Lovely Professional University, Punjab

Course Code	Course Title	Lectures	Tutorials	Practicals	Credits	
PEA308	ADVANCED ANALYTICAL SKILLS-II	2	1	0	3	
Course Weightage	ATT: 15 CA: 30 MTT: 15 ETT: 40					

Course Outcomes :Through this course students should be able to

CO1 :: apply the concepts learned to solve the problems related to time and work

CO2 :: select an appropriate approach for solution of time, speed and distance related problems

CO3 :: learn the various logical reasoning techniques to rechat appropriate conclusions and solve the question related to logarithm and ranking.

CO4 :: use mathematical concepts learned to solve problems of mensuration, height and distance

CO5 :: understand the concepts of clock and calendar to solve competition based questions

CO6 :: remember various fast calculation techniques for quick and accurate data interpretation

	TextBooks (T)		
Sr No	**Title**	**Author**	**Publisher Name**
T-1	A MODERN APPROACH TO VERBAL & NON-VERBAL REASONING	DR. R. S. AGGARWAL	S Chand Publishing
T-2	QUANTITATIVE APTITUDE	DR. R. S. AGGARWAL	S Chand Publishing
	Reference Books (R)		
Sr No	**Title**	**Author**	**Publisher Name**
R-1	ANALYTICAL REASONING	MK PANDAY	BANKING SERVICE CHRONICLE
R-2	MAGICAL BOOK ON QUICKER MATHS	M.TYRA	BANKING SERVICE CHRONICLE

Other Reading (OR)	
Sr No	**Journals articles as Compulsary reading (specific articles, complete reference)**
OR-1	BSC publications monthly magazine ,

Relevant Websites (RW)	
Sr No	**(Web address) (only if relevant to the course)**	**Salient Features**
RW-1	https://www.indiabix.com/	eveled questions for placement and competitive exams

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LTP week distribution: (LTP Weeks)	
Weeks before MTE	7
Weeks After MTE	7
Spill Over (Lecture)	4

Detailed Plan For Lectures

Week Number	Lecture Number	Broad Topic(Sub Topic)	Chapters/Sections of Text/reference books	Other Readings, Relevant Websites, Audio Visual Aids, software and Virtual Labs	Lecture Description	Learning Outcomes	Pedagogical Tool Demonstration/ Case Study / Images / animation / ppt etc. Planned	Live Examples
Week 1	Lecture 1	Time and work.(efficiency based problems)	T-2 R-2	OR-1 RW-1	Introduction of course will be given. The students will solve the questions of Time & Work	Able to solve the Time & Work related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Time and work.(chain rule)	T-2 R-2	OR-1 RW-1	Introduction of course will be given. The students will solve the questions of Time & Work	Able to solve the Time & Work related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Time and work.(alternate work problems)	T-2 R-2	OR-1 RW-1	Introduction of course will be given. The students will solve the questions of Time & Work	Able to solve the Time & Work related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	

Week 1	Lecture 2	Time and work.(wages based problems)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Time & Work	Able to solve the Time & Work related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Time and work.(advanced time and work problems)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Time & Work	Able to solve the Time & Work related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
Week 2	Lecture 3	Pipes and cistern(inlet-outlet)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Pipes & Cistern	Able to solve the Pipes and cisterns related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Pipes and cistern(time-based problems)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Pipes & Cistern	Able to solve the Pipes and cisterns related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
	Lecture 4	Pipes and cistern(part of the tank filled)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Pipes & Cistern	Able to solve the Pipes and cisterns related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	

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Week	Lecture	Topic			Outcome	Able to	Method	
Week 3	Lecture 5	Time, speed and distance (average speed concept)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Time speed and Distance	Able to solve the Time and Distance related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Time, speed and distance (ratio based problems)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Time speed and Distance	Able to solve the Time and Distance related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
	Lecture 6	Time, speed and distance (advanced time and speed based questions)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Time speed and Distance	Able to solve the Time and Distance related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Time, speed and distance (races)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Time speed and Distance	Able to solve the Time and Distance related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
Week 4	Lecture 7	Problem on trains(relative speed concept & application)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Problem on Trains	Able to solve the Problem on trains related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	

