



GURU NANAK DEV ENGINEERING COLLEGE, LUDHIANA

An Autonomous College under UGC Act 1956

Mentoring and Professional Development Proforma

BBA/BCA/B.Com.(Entrepreneurship)/B.Voc.(Interior Design)
(Academic Year:) w.e.f. Scheme Code-2024 onwards

Name:....., Univ. Roll No.:.....

Branch:....., Semester:....., Section:.....

Note: Students are required to participate in different activities proposed under AICTE Activity Point Programme (see Annexure-I for detail) to become successful professionals with excellent soft skills, leadership qualities, team spirit as well to have entrepreneurial capabilities and societal commitment.

Instructions:

- Fill information/count of each activity and calculate marks as instructed in marks criterion.
- Fill information only of the current Academic year.
- Attach proof of each activity/event claimed. Without proof marks will not be considered.
- Filling of any false information and providing any forged document will lead to strict disciplinary action.

Section A (Conduct: Marks 10)

Is any disciplinary action taken against you in this Academic year?

a) UMC: Yes/No b) Misconduct: Yes /No c) Any Other (Give Detail):.....

Conduct marks *(to be filled by mentor)*:.....

Note: Marks to be awarded to all students except against whom any disciplinary action is taken. Mentor to verify same.

Section B (Co-Curricular Activities: Max.Marks 60)

