) Historical data on employee turn ove	er rate.
6.	The primary goal of UI design is to	
	a) To maximize user satisfaction and us	sability
	b) To optimize loading times	
	c) To minimize user engagement d) All of these	
	GI ZII OI HICSC	

7.	Which of the follow a) Learn ability c) Memorability	ving is not a usability pr	b) Efficiency d) Cost-effectiveness					
8.	In concern to design a) User involvement c) User interaction	t UI stands for	b) User interface d) User inspection					
9.	a) UI focuses on virb) UI and UX are inc) UI focuses on fur	nterchangeable terms nctionality, while UX fo	X focuses on functionali ocuses on elements uses on user satisfaction					
10.	a) The psychologicab) How user feel wlc) The technical per	s user experience designal effects of color choice then they interact with a formance of the websit eatures available to user	es on users product or service e or app					
11.	Design concept incl a) Usability		c) Both (a) and (b)	d) None of these				
12.	creativity and collab	poration.	problems solving that c) User perspectives					
13.	Generation of new a) Critiquing		c) Idea creation	d) Sketching				
14.	Interaction perspect a) How the system c) How the system	work	b) How the user operad) How a system inter	-				
15.	The long term designa) Sketching	n documentation is b) Design	c) Drawing	d) ideation				
16.	Critiquing is about a) Review and judg c) Idea creation		b) Joy and enjoyment d) Theme or ideas					
17.	Rapid creation of fr a) Drawing c) Designing	eehand drawing is	b) Sketching d) Intellectual drawing					
18.	Story board is a seq a) Frame clips c) Sketches	uence of	b) Visual frames d) Graphics frames					
19.	Ideation is ana) Active	b) Fast moving	c) Collaboration	d) All of these				

20.	Use mental model is a description of a) How the system work c) Something works in the real world	b) Explanation of so d) None of these	meone's thought
21.	The purpose of wire framing in UI/UX do a) to create a final polished design c) to select color schemes		ayout and functionality
22.	UX measure is a) Usage of your interaction design c) Usage of design thinking	b) Usage of concepts d) Usage of ideations	
23.	Measuring instrument is a description of a) Providing values for the particular UX b) Providing values for the UX targets c) Providing values for the UX metrics d) Providing values for UX goals.	measure	
24.	Detailed design includes a) Visual frames c) Visual comps	b) Visual clips d) Visual wire frame	·s
25.	Bread and butter tool of interaction desig a) Sketching c) Detailed design	b) Wireframes d) None of these	
26.	In which software tool is used in wirefrar a) Adobe XD b) Keil	nec) Xlinx	d) None of these
27.	Subjective of the UX design is a) UX metrics c) UX measure	b) UX goals d) UX target	
28.	Quantitative statement is a) UX metrics b) UX goals	c) UX measure	d) UX target
29.	Wire frames are frames a) Low fidelity wire frames c) Median fidelity wireframes	b) High fidelity wire d) None of these	eframes
30.	The drawing aspects of wireframes are us a) Square boxes c) Rectangular boxes	b) Paralleogram boxed d) None of these	es
31.	A sense is a design representation is a) Interaction design c) Prototype	b) Wire frame d) Design thinking	
32.	The ideas of prototyping is a) Timeless and universal c) Choice and approach	b) Build and real thind) all of these	ng