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Week	Lecture	Topic			Learning Outcome		Pedagogical Tool	
Week 4	Lecture 8	Boats and stream (downstream and upstream)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Boats and Streams	Able to solve the Boats and Streams related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cum-discussion method	
		Boats and stream(two variable problems)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Boats and Streams	Able to solve the Boats and Streams related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cum-discussion method	
Week 5	Lecture 9				Test 1			
	Lecture 10	Syllogism(logical venn diagrams)	T-1 R-1	OR-1 RW-1	The students will relate a given group of items diagrammatically	The students will relate a given group of items diagrammatically	Lecture-cum☐discussion method	
		Syllogism(negative statement-based problems)	T-1 R-1	OR-1 RW-1	The students will relate a given group of items diagrammatically	The students will relate a given group of items diagrammatically	Lecture-cum☐discussion method	
Week 6	Lecture 11	Syllogism(possibility based problems)	T-1 R-1	OR-1 RW-1	The students will relate a given group of items diagrammatically	The student will learn how to relate a given group of items and illustrate it diagrammatically	Lecture-cum☐discussion method	
	Lecture 12	Ranking test(ranking test problems)	T-1 R-1	OR-1 RW-1	The students will solve problems related to number ranking	Able to solve problems related number ranking quickly so that they can solve the placement and competitive exams given in time period	Lecture-cumdiscussion method	

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Week 7	Lecture 13	Logarithm(concepts of the logarithm)	T-2 R-2	OR-1 RW-1	The students will solve problems related to Logarithm	Able to solve problems related Logarithm quickly so that they can solve the placement and competitive exams given in time period	Lecture-cumdiscussion method	
				SPILL OVER				
Week 7	Lecture 14				Spill Over			
				MID-TERM				
Week 8	Lecture 15	Mensuration(perimeter and area of 2-D figures)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Mensuration	Able to solve the Area and volume related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Mensuration(problems on surface area and volume of cube, cuboid)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Mensuration	Able to solve the Area and volume related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
	Lecture 16	Mensuration(problems on surface area and the volume of sphere and hemisphere)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Mensuration	Able to solve the Area and volume related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cum☐discussion method	
Week 9	Lecture 17	Mensuration(problems on surface area and volume of cone and cylinder)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Mensuration	Able to solve the Area and volume related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cum☐discussion method	

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Week 9	Lecture 18	Height and distance(problem based on height and distance)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Height and Distance	"Able to solve the Height and Distance problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period"	Lecture-cumdiscussion method	
		Height and distance(moving object based)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Height and Distance	"Able to solve the Height and Distance problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period"	Lecture-cumdiscussion method	
Week 10	Lecture 19				Test 2			
	Lecture 20	Calendar(finding the exact day)	T-1 R-1	OR-1 RW-1	The students will solve the questions of Calendar	Able to solve the Calendar related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Calendar(advanced concept of calendar)	T-1 R-1	OR-1 RW-1	The students will solve the questions of Calendar	Able to solve the Calendar related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
Week 11	Lecture 21	Clocks(concept of clock)	T-1 R-1	OR-1 RW-1	The students will solve the questions of Clock	Able to solve the Clock related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	

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Week 11	Lecture 21	Clocks(gain and loss of time)	T-1 R-1	OR-1 RW-1	The students will solve the questions of Clock	Able to solve the Clock related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Clocks(angle based problems)	T-1 R-1	OR-1 RW-1	The students will solve the questions of Clock	Able to solve the Clock related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
	Lecture 22	Inequalities(advanced concepts of inequalities)	T-1 T-2 R-1 R-2	OR-1 RW-1	The students will solve the questions of Inequalities	Able to solve the Inequalities related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
Week 12	Lecture 23	Analytical reasoning.(linear seating arrangement)	T-1 R-1	OR-1 RW-1	Students will workout on arrangement related question and analytical puzzles	Able to solve the data arrangement related problems and analytical puzzles related problems quickly quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Analytical reasoning. (circular seating arrangement)	T-1 R-1	OR-1 RW-1	Students will workout on arrangement related question and analytical puzzles	Able to solve the data arrangement related problems and analytical puzzles related problems quickly quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	

