Scheme of Examination of B.Sc. (Multimedia) programme in accordance with NEP 2020 (Multiple Entry-Exit, Internships and Choice Based Credit System) w.e.f. Academic Session2022-23 in phased manner.

**Semester-I** 

~	T a	T ~	-			meste			1				T
Course	Course Title	Course			Hou	ırs per	Credits	Total		N	Iarks		Duration
Code		Type	We					Credits					of Exam
			L	T	P	Total			T	P	IA	Total	
AECC-	Communicative	AECC-1	2	-	-	2	2	2	25	-	25	50	2 Hours
N100	English												
B-MMT-	Art & Creativity	CC-1A	4	-	-	4	4		50	-	50	100	3 Hours
N101	(Theory)												
B-MMT-	Art & Creativity		-	-	2	4	2	6	-	25	25	50	3 Hours
N102	(Practical)												
B-MMT-	Computer	CC-2A	4	-	-	4	4		50	-	50	100	3 Hours
N103	Programming												
	(Theory)							6					
B-MMT-	Computer		-	-	2	4	2		-	25	25	50	3 Hours
N104	Programming												
	(Practical)												
B-MMT-	Fundamentals of	CC-3A	5	1	-	6	6	6	75	-	75	150	3 Hours
N105	Multimedia												
B-MMT-	Computer	SEC-1	1	-	-	1	1		20	-	5	25	2 Hours
N106	Science(Theory)												
B-MMT-	Computer		-	-	1	2	1	2	-	20	5	25	2 Hours
N107	Science(Practical)												
B-MMT-	Activity/Hobby							2	Satisfactory/Non				
N108	Gita-A Manual of								satisfactory				
	Life (Option-i)								, , ,				
	Public Speaking												
	(Option-ii)												
	<u> </u>					Tot	al Credits	24	Tot	al Ma	rks	550	

# **Semester-II**

Course Code	Course Title	Course Type	Cor		t Ho Veek	urs per	Credits	Total Credits		N	Iarks		Duration of Exam
		J.F.	L	T	P	Total			Т	P	IA	Total	
AECC- N200	Environmental Studies	AECC-2	2	-	-	2	2	2	25	-	25	50	3Hours
B-HIN- N200	Communicative Hindi	AECC-3	2	-	-	2	2	2	25	-	25	50	2 Hours
B-MMT- N201	Internet Technology and Web Design (Theory)	CC-1B	4	-	-	4	4		50	-	50	100	3 Hours
B-MMT- N202	Internet Technology and Web Design (Practical)		-	-	2	4	2	6	-	25	25	50	3 Hours
B-MMT- N203	Graphic Design & DTP (Theory)	CC-2B	4	-	-	4	4		50	-	50	100	3 Hours
B-MMT- N204	Graphic Design & DTP (Practical)		-	-	2	4	2	6	-	25	25	50	3 Hours
B-MMT- N205	Basics of Animation	CC-3B	5	1	-	6	6	6	75	-	75	150	3 Hours
B-MMT- N206	Human values and Ethics	SEC-2	2	-	-	2	2	2	25	-	25	50	2 Hours
B-MMT- Activity/Hobby 2 2 Satisfactory/Non satisfactory											7		
	Total Credits 26 Total Marks 600												
	Internsh	ip@10 Cro	edits(	<b>450</b> ]	hour	's) after 2	2 <sup>nd</sup> semester	(only for E	Exit Opt	ion)			

### **AECC-N100: Communicative English**

Time: 2 Hrs. Total Marks: 50 Credits: 2 Theory:25

Internal Assessment: 25

Contact hours per week: 2

Course objectives: The paper is designed to enhance proficiency in English Language. It seeks to develop the basics of English Language through different modules. Each unit will enable and capacitate the learner to have communication competence which is required in the present-day world. The basic knowledge of communication will enable the learners to share and enliven ideas, experience and know-how ubiquitous in the world.

