Dated: 05.10.2023   Maximum Marks: 20   Time Allowed: 01 Hour.

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

Q No.	Question	CLO	Taxonomy Level	PLO	Marks
01	Discuss the role of Persuasive witting in creative Writing.	1	C1	10	10
02	What is the importance of Technical Writing in academic life? Discuss in detail.	1	C1	10	10
03	Write a short note on the following: (A) Business Witting (B) Brain Storming (C) Topic Sentence	2	C1	10	10

The End

<u>Dated: 06.10.2023</u>   <u>Maximum Marks: 20</u>   Time Allowed: 01 Hour.

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

Q. No.		Question	CLOs	Taxonomy Level	PLOs	Marks
Q. 01	(a)	What do you know about Compiler? Differentiate between Compiler and Interpreter.	1	1,2	2	05
	(b)	Describe the silent features of compiler construction.	1	1,2	2	05
Q. 02	(a)	What do you know about Syntax Analyzer and Semantic Analyzer? With help of Example describe Semantic Analyzer.	1	1,2	2	05
	(b)	Solved Left and Right Mode Derivation by using expression (Grammar) as mentioned below: $E \rightarrow E + E / E * E / E + id + id * id$	1	1,2	2	05
Q. 03	(a)	What do you about Language Processing System? Explain the role of language processing system in compiler construction.	1	1,2	2	05
	(b)	What is Lexical Analysis? With help of diagram and considering of any example explain the role of lexical analysis in compiler construction.	1	1,2	2	05

The End

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

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – THIRD YEAR (6TH SEMESTER) 2023, 20-BATCH, B.S (IT)

SUBJECT: DIGITAL LOGIC DESIGN

Dated: 03.10.2023　　　　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	Marks
Q. 01 (a)	Convert the following: 1. $(53.625)_{10}$　Into(　)$_2$ 2. $(A69.8)_{16}$　into(　)$_{10}$ 3. $(7201.62)_8$　Into(　)$_{16}$ 4. $(11010111.110)_2$ into (　)$_8$	1	2	1	06
(b)	Convert decimal number 83.25 to Excess-3 code. Convert grey code 1010 to its equivalent binary.	1	2	1	04
Q. 02 (a)	Perform M-N using r-1's complement where M=1100 and N=1001 are in binary number system.	1	2	1	04
(b)	Prove that $(A+B)(A+C)=A+BC$ through truth table and make a circuit diagram.	2	3	.2	06
Q. 03 (a)	What is logic gates? draw all the logic gates with their Boolean expression and truth table.	2	3	2	04
(b)	Simplify the following Boolean expression to minimum numbers of literals. 1. $F(A,B,C,D) = (A+BC)(D'+BC)(A'+B')$ 2. $F(X,Y,Z)$　$=XYZ + X'Y + XYZ'$	2	3	2	06

Good Luck

$A(A+B)=A$

$r-1|(A-C)$

BC

$(A-B)+(A-C)$

$A(A-C) - D(A-C)$

$A-AC + AB-BC$

$+B(A+)$

Dated: 02.10.2023   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	Marks
Q. 01	(a)	List out the new types of applications regarding to the IT Infrastructure. With help of diagram describe definition of IT infrastructure which may support: business analyst, application user, and for system manager.	1	2,4	3	05
	(b)	Consider the diagram of the IT infrastructure building block and briefly describe the main components of Infrastructure Management.	1	2,4	3	05
Q. 02	(a)	Consider the rating of components as per following Table and calculate the availability for each:	1	2,4	3	05
	(b)	Explain the terms RTO and RPO. What are the Role of RTO and RPO in non-functional attribute availability?	1	2,4	3	05
Q. 03	(a)	List out the performance patterns. Briefly describe horizontal and vertical scalability.	1	2,4	3	05
	(b)	Explain the following terms: 1. Load Testing. 2. Stress Testing 3. Endurance Testing	1	2,4	3	05

The End

Dated: 09.10.2023   Maximum Marks: 10   Time Allowed: 45 Minutes.