Item	Yes/No/NA	Specify Count	Total Marks	Marks Criterion																								
a) Hackathons		<p>Mention Highest Achievement in Case of Same Activity. Mention Participation only if no position is held in event.</p> <p><u>International Level</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3">Positions Held: (mention count)</td> </tr> <tr> <td style="width: 33%;">1st: <count></td> <td style="width: 33%;">2nd: <count></td> <td style="width: 33%;">3rd: <count></td> </tr> </table> <p>Participation (No position held): <count></p> <p><u>National Level</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3">Positions Held: (mention count)</td> </tr> <tr> <td style="width: 33%;">1st: <count></td> <td style="width: 33%;">2nd: <count></td> <td style="width: 33%;">3rd: <count></td> </tr> </table> <p>Participation (No position held): <count></p> <p><u>State Level</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3">Positions Held: (mention count)</td> </tr> <tr> <td style="width: 33%;">1st: <count></td> <td style="width: 33%;">2nd: <count></td> <td style="width: 33%;">3rd: <count></td> </tr> </table> <p>Participation (No position held): <count></p> <p><u>Institute Level</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3">Positions Held: (mention count)</td> </tr> <tr> <td style="width: 33%;">1st: <count></td> <td style="width: 33%;">2nd: <count></td> <td style="width: 33%;">3rd: <count></td> </tr> </table> <p>Participation (No position held): <count></p>	Positions Held: (mention count)			1 st : <count>	2 nd : <count>	3 rd : <count>	Positions Held: (mention count)			1 st : <count>	2 nd : <count>	3 rd : <count>	Positions Held: (mention count)			1 st : <count>	2 nd : <count>	3 rd : <count>	Positions Held: (mention count)			1 st : <count>	2 nd : <count>	3 rd : <count>		<p><u>International Level</u></p> <p>Positions Held:</p> <p>1st: count×60 marks</p> <p>2nd: count×58 marks</p> <p>3rd: count×56 marks</p> <p>Participation: count×55 marks</p> <p><u>National Level</u></p> <p>Positions Held:</p> <p>1st: count×55 marks</p> <p>2nd: count×53 marks</p> <p>3rd: count×51marks</p> <p>Participation: count×50 marks</p> <p><u>State Level</u></p> <p>Positions Held:</p> <p>1st: count×50 marks</p> <p>2nd: count×48 marks</p> <p>3rd: count×46marks</p> <p>Participation: count×45 marks</p> <p><u>Institute Level</u></p> <p>Positions Held:</p> <p>1st: count×45 marks</p> <p>2nd: count×43 marks</p> <p>3rd: count×41 marks</p> <p>Participation: count×15marks</p>
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b)Project developed and presented in an event outside institute benefiting society	Give Details:	5 marks per participation																								
c) Research Publications	Conferences:<no. of publications> Journals:<no. of publications>	5 marks per conference paper 10 marks per journal paper Additional 50 marks for SCI and 25 marks for Scopus publication																								
d) Technical Activities 1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	Mention Highest Achievement in Case of Same Activity. Mention Participation only if no position is held in event. <u>International Level</u> <table border="1" data-bbox="518 824 1007 913"> <tr> <td colspan="3">Positions Held: (mention count)</td> </tr> <tr> <td>1st:<count></td> <td>2nd:<count></td> <td>3rd:<count></td> </tr> </table> Participation (No position held):<count> <u>National Level</u> <table border="1" data-bbox="518 1010 1007 1099"> <tr> <td colspan="3">Positions Held: (mention count)</td> </tr> <tr> <td>1st:<count></td> <td>2nd:<count></td> <td>3rd:<count></td> </tr> </table> Participation (No position held): <count> <u>State Level</u> <table border="1" data-bbox="518 1196 1007 1285"> <tr> <td colspan="3">Positions Held: (mention count)</td> </tr> <tr> <td>1st:<count></td> <td>2nd:<count></td> <td>3rd:<count></td> </tr> </table> Participation (No position held): <count> <u>Institute Level</u> <table border="1" data-bbox="518 1382 1007 1471"> <tr> <td colspan="3">Positions Held: (mention count)</td> </tr> <tr> <td>1st:<count></td> <td>2nd:<count></td> <td>3rd:<count></td> </tr> </table> Participation (No position held): <count> <hr/> <u>Events Organised:</u> International Level: <count> National Level: <count> State Level: <count> Institute Level: <count> <u>Position Held in Committee</u> Convener/Co-Convener/ Secretary / Executive / Active Member:	Positions Held: (mention count)			1 st :<count>	2 nd :<count>	3 rd :<count>	Positions Held: (mention count)			1 st :<count>	2 nd :<count>	3 rd :<count>	Positions Held: (mention count)			1 st :<count>	2 nd :<count>	3 rd :<count>	Positions Held: (mention count)			1 st :<count>	2 nd :<count>	3 rd :<count>	<u>International Level</u> Positions Held: 1 st : count×60 marks 2 nd : count×58 marks 3 rd : count×56 marks Participation: count×55 marks <u>National Level</u> Positions Held: 1 st : count×55 marks 2 nd : count×53 marks 3 rd : count×51marks Participation: count×50 marks <u>State Level</u> Positions Held: 1 st : count×50 marks 2 nd : count×48 marks 3 rd : count×46marks Participation: count×45 marks <u>Institute Level</u> Positions Held: 1 st : count×45 marks 2 nd : count×43 marks 3 rd : count×41 marks Participation: count×15 marks <hr/> <u>Events Organised</u> International Level: count×50 National Level: count×40 State Level: count×30 Institute Level: count×10 <u>Position Held in Committee</u> Convener: 10 marks Co-Convener: 8 marks Secretary: 6 marks Executive Member: 5 marks Active Member: 3 marks
Positions Held: (mention count)																										
1 st :<count>	2 nd :<count>	3 rd :<count>																								
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<p>e) SWAYAM-NPTEL MOOC or other online Courses</p>		<p>Mention courses which are not claimed for minor degree/ honour degree/ open elective/ part of curriculum/ etc.</p> <p>Course – Online Platform:</p> <p>1).....</p> <p>2).....</p> <p>3).....</p> <p>4).....</p>	<p>Course weeks×04 marks</p> <p>Additional marks for following categories of SWAYAM-NPTEL:</p> <p>Star: 10 marks</p> <p>Topper in course: 5 marks</p> <p>Gold Category:4 marks</p> <p>Silver Category:3 marks</p> <p>Elite Category:2 marks</p>
<p>f) Startup Initiative</p> <p>Startup should be the fresh initiative of the student with he/she being in the lead role and it should be registered (DPIIT registered not earlier than two years from the date of claim) for working towards innovation, development, deployment or commercialization of new products, processes or services driven by technology or intellectual property.</p> <p>Registration of startup should be as per rules & regulations laid by Government of India (Refer https://www.startupindia.gov.in/)</p>		<p>Name of Startup:</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>Owner(s) Names:</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>Registration Details:</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>No. of Startups×60 marks</p>
<p>g) Professional Societies/ Bodies/ Chapters/ Clubs Membership</p>		<p>Name of Societies/Clubs:</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>7 marks per membership of International Professional Societies/ Bodies/ Chapters</p> <p>5 marks per membership of National Professional Societies/ Bodies/ Chapters</p> <p>3 Marks per club membership</p>
<p>h) Participation in Co-Curricular Activities Not Covered Above</p>		<p>Activity Details:</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>5 marks per activity participation</p>