Course Learning Outcomes:
After completing the Course, the student will be able to:
AECC-N100.1:Learn the rhetoric of presentation
AECC-N100.2: Learn, comment and respond to correspondence
<b>AECC-N100.3</b> : Learn the basics of grammar and composition
<b>AECC-N100.4</b> : Acquaint with verbal and non-verbal communication

Note: All questions are compulsory.

- Q.1. The paper setter will set two question from unit-II. The student shall attempt one out of the given two. (05)
- Q.2. This question shall be based on unit-III. The student shall attempt one out of the given two.
- Q.3. There will be 15 grammatical items based on unit-IV. The student shall attempt any 10 items. (10)

Internal Assessment: The students shall be required to make presentation /PPT based on unit-I.

#### **Unit-I**

#### Listening and speaking skills

Listening skills (Active-passive, Accent)

Speaking Skills (Accent, Stress, Intonation, Assertion, Rhetorical questions, Pause, Pitch)

Oral presentation, Debates, Elocution and Extempore

#### **Unit-II**

#### Writing skills

Report writing

Paragraph writing

Letter writing

#### **Unit-III**

#### **Technical and Modern communication**

Resume writing

E-mail

Blogs and comments on social media

#### **Unit-IV**

#### Grammar

Noun, Pronoun, Verb, Adverb, Adjective, Preposition, Conjunction and their uses

Common errors in the use of English (Noun, Pronoun, Adjective, Adverb, Conjunctions)

Correct use of verbs and Articles

Vocabulary: Homonyms, Homophones, Pair of words

# **References:**

- o Communicative English, Dr. Jimmy Sharma, Arihant Parkashan Pvt. Ltd.
- o Strengthen Your English, Bhaskaran and Horsburgh, Oxford University Press
- Basic Communication Skills for Technology, and area J Rutherfoord, Pearson Education Asia.
- o Murphy's English Grammar with CD, Murphy, Cambridge University Press
- o English Skills for Technical Students by Orient Longman
- Everyday Dialogues in English by Robert J. Dixson, Prentice-Hall of India Ltd.,
   2006.

# **AECC-N100: Communicative English**

# **CO-PO Mapping Matrix**

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
AECC-N100.1	2	2	2	2	2	2	2	2
AECC-N100.2	2	2	2	2	2	2	2	2
AECC-N100.3	2	2	2	2	2	2	2	2
AECC-N100.4	2	2	2	2	2	2	2	2
Average	2	2	2	2	2	2	2	2

# **CO-PSO Mapping Matrix**

СО	PSO1	PSO2	PSO3	PSO4	PSO5
AECC-N100.1	2	2	2	2	2
AECC-N100.2	2	2	2	2	2
AECC-N100.3	2	2	2	2	2
AECC-N100.4	2	2	2	2	2
Average	2	2	2	2	2

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
AECC-	2	2	2	2	2	2	2	2	2	2	2	2	2
N100.1													
AECC-	2	2	2	2	2	2	2	2	2	2	2	2	2
N100.2													
AECC-	2	2	2	2	2	2	2	2	2	2	2	2	2
N100.3													
AECC-	2	2	2	2	2	2	2	2	2	2	2	2	2
N100.4													
Average	2	2	2	2	2	2	2	2	2	2	2	2	2

### **B-MMT-N101:** Art & Creativity (Theory)

Time:3 Hrs. Total marks:100 Credits: 4 Theory: 50

Internal Assessment: 50

**Course Objectives:** This course is designed for theoretical understanding of aesthetics of arts and creating sense of creativity, colours, and design for making artistic content for multimedia composition.

#### **Course Learning Outcomes:**

After completing the Course, the student will be able to:

**B-MMT-N101.1**: Understand art aesthetics including Indian concept of aesthetics.

**B-MMT-N101.2**: Acquire skills to create interesting and interactive components for multimedia.

**B-MMT-N101.3**: Develop the capacities to design, assess, enact with creative projects.

**B-MMT-N101.4**: Develop the ability to link art theory with using creative practices.

Note:- The question paper will be divided into five Units containing nine questions. Students are required to attempt five questions in all. There will be two questions in each unit from I to IV and students are required to attempt one question from each unit. Unit V will have only one Compulsory question containing six short notes covering the entire syllabus and students are required to attempt any four. All questions will carry equal marks.