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

Q. No.	Question	CLO	Taxonomy Level	PLO	Marks
01	Explain server-side programming and PHP programming language.	1	C1	1	05
02	Describe following terms with example: a- SESSION b- GET and POST methods c- Functions in PHP language	1	C1	1	05
03	By considering following figures, first generate HTML code for the search form (as shown in figure 1) and then give details (as shown in figure 2, name, FName, City, Age, Salary) of a person depending upon user input in text field.	2	C2	2	05

Figure 1:

Name	FName	City	Age	Salary
Smith	John	3	35	$280
Doe	Jane	1	28	$325
Brown	Scott	3	41	$265
Howard	Shemp	4	48	$359
Taylor	Tom	2	22	$250

Figure 2:

The End

9. SESSION[

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MID-SEMESTER EXAMINATION OF SECOND SEMESTER – THIRD YEAR (6ᵀᴴ SEMESTER) 2023, 20-BATCH, B S (IT)

SUBJECT: HUMAN COMPUTER INTERFACE

Dated: 04.09.2023   Maximum Marks: 20   Time Allowed: 01 Hour,

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

Q. 01	(a)	Define the User Interface?	05	01
	(b)	Describe all the basic principles of User Interface Design.	05	01
Q. 02	(a)	Design a good "Login" interface which is applicable to all (different) user types.	05	04
	(b)	Determine the type of Input Box that has been used in the following diagram.	05	04
Q. 03	(a)	Evaluate the following interface and determine <u>five</u> things wrong with the interface as per "principle UI design" or "UI management system". •Grading: Any reasonable answer would receive 1 mark.	05	05

PRESCRIPTION REFILL SERVICE

Your name:

Date:**

Prescription Refill Service

Doctors Name:

Medicine Name:

- Prozac
- Claritin
- Allegra D
- Singulair
- Propecia
- Viagra
- Paxil

Submit!

** Use MM/DD/YYYY

05 | 01

(b) Define report and list the types of reports.

Good Luck

SUBJECT: IT INFRASTRUCTURE

Dated: 17.11.2023   Maximum Marks: 60   Time Allowed: 3 Hours.

NOTE: ATTEMPT ALL QUESTIONS.

Q. No.		QUESTION	CLOs	Taxonomy Level	PLOs	Marks
Q.01	(a)	Briefly describe the different types of the servers. How you maintain the server security?	2	2,4	3	06
	(b)	Elaborate the components of Data Center. Briefly describe cloud services.	4	6	5	06
Q.02	(a)	Differentiate between BOOTP and DHCP. What do you know about NTP and how NTP operates?	3	3,4	5	06
	(b)	Explain the main features of VXLAN. Briefly describe the main aspects of NFV.	2	2	4	06
Q.03	(a)	What are the three main goals of CIA? Write short note on IAM.	3	3,4	5	06
	(b)	What do you mean by Role Based Access Control (RBAC)? Explain the term layered based security.	3	3,4	5	06
Q.04	(a)	With help of possible diagrams describe Symmetric and Asymmetric Key Encryptions.	3	3,4	5	06
	(b)	What do you know about Block Ciphers? Explain the standards of Block Ciphers. Briefly describe the term stream ciphers.	3	3,4	5	06
Q.05	(a)	What do you know about attack vectors? Differentiate between phishing and baiting.	3	3,4	5	06
	(b)	Describe the following terms: I. EER ii. SEER iii. COP	4	6	10	06

The End

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

FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER – THIRD YEAR, 2023 OF 20-BATCH B.S (IT)

SUBJECT: DIGITAL LOGIC DESIGN

Dated: 21.11.2023   Maximum Marks: 60   Time Allowed: 3 Hours.

