

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for All First Year UG Courses effective from the year 2024-2025

Sem	Category	Course Code	Course Title	Hours	Credits	Int. Marks	Ext. Marks	Max. Marks
I	GEL	U24FTA101	TAMIL - I	60	3	25	75	100

OBJECTIVES

- தமிழ் மொழியின் பண்புகளை மாணவர் மனதில் பதிய வைத்தல் தாய்மொழியின் பழமை, சிறப்பு, விழுமியங்கள் ஆகியவற்றைக் கற்பித்தல். செவ்வியல் இலக்கியங்களை அறியச் செய்தல்
- தமிழில் உள்ள இலக்கிய வடிவங்களை அறிமுகப்படுத்தி படைப்பாக்கத்திற்கு துணை நிறுதல். இலக்கிய இலக்கணக் கற்றல் வழி போட்டித் தேர்வுகளுக்கு ஆயத்தப்படுத்தல்.

COURSE OUTCOME(S)

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	செவ்வியல் இலக்கிய நெடிய வரலாறு, இலக்கணப் பயிற்சி வழி போட்டித் தேர்வுகளை எதிர்கொள்ளல்.	K3
CO2	சமூகச் நிலைப்பாடு, பண்டைய அரச வரலாறு போன்றவற்றை விளக்கி, வாசிப்பையும் உச்சரிப்பையும் மேம்படுத்தி புரியவைத்தல்	K2
CO3	நீதி இலக்கியங்களின் வழி ஒழுக்க விழுமியங்களை வலியுறுத்தி அறவுரைகளை மேற்கொள்ளல்.	K3
CO4	காப்பிய மாந்தர்களின் வாழ்வியல் வழி தனி மனித மன உணர்வுகளை வெளிக் கொணரல்	K4
CO5	பக்தி இயக்க காலத்தில் சமூகப் பண்பாட்டு வரலாற்றை இனம் காணல்.	K2

அலகு - 1	இலக்கணம் & இலக்கிய வரலாறு அறிமுகம் 1. ஐந்திலக்கணம் - அறிமுகம் 2. சங்க இலக்கியங்கள் - எட்டுத்தொகை, பத்துப்பாட்டு 3. நீதி இலக்கியங்கள் 4. காப்பியங்கள் 5. பக்தி இலக்கியங்கள்	(12 Hours)
அலகு - 2	சங்க இலக்கியம் 1. நற்றிணை - 3 பாடல்கள் (எண்கள் : 47,96,285) 2. குறுந்தொகை - 6 பாடல்கள் (எண்கள் : 18,27,58,371,399,400) 3. புறநானூறு - 6 பாடல்கள் (எண்கள் : 25,86,92,183) 4. முல்லைப் பாட்டு - (முழுவதும்)	(12 Hours)
அலகு - 3	அற இலக்கியம் 1. திருக்குறள் - அறன் வலியுறுத்தல் 2. நாலடியார் - 8 பாடல்கள் 3. பழமொழி நானூறு - 8 பாடல்கள் 4. இனியவை நாற்பது - 8 பாடல்கள்	(12 Hours)
அலகு - 4	காப்பியம் & சமய இலக்கியம் 1. சிலப்பதிகாரம் - வழக்குரை காதை (முழுவதும்) 2. கம்ப ராமாயணம் - குகப்படலம் (25 பாடல்கள்) 3. சீறாப்புராணம் - மானுக்குப் பிணை நின்ற படலம் (30 பாடல்கள்) 4. இயேசு காவியம் - ஊதாரிப் பிள்ளை (முழுவதும்)	(12 Hours)
அலகு - 5	பக்தி & பகுத்தறிவு இலக்கியம் 1. நாயன்மார் பாசுரங்கள் - சமயக்குரவர் நால்வர் (4 பாடல்கள்) 2. ஆழ்வார் பாசுரங்கள் - முதலாழ்வார்கள் மற்றும் ஆண்டாள் (4 பாடல்கள்) 3. திருமந்திரம் - திருமுலர் (7 பாடல்கள்) 4. இராவண காவியம் - புலவர் குழந்தை (5 பாடல்கள்)	(12 Hours)

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- 1 செய்யுள் திரட்டு - தமிழ்த்துறை, சி.அப்துல் ஹக்கீம் கல்லூரி வெளியீடு. 2024 சூன் வெளியீடு
- 2 தமிழ் இலக்கிய வரலாறு - பேரா.மது.ச.விமலானந்தம்
அபிராமி பதிப்பகம், இராயபுரம், சென்னை -13
மறு பதிப்பு -2002
- 3 நற்றிமிழ் இலக்கணம் - டாக்டர்.சொ.பரமசிவம்,
பட்டுப் பதிப்பகம், 1269, 32-ஆம் தெரு
அண்ணாநகர் மேற்கு, கம்பர் குடியிருப்பு,
சென்னை -40
பன்னிரண்டாம் பதிப்பு -2012

Web Sources

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- Tamil Books on line- [books.tamil cube.com](http://books.tamilcube.com)
- Catalogue of the Tamil books in the Library of British Congress archive.org
- Tamil novels on line - books.tamilcube.com

Cos	Programme Outcomes					Programme Specific Outcomes					Mean
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	1	1	3	2	2	-	-	-	-	-	
CO2	1	2	2	3	3	-	-	-	-	-	
CO3	2	2	3	2	3	-	-	-	-	-	
CO4	3	2	2	2	3	-	-	-	-	-	
CO5	3	2	3	2	3	-	-	-	-	-	
Mean Overall Score											

3 – Strong; 2 – Medium; 1 – Low

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C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for All First Year UG Courses effective from the year 2024-2025

Sem	Category	Course Code	Course Title	Hours	Credits	Int. Marks	Ext. Marks	Max. Marks
II	GEL	U24FTA201	TAMIL - I	60	3	25	75	100

OBJECTIVES

- தமிழ் மொழியின் பண்புகளை மாணவர் மனதில் பதிய வைத்தல் தாய்மொழியின் பழமை, சிறப்பு, விழுமியங்கள் ஆகியவற்றைக்கற்பித்தல்.செவ்வியல் இலக்கியங்களை அறியச் செய்தல்
- தமிழில் உள்ள இலக்கிய வடிவங்களை அறிமுகப்படுத்தி படைப்பாக்கத்திற்கு துணை நின்றல்.இலக்கிய இலக்கணக் கற்றல் வழி போட்டித் தேர்வுகளுக்கு ஆயத்தப்படுத்தல்.

COURSE OUTCOME(S)

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	காலந்தோறும் தமிழ் இலக்கியங்களில் மாறுபடும் பாடுபொருள். வடிவம் முதலியவற்றை வரலாற்றின் வழி உணர்த்தல்.	K4
CO2	சிறுநிலக்கியங்களின் வழி இலக்கியச் சுவையினையும் பண்பாட்டு அறிவினையும் பெறுதல்	K1
CO3	கவிதை வழி சமூகச் சிந்தனைகளையும், தேவைகளையும் கவிதை வழி இயம்பல்.	K2
CO4	சிறுகதைகளின் வாயிலாக சமகால மனிதர்களின் பண்பு நலன்களை அறிய வைத்தல்.	K4
CO5	நடிப்பாற்றல், படைப்பாற்றல் மற்றும் கலைத் தன்மைகளை வளர்த்தல்.	K6

பாடத்திட்டம்

அலகு - 1	இலக்கிய வரலாறு அறிமுகம் 1. சிறுநிலக்கியங்கள் - அறிமுகம் 2. கவிதை - தோற்றமும் வளர்ச்சியும் 3. சிறுகதை - தோற்றமும் வளர்ச்சியும் 4. நாடகம் - தோற்றமும் வளர்ச்சியும்	(12 Hours)
அலகு - 2	சிறுநிலக்கியங்கள் & தனிப்பாடல்கள் 1. கலிங்கத்துப்பரணி - களம் பாடியது (7 பாடல்கள்) 2. குற்றாலக் குறவஞ்சி - வசந்தவல்லி பந்தடித்தல் (7 பாடல்கள்) 3. முக்கூடற்பள்ளு - பள்ளியர் ஏசல் (11 பாடல்கள்) 4. தனிப்பாடல்கள் - ஓளவை, வீரராகவர், காளமேகம், சத்திமுத்திப் புலவர்,படிக்காகப் புலவர், பட்டினத்தடிகள், சொக்கநாதப்புலவர் (7பா.)	(12 Hours)
அலகு - 3	கவிதை 1. பாரதியார் - பாரத தேசம் 2. பாரதிதாசன் - குடும்ப விளக்கு 3. அப்துல் ரகுமான் - வீடு (பித்தன்) 4. வாலி - புத்தகச் சந்தை 5. ஈரோடு தமிழன்பன் - எட்டாவது சீர் (வணக்கம் வள்ளுவ)	(12 Hours)
அலகு - 4	சிறுகதை 1. புதுமைப்பித்தன் - கடவுளும் கந்தசாமிப்பிள்ளையும் 2. ஜெயகாந்தன் - வாய்ச்சொற்கள் 3. அ.விநாயகமூர்த்தி - பரிசு 4. வைரமுத்து - இப்படியும் ஒருவன் இறந்தான்	(12 Hours)
அலகு - 5	நாடகம் 1. பேரறிஞர் அண்ணா - வேலைக்காரி 2. ஆறு.அழகப்பன் - கொல்லிப்பாவை	(12 Hours)