Section C (Extra-Curricular Activities: Max. Marks 60)

Item	Specify Count	Total Marks	Marks Criterion																																				
a) Sports (Yes/No/NA)																																							
<p>Games:</p> <p>1.....</p> <p>2.....</p> <p>3.....</p> <p>4.....</p> <p>5.....</p> <p>6.....</p> <p>7.....</p> <p>8.....</p> <p>9.....</p> <p>10.....</p>	<ul style="list-style-type: none"> • Mention highest achievement in case of same game event. • Mention participation only if no position is held in game Event. <p>International Level</p> <table border="1"> <tr><td colspan="3">Positions Held: (mention count)</td></tr> <tr><td>1st:<count></td><td>2nd:<count></td><td>3rd:<count></td></tr> </table> <p>Participation (No position held):<count></p> <p>National Level</p> <table border="1"> <tr><td colspan="3">Positions Held: (mention count)</td></tr> <tr><td>1st:<count></td><td>2nd:<count></td><td>3rd:<count></td></tr> </table> <p>Participation (No position held): <count></p> <p>State Level</p> <table border="1"> <tr><td colspan="3">Positions Held: (mention count)</td></tr> <tr><td>1st:<count></td><td>2nd:<count></td><td>3rd:<count></td></tr> </table> <p>Participation (No position held): <count></p> <p>Inter-University Level</p> <table border="1"> <tr><td colspan="3">Positions Held: (mention count)</td></tr> <tr><td>1st:<count></td><td>2nd:<count></td><td>3rd:<count></td></tr> </table> <p>Participation (No position held): <count></p> <p>University Level</p> <table border="1"> <tr><td colspan="3">Positions Held: (mention count)</td></tr> <tr><td>1st:<count></td><td>2nd:<count></td><td>3rd:<count></td></tr> </table> <p>Participation (No position held): <count></p> <p>Institute Level</p> <table border="1"> <tr><td colspan="3">Positions Held: (mention count)</td></tr> <tr><td>1st:<count></td><td>2nd:<count></td><td>3rd:<count></td></tr> </table> <p>Participation (No position held): <count></p> <hr/> <p>Captain of Team: (Yes/ No)</p> <p>Game:.....</p> <p>Highest Level (International/ National/ Inter-University/ University/ Institute):</p> <p>.....</p> <p>.....</p>	Positions Held: (mention count)			1 st :<count>	2 nd :<count>	3 rd :<count>	Positions Held: (mention count)			1 st :<count>	2 nd :<count>	3 rd :<count>	Positions Held: (mention count)			1 st :<count>	2 nd :<count>	3 rd :<count>	Positions Held: (mention count)			1 st :<count>	2 nd :<count>	3 rd :<count>	Positions Held: (mention count)			1 st :<count>	2 nd :<count>	3 rd :<count>	Positions Held: (mention count)			1 st :<count>	2 nd :<count>	3 rd :<count>		<p>International Level</p> <p>Positions Held:</p> <p>1st: count×60 marks</p> <p>2nd: count×58 marks</p> <p>3rd: count×56 marks</p> <p>Participation: count×55 marks</p> <p>National Level/ Inter-University Level</p> <p>Positions Held:</p> <p>1st: count×55 marks</p> <p>2nd: count×53 marks</p> <p>3rd: count×51 marks</p> <p>Participation: count×50 marks</p> <p>State Level/ University Level</p> <p>Positions Held:</p> <p>1st: count×50 marks</p> <p>2nd: count×48 marks</p> <p>3rd: count×46marks</p> <p>Participation: count×45marks</p> <p>Institute Level</p> <p>Positions Held:</p> <p>1st: count×45 marks</p> <p>2nd: count×43 marks</p> <p>3rd: count×41 marks</p> <p>Participation: count×15 marks</p> <hr/> <p>Captain of Team:</p> <p>International/National/Inter-university/ University: 15 marks</p> <hr/> <p>Routine basis active involvement in sports related activities (Gym/ Swimming/ shooting etc.): Marks to be allotted by sports deptt. out of 30</p>
Positions Held: (mention count)																																							
1 st :<count>	2 nd :<count>	3 rd :<count>																																					
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1 st :<count>	2 nd :<count>	3 rd :<count>																																					
b) Cultural (Yes/No/NA)																																							
<p>Cultural Events:</p> <p>1.....</p> <p>2.....</p> <p>3.....</p>	<ul style="list-style-type: none"> • Mention highest achievement in case of same cultural event. • Mention participation only if no position is held in cultural event. 		<p>International Level</p> <p>Positions Held:</p> <p>1st: count×60 marks</p> <p>2nd: count×58 marks</p> <p>3rd: count×56 marks</p>																																				

