

DAWOOD UNIVERSITY OF ENGINEERING & TECHNOLOGY, KARACHI

FINAL EXAMINATION 2025 OF FIRST SEMESTER FIRST YEAR
(1st SEMESTER) (24F-BATCH) OF B.S. (CYBER SECURITY)

SUBJECT: CALCULUS AND ANALYTICAL GEOMETRY

Dated: 07-02-2025

Time Allowed: 03 Hours

Max. Marks: 50

Student Name: _____

Student Id Number: _____

Instructions:

1. This paper contains 05 questions.
2. Use of Calculator is not allowed (allowed / not allowed)
3. Cheating of any type will disqualify the candidate.
4. Do not detach the sheets. (Paper will be cancelled, if the sheets are detached).
5. Write your answers in ink. For drawing pencils may be used.
6. The work must be neat & clean.
7. Exchange / Borrow of Calculator or Stationary is not allowed.
8. Mobile Phones must be powered off and submitted at the given counters during the exam.
9. The Answer Script must be returned back to invigilator before leaving exam hall.

NOTE: - ATTEMPT ALL THE FOLLOWING QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q1)	Differentiate and Solve the following w.r.t given variable:	CLO-2	C2	10 marks
Q2)	i. $y = x^3 - 3\sqrt{x}$			
	ii. $y = 5 \cot x^2$			
	iii. $y = \ln \cos^{-1} x$			
	iv. $y = (2 - x) \tan x^2$			
	v. $y = (3x^2 + 1)^3$			
Q2)	Apply Integration to the following:	CLO-2	C2	10 marks
Q2)	i. $\int (3 \cos 5\theta) d\theta$			
	ii. $\int x^{\sqrt{2}-1} dx$			
	iii. $\int 7 \sin \frac{\theta}{3} d\theta$			
	iv. $\int_1^0 (3x^2 + x - 5) dx$			
	v. $\int_{-2}^2 (5 - 6x) dx$			

Q3a)	Apply chain rule to interpret $\frac{dy}{dx}$ of $y = \cos u$ and $u = e^{-x}$	CLO-1	C2	10 marks
b)	Use Implicit differentiation to compute $\frac{dy}{dx}$: $x^3 + y^3 = 18xy$			
Q4a)	Label and Verify that the points (3, -1, 3) , (1, -1, 2) , (2, 1, 0) and (4, 1, 1) are the vertices of a rectangle.	CLO-1	C2	10 marks
b)	Write the distance between two given points A (1, 5, 0) and B(6, 6, 4)			
Q5)	Galileo's free fall formula Galileo developed a formula for a body's velocity during free fall by rolling balls from rest down increasingly steep inclined planks and determined that the velocity was given by a formula $v = 9.8(\sin \theta)t$ m/sec	CLO-3	C3	10 marks
	a) Produce the equation for the ball's velocity during free-fall? b) Building on your work in part (a), acquire the constant acceleration that a freely falling body experience near the surface of Earth.			
b)	The position of a particle moving along a coordinate line is $s = 1 + 4t^3$, with S in meters and t in seconds. Attain the particle's velocity and acceleration at $t = 6\text{sec}$.			



DAWOOD UNIVERSITY OF ENGINEERING & TECHNOLOGY, KARACHI
FINAL TERM EXAMINATION OF 1st SEMESTER 1st YEAR OF 24th BATCH

DEPARTMENT OF CYBER SECURITY
SECTION (A3)
APPLIED PHYSICS (THEORY)

DATED: 04-02-2025 TIME ALLOWED: 3-HOUR MAX. MARKS 50
Student Id Number _____

Student Signature: _____

Instructions:

1. This paper contains four questions.
2. Use of the Calculator is allowed.
3. Cheating of any type will disqualify the candidate.
4. Do not detach the sheets. (Paper will be cancelled if the sheets are detached).
5. Write your answer in ink. For drawing pencils, they may be used.
6. The work must be neat & clean.
7. Exchange / Borrow of Calculator or Stationery is not allowed.
8. Mobile Phone must be powered off and submitted at the given counters during the exam.
9. The Answer Script must be returned to the invigilator before leaving the exam hall.

NOTE: - ATTEMPT ALL THE FOLLOWING QUESTIONS

Q # 01 (a) Define the interference. Write down the condition for interference and explain its types.

(CLO 1, PLO 1) L1(5marks)

(b) Define the term Reflection of light? explain its types and laws. (CLO 1, PLO 1) L1(5marks)

Q # 02 (a) Define the term Refraction of light? explain its types and laws. (CLO 1, PLO 1) L1(6marks)

(b) A ray of light enters from air to water with an angle of is 40° . If the refractive index of water is $4/3$, find the angle of refraction.

