

Cork Institute of Technology
Bachelor of Engineering in Building Services Engineering – Stage 2
(EBSEN_7_Y2)
Summer 2008
Electrotechnology
(Time: 3 hours)

Answer THREE questions from Section A
and TWO questions from Section B.
Use separate answer books for each Section.
All questions carry equal marks.

Examiner: Mr. S. Bojovic
Dr. M. Smyth
Mr. D. Leonard

Section A

- Q1. (a) A coil of insulated wire of resistance $8\ \Omega$ and inductance $0.03\ \text{H}$ is connected to an a.c. supply at $240\ \text{V}$ 50Hz . Draw the circuit and calculate:
- (i) the current through the coil
 - (ii) power factor
 - (iii) the power consumed by the coil (6 marks)
- (b) Calculate the value of capacitance which when connected in series with the above coil, causes no change in the values of the current and power taken from the supply. (6 marks)
- (c) A coil of resistance $100\ \Omega$ and inductance $100\ \mu\text{H}$ is connected in series with a $100\ \text{pF}$ capacitor. The circuit is connected to a $10\ \text{V}$ variable frequency supply. Draw the circuit and calculate:
- (i) the resonant frequency
 - (ii) current at resonance
 - (iii) voltage across L and C at resonance
 - (iv) Q factor of the circuit (8 marks)

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Electrotechnology Question Paper For Final Exam 13 November 2014:

Electrotechnology Question Paper For Final Exam 13 November 2014: Bestsellers in 2023 The year 2023 has witnessed a remarkable surge in literary brilliance, with numerous captivating novels captivating the hearts of readers worldwide. Lets delve into the realm of popular books, exploring the captivating narratives that have charmed audiences this year.

Electrotechnology Question Paper For Final Exam 13 November 2014 : Colleen Hoover's "It Ends with Us" This touching tale of love, loss, and resilience has gripped readers with its raw and emotional exploration of domestic abuse. Hoover expertly weaves a story of hope and healing, reminding us that even in the darkest of times, the human spirit can succeed. Uncover the Best : Taylor Jenkins Reid's "The Seven Husbands of Evelyn Hugo" This captivating historical fiction novel unravels the life of Evelyn Hugo, a Hollywood icon who defies expectations and societal norms to pursue her dreams. Reid's compelling storytelling and compelling characters transport readers to a bygone era, immersing them in a world of glamour, ambition, and self-discovery. Discover the Magic : Delia Owens' "Where the Crawdads Sing" This mesmerizing coming-of-age story follows Kya Clark, a young woman who grows up alone in the marshes of North Carolina. Owens spins a tale of resilience, survival, and the transformative power of nature, captivating readers with its evocative prose and mesmerizing setting. These top-selling novels represent just a fraction of the literary treasures that have emerged in 2023. Whether you seek tales of romance, adventure, or personal growth, the world of literature offers an abundance of captivating stories waiting to be discovered. The novel begins with Richard Papen, a bright but troubled young man, arriving at Hampden College. Richard is immediately drawn to the group of students who call themselves the Classics Club. The club is led by Henry Winter, a brilliant and charismatic young man. Henry is obsessed with Greek mythology and philosophy, and he quickly draws Richard into his world. The other members of the Classics Club are equally as fascinating. Bunny Corcoran is a wealthy and spoiled young man who is always looking for a good time. Charles Tavis is a quiet and reserved young man who is deeply in love with Henry. Camilla Macaulay is a beautiful and intelligent young woman who is drawn to the power and danger of the Classics Club. The students are all deeply in love with Morrow, and they are willing to do anything to please him. Morrow is a complex and mysterious figure, and he seems to be manipulating the students for his own purposes. As the students become more involved with Morrow, they begin to commit increasingly dangerous acts. The Secret History is an exceptional and suspenseful novel that will keep you wondering until the very end. The novel is a cautionary tale about the dangers of obsession and the power of evil.

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