4.	International Level		Participation: count×55 marks
5.	Positions Held: (mention count)		National Level/
6.	1 st :<count> 2 nd :<count> 3 rd :<count>		Inter-University Level
7.	Participation (No position held):<count>		Positions Held:
8.	National Level		1 st : count×55 marks
9.	Positions Held: (mention count)		2 nd : count×53 marks
10.	1 st :<count> 2 nd :<count> 3 rd :<count>		3 rd : count×51 marks
	Participation (No position held):<count>		Participation: count×50 marks
	State Level		State Level
	Positions Held: (mention count)		Positions Held:
	1 st :<count> 2 nd :<count> 3 rd :<count>		1 st : count×50 marks
	Participation (No position held):<count>		2 nd : count×48 marks
	State Level		3 rd : count×46 marks
	Positions Held: (mention count)		Participation: count×45 marks
	1 st :<count> 2 nd :<count> 3 rd :<count>		University Level
	Participation (No position held):<count>		Positions Held:
	Inter-University Level		1 st : count×45 marks
	Positions Held: (mention count)		2 nd : count×43 marks
	1 st :<count> 2 nd :<count> 3 rd :<count>		3 rd : count×41 marks
	Participation (No position held):<count>		Participation: count×40 marks
	University Level		Institute Level
	Positions Held: (mention count)		Positions Held:
	1 st :<count> 2 nd :<count> 3 rd :<count>		1 st : count×40 marks
	Participation (No position held):<count>		2 nd : count×38 marks
	Institute Level		3 rd : count×36 marks
	Positions Held: (mention count)		Participation: count×15 marks
	1 st :<count> 2 nd :<count> 3 rd :<count>		
	Participation (No position held):<count>		

c) NCC (Yes/No/NA)

Achievements	<p>Highest Achievement only out of followings:</p> <ul style="list-style-type: none"> • National Level Republic Day Parade Camp • Senior Under officer (SUO) • Under officer (UO) • Other Ranks • Best Cadet National Level • Best Cadet State Level • Best Cadet Group Level • C – Certificate • B – Certificate <p>Mention Major Achievement:</p> <p>.....</p> <p>.....</p>		<p>National Level Republic Day Parade Camp: 60 marks</p> <p>SUO: 55 marks</p> <p>UO: 45 marks</p> <p>Other Ranks: 35</p> <p>Best Cadet National Level: 55 marks</p> <p>Best Cadet State Level: 50marks</p> <p>Best Cadet Group Level: 45 marks</p> <p>C – Certificate: 40 marks</p> <p>B – Certificate: 30 marks</p> <p>NCC Enrollment: 15 marks</p> <p>25 marks per achievement in NCC on recommendation of College NCC Incharge</p>
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d) NSS (Yes/No/NA)