(CLO 3, PLO 3) L3(4marks)

Q # 03 (a) State and explain Compton effect also calculate Compton Shift. (CLO 2, PLO 2) L2(6marks)

(b) Monochromatic X-rays of wavelength 12 \AA undergo Compton scattering through an angle 60° from a carbon block. The wavelength of the scattered X-rays, in \AA . ($\frac{h}{m_0 c} = 0.24 \text{ \AA}$).

(CLO 3, PLO 3) L3(4marks)

Q # 04 (a) Derive the expression of electric potential due to dipole.

(CLO 2, PLO 2) L2(6marks)

(b) The potential at a point P due to an electric dipole is $1.8 \times 10^5 \text{ V}$. If P is at 50 cm apart from the Centre O of the dipole and if CP makes an angle 60° with the positive side of the axial line of the dipole, what is the moment of the dipole?

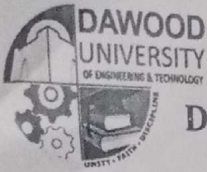
(CLO 3, PLO 3) L3(4marks)

Q # 05 Define the following terms:

(CLO 1, PLO 1) L1(10marks)

- Frequency
- Wavelength
- Wave velocity

THE END



DAWOOD UNIVERSITY OF ENGINEERING & TECHNOLOGY, KARACHI

FINAL SEMESTER EXAMINATION 2025 OF FIRST SEMESTER FIRST YEAR (1ST SEMESTER) (24F-BATCH) OF B.S. (CYBER SECURITY)

SUBJECT: (IT-1501) Introduction to Information and Communication Technologies

Dated: 10-02-2025

Time Allowed: 02 Hours

Max. Marks: 25

Student Name: _____

Student Id Number: _____

Instructions:

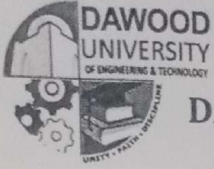
1. This paper contains **03** questions.
2. Use of Calculator is **not allowed** (allowed / not allowed)
3. Cheating of any type will disqualify the candidate.
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NOTE: - ATTEMPT ALL THE FOLLOWING QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.		CLO Assessed	Taxonomy Level	Marks
01	Differentiate between primary and secondary storage. How do RAM, cache memory, and hard disks contribute to computer performance? Optical discs and magnetic tapes are both used to store computer data. Discuss the advantages and disadvantages of using each of these media.	CLO-1	C1	[8]
02	What are the key functions of web browsers and search engines? Explain how they help users access and retrieve information on the internet.	CLO-1	C1	[8]
03	Define computer network and network topology. Discuss the various types of network topologies in computer network with diagram. Also discuss the various advantages and disadvantages of each topology.	CLO-3	C3	[9]

GOOD LUCK

Subject Teacher: _____



DAWOOD UNIVERSITY OF ENGINEERING & TECHNOLOGY, KARACHI

FINAL SEMESTER EXAMINATION 2025 OF FIRST SEMESTER FIRST YEAR
(1ST SEMESTER) (24F-BATCH) OF B.S. (CYBER SECURITY)

SUBJECT: (IT-1501) Introduction to Information and
Communication Technologies

Dated: 10-02-2025

Time Allowed: 30 Min

Max. Marks: 10

Student Name: _____

Student Id Number: _____

Instructions:

1. This paper contains **01** question.
2. Use of Calculator is **not allowed** (allowed / not allowed)
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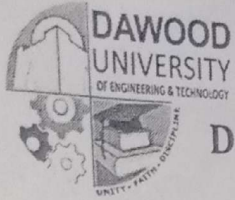
NOTE: - ATTEMPT ALL THE FOLLOWING QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No. Explain the below lab task with objective, procedure, C++ code and result (Even ID's have to do (a) and odd ID's have to do (b))

- (a) Implementation of Conditional Statements in C++ (if-else, if else ladder and Switches)
- (b) Implementation of Loops in C++ (For, While and Do-while)

GOOD LUCK

Subject Teacher: _____



DAWOOD UNIVERSITY OF ENGINEERING & TECHNOLOGY, KARACHI

FINAL EXAMINATION 2025 OF 1st SEMESTER, 1st YEAR (24F-BATCH) OF B.S. (CYBER SECURITY)

SUBJECT: (CS-1101) Programming Fundamentals (Theory)

Dated: 14-02-2025

Time Allowed: 03 Hours

Max. Marks: 50

Student Name: _____

Student Id Number: _____

Instructions:

1. This paper contains **05** questions.
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7. Exchange / Borrow of Calculator or Stationary is not allowed.
8. Mobile Phones must be powered off and submitted at the given counters during the exam.

