

Mid Exams



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

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2ND) 2023, 22-BATCH, B.E (CS)

SUBJECT: APPLIED CALCULUS

Dated: 06.09.2023

Maximum Marks: 20

Time Allowed: 01 Hour.

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

**Subject Teacher: Sir
Hadi Bux**

Q. No.	Question	CLOs	Taxonomy Level	PLOs	Marks
Q. 01	(a) Define interval and types of intervals? Solve the following inequalities and show their solution on the real line and intervals. i. $2x - 1 < x + 3$ ii. $ 2x - 3 > 5$	1	C1	2	05
	(b) Define composite function and inverse of function? And given that $f(x) = 3x - 1$ and $g(x) = \frac{5x-1}{2}$ are two functions then show that $(f \circ g)^{-1} = g^{-1} \circ f^{-1}$.	1	C1	2	05
Q. 02	Discuss limit of function at finite point and Continuity of function at point "a"? And Find the values of "m" and "n" if $f(x)$ is continuous for all real numbers, $f(x) = \begin{cases} 2x - 1, & x < -3 \\ 4mx - 3n, & -3 \leq x \leq 2 \\ 3x, & x > 2 \end{cases}$ And draw the graph of function.	1	C6	2	10

The End



SUBJECT: ELECTRONIC ENGINEERING / BASIC ELECTRONICS

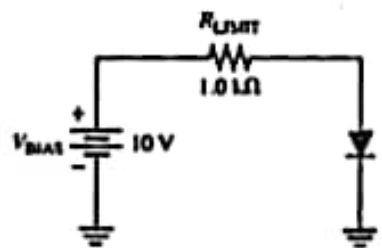
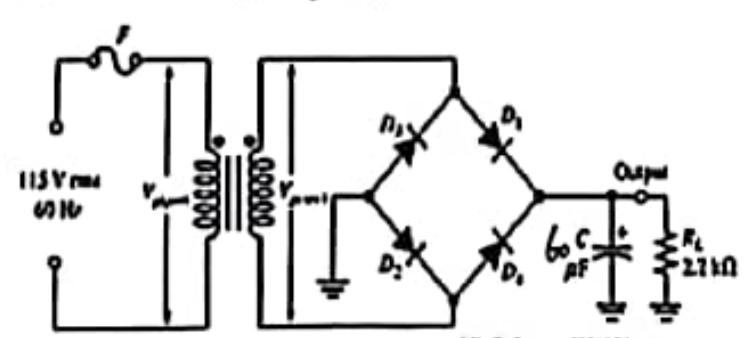
Dated: 04.09.2023

Maximum Marks: 20

Times Allowed: 01 Hour.

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

Subject Teacher: Sir

Q.No.	Sarfraz Ahmed	Question	CLO	Taxonomy Level	PLO	Marks
Q. 01	(a)	Discuss diode, acceptor doping, depletion layer, PIV, and draw energy band diagram of conductor, insulator and semiconductor.	1	C2	1	05
	(b)	Determine the forward voltage and forward current for the diode in the diagram for each of the diode models. Also find the voltage across the limiting resistor in each case. Assume $r_d = 10\Omega$ at the determined value of forward current. 	1	C3	1	05
Q. 02	(a)	Differentiate between bridge and center tapped full wave rectifier.	1	C4	1	05
	(b)	Determine the ripple factor for the filtered bridge rectifier with a load as indicated, capacity $60\mu F$ and has primary turns 100 and secondary 10. 	1	C3	1	05

The End



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

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2ND) 2023, 22-BATCH, B.E (CS)

SUBJECT: COMMUNICATION SKILLS & TECHNICAL WRITING

Dated: 05.09.2023

Maximum Marks: 20

Time Allowed: 1 Hour.

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

Q. No		CLO	Taxonomy Level	PLO	Marks
01	Explain four types of Communication Skills.	1	C1	1	05
02	What is the Importance of communication in academic life? Discuss in detail.	2	C1	1	05

Subject Teacher: Sir

Ismail Rahu

The End



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

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2nd) 2023, 22-BATCH, B.E (CS)

SUBJECT: OBJECT ORIENTED PROGRAMMING

Dated: 08.09.2023


Maximum Marks: 20

Time Allowed: 01 Hour

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

Subject Teacher:

Mam Irfana Memon

Question	CLO	Tax: Level	PLO	Marks
Q. 01(a) Define If Statement in C++? Explain the term If and Nested If with example?	1	C1	PLO-1	(05)
Q. 01(b) Write a C++ program to read any day number in integer and display the day name in word format (using switch statement).	2	C2	PLO-2	(05)
Q. 02 a) What are user-defined data types? Write one example.	1	C1	PLO-1	(05)
Q. 02 (b) Write a C ++ program which prints the following pattern on the screen (Use for loops)	2	C2	PLO-2	(05)
				

--- THE END ---



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

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2ND) 2023, 22-BATCH,

**Subject Teacher: Sir
Saleemullah Bhutto**

B.E (DAE / CS / SW) / B.S (CHM)

SUBJECT: ISLAMIC STUDIES / ETHICS

Dated: 07.09.2023

Maximum Marks: 10

Time Allowed: 45 Minutes.

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

Q. No.	Question	CLO	Taxonomy Level	PLO	Marks
	ISLAMIC STUDIES (FOR MUSLIMS)				
Q. 01	Describe the all qualities of believers in the light of Surah Furqan.	1	C1	6	05
Q. 02	Attempt any TWO of the following Surah: 1. Write down the commandments of Surah Al-Ana'am. 2. Describe the qualities of believers in the light of Surah Al-Momnoon. 3. Write the Surah Hujrat related to the manners in the respect of Holy Prophet (S.A.W) and mention the actions which indicate the betterment for society.	1	C2	6	05
	ETHICS (FOR NON-MUSLIMS)				
Q. 01	Write down about the religion Hinduism and mention religious festivals of Hinduism.	1	C1	6	05
Q. 02	Attempt any ONE of the following: 1. Write down the life history of Gotham Buddha. 2. Describe the value of Ethics in all religions.	1	C2	6	05

Best Wishes



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

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2ND) 2023, 22-BATCH,

Subject Teacher:

Mam Nazish

Chandio

B.E (CS / SW / TC) / B.S (MS / ENG / DS / AI)

SUBJECT: PAKISTAN STUDIES

Dated: 07.09.2023

Maximum Marks: 10

Time Allowed: 45 Minutes,

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

Q. No.	QUESTION	CLOs	Taxonomy Level	PLOs	Marks
Q. 01	Discuss why "Khilafat Movement was an emotional movement".	1	C1	8	05
Q. 02	Write the short note on the following: a) Simla Deputation b) Lucknow Pact 1916	1	C1	8	05

Good Luck



Final Exams

SUBJECT: OBJECT ORIENTED PROGRAMMING

Dated: 23.11.2023

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	(a) Define object oriented programming. Write C++ Program for Addition of two matrix <i>using</i> a multi-dimensional array.	3	C3	1	06
	(b) Explain the purpose of polymorphism in OOP? Differentiate function overloading and function overriding in C++.	2	C2	2	06
Q. 02	Write the general form of function. Why should default values be given to function arguments in function prototyping and not in function definition? Write a program in C++ to find the sum of the series $1/1 + 2/2 + 3/3 + 4/4 + 5/5$ using user-defined function.	3	C3	3	12
Q. 03	(a) What are nested classes? What is its use? Give an example.	1	C1	1	06
	(b) Write C++ Program for the addition of two distances (feet, inches) using structure.	3	C3	3	06
Q. 04	What are constructors? How are they different from member functions? Write a program to print the area and perimeter of a triangle having sides of 3, 4 and 5 units by creating a class named 'Triangle' with the constructor having the three sides as its parameters.	1	C1	1	12
Q. 05	Explain different types of inheritance with block diagram. Write a C++ program to implement a class called BankAccount that has private member variables for account number and balance. Include member functions to deposit and withdraw money from the account.	2	C2	2	12

Good Luck

**QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH****FINAL SEMESTER REGULAR EXAM: OF SECOND SEMESTER – FIRST YEAR (2nd SEM.) 2023 OF 22-BATCH, BE (CS)****SUBJECT: APPLIED CALCULUS****Dated: 10.11.2023****Maximum Marks: 60****Time Allowed: 03 Hour.****NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.**