Activities like – One student one tree, Jal Shakti Abhiyan, Blood Donation, Swachh Bharat Abhiyan, Community Service, Social internship and	Participation/Camps Attended:		5 marks per Participation
		25 marks per week camp attended
		

Participation in extra-curricular activities not covered above	Activities Details:		5 marks per activity participation
		
		
		

Section D (Continuous Evaluation of Class Activities: Marks 15)

Student will be awarded marks for continuous evaluation and attendance of ‘Mentoring and Professional Development’ class during Academic Year. *(Marks to be awarded by mentor)*

Section E (Induction Program / Aptitude Test/Competitive Exam: Marks 15)

Marks will be awarded as per following:

Sr. No.	Year	Activity
1.	1 st Year	Marks will be awarded based on participation/performance of student during induction program at the start of session. The marks will be compiled by respective Department.
2.	2 nd Year	Marks will be awarded based on performance in Aptitude Test(s). The aptitude test(s) will be conducted as per notification issued by authority. OR Marks will be awarded based on performance in Group Discussion/ Business plan/ Understanding of current market trends/ participation in skill-oriented initiatives.
3.	3 rd Year	Marks will be awarded based on: <ul style="list-style-type: none"> • Performance in competitive examinations, like – GATE, GRE, GMAT, CAT, UPSC, State Services, Armed Forces, etc. • Holistic development/ inculcation of human values/ Industrious development of student during the entire term in the institute.

Dated:

Signature of the student

.....

(For Office Use)

Marks awarded by mentor after verification of marks claimed by student:

Section A (10 marks)	Section B (60 marks)	Section C (60 marks)	Section D (15 marks)	Section E (15 marks)	Total* (Max. marks: 100)
----/(out of 10)	-----/(out of 60)		----/(out of 15)	----/(out of 15)	----/(out of 100)
	<i>Note: Fill combined marks of Section B and Section C and marks should not exceed 60</i>				

*Maximum marks should not exceed 100.

Signature of the Mentor

Name of Mentor:.....

AICTE ACTIVITY POINT PROGRAMME

Sub Activity Head

- Prepare and implement plan to create local job opportunities
- Prepare and implement plan to improve education quality in village.
- Preparing an actionable DPR for Doubling the village Income
- Developing Sustainable Water Management system.
- Prepare and Improve a plan to improve health parameters of villagers
- Developing and implementing of Low Cost Sanitation facilities
- Prepare and implement plan to promote Local Tourism through Innovative Approaches
- Implement/Develop Technology solutions which will improve quality of life
- Prepare and implement solution for energy conservation
- Prepare and implement plan to Skill village youth and provide employment
- Develop localized techniques for Reduction in construction Cost
- Prepare and implement plan of sustainable growth of village
- Setting of Information imparting club for women leading to contribution in social and economic issues
- Developing and managing Efficient garbage disposable system
- Contribution to any national level initiative of Government of India. For eg. Digital India/ Skill India/ Swachh Bharat Internship etc.

