Dated: 22.11.2022   **Maximum Marks: 10**   **Time Allowed: 45 Minut**

NOTE: ATTEMPT ANY TWO (02) QUESTIONS.   ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.	Question	CLOs	Marks
Q. 01	What is Software Design? Draw flow chart of generic software engineering design process.	1	05
Q. 02	What is Software Architecture? Discuss stages of design.	1	05
Q. 03	Briefly discuss 4+1 view model.	1	05

The End

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

Mid Semester Examination of 2nd Semester – 2nd Year (4th Semester) 2022 of 20-Batch B.E. (SW)

SUBJECT: COMPUTER NETWORKS

Dated: 21.11.2022   Maximum Marks: 20   Time Allowed: 01 H

Note: Attempt any TWO (02) questions. All questions carry equal marks.

S.N	Question	Marks	CLO
Q#1(a):	Discuss merits, demerits, and different types of computer networks based on data rates and coverage area.	06	1
(b):	Enlist and brief the working of different OSI layers.	04	1
Q#2(a):	Analyze the working and usage of any THREE of the following devices: 1. Router 2. Switch 3. Bridge 4. Amplifier	06	2
(b):	Identify what can be considered a 'network resource'.	04	2
Q#3:	Justify the following: ✓ The ring is essentially a collision-free topology. ✓ MAC address of a device remains the same; however, its IP may change. ✓ For a medium-sized organization, a class-B IP address is a better choice. ✓ Packet switching is easier and more affordable than circuit switching. ✓ Switch is a more preferred device than a hub.	10	1

THE END

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – SECOND YEAR (4TH SEMESTER) 2022, 20-BATCH, B.E (SW)

SUBJECT: ENTREPRENEURSHIP

Dated: 25.11.2022   Maximum Marks: 10   Time Allowed: 45 Min

NOTE: ATTEMPT ANY TWO (02) QUESTIONS.   ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.	Question	CLOs	Taxonomy Level	PLOs	M
Q. 01	Define the terms entrepreneur and entrepreneurship. Also describe who can be an entrepreneur.	1	C1	1	0
Q. 02	Describe the 6Cs that motivate entrepreneurs to establish their own business.	1	C2	1	0
Q. 03	Describe different types of entrepreneurs with respect to the goals they have.	1	C2	1	05

The End

SUBJECT: OPERATIONS RESEARCH

Dated: 23-11-2022   Maximum Marks: 20   Time Allowed: 01 Hour,

NOTE: ATTEMPT ANY TWO (02) QUESTIONS, ALL QUESTIONS CARRY EQUAL MARKS,

Q.1	Define the following: 1. Operations Research Phases 2. Feasible, infeasible and optimum solutions 3. Applications of Operations Research in our daily life	(10)	C1
Q.2	The CLASSIC CHINA Company produces two products daily plates and mugs. The company has limited amounts of two resources used in the production of these products clay and labor. Given these limited resources, the company desires to know how many plates and mugs to produce each day, in order to maximize profit. The two products have the following resource requirements for production and profit per item produced (i.e., the model parameters).	(10)	C1

Product	Labor Hours/unit	Clay Lbs/unit	Profit Rs/unit
Plates	5	4	25
Mugs	3	12	40

There are 120 hours of labor and 600 pounds of clay available each day for production.

Formulate this problem as a linear programming model by defining each component of the model separately and then combining the components into a single model. Use the Graphical method and find the optimum solution.

Q. 3	A company is determining how to advertise nationally on television and on a newspaper. Each television ad is expected to be seen by 15 million viewers and each newspaper ad is expected to be seen by 3 million readers. The company has the constraints below: 1. The company has budgeted a maximum of Rs. 600,000 to advertise the product. 2. Each minute of television time costs Rs. 60,000 and each one-page newspaper ad costs Rs. 15000. 3. The company's market research department recommends using at-least 6 television ads and at-least 4 television ads. How should the company allocate its advertising budget to maximize the total audience? What is the maximum audience?	(10)	C1

— All The Best —

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – SECOND YEAR (4TH SEMESTER) 2022, 20-BATCH, SWE

SUBJECT: <u>WEB ENGINEERING</u>

Dated: **24.11.2022**   Maximum Marks: 20   Time Allowed: 01 Hour.

NOTE: ATTEMPT ANY TWO (02) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.	QUESTION	CLOs	Taxonomy Level	PLOs	Ma
Q. 01	Discuss any of the three from the following along with example and syntax: I. HTML attributes II. HTML paragraph tags III. HTML elements IV. image tags	1	2	1	1
Q. 02	Write down a HTML code for creating a simple table with two rows and two columns. Insert your name and roll number in it and also give a web page heading " MID-EXAM Program "	1	3	1	10
Q. 03	Differentiate the following: a) web page and website b) developing a site for a corporate world and developing a site for individual c) HTML and XML d) HTML and CSS	1	4	1	10

Good Luck

NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.	QUESTION	CLO	Taxonomy Level	PLO	Marks
Q. 01	Define cascading style sheet and state the different ways you could Integrate CSS in HTML page.	2	1	1	6
	Describe the different media types allowed by CSS.	2	2	1	6
Q. 02	Explain the syntax in CSS for TEXT a) Text color b) Text direction c) Space between characters d) Space between words e) Text alignment	2	1	1	12
Q. 03	The fundamental thing to consider when creating a list style is to use different bullet style and numbering. The example is given below in the picture. Write a CSS syle sheet code to set all order and un order lists with bullet styles. 	3	3	2	12
Q. 04	Define JAVA Script and also its advantages and disadvantages.	1	1	1	6
	Discuss the placement of JavaScript in HTML.	2	2	1	6
Q. 05	Write short answers of the following. I. What is page redirection and how it works II. What are cookies III. Write JavaScript control statement	2	2	1	12

Good Luck

Dated: 16.01.2023   Maximum Marks: 60   Time Allowed: 3 Hours.

NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.	Questions	CLO	Level	PLO	Marks
Q.01	The PURE CLAY Company creates a special hard brick which weights 5 kg and it must contain two basic ingredients C1 and C2. C1 costs Rs 5 per kg and C2 costs Rs 8 per kg. Strength considerations dictate that the brick should contain no more than 4 kg of C1 and minimum 2 kg of C2. Since the demand for the product is likely to be related to the price of the brick, find out graphically the minimum cost of the brick satisfying the above conditions.	1	C3	1	12
Q.02	Answer the following in short: 1. What is the rule to change the direction of inequality in constraints? 2. Why slack variables are used in Simplex method? 3. What is the role of artificial variables in simplex method? 4. What is importance of +M or –M in Big M method? 5. What is advantage of Two Phase method over Big M method? 6. How to deal with unrestricted variables in Simplex method?	2	C3	2	12
Q.03	Define the following categories of problems: 1. Category 1: Unbounded solution space and unbounded optimal solution 2. Category 2: Unbounded solution space and bounded optimal solution Prove that the following operation research model belongs to Category 1: Maximize $3x_1 + 2x_2$ Subject to $x_1 - x_2 <= 15$ $2x_1 - x_2 <= 40$ and $x_1, x_2 >= 0$	2	C3	2	12
Q.04	What are the applications of Duality in operations research? Determine the Dual of the following LPP (a) Minimize $5x_1 + 8x_2$ Subject to $4x_1 + 9x_2 >= 100$ $2x_1 + x_2 <= 20$ $2x_1 + 5x_2 >= 120$ and $x_1, x_2 >= 0$ (b) Maximize $5x_1 + 6x_2$ Subject to $4x_1 + 7x_2 = 2$ $5x_1 + 2x_2 = 10$ $6x_1 + 8x_2 = 25$ and $x_1, x_2 >= 0$	3	C3	3,5	12
Q.05	Describe transportation problems? What is difference between North West Corner rule and Vogel's method? In the following table supply level, demands at various destinations (P, Q and R), and the unit cost of transportation are given. Use North West Corner rule to find the initial solution.	3	C3	3,5	12

Origin	P	Q	R	Supply
A	5	7	8	70
B	4	4	6	30
C	6	7	7	50
Demand	80	40	30	150

Good Luck

Dated: 16.01.2023   **Maximum Marks: 60**   **Time Allowed: 3 Hours.**

NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.	Questions	CLO	Level	PLO	Marks
Q. 01	The PURE CLAY Company creates a special hard brick which weights 5 kg and it must contain two basic ingredients C1 and C2. C1 costs Rs 5 per kg and C2 costs Rs 8 per kg. Strength considerations dictate that the brick should contain no more than 4 kg of C1 and minimum 2 kg of C2. Since the demand for the product is likely to be related to the price of the brick, find out graphically the minimum cost of the brick satisfying the above conditions.	1	C3	1	12
Q. 02	Answer the following in short: 1. What is the rule to change the direction of inequality in constraints? 2. Why slack variables are used in Simplex method? 3. What is the role of artificial variables in simplex method? 4. What is importance of +M or −M in Big M method? 5. What is advantage of Two Phase method over Big M method? 6. How to deal with unrestricted variables in Simplex method?	2	C3	2	12
Q. 03	Define the following categories of problems: 1. Category 1: Unbounded solution space and unbounded optimal solution 2. Category 2: Unbounded solution space and bounded optimal solution Prove that the following operation research model belongs to Category 1: Maximize $3x_1 + 2x_2$ Subject to $x_1 - x_2 <= 15$ $2x_1 - x_2 <= 40$ and $x_1, x_2 >= 0$	2	C3	2	12
Q. 04	What are the applications of Duality in operations research? Determine the Dual of the following LPP (a) Minimize $5x_1 + 8x_2$ Subject to $4x_1 + 9x_2 >= 100$ $2x_1 + x_2 <= 20$ $2x_1 + 5x_2 >= 120$ and $x_1, x_2 >= 0$ (b) Maximize $5x_1 + 6x_2$ Subject to $4x_1 + 7x_2 = 2$ $5x_1 + 2x_2 = 10$ $6x_1 + 8x_2 = 25$ and $x_1, x_2 >= 0$	3	C3	3,5	12
Q. 05	Describe transportation problems? What is difference between North West Corner rule and Vogel's method? In the following table supply level, demands at various destinations (P, Q and R), and the unit cost of transportation are given. Use North West Corner rule to find the initial solution.	3	C3	3,5	12

Origin	P	Q	R	Supply
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Demand	80	40	30	150

Good Luck

NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.		QUESTION	CLOs	Taxonomy Level	PLOs	Marks
Q. 01		Describe taxonomy of architectural styles. Briefly discuss the following architectural styles: I. Data-Centered style II. Call and Return Style	2	C4	2	10
Q. 02		What is user interface design? Briefly discuss the user interface design process with the help of diagram. Also discuss characteristics of graphical user interfaces.	1	C2	1	10
Q. 03	(a)	What is Software component? Briefly discuss the three different views of a component.	2	C4	2	05
	(b)	Briefly discuss the following interaction styles: I. Direct manipulation II. Menu selection III. Form fill-in	2	C4	2	05

The End