#### Unit-I

**Art:** Meaning and Definition of Art

Indian Aesthetics: Ras, Bhav, shadaang, Auchitya, Alankaar, Rasa Nispatti Elements of Art: Point, Line, Form, Shape, Space, Colour, Texture, Value Understanding of Light and Shadow Perception of Color and Color Wheel

#### Unit II

**Principles of Art:** Balance, Rhythm, Harmony, Contrast, Proportion, Dominance, Unity Perspectives on the Creative Process

Landscapes and Composition

Technique of different Art styles: Watercolor, Acrylic painting, pencil color, spray painting, pastel color

#### **Unit –III**

Design: concept, 2D shape design,

Character Designing: Creating appealing characters with a distinctive personality,

C-reating a range of characters that work together as a "Cast"

Typography and its types

Calligraphy

#### **Unit IV**

**Digital Tools:** Overview of Photoshop Interface Understanding of Pen tool, Brush Tool and Brush Panel Shading and Painting techniques in Photoshop Use of Opacity, Flow and Pattern Digital Panting

# **References:**

- Jansen, Charles R. Studying Art History, Prentice Hall Engle word cliffs, M.J.07632, 1986
- o Dhawan, A. K., Dhawan's *Hand Book of History of Art*, Tip Top Trading Co., B-N-1076, HenrySally, *Clay Modeling*, 2008
- o Huguette Kirby, Crafts from Modeling Clay, 2006
- Ghertner, ed. Layout and Composition for Animation, Focal Press, New York Dennis, H.J., Elementary Perspective, Bailliere Tindall and Cox,
- o Ghertner, ed. Layout and Composition for Animation, Focal Press, New York
- o Srivastav, Harish Chandra, Raag Paricha; Sangeet Sadan Prakash; 1971
- o Fox, Dan; Chord Progression theory and practice; Alfred Music; 2013

# **B-MMT-N101:** Art & Creativity (Theory)

# **CO-PO Mapping Matrix**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N101.1	3	3	3	3	3	3	3	3
B-MMT-N101.2	2	3	3	2	3	3	3	3
B-MMT-N101.3	3	2	3	3	3	3	3	3
B-MMT-N101.4	3	3	3	3	2	3	3	3
Average	2.75	2.75	3	3	2.75	3	3	3

# **CO-PSO Mapping Matrix**

СО	PSO1	PSO2	PSO3	PSO4	PSO 5
B-MMT-N101.1	3	3	3	3	3
B-MMT-N101.2	3	3	3	3	3
B-MMT-N101.3	3	3	2	3	2
B-MMT-N101.4	3	3	3	3	3
Average	3	3	2.75	3	2.75

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N101.1	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N101.2	2	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N101.3	3	2	3	3	3	3	3	3	3	3	2	3	2
B-MMT-N101.4	3	3	3	3	2	3	3	3	3	3	3	3	3
Average	2.75	2.75	3	3	2.75	3	3	3	3	3	2.75	3	2.75

# **B-MMT-N102:** Art & Creativity (Practical)

Time:3 Hrs.

Credits: 2

Practical: 25

Internal Assessment: 25

**Course Objectives**: This course is designed for practical understanding of arts and creating sense towards creativity and design for making artistic contents for multimedia composition.

Course Learning Outcomes:
After completing the Course, the student will be able to:
<b>B-MMT-N102.1</b> : Understand Drawing anatomy and Pencil shading techniques.
<b>B-MMT-N102.2</b> : Understand various 2D design patterns
<b>B-MMT-N102.3</b> : Demonstrate about 3D textures
<b>B-MMT-N102.4</b> : Identify and produce different styles of calligraphy

Note:- The students will do practical assignments assigned by the concerned teacher throughout the whole semester and will submit them in the form of hardcopy/softcopy to the teacher. External Examiner will evaluate the work done by the student, will conduct the practical and viva voce.