C. Abdul Hakeem College (Autonomous), Melvisharam.

பார்வை நூல்கள்

- 1 செய்யுள் திரட்டு - சி.அப்துல் ஹக்கீம் கல்லூரி வெளியீடு.
2024 சூன் வெளியீடு
- 2 தமிழ் இலக்கிய வரலாறு - பேரா.மது.ச.விமலானந்தம்
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- Tamil Books on line- books.tamil cube.com
- Catalogue of the Tamil books in the Library of British Congress archive.org
- Tamil novels on line - books.tamilcube.com

Cos	Programme Outcomes					Programme Specific Outcomes					Mean
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	2	2	3	2	-	-	-	-	-	
CO2	2	2	3	2	2	-	-	-	-	-	
CO3	2	2	3	2	3	-	-	-	-	-	
CO4	2	2	3	2	3	-	-	-	-	-	
CO5	2	2	2	3	3	-	-	-	-	-	
Mean Overall Score											

3 – Strong; 2 – Medium; 1 – Low

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Syllabus for All First Year UG Courses effective from the year 2024-2025

Sem	Category	Course Code	Course Title	Hours	Credits	Int. Marks	Ext. Marks	Max. Marks
I	GEL	U24CSL201	SKILL LANGUAGE TAMIL திறன் வளர்தமிழ்	60	2	50	50	100

OBJECTIVES

- மாணவர்கள் இலக்கணப் பிழையின்றி எழுதுதல், பேசுதல்
- ஊடகத் தமிழ்ச் செய்திகளை அறிதல்
- கட்டுரை, கவிதை மற்றும் நேர்காணலுக்கான விதிகள் அறிதல்

COURSE OUTCOME(S)

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	தமிழின் இயல்புகளை அறிதல்	K2
CO2	தமிழ்ச் சொற்களிடையே வேறுபாட்டை உணர்தல்	K2
CO3	நடைமுறை சார் மொழித்திறன்களை உணர்த்தல்	K3
CO4	மொழிப்பயிற்சியை வெளிக்கொணர்தல்	K4
CO5	திறன்களை வளர்க்கும் நெறிகளை அறிதல்	K5

பாடத்திட்டம்

அலகு - 1	கற்றல் திறன் - 1 1. எண்களை எழுத்தால் எழுதுதல் 2. குறில், நெடில் வேறுபாடு அறிதல் 3. திணை, பால் வேறுபாடு அறிதல் 4. மயங்கொலி வேறுபாடு அறிதல் (ர-ற: ந-ண-ன: ல-ள-ழ) 5. இரு பொருள் அறிதல்	(12 Hours)
அலகு - 2	கற்றல் திறன் - 2 1. வாக்கியத்தில் அமைத்தல் 2. அகரவரிசைப்படுத்துதல் 3. பொருந்தாத சொல்லைக் கண்டறிதல் 4. சொற்களை ஒழுங்குபடுத்தி சொற்றொடராக்குதல்	(12 Hours)
அலகு - 3	கேட்டல் திறன் - 1 1. நூல், செய்தித்தாள் வாசித்தல் 2. பாடல் ஒப்புவித்தல் 3. நேர் காணல்	(12 Hours)
அலகு - 4	கேட்டல் திறன் - 2 1. நூல் மதிப்புரை 2. ஏதேனும் ஒரு தலைப்பில் பேசிப் பழகுதல்.	(12 Hours)
அலகு - 5	உணர்தல் திறன் 1. கட்டுரை, கவிதை, துணுக்கு இயற்றுதல் 2. அறிக்கை தயாரித்தல் 3. குழு நடிப்பு	(12 Hours)

C. Abdul Hakeem College (Autonomous), Melvisharam.

பார்வை நூல்கள்

- 1 மேடைப் பேச்சுக்கலை - டேல் கார்னகி , கண்ணதாசன் பதிப்பகம்
2012 வெளியீடு
- 2 பேச்சுக்கலை - முனைவர் ப.இப்ராஹிம்
என்.சி.பி.எச். வெளியீடு
முதல் பதிப்பு,2021
3. நற்றமிழ் இலக்கணம் - டாக்டர்.சொ.பரமசிவம்,
பட்டுப் பதிப்பகம், 1269, 32-ஆம் தெரு
அண்ணாநகர் மேற்கு, கம்பர் குடியிருப்பு,
சென்னை -40
பன்னிரண்டாம் பதிப்பு -2012

Cos	Programme Outcomes					Programme Specific Outcomes					Mean
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	2	3	3	2	-	-	-	-	-	
CO2	1	2	3	3	1	-	-	-	-	-	
CO3	2	2	3	3	2	-	-	-	-	-	
CO4	2	2	3	3	3	-	-	-	-	-	
CO5	2	2	3	3	2	-	-	-	-	-	
Mean Overall Score											

3 – Strong; 2 – Medium; 1 – Low

Prepared by	Verified by

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for First Year UG Courses effective from the year 2024-2025

Sem	Category	Course Code	Course Title	Hours	Credits	Int. Marks	Ext. Marks	Max. Marks
I	GEL	U24FUR101	URDU - I	60	3	25	75	100

Objectives:

Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Describe the Basic Grammar Rules and Sentence Construction	K5
CO2	Identify and Classify the Nouns and Genders	K4
CO3	Comprehend and Analyze Historical Stories (Hikayat)	K4
CO4	Explore and Critique the Essays (Inshayiya)	K6
CO5	Analyze Biographies of Notable Personalities	K5

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

Syllabus:

UNIT – I [12 Hours] ➤ Qawaid ❖ Huroof, ki Tareef ❖ Huroof e Tahaji Aur Uske Aqsaam ❖ Jumla ki Tareef ❖ Jumla Banane ka Tariqah UNIT – II [12 Hours] ❖ Ism Ki Tareef ❖ Ism ke Aqsaam Misalon Ke Sath ❖ Jins(Muzakkar aur Maunnas) ki Tareef ❖ Jins ke Aqsaam ❖ Muzakkar aur Muannas ki Tareef ❖ Muzakkar Se Muannas Banane ka Tariqah UNIT – III [12 Hours] ➤ Hikayat ❖ Hikayat ki tareef ❖ Sahabi aur Khalifa ki tareef ❖ Hikayat-e-Sahaba (Khulafa e Raashidain - Sayeduna Abu Bakr Siddiq(R.A),Hazrat Umar(R.A),Hazrat Usman(R.A),Hazrat Ali(R.A) ❖ Shaikh Saadi ka taruf ❖ Hikayat-e-Shaik Saadi ❖ Ek Badsha ❖ Haroon Rasheed	یونٹ I- ✓ قواعد ❖ حروف کی تعریف ❖ حروف تہجی اور اس کے اقسام ❖ جملہ کی تعریف ❖ جملہ بنانے کا طریقہ یونٹ II- ✓ اسم کی تعریف ❖ اسم کے اقسام مثالوں کے ساتھ ❖ جنس (مذکر اور مؤنث) کی تعریف ❖ جنس کے اقسام ❖ مذکر اور مؤنث کی تعریف ❖ مذکر سے مؤنث بنانے کا طریقہ یونٹ III- ✓ حکایت ❖ حکایت کی تعریف ❖ صحابی اور خلیفہ کی تعریف ❖ حکایت صحابہ (خلفائے راشدین سیدنا ابوبکر صدیق رضی اللہ عنہ، حضرت عمر رضی اللہ عنہ، حضرت عثمان رضی اللہ عنہ، حضرت علی رضی اللہ عنہ) ❖ شیخ سعدی کا تعارف ❖ حکایت شیخ سعدی ❖ ایک بادشاہ ❖ ہارون رشید یونٹ IV- ✓ انشائیہ ❖ انشائیہ کی تعریف ❖ سر سید احمد خان کا تعارف ❖ امید کی خوشی - سر سید احمد خان ❖ رشید احمد صدیقی کا تعارف ❖ ڈاکٹر عبدالحق مرحوم - رشید احمد صدیقی۔ یونٹ V - ✓ شخصیات کی سوانح ❖ سوانح کی تعریف
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UNIT – IV [12 Hours] ➤ Inshayiya ❖ Inshayiya ki tareef ❖ Sir Syed Ahamed Khan ka taruf ❖ Umeed Ki Khushi – Sir Syed Ahamed Khan ❖ Rasheed Ahmed Siddiqi ka taruf ❖ Dr. Abdul Haq Marhoom – Rasheed Ahmed Siddiqi UNIT – V [12 Hours] ➤ Shakhsiyat ki Sawaneh ❖ Sawaneh ki tareef ❖ Allama Iqbal ki Sawaneh ❖ Moulana Abul Kalam Azad ki Sawaneh	❖ علامہ اقبال کی سوانح □□ ❖ مولانا ابوالکلام آزاد کی سوانح □□
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_____ # Self Study Component for Seminar/Assignment:

(Questions should not be asked from self study component in the End Semester Examinations)

Text Books:

NISAB-E-JAMEEL EDITED BY Dr.S.MOHAMED YASSIR & Dr.S.MOHAMED MUDDASSIR

Reference Book:

- Qawayad Urdu– Maulvi Abdul Haq
- Hikayat e Sahaba – Maulana Yusuf Kandhalvi
- Mazameen e Sir Syed
- Inshayiya aur Inshayiye – Syed Muhammad Hasnain
- Mazhar-e- Adab – Edited by Dr.K.Habeeb Ahmed & Dr.K.H.Kaleemullah
- Adab-E-Jameel – Edited by Dr.K.Habeeb Ahmed , Dr.S.M.Yassir & Dr.S.M.Muddassir

Web Resources :

1. www.rekhta.org 2. www.urduchannel.in 3. www.urducouncil.nic.in

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	3							
CO2	3	3	3	3							
CO3	3	3	3	3							
CO4	3	3	3	3							
CO5	3	3	3	3							

3 – Strong; 2 – Medium; 1 – Low

Prepared by	Verified by

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for First Year UG Courses effective from the year 2024-2025

Sem	Category	Course Code	Course Title	Hours	Credits	Int. Marks	Ext. Marks	Max. Marks
II	GEL	U24FUR201	URDU - II	60	3	25	75	100

Objectives:

Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Describing Ghazals	K2
CO2	Analyze Urdu Poets' Contributions to Ghazal	K4
CO3	Evaluating Nazams and Its Themes	K5
CO4	Analyze and Critique Nazams by Various Poets	K5
CO5	Evaluate Literary Translations	K6

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

Syllabus:

UNIT – I [12 Hours]

➤ Ghazliyat

- ❖ Ghazal ki Tareef
- ❖ Mirza Ghalib ka taruf
- ❖ Mirza Ghalib ki Ghazal → Dil Hi toh Yeh Na Sang....
- ❖ Momin Khan Momin ka taruf
- ❖ Momin Khan Momin ki Ghazal → Adam Mein Rehte tu..

- یونٹ I –
- ✓ ☐ غزلیات
 - ❖ ☐ غزل کی تعریف
 - ❖ ☐ مرزا غالب کا تعارف
 - ❖ ☐ مرزا غالب کی غزل ☐ دل ہی تو یہ نہ سنگ....
 - ❖ ☐ مومن خان مومن کا تعارف
 - ❖ ☐ مومن خان مومن کی غزل ☐ عدم میں رہتے تو.

UNIT – II [12 Hours]

- ❖ Khaja Mir Dard ka tarruf
- ❖ Khaja Mir Dard → Tuhmatein Apne Zimme
- ❖ Jigar Muradabadi ka Tarruf
- ❖ Jigar Muradabadi ki Ghazal → Na Dunya ke Sitam....

- یونٹ II –
- ❖ ☐ خواجہ میر درد کا تعارف
 - ❖ ☐ خواجہ میر درد... تہمتیں چند اپنے ذمے
 - ❖ ☐ جگر مراد آبادی کا تعارف
 - ❖ ☐ جگر مراد آبادی کی غزل ☐ نہ دنیا کے ستم....

UNIT – III [12 Hours]

➤ Nazmein

- ❖ Nazm ki Tareef
- ❖ Allama Iqbal ka tarruf
- ❖ Allama Iqbal ki Nazm → Khitab Ba Naujawan-e-Islam
- ❖ Khaja Altaf Hussain Hali ka tarruf
- ❖ Altaf Hussain Hali Ki Nazm → Taleem Ki Ahmiyat

- یونٹ III –
- ✓ ☐ نظمیں
 - ❖ ☐ نظم کی تعریف
 - ❖ ☐ علامہ اقبال کا تعارف
 - ❖ ☐ علامہ اقبال کی نظم ☐ خطابِ نو جوان اسلام
 - ❖ ☐ خواجہ الطاف حسین حالی کا تعارف
 - ❖ ☐ الطاف حسین حالی کی نظم ☐ تعلیم کی اہمیت

UNIT – IV [12 Hours]

- ❖ Akbar Allahabadi ka tarruf
- ❖ Akbar Allahabadi ki Nazm Nagma e Hasrat
- ❖ Sahir Ludhyanavi ka tarruf
- ❖ Sahir Ludhyanvi Ki Nazm Taj Mahal
- ❖ Faiz Ahmad Faiz ka tarruf
- ❖ Faiz Ahmad Faiz ki Nazm Subh-e-Azadi

- یونٹ IV –
- ❖ ☐ اکبر الہ آبادی کا تعارف
 - ❖ ☐ اکبر الہ آبادی کی نظم نغمہ حسرت
 - ❖ ☐ ساحر لدھیانوی کا تعارف
 - ❖ ☐ ساحر لدھیانوی کی نظم تاج محل
 - ❖ ☐ فیض احمد فیض کا تعارف
 - ❖ ☐ فیض احمد فیض کی نظم صبح آزادی

یونٹ V –

- ✓ ترجمہ نگاری
- ❖ ☐ ترجمہ نگاری کی تعریف

C. Abdul Hakeem College (Autonomous), Melvisharam.

❖ تجارتي الفاظ (اردو اور انگريزي)

❖ پياري اردو (ترجمہ اردو سے

انگريزي)

❖ مکالمات (اردو اور انگريزي)

UNIT – V [12 Hours]

- Tarjama Nigari
- ❖ Tarjama Nigari Ki taareef
- ❖ Tijarati Alfaz (Urdu Aur Angrezi)
- ❖ Pyari Urdu (Tarjuma Urdu se Angrezi)
- ❖ Makalimat (Urdu Aur Angrezi)

_____ # Self Study Component for Seminar/Assignment:

(Questions should not be asked from self study component in the End Semester Examinations)

Text Books:

NISAB-E-JAMEEL EDITED BY Dr.S.MOHAMED YASSIR & Dr.S.MOHAMED MUDDASSIR

Reference Book:

- Deewan-e-Meer
- Deewan-e-Dard
- Deewan-e-Ghalib
- Kuliyaath-e-Momin
- Kuliyaath-e-Akbar
- Kuliyaath-e- Iqbal
- Kuliyaath-e- Jigar
- Kuliyaath-e- Saher Ludhyanvi

Web Resources:

1. www.rekhta.org
2. www.urduchannel.in
3. www.urducouncil.nic.in

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	2							
CO2	2	3	3	2							
CO3	3	2	3	3							
CO4	3	2	2	2							
CO5	3	3	2	3							

3 – Strong; 2 – Medium; 1 – Low

Prepared by	Verified by

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for First Year UG Courses effective from the year 2024-2025

Sem	Category	Course Code	Course Title	Hours	Credits	Int. Marks	Ext. Marks	Max. Marks
II	GEL	U24CSL201	SKILL LANGUAGE URDU LANGUAGE IDENTIFICATION AND COMPREHENSION	60	2	50	50	100

Objectives:

Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Understanding Language Skills, Urdu Alphabets and Pronunciation	K2
CO2	Analyze Writing Proficiency in Urdu and Listening Skills	K4
CO3	Describe Compound Words in Urdu	K4
CO4	Constructing Basic Sentences and Reading Skills	K5
CO5	Enhancing Communication Skills and Writing Skills	K6

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

Syllabus:

UNIT – I [12 Hours]

➤ Introduction about LSRW

- ❖ Listening
- ❖ Speaking
- ❖ Reading and
- ❖ Writing

یونٹ – I [12 گھنٹے]
LSRW کے بارے میں تعارف ✓

- ✓ سمات
- ✓ تقریر
- ✓ قرات
- ✓ تحریر

یونٹ – II [12 گھنٹے]
✓ سمات

UNIT – II [12 Hours]

Listening:

- ❖ Huroof-e-Thaji (Urdu Alphabet)
- ❖ Murakab Alfaaz (Compound Words)
- ❖ Small Sentences