NOTE: - ATTEMPT ALL THE FOLLOWING QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.		CLO Assessed	Taxonomy Level	Marks
01	(a) Explain the difference between primitive data types and user-defined data types in C/C++ (any 5) (b) Differentiate between while , and do-while loops with examples.	CLO-1	Apply	[10]
02	Write a program that takes an integer N as input and determines whether it is a prime number using conditional statements and loops . Explain the logic used in your program and provide test cases to verify its correctness.	CLO-3	Underst and	[10]
03	(a) Describe the memory organization of one-dimensional. (b) Write the Memory Hierarchy design, its Characteristics and the types of the memory. Also make the diagram.	CLO-3	Apply, solve	[10]
04	How to improve programming skills (5 points) and what is debugging.	CLO-3	Apply	[10]
05	What is the purpose of malloc() and calloc() in C? How do they differ in terms of memory allocation?	CLO-2	Apply	[10]

GOOD LUCK



DAWOOD UNIVERSITY OF ENGINEERING & TECHNOLOGY,
KARACHI
FINAL EXAMINATION OF CYBER SECURITY, OF 1ST SEMESTER 1ST
YEAR, 2024 BATCH.

FUNCTIONAL ENGLISH (THEORY)

DATED 12-2-2025 TIME ALLOWED TWO HOURS MAX. MARKS 25
Student Name: _____ Student Id Number: _____

Instructions:

1. This paper contains 03 questions.
2. Use of Calculator is _____ (allowed / not allowed)
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Q:1 Many students work part-time while they are still at university or get a job in their summer holidays. What are the arguments for and against working and going to university at the same time?

Write an essay in which you

- ✓ state the advantages and disadvantages
 - ✓ describe jobs you would work in if you had the opportunity
 - ✓ explain how working at an early age can affect your future life
- Your essay should be about 200 words.

(Level 3, CLO-02, PLO-12, Marks:05)

Q:2 (a) Write a letter to the Director of Education requesting for a better library and laboratory facilities in your university.

(Level 1, CLO-02, PLO-12, Marks:05)

(b) Complete the Conditional Sentences (Type I, II or III) by putting the verbs into the correct form.

(Level 3, CLO-02, PLO-12, Marks:05)

1. If they (have) time at the weekend, they will come to see us.
2. If we sneak out quietly, nobody (notice) .
3. If we (know) about your problem, we would have helped you.
4. If I (be) you, I would not buy that dress.
5. We (arrive) earlier if we had not missed the bus.
6. If I didn't have a mobile phone, my life (not / be) complete.
7. Okay, I (get) the popcorn if you buy the drinks.
8. If I (tell) you a secret, you would be sure to leak it.
9. She (go) out with you if you had only asked her.
10. I would not have read your diary if you (not hide) it in such an obvious place.

Q:3 Fill in the blanks using MUST, CAN'T, MAY, MIGHT, COULD, SHOULD, SHOULDN'T
(Level 4, CLO-01, PLO-10, Marks:05)

1. Sally looks worried . She _____ a problem with something (HAVE).
2. Bob _____ at school because I haven't seen him all day (BE).
3. I _____ you the money. Why didn't you ask me (LEND)
4. I'm not sure where my wife is at the moment. She _____ be at her dance class.
5. She knew everything about our plans. She _____ to our conversation (LISTEN)
6. He came home alone yesterday. You _____ him do that ; he _____ lost. (LET, GET)
7. Dad _____ go and see a doctor. His cough is getting worse all the time.
- 8 You don't have to shout. I _____ hear you very well.
9. It _____ be him. I saw him a week ago, and he didn't look like that.
- 10 You look pretty tired. I think you _____ go to bed early tonight.

(b) Choose the correct phrasal verb to complete the sentence: carry on, get on, hold on, put on,
look after and try on.
(Level 3, CLO-01, PLO-10, Marks:03)

1. Hi! Is Mr. Knight in? _____, I'll call him.
2. Excuse me, could I _____ this dress, please?
3. How are you _____ at college?
4. Are you still _____ with your tennis lessons?
5. It was a bit chilly, so she _____ her jacket.
6. Could you _____ my car for a moment, please?

(c) Change the following verbs into nouns by adding the suitable suffix.
(Level 6, CLO-01, PLO-10, Marks:02)

- | | | | |
|------------|-------------|-------------|-------------|
| (1) Move | (2) Perform | (3) Reduce | (4) Conform |
| (5) Remove | (6) Object | (7) Imagine | (8) Amuse |

THE END