List of Practical Exercises:
Drawing anatomy
Pencil shading techniques
Analogous Colors and Color Wheel
Composition in Art
Landscape drawing
Cartoon character sketch
Patterns and 2D design
Textures and 3D design
Calligraphy
living and non living objects.
Poster making
Stone art
Mandala art
Typography

# **B-MMT-N102:** Art & Creativity (Practical)

# **CO-PO Mapping Matrix**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N102.1	3	3	3	3	2	3	2	3
B-MMT-N102.2	3	3	3	3	2	3	2	2
B-MMT-N102.3	3	2	3	3	3	3	2	2
B-MMT-N102.4	3	3	3	3	2	3	2	2
Average	3	2.75	3	3	2.25	3	2	2.25

# **CO-PSO Mapping Matrix**

CO	PSO1	PSO2	PSO3	PSO4	PSO5
B-MMT-N102.1	3	2	3	3	3
B-MMT-N102.2	3	2	3	3	3
B-MMT-N102.3	3	2	3	3	3
B-MMT-N102.4	3	2	2	3	3
Average	3	2	2.75	3	3

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N102.1	3	3	3	3	2	3	2	3	3	2	3	3	3
B-MMT-N102.2	3	3	3	3	2	3	2	2	3	2	3	3	3
B-MMT-N102.3	3	2	3	3	3	3	2	2	3	2	3	3	3
B-MMT-N102.4	3	3	3	3	2	3	2	2	3	2	2	3	3
Average	3	2.75	3	3	2.25	3	2	2.25	3	2	2.75	3	3

### **B-MMT-N103: Computer Programming (Theory)**

Time: 3 Hrs. Total Marks: 100 Credits: 4 Theory: 50

Internal Assessment: 50

**Course Objectives**: This course is designed for theoretical understanding of computer programming terms and concepts for creating an interface between a computer system and users.

**Course Learning Outcomes:** 

After completing the Course, the student will be able to:

**B-MMT-N103.1:** Understand the keywords and syntax of C programming.

**B-MMT-N103.2**: Write the C code for a given algorithm.

**B-MMT-N103.3**: Understand and trace the execution of programs written in C language.

**B-MMT-N103.4**: Write program that perform operations using various data types.

Note:- The question paper will be divided into five Units containing nine questions. Students are required to attempt five questions in all. There will be two questions in each unit from I to IV and students are required to attempt one question from each unit. Unit V will have only one Compulsory question containing six short notes covering the entire syllabus and students are required to attempt any four. All questions will carry equal marks.

#### Unit-I

C fundamentals: Problem definition, algorithms, flow charts and their symbols

Variables, C Expressions, C Tokens, Constant

**Data Types** 

Standard library: Input / output

#### **Unit-II**

**Operator and Expressions:** Precedence of Arithmetic Operations, Type Conversion in Expression, Operator Precedence & Associability Managing Input and Output Operations

**Decision Making Statements** 

#### **Unit-III**

Array: One Dimensional Array, Declaration and Initialization of One Dimensional

Array, Two Dimensional Array, Multi-dimensional Array

String: Declaring and Initializing Variables, String Handling Functions,

#### **Unit-IV**

**Functions:** Definition of Functions, Elements of user Defined functions, Return values and their types, Function calls, Function Declaration, Recursion **Structures and Union:** Defining structures, declaring structure variables,

Accessing Structure variables, Structure initialization, union

#### **References:**

- o <u>Kernighan, Brian</u>; <u>Ritchie, Dennis</u> (1988). <u>The C Programming Language</u> (2 ed.). Prentice Hall.
- o Plauger, P.J. (1992). The Standard C Library (1 ed.). Prentice Hall.
- o Banahan, M.; Brady, D.; Doran, M. (1991). The C Book: Featuring the ANSI C Standard (2 ed.). Addison-Wesley.
- o Harbison, Samuel; Steele Jr, Guy (2002). C: A Reference Manual (5 ed.). Pearson.
- o King, K.N. (2008). C Programming: A Modern Approach (2 ed.). W. W. Norton.