✓ اردو حروف تہجی
✓ مرکب الفاظ
✓ چھوٹے جملے

یونٹ – III [12 گھنٹے]
✓ تقریر

✓ اردو حروف تہجی
✓ مرکب الفاظ
✓ چھوٹے جملے

UNIT – III [12 Hours]

Speaking:

- ❖ Huroof-e-Thaji (Urdu Alphabet)
- ❖ Murakab Alfaaz (Compound Words)
- ❖ Small Sentences

یونٹ – IV [12 گھنٹے]
✓ قرات

✓ اردو حروف تہجی
✓ مرکب الفاظ
✓ چھوٹے جملے

UNIT – IV [12 Hours]

Reading:

- ❖ Huroof-e-Thaji (Urdu Alphabet)
- ❖ Murakab Alfaaz (Compound Words)
- ❖ Small Sentences

یونٹ – V [12 گھنٹے]
✓ تحریر

✓ اردو حروف تہجی
✓ مرکب الفاظ
✓ چھوٹے جملے

C. Abdul Hakeem College (Autonomous), Melvisharam.

UNIT – V [12 Hours]

Writing:

- ❖ Huroof-e-Thaji (Urdu Alphabet)
- ❖ Murakab Alfaaz (Compound Words)
- ❖ Small Sentences

_____ # Self Study Component for Seminar/Assignment:

(Questions should not be asked from self study component in the End Semester Examinations)

Text Books:

Urdu for All – Part -I & II published by NCPUL, New Delhi

Reference Books:

1. "Urdu: An Essential Grammar" by Ruth Laila Schmidt
2. "Urdu-English English-Urdu Dictionary" by S. M. Salimuddin, Suhail Anjum, and Rauf Parekh
3. "Urdu ki Pehli Kitab" by Muhammad Sharif Baqa
4. "Learning Urdu: A Comprehensive Course" by Mahvash Shaheen

Web Resources :

1. www.rekhta.org
2. www.urduchannel.in
3. www.urducouncil.nic.in
4. BBC Urdu
5. UrduPod101
6. YouTube Channels - Urdu Stories for Kids

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	3	3	3	3							
CO2	3	2	2	3							
CO3	3	3	3	3							
CO4	3	2	2	3							
CO5	3	3	2	2							

3 – Strong; 2 – Medium; 1 – Low

Prepared by	Verified by

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for All I Year UG Courses effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>I</i>	<i>GEL</i>	<i>U24FEN101</i>	<i>ENGLISH – I</i>	<i>60</i>	<i>3</i>	<i>25</i>	<i>75</i>	<i>100</i>

Course Objectives

CO1	To enable learners to acquire self-awareness required in various life situations.
CO2	To enable learners to inculcate positive thinking required in various life situations.
CO3	To help them acquire the attribute of empathy
CO4	To assist them in acquiring creative and critical thinking abilities
CO5	To enable them to learn the basic grammar

Unit I

Prose

- At School - M. K. Gandhi
- My Early Days - A.P.J. Abdul Kalam

Poetry

- The Character of Happy Life - Henry Wotton
- Stopping by the Woods on a Snowy Evening - Robert Frost

Unit II

Prose

- My Financial Career - Stephen Leacock
- Computeracy - Peter Lurie

Poetry

- Where the Mind is Without Fear – Rabindranath Tagore
- If – Rudyard Kipling

Unit III : Short Stories

- The Happy Prince - Oscar Wilde
- Engine Trouble - R.K. Narayan

Unit IV : Autobiography & Reader's Theatre

- I am Malala (Chapter 1) - Malala Yousafzai,
- The Refund – Fritz Karinthy

Unit V

Lexical Skills & Grammar

- Synonyms and Antonyms
- Homophones and Homonyms
- Words often Confused

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Grammar

- a. Sentence
- b. Subject and predicate
- c. Parts of Speech
- d. Noun and its kinds
- e. Pronoun and its kinds
- f. Articles and Prepositions

Prescribed Book: New Vistas in English – I, Board of Editors, Published by Hakeem Publication, Department of English, C. Abdul Hakeem College (Autonomous), Melvisharam-632509.
www.cahc.ac.in, Mail: hakeemcollege@edu.in

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for All I Year UG Courses effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>II</i>	<i>GEL</i>	<i>U24FEN201</i>	<i>ENGLISH – II</i>	<i>60</i>	<i>3</i>	<i>25</i>	<i>75</i>	<i>100</i>

Course Objectives

CO1	To facilitate self-awareness for handling diverse life situations.
CO2	To cultivate positive thinking skills for various life scenarios.
CO3	To develop empathy as a core attribute.
CO4	To nurture creative and critical thinking abilities.
CO5	To apply acquired grammar knowledge to improve the quality and effectiveness.

Unit I

Prose

- The Secret of Work - Swami Vivekananda
- Uncle Podger Hangs a Picture – Jerome K Jerome

Poetry

- Satan's Speech - John Milton
- Night of the Scorpion - Nissim Ezekiel

Unit II

Prose

- Mobile and Mixed Up – Anil Dharker
- Words of Wisdom – Chetan Bhagat

Poetry

- The Road Not Taken – Robert Frost
- Alice Fell or Poverty – William Wordsworth

Unit III

Short Stories

- The Lady or the Tiger - Frank Stockton
- The Diamond Necklace – Guy de Maupassant

Unit IV

Biography & One Act Play

- The Saga of a Philanthropist
- The Never Never Nest – Cedric Mount

Unit V

Lexical Skills & Grammar

- One Word Substitutes
- Correct Usage of words
- Formation of plurals

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Parts of Speech

- a. The Phrase and The Clause - Types
- b. Adjective and its kinds
- c. Verb and its kinds
- d. Conjunction
- e. Interjection

Prescribed Book: New Vistas in English–II, Board of Editors, Published by Hakeem Publication, Department of English, C. Abdul Hakeem College (Autonomous), Melvisharam-632509.
www.cahc.ac.in, Mail: hakeemcollege@edu.in

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for All I Year UG Courses effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>II</i>	<i>GEL</i>	<i>U24FEN201</i>	<i>SKILLS FOR COMMUNICATION</i>	<i>60</i>	<i>3</i>	<i>25</i>	<i>75</i>	<i>100</i>

Course Objectives

CO1	To inculcate communicative proficiencies in the learners
CO2	To develop the essential aspects of effective written communication.
CO3	To implant essential emotions needed in professional life.
CO4	To enhance contextual communication in personal and professional situations with courtesy
CO5	To instill competences required in recruitment process

Unit I - Spoken Communication:

1. Communication Etiquette
2. Introducing Self and Others
3. Listening for Specific Information
4. Asking for Information and Giving Information
5. Giving and Following Instructions

Unit II - Written Communication:

1. Paragraph and Types of Paragraphs
2. Descriptive Writing – Writing a Short Descriptive Essays of Two to Three Paragraphs
3. Dialogue Writing
4. Preparing Agenda for the Meeting
5. Writing Minutes of the Meeting

Unit III - Intrapersonal Communication:

1. Emotional Intelligence
2. Goal Setting
3. Stress Management
4. Positive Attitude
5. Common Sense

Unit – IV - Interpersonal Communication:

1. Listening to Famous Speeches and Poems
2. Making Short Speeches – Welcome Address and Vote of Thanks
3. Making Short Presentation with PPT
4. Day - to - Day Communication
5. Communication with Fellow-Employee

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Unit – V - Employment Communication:

1. Preparing Resume & Curriculum Vitae
2. Writing Covering Letter
3. Aptitude Test
4. Facing an Interview
5. Group Discussion

Prescribed Book: Skills for Communication, Board of Editors, Published by Hakeem Publication, Department of English, C. Abdul Hakeem College (Autonomous), Melvisharam-632509.
www.cahc.ac.in, Mail: hakeemcollege@edu.in

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Syllabus for B.Sc., Mathematics effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>I</i>	<i>CC</i>	<i>U24MMA101</i>	<i>ALGEBRA AND TRIGONOMETRY</i>	<i>60</i>	<i>4</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives:

- To basic ideas on the Theory of Equations, Matrices and Number Theory.
- To Knowledge to find expansions of trigonometry functions, solve theoretical and applied problems.

Course Outcomes (COs) and Cognitive Level Mapping:

Cos	CO Statement (After completing the course, the students will be able to)	Cognitive level
CO1	Solve polynomial equations and find the approximate solution by applying Horner's method.	K6
CO2	Using either binomial or exponential or logarithmic series find the sum of the given series.	K3
CO3	Determine whether the given square matrix is diagonalizable or not.	K5
CO4	Expand the powers and multiples of trigonometric functions in terms of sine and cosine.	K3
CO5	Demonstrate the relationship between circular and hyperbolic functions, and find the Logarithm of complex quantities.	K2

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

Syllabus:

Unit – I

(12 Hours)

Reciprocal Equations-Standard form-Increasing or decreasing the roots of a given equation-Removal of terms, approximate solutions of roots of polynomials by Horner's method – related problems.

