Government PG College, Ambala Cantt

Course File(Session 2023-24)

Name of Assistant Professor: Dr. Hardish Kaur

Class: B.Com. General I Year/2ⁿᵈ semester

Section: A,B

Course Code and Name: B23-COM-204/Business Mathematics II

As per NEP-2020

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Session 2023-2024			
Part-A Introduction			
Subject	Commerce		
Semester	II		
Name of the Course	Business Mathematics-II		
Course Code	B23-COM-204		
Course Type: (CC/MCC/MDC/ CCM/ DSEC/VOC/DSE/PC/AEC/ VAC	CC-M2		
Pre-requisite for the course (if any)	NIL		
Course Learning Outcomes (CLO)	After completing this course, the learner will be able to: 1. gain the knowledge to find derivatives simple functions related to commerce problems, attain skills to use application of derivatives in evaluating maxima and minima. 2. learn to find integration of simple functions related to commerce and economic problems, attain skills to use application of integration in business and commerce problems. 3. apply binomial theorem, learn the concept and applications of permutations and combinations. 4. learn the concept of Linear programming and formulation of linear programming problems related to business and commerce. 5*.		
	Theory	**Tutorial**	**Total**
Credits	01	01	02
Internal Assessment Marks	15	-	15
End Term Exam Marks	35	-	35
Exam Time	3 Hrs.	-	3 Hrs.
Part-B Contents of the Course			

Instructions for Paper Setters

1. The examiner will set 9 questions in all covering the course learning outcomes (CLOs). Question No. 1 will be compulsory and comprises of seven parts of 1 marks each. Question Nos. 2 to 9 will carry 7 marks each, having two questions from each unit. About 40% questions should be numerical type.
2. Students are required to attempt 5 questions in all, selecting one question from each unit and the compulsory question.

Unit	Topics	Contact Hours
I	Differentiation; derivative of simple functions and other functions (excluding trigonometric functions) having applications in business studies; Maxima and minima of Revenue, Cost, Demand, Production, Profit functions and other functions related to business and commerce.	6
II	Integration: Definite and indefinite (simple functions excluding trigonometric functions), basic rules of integration, application of integration in commercial and business problems.	6
III	Binomial Theorem; Permutations and Combinations.	6
IV	Linear programming: Formulation of linear programming problems (LPP) and their solution by graphical and simplex methods, Applications of linear programming in solving problems related to business and commerce.	7
V*		

Suggested Evaluation Methods

Internal Assessment:	End Term Exam
Theory Class Participation Seminar/Presentation/Assignment/Quiz/Class Test etc. Mid Term Exam	

Part-C Learning Resources

Recommended Books/E-Resources/LMS:

- A.R. Vasishtha, Matrices, Krishna Prakashan (P) Media Ltd.
- Allen R.G.D., Basic Mathematics, Macmillan, New Delhi
- D.C. Sancheti and V.K. Kapoor, Business Mathematics, Sultan Chand and Sons.
- Dowling E.T., Mathematics for Economics, Schaum Series, McGraw Hill, London.
- E.T. Dowling, Schaum outlines of Calculus for Business, Economics and the Social Sciences. McGraw Hill.
- Holden, Mathematics for Business and Economics, Macmillan India, New Delhi.
- S.C. Gupta and V.K. Kapoor, Fundamentals of Mathematical Statistics, S. Chand & Sons,Delhi.

* Applicable for courses having practical component.

Lesson Plan

From February 2024 to May 2024

Week No	Scheduled Dates	Topics to be covered
1.	**12-17 February**	Permutations
2.	**19-24 February**	Permutations
3.	**26-2 March**	Combinations
4.	**4-9 March**	Combinations
5.	**11-16 March**	Binomial Theorem
6.	**18-22 March**	Binomial Theorem
7.	**23-31 March**	**Holi Vacations**
8.	**1-6 April**	Linear programming: Formulation of linear programming problems (LPP) and their solution by Graphical method
9.	**8-13 April**	Linear programming: Formulation of linear programming problems (LPP) and their solution by Simplex method
10.	**15-20 April**	Applications of linear programming in solving problems related to business and commerce.
11.	**22-27 April**	Differentiation; derivative of simple functions and other functions (excluding trigonometric functions) having applications in business studies
12.	**29-3 May**	Maxima and minima of Revenue, Cost, Demand, Production, Profit functions and other functions related to business and commerce
13.	**6-11 May**	Integration: Definite and indefinite (simple functions excludingtrigonometric functions),
14.	**20-25 May**	Basic rules of integration
15.	**27-31 May**	Application of integration in commercial and business problems
		Exams Starts