Guru Nanak Dev Engineering College , Ludhiana

UG- Non-Engineering Syllabus

Course Code: NEMPD102

Course Title: Mentoring and Professional Development

Programme: UG (Non- Engineering)	Semester: 3	Total Max. Marks: 15
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PART-A

UNIT-I: Numerical Ability – Fundamentals

Number System, Simplification, Percentages, Ratio and Proportion, Averages, Profit and Loss, Simple Interest

UNIT-II: Verbal Ability – Core English Skills

Vocabulary, Synonyms, Antonyms, Idioms and Phrases, Grammar Fundamentals, Parts of Speech, Tenses, Subject-Verb Agreement, Sentence Correction, One-Word Substitutions

PART-B

UNIT-III: Reasoning Ability – Basic Logic

Series, Alphabet Series, Number Series, Coding and Decoding, Direction Sense, Blood Relations, Analogy, Verbal Analogy, Numerical Analogy, Simple Logical Statements

UNIT-IV: Programming – Algorithmic Problem Solving-I

Design of Algorithms using Pseudocode and Stepwise Refinement, Programming Fundamentals including Character Set Identifiers and Keywords, Data Types Constants Variables and Symbolic Constants, Expressions and Statements, Operations and Expressions using Arithmetic Unary Relational Logical Assignment and Conditional Operators, Use of Standard Library Functions, Formatted and Unformatted Input Output Operations, Conditional Control Statements including if-else and switch case, Iterative Control Statements including while do-while and for loops, Nested Looping Structures, Jump Statements including break and continue

Textbooks

1. R. S. Aggarwal, *Quantitative Aptitude for Competitive Examinations*, Revised ed., S. Chand Publishing, 2025.
2. R. S. Aggarwal, *A Modern Approach to Non Verbal Reasoning*, latest edition S. Chand Publishing



3. R. S. Aggarwal, Objective General English S. Chand Publishing
4. Neetu Singh | English for General Competitions | Updated 2025 Edition | KD Publication
5. Y. Kanetkar, *Let Us C*, 21st ed., BPB Publications, 2023.

Online Resources / Reference Websites

6. IndiaBIX, "Aptitude, Logical Reasoning and Verbal Ability," Available: <https://www.indiabix.com/> (accessed 2025).
7. Testbook, "Quantitative Aptitude, Reasoning and English Practice," Available: <https://testbook.com/> (accessed 2025).
8. British Council, "Learn English – Grammar, Vocabulary and Reading," Available: <https://learnenglish.britishcouncil.org/> (accessed 2025).
9. NPTEL Course: Developing Soft Skills and Personality, IIT Kanpur Prof. T Ravichandran <https://nptel.ac.in/courses/109104107>
10. NPTEL Course: Getting Started with Competitive Programming By Prof. Neeldhara Misra, IIT Gandhinagar https://onlinecourses.nptel.ac.in/noc26_cs69/preview
11. NPTEL Course: English Language for Competitive Exams By Prof. Aysha Viswamohan IIT Madras https://onlinecourses.nptel.ac.in/noc26_hs74/preview
12. NPTEL Course: Problem Solving Through Programming In C By Prof. Anupam Basu IIT Kharagpur https://onlinecourses.nptel.ac.in/noc26_cs53/preview
13. LeetCode, "Coding Interview Questions and Programming Practice," Available: <https://leetcode.com/> (accessed 2025).
14. HackerRank, "Coding Challenges and Skill Certification Platform," Available: <https://www.hackerrank.com/> (accessed 2025).
15. InterviewBit, "Programming Interview Preparation and Coding Practice," Available: <https://www.interviewbit.com/> (accessed 2025).
16. CodeChef, "Competitive Programming Platform," Available: <https://www.codechef.com/> (accessed 2025).
17. GeeksforGeeks, "Practice Coding Problems and Interview Preparation," Available: <https://practice.geeksforgeeks.org/> (accessed 2025).
18. Codeforces, "Competitive Programming Contests and Problem Sets," Available: <https://codeforces.com/> (accessed 2025).
19. Exercism, "Programming Practice with Mentorship and Guided Learning," Available: <https://exercism.org/> (accessed 2025).