Unit – II

(12 Hours)

Summation of Series: Binomial– Exponential –Logarithmic series (Theorems without proof) – Approximations - related problems.

Unit – III

(12 Hours)

Characteristic equation –Eigen values and Eigen Vectors - Similar matrices - Cayley - Hamilton Theorem (Statement only) - Finding powers of square matrix, Inverse of a square matrix up to order 3, Diagonalization of square matrices - related problems.

Unit – IV

(12 Hours)

Expansions of $\sin n\theta$, $\cos n\theta$ in powers of $\sin \theta$, $\cos \theta$ - Expansion of $\tan n\theta$ in terms of $\tan \theta$, Expansions of $\cos^n \theta$, $\sin^n \theta$, $\cos^m \theta \sin^n \theta$ - Expansions of $\sin \theta$, $\cos \theta$ and $\tan \theta$ in terms of θ - related problems.

Unit – V

(12 Hours)

Hyperbolic functions – Relation between circular and hyperbolic functions Inverse hyperbolic functions, Logarithm of complex quantities – related problems.

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Text Books:

1. P.R. Vittal, V. Malini, Algebra, Analytical Geometry and Trigonometry, Margham Publications, Chennai.
2. P.R. Vittal (2004) Trigonometry, Margham Publications, Chennai.

Reference Books:

1. W.S. Burnstine and A.W. Panton, Theory of equations
2. David C. Lay, Linear Algebra and its Applications, 3rd Ed., Pearson Education Asia, Indian Reprint, 2007
3. G.B. Thomas and R.L. Finney, Calculus, 9th Ed., Pearson Education, Delhi, 2005
4. C.V. Durell and A. Robson, Advanced Trigonometry, Courier Corporation, 2003
5. J. Stewart, L. Redlin, and S. Watson, Algebra and Trigonometry, Cengage Learning, 2012.
6. Calculus and Analytical Geometry, G.B. Thomas and R. L. Finny, Pearson Publication, 9th Edition, 2010.

e-Resources: <https://nptel.ac.in/courses/111108066>
<https://cahc.edu.in/mathematics/>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	3	3	2	-	-	2	3	2	1
CO2	2	3	2	-	-	2	3	2	1
CO3	3	3	2	-	-	2	3	2	1
CO4	3	3	2	-	-	2	3	2	1
CO5	3	3	2	-	-	2	3	2	1
Mean	2.8	3	2			2	3	2	1

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SMR& ASF	HOD

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Syllabus for B.Sc., Mathematics effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>I</i>	<i>CC</i>	<i>U24MMA102</i>	<i>DIFFERENTIAL CALCULUS</i>	<i>60</i>	<i>4</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives:

- To the basic skills of differentiation, successive differentiation, and their applications.
- To basic knowledge on the notions of curvature, evolutes, involutes and polar co-ordinates and in solving related problems.

Course Outcomes (COs) and Cognitive Level Mapping:

Cos	CO Statement (After completing the course, the students will be able to)	Cognitive level
CO1	Find the n th derivative, form equations involving derivatives and apply Leibnitz formula.	K3
CO2	Illustrate the partial derivative and total derivative coefficient.	K2
CO3	Determine maxima and minima of functions of two variables and to use the Lagrange's method of undetermined multipliers.	K5
CO4	Identify and list the envelope of a given family of curves.	K4
CO5	Find the Evolutes and involutes and Match the radius of curvature using polar co-ordinates.	K1

Syllabus:

Unit – I Successive Differentiation

(12 Hours)

Introduction (Review of basic concepts) – The n th derivative – Standard results – Fractional expressions – Trigonometrical transformation – Formation of equations involving derivatives – Leibnitz formula for the n th derivative of a product.

Unit – II Partial Differentiation

(12 Hours)

Partial derivatives – Successive partial derivatives – Function of a function rule – Total differential coefficient – A special case – Implicit Functions

Unit – III Partial Differentiation (Continued):

(12 Hours)

Homogeneous functions – Partial derivatives of a function of two variables – Maxima and Minima of functions of two variables - Lagrange's method of undetermined multipliers.

Unit – IV Envelope

(12 Hours)

Method of finding the envelope – Another definition of envelope – Envelope of family of curves which are quadratic in the parameter

Unit – V Curvature:

(12 Hours)

Definition of Curvature – Circle, Radius and Centre of Curvature – Evolutes and Involute – Radius of Curvature in Polar Co-ordinates.

Text Books:

S.Narayanan and T K Manicavachagom Pillay, Calculus Volume-I, S.Viswanathan (Printers & Publication)-2011

C. Abdul Hakeem College (Autonomous), Melvisharam.

Reference Books:

1. R. Courant and F. John, Introduction to Calculus and Analysis (Volumes I & II), Springer-Verlag, New York, Inc., 1989.
2. T. Apostol, Calculus, Volumes I and II.
3. S. Goldberg, Calculus and mathematical analysis.
4. H. Anton, I. Birens and S. Davis, Calculus, John Wiley and Sons, Inc., 2002.
5. G.B. Thomas and R.L. Finney, Calculus, Pearson Education, 2010.
6. M.J. Strauss, G.L. Bradley and K. J. Smith, Calculus, 3rd Ed., Dorling Kindersley (India) P. Ltd. (Pearson Education), Delhi, 2007.

e-Resources: <https://nptel.ac.in>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	3	3	2	2	3	-	2	2	2
CO2	2	3	2	3	2	-	2	3	2
CO3	3	2	3	2	3	-	3	3	3
CO4	2	3	3	3	2	-	2	2	2
CO5	2	2	2	2	3	-	2	3	3
Mean	2.4	2.6	2.4	2.4	2.6	-	2.2	2.6	2.4

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Syllabus for B.Sc., Mathematics effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>I</i>	<i>SEC</i>	<i>U24SMA101</i>	BRIDGE MATHEMATICS (FC)	<i>30</i>	<i>2</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives:

- To bridge the gap and facilitate transition from.
- To instill confidence among stake holders and inculcate interest for Mathematics.

Course Outcomes (COs) and Cognitive Level Mapping:

Cos	CO Statement (After completing the course, the students will be able to)	Cognitive level
CO1	Explain the basic concepts of the binomial theorem.	K2
CO2	Solve the problems related to sequences and series and then explain the principle of counting.	K3
CO3	Solve the problems on permutations and combinations.	K6
CO4	Explain trigonometric ratios and trigonometric identities.	K5
CO5	Solve the problems on limit and derivative of a function, and the integration.	K3

Syllabus:

Unit – I

(6 Hours)

Algebra: Binomial theorem, General term, middle term, Problems based on these concepts.

Unit – II

(6 Hours)

Sequences and series principle of counting. Factorial n.

Unit – III

(6 Hours)

Permutations and combinations, Derivation of Formulae and their connections, simple applications, combinations with repetitions, arrangements with in groups, formation of groups.

Unit – IV

(6 Hours)

Trigonometry: Introduction to trigonometric ratios, proof of $\sin(A + B)$, $\cos(A + B)$, $\tan(A + B)$ formulae, multiple and sub multiple angles, $\sin(2A)$, $\cos(2A)$, $\tan(2A)$ etc., transformations sum into product and product into sum formulae, inverse trigonometric functions, sine rule and cosine rule.

Unit – V

(6 Hours)

Calculus: Limits, standard formulae and problems, differentiation, first principle, uv rule, u/v rule, methods of differentiation, application of derivatives, integration – product rule and substitution method.

Text Books:

1. NCERT class XI and XII text books.
2. Any State Board Mathematics text books of class XI and XII.

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e-Resources:

https://onlinecourses.swayam2.ac.in/nos24_sc35/preview

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	2	3	3	2	-	2	3	2	2
CO2	3	3	3	2	-	2	3	2	2
CO3	3	3	2	2	-	2	2	2	2
CO4	2	3	2	2	-	2	2	2	2
CO5	2	3	2	2	-	2	2	2	3
Mean	2.4	3	2.4	2	-	2	2.4	2	2

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Syllabus for B.Sc., Mathematics effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>I</i>	<i>ISEC</i>	<i>U24SMA102</i>	MATHEMATICS FOR COMPETITIVE EXAMINATIONS – I (SBS – I)	<i>30</i>	<i>2</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives:

- To answer the questions related to the number system.
- To answer real life simple problems by using HCF and LCM.
- To apply the correct sequence of operations to find out the value of a given mathematical expressions.
- To solve the problem involving square roots, cube roots and average.
- To carry out the problems related to age and simple product.