Week 12	Lecture 23	Analytical reasoning. (combined problems)	T-1 R-1	OR-1 RW-1	Students will workout on arrangement related question and analytical puzzles	Able to solve the data arrangement related problems and analytical puzzles related problems quickly quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
	Lecture 24	Data interpretation(bar graph-based problems)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Data Interpretation	Able to solve the Data Interpretation related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Data interpretation(tabular based problems)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Data Interpretation	Able to solve the Data Interpretation related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
		Data interpretation(pie-chart based problems)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Data Interpretation	Able to solve the Data Interpretation related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cumdiscussion method	
Week 13	Lecture 25	Data interpretation(linegraph based problems)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Data Interpretation	Able to solve the Data Interpretation related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cum☐discussion method	

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Week 13	Lecture 25	Data interpretation(mixed graph-based problems)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Data Interpretation	Able to solve the Data Interpretation related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cum☐discussion method	
		Data interpretation (histogram based problems)	T-2 R-2	OR-1 RW-1	The students will solve the questions of Data Interpretation	Able to solve the Data Interpretation related problems quickly so that students can solve the Placement Test/Competitive Test paper in given time period	Lecture-cum☐discussion method	
	Lecture 26	Data sufficiency(check sufficiency of data)	T-1 T-2 R-1 R-2	OR-1 RW-1	The students will solve the problem given with the facts provided in clues	The student learns to identify which statement is sufficient to answer the question	Lecture-cumdiscussion method	
Week 14	Lecture 27				Test 3			

SPILL OVER

Week 14	Lecture 28				Spill Over			
Week 15	Lecture 29				Spill Over			
	Lecture 30				Spill Over			

Scheme for CA:

CA Category of this Course Code is:A0203 (2 best out of 3)

Component	Weightage (%)	Mapped CO(s)
Test 1	50	CO1, CO2
Test 2	50	CO3, CO4
Test 3	50	CO5, CO6

Details of Academic Task(s)

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Academic Task	Objective	Detail of Academic Task	Nature of Academic Task (group/individuals)	Academic Task Mode	Marks	Allottment / submission Week
Test 1	To check the ability of the students to solve the question in stipulated time	30 MCQ type questions would be asked covering topics from Lecture No. 1 to 8, Duration of the first CA would 40 minutes and 25 % negative marking will be imposed for every incorrect answer	Individual	Online	30	4 / 5
Test 2	To check the ability of the students to solve the question in stipulated time	30 MCQ type questions would be asked covering topics from Lecture No. 10 to 18, Duration of the first CA would 40 minutes and 25 % negative marking will be imposed for every incorrect answer	Individual	Online	30	9 / 10
Test 3	To check the ability of the students to solve the question in stipulated time	30 MCQ-type questions would be asked covering topics from Lecture No. 20 to 26, Duration of the CA would be 40 minutes and 25 % negative marking will be imposed for every incorrect answer	Individual	Online	30	13 / 14

MOOCs/ Certification etc. not-mapped with the Academic Task(s) (Available for students for better learning/ will get students ready for)

Name Of Certification/Online Course/Test/Competition mapped	Type	Offered By Organisation
PO CGL	Test/Examination	IBPS SSC

Plan for Tutorial: (Please do not use these time slots for syllabus coverage)

Tutorial No.	Lecture Topic	Type of pedagogical tool(s) planned (case analysis,problem solving test,role play,business game etc)
Tutorial1	Time & Work	Problem Solving
Tutorial2	Pipes & Cistern	Problem Solving
Tutorial3	Time, speed and Distance	Problem Solving
Tutorial4	Problem on trains	Problem Solving
Tutorial5	Boats & Streams	Problem Solving
Tutorial6	Practice Questions on Syllogism	Problem Solving
Tutorial7	Practice Questions on Ranking test and Logarithm	Problem Solving
After Mid-Term		
Tutorial8	Mensuration	Problem Solving
Tutorial9	Height and Distance	Problem Solving
Tutorial10	Calendar	Problem Solving

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Tutorial11	Clock and Logarithm	Problem Solving
Tutorial12	Analytical Reasoning	Problem Solving
Tutorial13	Data Interpretation	Problem Solving
Tutorial14	Data Sufficiency	Problem Solving

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