33.	Which prototype is demonstrating the p product overview?	roduct concept and for conveying an early
	a) Vertical prototype c) Horizontal prototype	b) Upper prototype d) None of these
34.	In which prototype combines the advantage good compress for system evaluation?	ges of both horizontal and vertical, offering a
	a) 'R' prototypec) 'T' prototype	b) 'Y' prototype d) 'D' prototype
		d) D prototype
35.	A vertical prototype is associated with a) User actions, in depth c) Stake holder actions in depth	b) Customer actions, in depth d) All of these
36.	Prototype that are not faithful representation	ons of the details of look, feel and behavior is
	a) Vertical prototype c) Horizontal prototype	b) Local prototype d) Low fidelity prototype
37.	In which prototype are more detailed repres a) High fidelity prototype c) Horizontal prototype	b) Local prototype d) Low fidelity prototype
38.	Which one of the fidelity is not independen a) Interactivity of prototype c) Horizontal prototype	b) Local prototype d) Low fidelity prototype
39.	Paper prototype can act as	
	a) Coding blocker c) Prototype blocker	b) View blocker d) All of these
40.	A 'T' prototype combines a) Both paper and local prototype c) Both low fidelity and high fidelity	b) Both horizontal and local prototype d) None of these
41.	Some of the guidelines and much of practic a) The concepts of over satisfaction c) The concepts of human working memory	b) The concepts of UX guidelines
42.	Sensory memory is of a) Small brief duration c) Very brief duration	b) Large brief duration d) None of these
43.	The selected UX design guidelines are gene a) UAF structure c) GUI structure	b) API structure d) All of these
44.	Design examples of UX guidelines from eva a) Hair dryers c) Public doorways	

a) Users	es are the support b) Servants	c) Public		d) None of these
a) When tasks or	steps to do			
Translation guide a) Users	lines are to support b) Customers	c) Peoples		d) None of these
_		b) Flexibility	ey	
a) Typingb) Clicking			actions	including
a) Users through ob) User's interaction	complete and correct "ba ion cycle functionality	nckend" functions	ality	
	a) Users User actions to de a) When tasks or st c) How tasks or st Translation guidel a) Users Including human a) Design simplic c) Efficiency Physical actions g a) Typing b) Clicking c) Dragging in a C d) All of these The outcomes par a) Users through c b) User's interactic c) Dragging in a C	User actions to determinea) When tasks or steps to do c) How tasks or step to do Translation guidelines are to supporta) Users b) Customers Including human memory support in the ta) Design simplicity c) Efficiency Physical actions guidelines support users a) Typing b) Clicking c) Dragging in a GUI, scrolling on a web d) All of these The outcomes part of the interaction cycle a) Users through complete and correct "bab b) User's interaction cycle functionality c) Dragging in a GUI, scrolling on a web	a) Users b) Servants c) Public User actions to determine a) When tasks or steps to do b) What tasks c) How tasks or step to do d) Why tasks Translation guidelines are to support a) Users b) Customers c) Peoples Including human memory support in the task structure a) Design simplicity b) Flexibility c) Efficiency d) Concurrence Physical actions guidelines support users is doing physical a) Typing b) Clicking c) Dragging in a GUI, scrolling on a web page d) All of these The outcomes part of the interaction cycle is about support a) User's interaction cycle functionality c) Dragging in a GUI, scrolling on a web page functionality c) Dragging in a GUI, scrolling on a web page functionality c) Dragging in a GUI, scrolling on a web page functionality c) Dragging in a GUI, scrolling on a web page functionality	a) Users b) Servants c) Public User actions to determine a) When tasks or steps to do b) What tasks or steps c) How tasks or step to do d) Why tasks or steps Translation guidelines are to support a) Users b) Customers c) Peoples Including human memory support in the task structure a) Design simplicity b) Flexibility c) Efficiency d) Concurrency Physical actions guidelines support users is doing physical actions a) Typing b) Clicking c) Dragging in a GUI, scrolling on a web page d) All of these The outcomes part of the interaction cycle is about supporting a) Users through complete and correct "backend" functionality b) User's interaction cycle functionality c) Dragging in a GUI, scrolling on a web page functionality

Ver-A 5 of 5

USN						Question Paper Version:	: C

Fourth Semester B.E./B.Tech. Degree Examination, June/July 2024

Time: 1 hr.]	[Max. Marks: 50
1 11110. 1 111.	