Course Outcomes (COs) and Cognitive Level Mapping:

Cos	CO Statement (After completing the course, the students will be able to)	Cognitive level
CO1	Construct different methods and strategies to solve problems involving numbers.	K6
CO2	Evaluate HCF, LCM and decimal fractions.	K5
CO3	Simplify the given expression.	K4
CO4	Illustration of square root, cube root and average.	K2
CO5	Estimate the problem solving strategies that arise in problems related to numbers, ages, surds and indices.	K5

Syllabus:

Unit – I **(6 Hours)**

Number System.

Unit – II **(6 Hours)**

H.C.F and L.C.M of numbers, Decimal Fractions

Unit – III **(6 Hours)**

Simplification.

Unit – IV **(6 Hours)**

Square root and Cube Roots, Averages.

Unit – V **(6 Hours)**

Problems on numbers, Problems on Age, Surds and Indices.

Text Books:

1. R.S.Aggarwal [2017], Quantitative Aptitude for Competitive Examinations, S. Chand and Company, New Delhi. Chapters 11-13, 18, 19, 22, 23

Reference Books:

1. Praveen R.V., Quantitative Aptitude and reasoning, PHIL Learning Pvt, New Delhi

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e-Resources:

<https://indiabix.com/aptitude/>

www.tcyonline.com/tests/mathematics-competitive-exam

<http://www.indiabix.com/online-test/non-verbal-reasoning-test/>

<http://books.tamilcube.com/career/aptitude-test/non-verbal-reasoning/non-verbal-reasoning-questions-001.aspx>

<https://www.kent.ac.uk/careers/tests/spatialtest.htm>

<http://www.careerbl ess.com/aptitude/qa/home.php>

<http://www.careerride.com/online- aptitude-test.aspx>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	2	3	2	2	-	2	3	2	1
CO2	2	3	2	2	-	2	3	2	1
CO3	2	3	2	2	-	2	3	2	1
CO4	2	3	2	2	-	2	3	2	1
CO5	2	3	3	2	-	2	3	2	1
Mean	2	3	2.2	2	-	2	3	2	1

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RS	HOD

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Syllabus for B.Sc., Mathematics effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>II</i>	<i>CC</i>	<i>U24MMA201</i>	<i>ANALYTICAL GEOMETRY</i>	<i>60</i>	<i>4</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives:

- To understand and apply the concept of homogeneous equations of second degree to represent straight lines in different forms.
- To derive polar equations for straight lines, circles, and conic sections, and analyze their geometric properties.
- To formulate general equations of planes, calculate angles between two planes, and determine perpendicular distances.
- To calculate the angle between a line and a plane, determine the length of perpendiculars, and analyze coplanar and skew lines.
- To originate equations of spheres, determine lengths of tangents, and analyze sections of spheres.

Course Outcomes (COs) and Cognitive Level Mapping:

Cos	CO Statement (After completing the course, the students will be able to)	Cognitive level
CO1	Apply the concept of homogeneous equations of second degree to represent a pair of straight lines	K3
CO2	Apply polar coordinates to derive equation of straight lines and circles	K3
CO3	Formulate general equations of planes, calculate angles between two planes, and determine perpendicular distances.	K6
CO4	Examine the different concepts of straight lines such as coplanar lines and skew lines.	K4
CO5	Formulate equations of spheres, determine lengths of tangents, and analyze sections of spheres.	K6

Syllabus:

Unit – I

(12 Hours)

PAIR OF STRAIGHT LINES: Introduction – Homogeneous equation of second degree – Angle between the lines – Equation for the bisector of the angle between the lines – Condition for a second degree equation to represent a pair of straight lines.

(Chapter 3: Sections 3.1 - 3.5).

Unit – II

(12 Hours)

POLAR COORDINATES: Introduction – Definition of polar coordinates – Relation between Cartesian coordinates and Polar coordinates – polar equation of a straight line – circle.

(Chapter 9: Sections: 9.1 – 9.6).

Unit – III

(12 Hours)

PLANE: Introduction – General equations of plane – Angle between two planes – Perpendicular distance – Plane passing through: Three given points, Intersection of two given planes – Condition for a second degree equation to represent a pair of planes.

(Chapter 12: Sections: 12.1 – 12.12).

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Unit – IV

(12 Hours)

STRAIGHT LINES: Introduction – Equations of straight Lines – Angle between a line and plane – Length of the perpendicular – Coplanar lines – Skew lines.

(Chapter 13: Sections: 13.1 – 13.11).

Unit – V

(12 Hours)

SPHERE: Equations of sphere – Length of the tangent – Section of a sphere – Equation of circle – Intersection of two spheres – Condition for the orthogonality.

(Chapter 14: Sections: 14.1 – 14.10).

Text Books:

P.R.Vittal, Analytical Geometry 2D and 3D, Pearson Publications, Chennai.

Reference Books:

1. P.Duraipandian and Laxmi Duraipandian, Analytical Geometry Two dimensions, Emerald Publication.
2. Shanti Narayan and P.K.Mittal, Analytical Solid Geometry of 3D, S. Chand Publications.
3. Manicavasagam Pillay & Natarajan, Analytical Geometry of Two dimensions, S.Viswanathan (printers & publication) Pvt Ltd.
4. Manicavasagam Pillay & Natarajan, Analytical Geometry of Three dimensions,
5. S. Viswanathan (printers & publication) Pvt Ltd.

e-Resources:

<https://mathworld.wolfram.com/> ,
<http://www.univie.ac.at/future.media/moe/galerie.html/>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	3	3	2	-	-	2	3	2	2
CO2	3	3	2	-	-	2	3	2	2
CO3	3	3	3	-	-	2	3	2	2
CO4	3	3	3	-	-	2	3	2	2
CO5	3	3	3	-	-	2	3	2	2
Mean	3	3	2.6	-	-	2	3	2	2

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Syllabus for B.Sc., Mathematics effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>II</i>	<i>CC</i>	<i>U24MMA202</i>	<i>INTEGRAL CALCULUS</i>	<i>60</i>	<i>4</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives:

- To knowledge on integration and its geometrical applications, double, triple integrals and improper integrals.
- To knowledge about Beta and Gamma functions and their applications.
- To Determine Fourier series expansions.

Course Outcomes (COs) and Cognitive Level Mapping:

Cos	CO Statement (After completing the course, the students will be able to)	Cognitive level
CO1	Determine the integrals of algebraic, trigonometric and logarithmic functions and to find the reduction formulae	K5
CO2	Evaluate double and triple integrals and problems using change of order of integration	K5
CO3	Utilize multiple integrals and to find the areas of curved surfaces and volumes of solids of revolution	K3
CO4	Explain beta and gamma functions and to use them in solving problems of integration	K2
CO5	Explain Geometric and Physical applications of integral calculus.	K2

Syllabus:

Unit – I

(12 Hours)

Reduction formulae -Types, integration of product of powers of algebraic and trigonometric functions, integration of product of powers of algebraic and logarithmic functions - Bernoulli's formula.

Unit – II

(12 Hours)

Multiple Integrals - definition of double integrals - evaluation of double integrals – double integrals in polar coordinates -Change of order of integration.

Unit – III

(12 Hours)

Triple integrals –applications of multiple integrals - volumes of solids of revolution - areas of curved surfaces–change of variables – Jacobian.

Unit – IV

(12 Hours)

Beta and Gamma functions – infinite integral - definitions– recurrence formula of Gamma functions – properties of Beta and Gamma functions- relation between Beta and Gamma functions – Applications.

Unit – V

(12 Hours)

Geometric and Physical Applications of Integral calculus.

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Text Books:

S. Narayanan and T K Manicavachagom Pillay, Calculus Volume-II, S.Viswanathan (Printers & Publication)-2011

Reference Books:

1. R. Courant and F. John, Introduction to Calculus and Analysis (Volumes I & II), Springer-Verlag, New York, Inc., 1989.
2. T. Apostol, Calculus, Volumes I and II.
3. S. Goldberg, Calculus and mathematical analysis.
4. H. Anton, I. Birens and S. Davis, Calculus, John Wiley and Sons, Inc., 2002.
5. G.B. Thomas and R.L. Finney, Calculus, Pearson Education, 2007.
6. D. Chatterjee, Integral Calculus and Differential Equations, Tata- McGraw Hill Publishing Company Ltd.
7. P. Dyke, An Introduction to Laplace Transforms and Fourier Series, Springer Undergraduate Mathematics Series, 2001 (second edition).

e-Resources: <https://nptel.ac.in>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	-	3	2	2
CO2	3	2	2	3	2	-	2	3	2
CO3	2	3	1	2	3	-	3	2	2
CO4	3	2	2	3	2	-	2	2	3
CO5	3	3	2	3	2	-	2	2	3
Mean	2.8	2.6	2	2.8	2.4	-	2.4	2.2	2.4

Prepared by	Verified by
RS	HOD

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Syllabus for B.Sc., Mathematics effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>II</i>	<i>DSSEC</i>	<i>U24SMA201</i>	MATHEMATICS FOR COMPETITIVE EXAMINATIONS – II (SBS – II)	<i>30</i>	<i>2</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives:

To prepare the students for competitive examinations.

Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive level
CO1	Apply the concepts of time and work, time and distance in real life / industrial problems.	K3
CO2	Analyze any real life / industrial problems using the concepts of interest, time, work, distance, and graph.	K4
CO3	Identify the given group words in a logical sequence and find the missing character.	K3
CO4	Analyze the data sufficiency, make decision and truth of the statements.	K4
CO5	Analyze the figures and classify into groups consisting of figures having more or less the same properties.	K4

Syllabus:

Unit – I

(6 Hours)

Time and work – Time and distance – Problems on Trains

(Book1:Chapters15, 17, 18).

Unit – II

(6 Hours)

Simple interest, compound Interest–Bar graphs–Pie Charts– Line Graphs.

(Book1:Chapters21, 22, 37, 38, 39).

Unit – III

(6 Hours)

Logical Sequence of Words–Arithmetical Reasoning– Inserting the Missing Character.

(Book2, Section: 1, Chapters 13–15)

Unit – IV

(6 Hours)

Data Sufficiency–Decision Making– Verification of Truth of the Statement.

(Book2, Section: 1, Chapters 16, 17, 20)

Unit – V

(6 Hours)

Non-Verbal Reasoning–Analytical Reasoning– Grouping of Identical Figures.

(Book2, Section: 3, Chapter 3, 4, 13)

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Text Books:

1. R.S.Agarwal, Quantitative Aptitude for Competitive Examinations, Revised Edition, S. Chand and Company Ltd., Ram Nagar, New Delhi, Reprint2022.
2. R.S.Agarwal, A Modern Approach to Verbal And Nonverbal Reasoning, S. Chand, 2018.

Reference Books:

V.V.K.Subbiraj, Test of Reasoning–Verbal/Non-Verbal & General Intelligence for Competitive Examinations, Sure Books, 2007

E-Resources:

www.tcyonline.com/tests/mathematics-competitive-exam

<http://www.indiabix.com/online-test/non-verbal-reasoning-test/>

<http://books.tamilcube.com/career/aptitude-test/non-verbal-reasoning/non-verbal-reasoning-questions-001.aspx>

<https://www.kent.ac.uk/careers/tests/spatialtest.htm>

<http://www.careerbliss.com/aptitude/qa/home.php>

<http://www.careerride.com/online-aptitude-test.aspx>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	2	3	2	-	-	2	3	2	2
CO2	2	3	2	-	-	2	3	2	2
CO3	3	3	2	-	-	2	3	2	3
CO4	2	3	2	-	-	2	3	2	2
CO5	2	3	2	-	-	2	3	2	3
Mean	2.2	3	2	-	-	2	3	2	2.4

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Syllabus for B.Sc., Mathematics effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>II</i>	<i>DSSEC</i>	<i>U24SMAP21</i>	<i>OFFICE AUTOMATION PRACTICAL (SBS - III)</i>	<i>30</i>	<i>2</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives:

- To include the computer knowledge.
- To introduce the office software.
- To train in the preparation of word, excel and power point.

Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Create word file.	K6
CO2	Create Header and footer.	K6
CO3	Create Excel file.	K6
CO4	Determine mathematical values.	K5
CO5	Create presentation slides using power point.	K6

List of Practical:

Design a document using a MS-Word with the following options

1. Bold, underline, italics, different styles
2. Tables
3. Header and footer
4. Mail Merge

Using MS-Excel

5. To perform mathematical functions
6. To perform logical functions
7. To create different types of chart for some data

Using Power Point

8. Create a slide show

Text Books:

Microsoft Office Professional 2010 step by step, Joyce Cox, Joan Lambert and Curtis Frye, Microsoft press.

E-Resources:

https://onlinecourses.swayam2.ac.in/nos24_sc27/preview

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Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	2	3	3	-	2	2	3	2	2
CO2	2	3	3	-	2	2	3	2	2
CO3	2	3	3	-	2	2	3	2	2
CO4	2	3	3	-	2	2	3	2	2
CO5	2	3	3	-	2	2	3	2	2
Mean	2	3	3	-	2	2	3	2	2

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ASF	HOD

C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for B.Sc., Mathematics & Chemistry effective from the year 2024-2025

Sem	Category	Course Code	Course Title	Hours	Credits	Int. Marks	Ext. Marks	Max. Marks
I	GEL	U24APH101	PHYSICS - I (ALLIED)	60	4	25	75	100

Objectives:

To provide students with a solid foundation in the principles of physics, focusing on mechanics, fluid properties, heat transfer and sound.

Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Recall the concepts of elasticity and mechanical properties of materials	K1
CO2	Explain the surface tension and viscosity of liquids	K2
CO3	Outline the Newton's and Kepler's laws of motion	K4
CO4	Recognize the transmission of heat by conduction and radiation	K4
CO5	Focus on transverse waves and ultrasonic waves in real life situations	K4

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

UNIT I: Properties of Matter

12 Hours

Elasticity – Hooke's Law – Young's modulus – Rigidity modulus – Bulk modulus – Bending of beams – Expression for bending moment – Non-uniform bending – Determination of Young's modulus – Expression for Couple per unit twist – Work done in twisting a wire – Determination of Rigidity modulus of a wire by torsion pendulum.

UNIT II: Viscosity and Surface tension

12 Hours

Viscosity – Viscous force – Co-efficient of viscosity – Poiseuille's formula – Determination of coefficient of viscosity using burette.

Surface tension – Definition – Molecular theory of surface tension – Excess pressure inside a drop and bubble – Drop weight method – Interfacial surface tension – Capillary rise – Variation of surface tension with temperature.

UNIT-III: Mechanics

12 Hours

Newton's Laws – forces – equations of motion – frictional force – motion of a particle in a uniform gravitational field.

Gravitation – Classical theory of gravitation – Kepler's laws, Newton's law of gravitation – Determination of G by Cavendish's method – Earth-moon system – weightlessness – earth satellites – parking orbit – earth density – mass of the Sun – gravitational potential – escape velocity – satellite potential and kinetic energy.

UNIT IV: Transmission of heat

12 Hours

Thermal conduction – Coefficient of thermal conductivity – Lee's Disc method for bad conductors – Convection and its applications – Black body – Stefan Boltzmann law – Wien's displacement law – Rayleigh-Jeans law – Derivation and experimental verification of Stefan's law.

UNIT V: Sound

12 Hours

Transverse waves – Expression for the velocity of transverse waves in a stretched string – Frequency of transverse vibration of stretched strings – Verification of laws of transverse vibration of string using sonometer.

Acoustics of buildings – Reverberation – Factors affecting acoustics of building. Introduction to ultrasonic – Piezoelectric effect – Production of ultrasonic waves by piezoelectric method – Applications of ultrasonic waves.

C. Abdul Hakeem College (Autonomous), Melvisharam.

Text Books:

1. Properties of matter – Brijlal and Subrahmanyam – Eurasia Publishing Co., New Delhi, III Edition 1983
2. Element of properties of matter – D.S.Mathur – S.Chand & Company Ltd, New Delhi, 10th Edition 1976
3. Heat and Thermodynamics – Brijlal & Subramanyam, S.Chand & Co, 16th Edition 2005
4. Heat and Thermodynamics – D.S. Mathur, SultanChand & Sons, 5th Edition 2014.
5. Allied Physics, R. Murugesan, S. Chand and Co, New Delhi, Edition 2001.

Reference Books:

1. Fundamentals of Physics, Resnick Halliday and Walker, John Wiley and Sons, Asia Pvt. Ltd., Singapore, 11th edition, 2018.
2. Textbook of Sound, V.R. Khanna and R.S. Bedi, Kedharnaath Publishers and Co, Meerut , First edition, 1998.

e-Resources:

1. https://youtu.be/M_5KYncYNyc
2. <https://youtu.be/ljJLJgIvaHY>
3. https://youtu.be/7mGqd9HQ_AU
4. <https://youtu.be/h5jOAw57OXM>
5. <https://learningtechnologyofficial.com/category/fluid-mechanics-lab/>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

COs	Programme Outcomes						Programme Specific Outcomes			Mean
	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	
CO1	3	3	3	2	1	1	3	3	3	2.44
CO2	3	3	3	1	-	-	3	3	3	2.11
CO3	3	3	3	2	1	1	3	3	3	2.44
CO4	3	3	3	1	-	-	3	3	3	2.11
CO5	3	3	3	1	1	1	3	3	3	2.33
Mean Overall Score										2.29

3 – Strong; 2 – Medium; 1 – Low

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C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for B.Sc., Mathematics & Chemistry effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>II</i>	<i>GEL</i>	<i>U24APH201</i>	<i>PHYSICS - II (Allied)</i>	<i>60</i>	<i>4</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives:

To provide students with a solid foundation in the principles of physics, focusing on optics, electricity, magnetism, modern physics and electronics.