Q.No.	Question	CLOs	Taxonomy Level	PLOs	Marks
Q.01	(a) Discuss Continuity of function and find "c" such that the function, $f(x) = \begin{cases} 1 - \sqrt{x} & \text{if } 0 \leq x < 1 \\ c & \text{if } x = 1 \end{cases}$ Is continuous for all $x \in [0,1]$.	02	C6	3	06
	(b) Define Differentiation and find the derivative of the following functions by using definition of derivative, I. $f(x) = e^{ax}$ II. $f(x) = 3x^2 - 5$	02	C1	3	06
Q.02	(a) Find derivative of $f(x) = \frac{u(x)}{v(x)}$ by Using First Principle Method?	02	C1	3	06
	(b) Define Partial Differentiation and show that the function $f(x,y) = \ln(\sqrt{x^2 + y^2})$ satisfies Laplace's equation.	03	C2	3	06
Q.03	If $f(x) = \ln(1 + \sqrt{1-x})$ then Prove that $4x(1-x)f''(x) + 2(2-3x)f'(x) + 1 = 0$.	02	C5	3	12
Q.04	State Mean value theorem and Roll's theorem? And find c (if possible) of the mean value theorem: $f(x) = x^3 - 5x^2 + 4x - 2$ on $[1,3]$.	03	C2	3	12
Q.05	(a) Define Definite integral and Indefinite integral? and Evaluate (any two) the following functions. I. $\int \sqrt{\sin x} \cos x \, dx$ II. $\int \frac{2x+5}{\sqrt{x^2+5x+7}} \, dx$ III. $\int \tan^3 \theta \sec^4 \theta \, d\theta$	03	C1	3	06
	(b) Define Taylor series and Maclaurin's series? And find the Maclaurin's series of $f(x) = e^x$.	03	C1	3	06

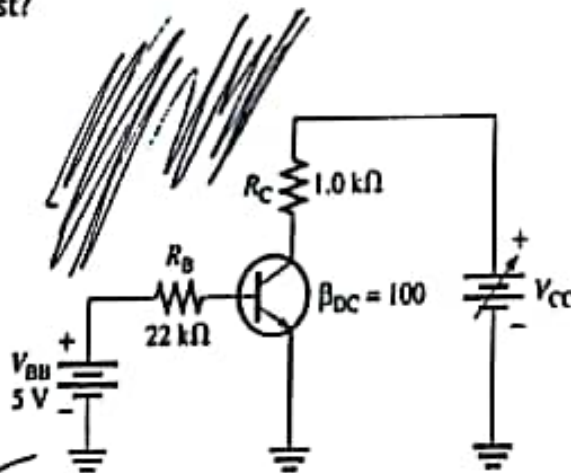
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Dated: 16.11.2023

Maximum Marks: 60

Time Allowed: 3 Hours.

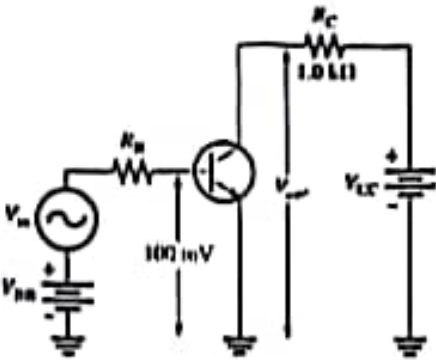
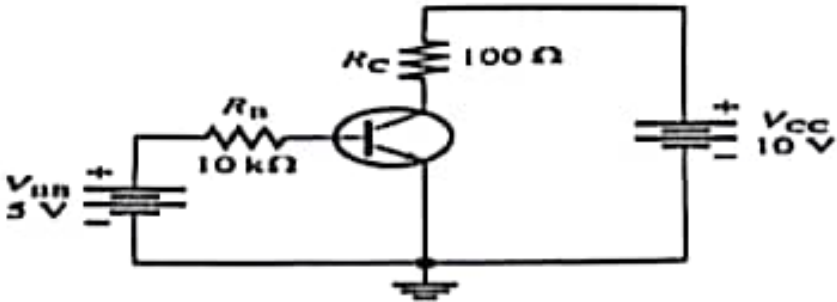
NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.	QUESTION	CLO	Taxonomy Level	PLO	Marks
Q. 01	What is working principle of Bipolar Junction Transistor (BJT), and how does it relate to its amplification factor? Additionally, could you explain relationship between Alpha (α) and Beta (β) in a BJT, and what are some common applications of this electronic component?	1	C1,C2	1	12
Q. 02	How does the BJT common emitter amplifier operate, and what roles do coupling capacitors, bypass capacitors, and the swamping resistor play in shaping its functionality and enhancing performance within the amplifier circuit?	1	C1,C3	1	12
Q. 03 (a)	What is DC load line of Bipolar Junction Transistor (BJT), and how does it relate to active region, cutoff region, and saturation region in BJT operation?	2	C1	2	06
Q. 03 (b)	<p>The transistor in the given circuit has following maximum ratings: $P_{D(max)} = 800\text{mW}$, $V_{CE(max)} = 15\text{ V}$, and $I_{C(max)} = 100\text{ mA}$. Determine the maximum value to which V_{CC} can be adjusted without exceeding a rating. Which rating would be exceeded first?</p> 	2	C3	2	06
Q. 04 (a)	What are the characteristics and functions of common emitter, common collector, and common base configurations in Bipolar Junction Transistors (BJTs)? How do these different configurations impact the input and output characteristics of the transistor, and what are their respective applications in electronic circuits?	2	C1,C4	2	06