	Universal riuman values Course
ime:	1 hr.] [Max. Marks: 50
	INSTRUCTIONS TO THE CANDIDATES
1.	Answer all the fifty questions, each question carries one mark.
2.	Use only Black ball point pen for writing / darkening the circles.
3.	For each question, after selecting your answer, darken the appropriate circle
	corresponding to the same question number on the OMR sheet.
4.	Darkening two circles for the same question makes the answer invalid.
5.	Damaging/overwriting, using whiteners on the OMR sheets are strictly
	prohibited.
	promoted.
	All the units of nature can be classified into orders
	a) Two b) Three c) Four d) Six
2	Which of the following does not form an order in nature? a)BIO b) Animal c) Consciousness d) Human
	Which of the following statements is true, a) Material units have only two kinds of activities recognizing and fulfilling b) Material units have three kinds of activities assuming, recognizing and fulfilling
	c) Material units have only four kinds of activities knowing, assuming, recognizing and fulfillingd) None of the statement

- Which of the following statement is not true?
 - a) There is inter connectedness in nature
 - b) There is recyclability and self regulation in nature
 - c) There is struggle for survival in nature
 - d) There is mutual fulfillment in nature
- According to quantity, which of the following is true for the orders in nature 5
 - a) Bio order >> Physical order >> Animal order >> Human order
 - b) Animal order >> Bio order >> Physical order >> Human order
 - c) Physical order >> Bio order >> Animal order >> Human order
 - d) None of the above

REAS SALEME

							BI	UHK408
USN					78	Question	Paper Ve	rsion : C
F	ourth So			Гесh. Deg Huma ı	a line		-	uly 2024
Time:	: 1 hr.]						[Max.	. Marks: 50
		I	NSTRU(CTIONS T	го тне	CANDII	DATES	
1.	Answer	all the fifty	question	is, each que	stion carr	ies one ma	rk.	
2.	Use only	Black bal	ll point p	en for writi	ng / darke	ening the c	ircles.	
3.	For eacl	1 question	, after se	electing you	ır answei	, darken	the approp	riate circle
	correspo	onding to 1	the same	question n	umber oi	the OMF	R sheet.	
4.	Darkenir	ng two circ	les for th	e same ques	stion make	es the ansv	ver invalid.	
5.	Damagi	ng/overwr	iting, us	sing white	ners on	the OM	R sheets	are strictly
	prohibite	ed.						
1	All the un a) Two	its of nature	e can be cl b) Thre	assified into	orc		d) Six	
2	Which of a)BIO	the followi	ng does no b) Ani	ot form an oi mal		ure? sciousness	d) Human	,
3	a) Materia		e only two	ents is true, kinds of act kinds of ac				nd fulfilling
	fulfillin			kinds of act	ivities kno	owing, assur	ning, recogr	nizing and

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 - d) None of the above

6	What are the fundamental components of ecosystems? a) Plants and Animals b) Air and water c) Rocks and minerals d) All of these					
7	The third order of natura) Material order	re is b) Animal order	c) Plant order	d) Human order		
8	The activities in humar a) Composition		c) Respiration	d) All of these		
9	The systems in nature a a) Cyclic	are b) Mutually fulfilling	g c) Both a and b	d) None of these		
10	The natural characteris a) Perseverance	tics/Svabhava of a hun b) Bravery		d) All of these		
11	The purpose of value –Education is to a) Foster universal core values b) Make syllabus easy c) Develop values in individual d) Both A and C					
12	Self exploration uses two mechanisms i) Na a) Experiential validation c) Logical Thinking		tural Acceptance ii)? b) Reason d) Theoretical concept			
13	Once we know what is valuable to us, these values becomes the basis, the anch					
	a) Knowledge	b) Actions	c) Society	d) None of these		
14	To fulfill Human Aspin a) Both values and skil c) Skills		sary b) Values d) None of these	15		
15	Which the following are the encompassing principles underlying the successfu implementation of value education? A) Conviction B) Connection C) Critical thinking D) Commitment choose the most appropriate answer from the options given below:					
	a) A, C and D only	b) B, C and D only	c) A, B and D only	d) None of these		
16	Value and skills should a) True	l go hand in hand b) False	c) Cannot tell	d) None of these		
17	Are the content of self a) Program		c) Both a and b	d) None		
18	Human life is lived at a) Nature	four levels individual, b) Nurture	Family, Society and c) World	d) Universe		
19	Any course content on a) Universal	value education needs b) Rational	to be c) Natural	d) All of these		
20	Value education enables us to a) To understand our needs b) Visualize our goals correctly c) Indicate the direction for their fulfillment d) All of the above					