Course Outcomes (COs) and Cognitive Level Mapping:

COs	CO Statement (After completing the course, the students will be able to)	Cognitive Level
CO1	Recall the principles and properties of optics	K2
CO2	Describe the principle of potentiometer and characteristics of alternating currents	K2
CO3	Apply the principles of quantum mechanics to atomic structure and photoelectric effect	K3
CO4	Apply the principles of nuclear physics for generation of energy	K3
CO5	Summarize the working of semiconductor devices and logic gates for simple circuit applications	K3

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

UNIT I: OPTICS

12 Hours

Interference – Conditions for interference – Air wedge – Thickness of a thin wire – Newton’s rings – Determination of wavelength using Newton’s rings.

Diffraction – Theory of transmission grating – Normal incidence – Determination of wavelength.

Optical activity – Biot’s law – Specific rotatory power – Determination of specific rotatory power using Laurent’s half shade polarimeter

UNIT II: ELECTRICITY AND MAGNETISM

12 Hours

Potentiometer – principle – Calibration of low range voltmeter – measurement of thermo emf using potentiometer – magnetic field due to a current carrying conductor – Biot-Savart’s law – field along the axis of the coil carrying current – peak, average and RMS values of ac current and voltage – power factor and current values in an AC circuit.

UNIT III: ATOMIC PHYSICS

12 Hours

Vector atom model – various quantum numbers – Pauli’s exclusion principle – electronic configuration – periodic classification of elements – Bohr magneton – Stark effect – Zeeman effect (elementary ideas only) – photo electric effect – Einstein’s photoelectric equation – applications of photoelectric effect: solar cells, solar panels.

UNIT-IV: NUCLEAR PHYSICS

12 Hours

Nuclear models – liquid drop model – mass defect – binding energy – radioactivity – half life – mean life - radio isotopes and uses –controlled and uncontrolled chain reaction – nuclear fission – energy released in fission – chain reaction – critical size- atom bomb – nuclear reactor – nuclear fusion – thermonuclear reactions.

C. Abdul Hakeem College (Autonomous), Melvisharam.

UNIT V: ELECTRONICS

12 Hours

SEMICONDUCTOR PHYSICS: p-n junction diode – forward and reverse biasing – characteristic of diode – bridge rectifier – construction and working – advantages – Zener diode – characteristic of Zener diode – voltage regulator.

DIGITAL ELECTRONICS: logic gates, OR, AND, NOT, NAND, NOR, EXOR logic gates – universal building blocks using NAND and NOR gates – Binary and decimal number system – conversion – De Morgan's theorem – verification.

Text Books:

1. R.Murugesan (2005), Allied Physics, S.Chand and Co, New Delhi.
2. K.Thangaraj and D.Jayaraman(2004), Allied Physics, Popular Book Depot, Chennai.
3. Brijlal and N.Subramanyam (2002), Textbook of Optics, S.Chand and Co, New Delhi.
4. R.Murugesan (2005), Modern Physics, S.Chand and Co, New Delhi.
5. A.Subramaniam, Applied Electronics, 2nd Edn., National Publishing Co., Chennai.
6. Optics and Spectroscopy – R. Murugesan, S.Chand and co., New Delhi, 6th Edition 2008.

Reference Books:

1. Fundamentals of Physics, Resnick Halliday and Walker, John Willey and Sons, Asia Pvt.Ltd., Singapore, 11th edition, 2018.

Web Resources:

1. https://youtu.be/M_5KYncYNyc
2. <https://youtu.be/ljJLJgIvaHY>
3. https://youtu.be/7mGqd9HQ_AU
4. <https://youtu.be/h5jOAw57OXM>
5. <https://learningtechnologyofficial.com/category/fluid-mechanics-lab/>

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

COs	Programme Outcomes						Programme Specific Outcomes			Mean
	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	
CO1	3	2	1	-	-	-	3	3	3	1.66
CO2	3	3	2	-	-	1	3	3	3	2
CO3	3	3	3	-	2	-	3	3	3	2.22
CO4	3	2	2	-	1	1	3	3	3	2
CO5	3	3	3	-	1	1	3	3	3	2.22
	Mean Overall Score									2.02

3 – Strong; 2 – Medium; 1 – Low

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C. Abdul Hakeem College (Autonomous), Melvisharam.

Syllabus for B.Sc., Mathematics & Chemistry effective from the year 2024-2025

<i>Sem</i>	<i>Category</i>	<i>Course Code</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credits</i>	<i>Int. Marks</i>	<i>Ext. Marks</i>	<i>Max. Marks</i>
<i>II</i>	<i>GEL</i>	<i>U24APHP21</i>	<i>ALLIED PRACTICAL - PHYSICS</i>	<i>30</i>	<i>2</i>	<i>25</i>	<i>75</i>	<i>100</i>

Objectives:

Apply several physics concepts to understand properties of matter, heat, sound waves, characteristics of electronic devices, set up experimentation to verify theories and interpret the results.

Course Outcomes (COs) and Cognitive Level Mapping

COs	CO Statement	Cognitive Level
CO1	Express the scientific methods and study the process of measuring different Physical variables	K2
CO2	Practice to explore the field of properties of matter, acoustics, heat and light	K3
CO3	Demonstrate the experiments in electricity and electromagnetics circuits	K4
CO4	Determine the frequency of tuning fork and specific heat capacity of liquid	K4
CO5	Construct the basic logic gates using diodes, transistors and ICs	K5

Cognitive Levels (K1-Remember; K2-Understand; K3-Apply; K4-Analyze; K5-Evaluate; K6-Create)

(Any 15 Experiments)

1. Young's modulus – Non-uniform bending - Optic lever method (Scale and telescope).
2. Young's modulus - Non-uniform bending - Pin and microscope.
3. Rigidity Modulus – Torsional pendulum method (Without masses).
4. Surface tension and Interfacial Surface Tension - Drop weight method.
5. Coefficient of viscosity of a liquid - Burette method (Radius of capillary tube is given).
6. Sonometer – Frequency of A.C mains using steel wire.
7. Frequency of the Tuning fork - Sonometer.
8. Specific heat capacity of a liquid - method of cooling.
9. Air wedge – Thickness of a thin wire.
10. Radius of curvature of lens - Newton's rings method.
11. Spectrometer – Refractive index of a liquid using hollow prism.
12. Potentiometer – calibration of low range voltmeter.
13. Potentiometer - Internal resistance of a cell.
14. Figure of Merit – Table galvanometer.
15. Determination of m and B_H using deflection magnetometer in Tan C position and vibration magnetometer.
16. Voltage regulation using Zener diode.
17. Construction of AND, OR using diodes and NOT by transistor.
18. NAND as universal logic gate.
19. NOR as universal logic gate.
20. De Morgan's theorem – verification.

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Books for study:

1. M. N. Srinivasan, S. Balasubramanian and R. Renganathan, A Text book of Practical Physics, Sultan Chand & Sons, New Delhi, 2015.
2. C.C Ouseph, G.Rangarajan - A Text Book of Practical Physics- S. Viswanathan Publisher- Part I (1990) & II (1996).
3. C.C Ouseph, U.J. Rao, V. Vijayendran, Practical Physics and Electronics, S. Viswanathan, Printers & Publishers Private Ltd, Chennai, 2018.

Books for reference:

1. S.L Gupta and V.Kumar- Practical Physics- Pragati Prakashan – 25th Edition (2002).
2. C.L. Arora, B.Sc., Practical Physics, S. Chand and Company, New Delhi.
3. Gupta & Kumar, Practical Physics, Pragati Prakashan, Meerut.

Mapping of Course Outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

COs	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3	Mean
CO1	2	2	3	1	2	3	3	3	2	2.33
CO2	2	3	2	-	2	2	3	3	2	2.11
CO3	2	3	2	-	2	3	3	3	2	2.22
CO4	2	3	3	-	2	2	3	3	2	2.22
CO5	2	2	3	-	2	3	3	3	2	2.22
Mean Overall Score										2.22

3 – Strong; 2 – Medium; 1 – Low

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Mr. A. K. ASLAM TABREZ	Mr. J. FAYAJUL ARIFEEN