P.T.O

$V_{BB} - V_{BE}$
 $\frac{V_{BB} - V_{BE}}{R_B}$

$$v_c = \frac{r_c}{r_c'} = \beta = A_v \times \beta_c'$$

	<p>(b) Determine the voltage gain and the ac output voltage if $r_e = 25 \Omega$ for the given circuit.</p> 	2	C3	2	
Q. 05	<p>(a) Distinguish between FET and BJT, and explain the characteristics of JFET, DMOSFET, and EMOSFET, highlighting their respective applications.</p>	2	C4	2	06
	<p>(b) Determine I_B, I_C, I_E, V_{BE}, V_{CE} and V_{CB} in the following circuit where the transistor has a $\beta_{DC} = 150$.</p> 	2	C3	2	06

Good Luck



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

FINAL SEMESTER REGULAR EXAM OF SECOND SEMESTER – FIRST YEAR (2ND SEM:) 2023 OF 22-BATCH, B.E (CS)

SUBJECT: COMMUNICATION SKILLS & TECHNICAL WRITING

Dated: 13.11.2023

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	What Is nonverbal communication? Discuss in detail various types of nonverbal communication.	1	C1	10	12
Q. 02	Suggest some methods to overcome barriers to communication.	2	C3	10	12
Q. 03	Explain 7 c's of effective communication skills.	2	C3	10	12
Q. 04	What are the qualities of effective presentation? Discuss in detail.	2	A2	10	12
Q. 05	Write short note on the following: 1. Encoding Message 2. Decoding Message 3. Communication Channels 4. Feedback	3	A3	10	12

Good Luck



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

FINAL -SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2ND) 2023, 22-BATCH,

B.E (CS / SW / TC) / B.S (MS / ENG / DS / AI)

SUBJECT: PAKISTAN STUDIES

Dated: 20.11.2023

Maximum Marks:30

Time Allowed: 2Hours.

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

Q. No.	QUESTION	CLOs	Taxonomy Level	PLOs	Marks
Q.01	Write the silent features of 1973 constitution and discuss the 18 th amendment.	3	C1	8	10
Q.02	What are the main cause of separation of east Pakistan?	2	C1	8	10
Q.03	Highlight one important historical event in Pak-Afghan relations and briefly mention the current challenge they face .	3	C2	8	10

Good Luck

**QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH****FINAL SEMESTER REGULAR EXAM OF SECOND SEMESTER – FIRST YEAR (2nd SEM.) 2023 OF 22-BATCH****B.E (CS / SW) / B.S (CHM)****SUBJECT: ISLAMIC STUDIES / ETHICS****Dated: 20.11.2023****Maximum Marks: 30****Time Allowed: 02 Hours.****NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.**

Q. No.	QUESTION	CLO	Taxonomy Level	PLO	Marks
<u>ISLAMIC STUDIES (FOR MUSLIMS)</u>					
Q. 01	Describe the Importance of Tauheed and write all its types in detail.	2	A3	8	10
Q. 02	Describe the Honour of Holy Prophet (Namoos-e-Risalat) in the light of Quran in detail.	2	A3	8	10
Q. 03	Describe the meaning of Zakat and importance of Zakat in Quran and Hadith and write its ratio (Nisab) and deserving people of Zakat.	3	A2	12	10
<u>ETHICS (FOR NON-MUSLIMS)</u>					
Q. 01	Describe the history of Hinduism and its religious festivals.	2	A3	8	10
Q. 02	Describe the life history of Jesus Christ and write the main teachings of Christianity.	2	A3	8	10
Q. 03	Write short notes on the following: 1. Ethical teachings of Islam 2. Ten commandments of Prophet Moses 3. Caste System in Hinduism	3	A2	12	10

Good Luck