Guru Nanak Dev Engineering College , Ludhiana

UG- Non-Engineering Syllabus

Course Code: NEMPD102

Course Title: Mentoring and Professional Development

Programme: UG (Non Engineering)	Semester: 4	Total Max. Marks: 15
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PART-A

UNIT-I: Numerical Ability – Advanced & Data Interpretation

Time and Work, Time Speed and Distance, Pipes and Cisterns, Compound Interest, Successive Discounts, Statistics, Mean, Mode, Range, Data Interpretation, Tables, Bar Graphs, Pie Charts, Caselet-Based Data Interpretation

UNIT-II: Verbal Ability – Comprehension & Application

Reading Comprehension, Fact-Based Questions, Inference-Based Questions, Para-Jumbles, Sentence Completion, Error Spotting, Contextual Vocabulary

PART-B

UNIT-III: Reasoning Ability – Analytical & Decision Making

Syllogisms, Statements and Conclusions, Course of Action, Seating and Arrangement Problems, Mathematical Reasoning, Visual Reasoning, Mirror Images, Figure Analogy

UNIT-IV: Programming – Algorithmic Problem Solving-II

Concept and Need of Functions in Modular Programming, Definition Invocation and Parameter Passing in Functions, Specification of Argument Data Types and Use of Function Prototypes, Recursive Functions and their Applications, One-Dimensional Arrays, Multi-Dimensional Arrays, Processing Arrays and Passing Arrays to Functions, String Declaration, String Handling Functions and String Manipulation, Program Structure and Storage Classes including Automatic Static and External Variables, User-Defined Data Types using Structures and Unions, Structures with Pointers and Passing Structures to Functions, Pointer Concepts including Declaration Initialization and Pointer Arithmetic, Relationship between Pointers and Arrays

Textbooks

1. R. S. Aggarwal, *Quantitative Aptitude for Competitive Examinations*, Revised ed., S. Chand Publishing, 2025.
2. R. S. Aggarwal, *A Modern Approach to Non Verbal Reasoning*, latest edition S. Chand Publishing



3. R. S. Aggarwal, Objective General English S. Chand Publishing
4. Neetu Singh | English for General Competitions | Updated 2025 Edition | KD Publication
5. Y. Kanetkar, *Let Us C*, 21st ed., BPB Publications, 2023.

Online Resources / Reference Websites

6. IndiaBIX, "Aptitude, Logical Reasoning and Verbal Ability," Available: <https://www.indiabix.com/> (accessed 2025).
7. Testbook, "Quantitative Aptitude, Reasoning and English Practice," Available: <https://testbook.com/> (accessed 2025).
8. British Council, "Learn English – Grammar, Vocabulary and Reading," Available: <https://learnenglish.britishcouncil.org/> (accessed 2025).
9. NPTEL Course: Developing Soft Skills and Personality, IIT Kanpur Prof. T Ravichandran <https://nptel.ac.in/courses/109104107>
10. NPTEL Course: Getting Started with Competitive Programming By Prof. Neeldhara Misra, IIT Gandhinagar https://onlinecourses.nptel.ac.in/noc26_cs69/preview
11. NPTEL Course: English Language for Competitive Exams By Prof. Aysha Viswamohan IIT Madras https://onlinecourses.nptel.ac.in/noc26_hs74/preview
12. NPTEL Course: Problem Solving Through Programming In C By Prof. Anupam Basu IIT Kharagpur https://onlinecourses.nptel.ac.in/noc26_cs53/preview
13. LeetCode, "Coding Interview Questions and Programming Practice," Available: <https://leetcode.com/> (accessed 2025).
14. HackerRank, "Coding Challenges and Skill Certification Platform," Available: <https://www.hackerrank.com/> (accessed 2025).
15. InterviewBit, "Programming Interview Preparation and Coding Practice," Available: <https://www.interviewbit.com/> (accessed 2025).
16. CodeChef, "Competitive Programming Platform," Available: <https://www.codechef.com/> (accessed 2025).
17. GeeksforGeeks, "Practice Coding Problems and Interview Preparation," Available: <https://practice.geeksforgeeks.org/> (accessed 2025).
18. Codeforces, "Competitive Programming Contests and Problem Sets," Available: <https://codeforces.com/> (accessed 2025).
19. Exercism, "Programming Practice with Mentorship and Guided Learning," Available: <https://exercism.org/> (accessed 2025).