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

Q. No.		QUESTION	CLOs	Taxonomy Level	PLOs	Marks
Q. 01	(a)	Define binary codes and their advantages and classification of binary codes.	1	2	1	5
	(b)	Differentiate between Analog Vs Digital system.	1	2	1	5
Q. 02	(a)	What do you knows about the complement's. Explain atleast two complement's with example.	1	2	1	4
	(b)	Perform BCD addition On 1. $259 + -378$ 2. $-20 + -42$	1	2	1	6
Q. 03	(a)	Differentiate between AND,NAND,OR,NOR with circuit diagram and truth table.	2	3	2	6
	(b)	Draw the truth table for the following $F(A B C) = (A'+B')(A'+B'+C')(B+C)$	2	3	2	6
Q. 04	(a)	A truth table has four input variables. The first eight output are 0's the last eight are 1's, design the K-MAP and write the down the simplified expression.	2	3	2	4
	(b)	Convert the following to the other canonical form 1. $F(X Y Z) = \Sigma(1, 3, 7)$ 2. $F(A B C D) = \Sigma(0,2,6,11,13,14)$ 3. $F(X Y Z) = \Pi(0,3,6,7)$ 4. $F(A B C D) = \Pi(0,1,2,3,4,6,12)$	2	3	2	4
Q. 05	(a)	Differentiate between adder and subtractor, implement the circuit diagram of full adder starting from truth table.	3	3	3	5
	(b)	Design a 4*1 multiplexer.	3	3	3	5

The End

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

FINAL SEMESTER REGULAR EXAM OF SECOND SEMESTER – THIRD YEAR (6ᵀᴴ SEM) 2023 OF 20-BATCH B.S (IT / CS)

SUBJECT: **TECHNICAL AND BUSINESS WRITING**

Dated: 28.11.2023   Maximum Marks: 60   Time Allowed: 3 Hours.

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

Q. No.	QUESTION	CLO	Taxonomy Level	PLO	Marks
Q. 01	Discuss the importance of developing good paraphrasing skills to avoid plagiarism.	1	C1	1	12
Q. 02	What are the key elements of a successful presentation? Discuss in detail	2	C10	2	12
Q. 03	What are the different types of report ?List and explain them.	3	C10	3	12
Q. 04	How do you develop brain storming skills? Discuss in detail.	2	C10	1	12
Q. 05	Write short note on the following: A. Teacher Centered Method B. Student Centered Method. C. Inquiry based Method	2	C1	1	12

**Good Luck**

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSh...

FINAL SEMESTER REGULAR EXAM OF SECOND SEMESTER – THIRD YEAR (5ᵀᴴ SEM.) 2023 OF 20-BATCH B.S (IT)

SUBJECT: COMPILER CONSTRUCTION

Dated: 01.12.2023   Maximum Marks: 60   Time Allowed: 3 Hours.

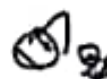**NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.**

Q. No.		QUESTION	CLOs	Taxonomy Level	PLOs	Marks
Q. 01	(a)	With help of diagrams briefly describe Compiler, Interpreter & Assembler.	1	1	2	(06)
	(b)	What do you know about three addressing—code mechanism? Explain the types of address codes with help of their tables.	2	1,2	2	(06)
Q. 02	(a)	What is parsing in compiler? Explain top down and bottom up parsing by giving relevant examples.	2	1,2	2	(06)
	(b)	Solve by bottom up parsing using below grammar: S → aABe A → Abc/a B → d Input string : aabcde	3	3	4	(06)
Q. 03		Describe in detail the error handling in compiler design.	2	1,2	2	(12)
Q. 04	(a)	With help of possible diagrams, explain single pass and multi pass compiler.	4	1	5	(06)
	(b)	Briefly discuss YACC tool in Compiler design.	4	1	5	(06)
Q. 05	(a)	Discuss in detail the compiler construction tool.	1	1	2	(06)
	(b)	With help of examples briefly discuss token, lexeme & pattern.	3	1	4	(06)