21	The only effective way to ensure professional ethics is by developing a) Knowledge b) Ethical conduct c) Ethical competence d) Professional activities				
22	How does unethical pra a) Through skills c) Through practical	ctices in various prof	ssions can be resolved b) Through knowledge d) Via right understanding		
23	What provides clear guidance and policy frame work conducive to the development of a un-fragmented human society and a universal human order a) Humanistic education b) Humanistic constitution c) Profession d) Ethical Human conduct				
24	The right understanding definitiveness of human a) Ethical Human conduct) Policy	conduct. What is thi		ables us to identify the	
25	Primary step to movunderstanding among hea) Do practical	umans and the comm	itment to	to develop the right (d) Teach others	
26	The right understanding a) Samadhan	helps us identify the b) Samridhi	c) Sah-astitva		
27	The humanistic education continuous a) Education	on will facilitate the b) Self evolution	process of self explor c) Development	ation which will lead to d) People friendly	
28	The values of human be a) Nine	eing can be enumerate b) Thirty	ed as c) Eighteen	d) Twenty four	
29	Which of the following a) Kindness	is not a characteristic b) Competency	e of professionalism? e) Morality	d) Complacency	
30	There are six characteria) Ethical	stics of a professiona b) Emotional	l style which is not a c) Responsible	professional style? d) Intellectual.	
31	Harmony should be ma a) Between body and li b) Between self and soc c) Between life and env d) All of the above	fe eiety			
32	The foundational value a) Respect	e in relationship is b) Love	c) Trust	d) Glory	
33	Ensuring right understa a) Care	nding and feeling in t b) Affection	the others is called c) Gratitude	d) Guidance	
34	Harmony in the family a) Society	is the building block b) Individual	for harmony in the c) Friend	d) Relative	
35	The total numbers of fe a) 5	b) 10	ionship c) 9 - 3 of 4	d) 8	

36	Comprehensive human a) Co-existance	goal is right understand b) Happiness	ding prosperity, trust c) Abhay	(fearlessness) and d) None
37	There is justice in relational Mutual fulfillment	onship when there is b) Self regulation	c) Freedom	d) None
38	The extension of family a) Self	is b) Body	c) Society	d) Nature
39	The feeling of relatedne a) Love	ss to all human beings b) Affection	is called c) Gratitude	d) Respect
40	Acceptance of excellence a) Reverence	ee in others is called b) Glory	c) Gratitude	d) Guidance
41	Harmony should be ma a) Between body and lift b) Between self and soc c) Between life and env d) All of these	e iety		
42	I being the a) does, seer and Enjoye c) seer	er	b) doer d) enjoy	
43	Which of the following a) Knowing c) Recognizing	is NOT response of th	e self? b) Assuming d) Preconditioning	
44	Activities of self (I) are a) Happiness c) Desire, thought and e	xpectation	b) Prosperity d) None	
45	The requirement of bod a) Desire	y is right utilization an b) Protection	d nurturing c) Thought	d) Expectation
46	The is an instrum	b) Body, I	c) Both a and b	d) None
47	The activity of desire, that a) Body	nought and expecting to b) Health		d) Future
48	Imaging is with t a) Continuous	ime b) Discontinuous	c) Random	d) Different
49	Where there is harmony a) Swasthya	among the parts of the b) Sanyam	e body it is known as c) Prosperity	d) None
50	Knowing means having a) Assumption b) Right understanding c) Right feeling d) None	the		