The End

Q. No.		QUESTION	CLO	Taxonomy Level	PLO	Marks
Q. 01	(a)	Explain SESSION and COOKIE also show differences between them.	2	C2	3	05
	(b)	Define GET, POST and REQUEST also write HTML form code to send GET and POST requests.	3	C3	4	05
Q. 02	(a)	Write LOGIN function and REGISTER function in PHP. The LOGIN function takes two parameters (username and password), based upon which it return true if both username and password are available in database otherwise it will return false. REGISTER function takes four parameters (username, password, first_name, last_name), this function will enter the information into the database if username is unique. Database information is given below SERVER NAME: localhost Username: root Password: 123456 DATABASE Name: SYSTEM	4	C3	4	05

	(b)	Explain following selectors of CSS with html code example:
		   i) h1
		   ii) .heading #main
		   iii) div ul.listing
		   iv) #sidebar a.active
			4	C4	3	05

Q. 03		Write PHP program in which take five numbers from a user through HTML form (the form will have five text fields and a submit button) by clicking the button the program will show minimum number.	4	C3	3	10

Good Luck

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

Q. 01	(a)	Write the full form of the following abbreviations. 1. STA 2. HTA 3. TCSD 4. DUTCH 5.GOMS	CLO 1	05
	(b)	Illustrate the goals of usability Evaluation with the help of labeled diagram.	CLO 2	04
	(C)	Identify the type of message in following diagram's.	CLO 3	03

Figure:1

Figure:2

Q. 02	(a)	List the phases in which TCSD is divided. (— [Identify main])	CLO 2	06
	(b)	Describe the rules which are used for developing good task description for TCSD		06

Q. 03	(a)	Produce a high-level hierarchical task analysis showing how you would find information on a website. Assume the site has a search facility as well as normal links.	CLO 2	06
	(b)	Create a textual representation of an HTA description of a task given to a robot to clean the house		06

Q. 04	(a)	Design a good user Interface based on the "interface requirements" defined below. **Interface Requirements:** Design your own "symptom assessment interface" that is used for medical-related application. As a part of the Interface, there is a minimum amount of information you need to collect from the patient. You can decide how to collect this information in any manner you wish, provided that the interface is designed in accordance with the standards presented in the course text, Designing the User Interface. The information you should gather is: 1. **Patient Information** - Patient's Name - Patient's Date of Birth - Name of Patient's doctor - The person using the interface (The only valid input for this question should be 'Patient' or 'Caregiver') 2. **Symptom Assessment:** The patient must answer the following three questions on a scale of zero to ten - Wellbeing (0 = 'Best Feeling of Wellbeing', 10 = 'Worst Feeling of Wellbeing') - Tired (0 ='Not Tired', 10='Worst Possible Tiredness') - Pain (0='No Pain', 10='Worst Possible Pain')	CLO 4	06

		3. **Pain Assessment:** Since many palliative patients have major problems with pain, specific pain assessment questions could be useful. You should allow the user to specify exactly where he or she is feeling pain. At the very least, pain should be able to be specified in the following places: Shoulders, Left Arm, Right Arm, Chest, Stomach, Right Leg, Left Leg, Back. 4. **Further pain information:** You should also gather the following information about the pain: - The time of the day the pain hurts (Morning/Afternoon/Night/All day) - Does movement influence pain? (Yes / No)		
	(b)	Design a questionnaire to evaluate the user-interface designed as an output of <u>Question#04(a)</u>, based on the following major criteria's: 1. To evaluate the designed interface on the usability criteria (hint: is designed interface a good user-interface?) 2. The designed UI meets the user given requirements (validation of requirements)		06
Q. 05	(a)	Summarize the usability testing process (step by step)	CLO 6	05
	(b)	Determine the interface that is a good design and one that you consider a bad design from the two interfaces given below. Figure 5.1 Figure5. 2		01
	(c)	Criticize /Evaluate the above UI's, and highlight its good and bad points of usability with reference to all the dimensions of usability discussed in lecture, like learnability, flexibility, and Robustness.	CLO 5	06