# **B-MMT-N103: Computer Programming (Theory)**

# **CO-PO Mapping Matrix**

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N103.1	3	3	3	3	3	3	3	3
B-MMT-N103.2	3	2	3	3	3	3	3	2
B-MMT-N103.3	3	3	2	3	3	3	3	2
B-MMT-N103.4	3	2	3	3	2	2	2	2
Average	3	2.5	2.75	3	2.75	2.75	2.75	2.25

# **CO-PSO Mapping Matrix**

CO	PS	PSO2	PSO3	PSO4	PSO5
	<b>O1</b>				
B-MMT-N103.1	3	2	3	3	2
B-MMT-N103.2	3	2	3	3	2
B-MMT-N103.3	3	2	3	3	2
B-MMT-N103.4	3	2	3	3	2
Average	3	2	3	3	2

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N103.1	3	3	3	3	3	3	3	3	3	2	3	3	2
B-MMT-N103.2	3	2	3	3	3	3	3	2	3	2	3	3	2
B-MMT-N103.3	3	3	2	3	3	3	3	2	3	2	3	3	2
B-MMT-N103.4	3	2	3	3	2	2	2	2	3	2	3	3	2
Average	3	2.5	2.75	3	2.75	2.75	2.75	2.25	3	2	3	3	2

### **B-MMT-N104: Computer Programming (Practical)**

Time: 3 Hrs. Total Marks: 50 Credits: 2 Practical: 25

Internal Assessment: 25

**Course Objectives**: This course is designed for those who want to advance structured and procedural understanding and to improve c programming skills.

### **Course Learning Outcomes:**

After completing the Course, the student will be able to:

**B-MMT-N104.1**: Implement the algorithms and draw flowcharts.

**B-MMT-N104.2**: Demonstrate an understanding of computer programming language concepts

**B-MMT-N104.3**: Define data types and use them.

**B-MMT-N104.4**: Use the concepts of arrays, functions and structure.

Note:- The students will do practical assignments assigned by the concerned teacher throughout the whole semester and will submit them in the form of hardcopy/softcopy to the teacher. External Examiner will evaluate the work done by the student, will conduct the practical and viva voce.

List of Practical Exercises:
Sum of three Number
Simple interest
Find Even/odd number
Largest among two numbers
Largest among three number using control statement
Fibonacci Series.
Prime number
Factorial.
Sum of Digits.
Reverse Number.
Swap two numbers
Table of a number
Create and initialize array
Create student records using structure and union

# **B-MMT-N104: Computer Programming (Practical)**

# **CO-PO Mapping Matrix**

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N104.1	3	3	3	3	3	3	3	3
B-MMT-N104.2	3	2	3	3	3	3	3	2
B-MMT-N104.3	3	3	2	3	3	3	3	2
B-MMT-N104.4	3	2	3	3	2	2	2	2
Average	3	2.5	2.75	3	2.75	2.75	2.75	2.25

# **CO-PSO Mapping Matrix**

CO	PS	PSO2	PSO3	PSO4	PSO5
	<b>O1</b>				
B-MMT-N104.1	3	2	3	3	2
B-MMT-N104.2	3	2	3	3	2
B-MMT-N104.3	3	2	3	3	2
B-MMT-N104.4	3	2	3	3	2
Average	3	2	3	3	2

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N104.1	3	3	3	3	3	3	3	3	3	2	3	3	2
B-MMT-N104.2	3	2	3	3	3	3	3	2	3	2	3	3	2
B-MMT-N104.3	3	3	2	3	3	3	3	2	3	2	3	3	2
B-MMT-N104.4	3	2	3	3	2	2	2	2	3	2	3	3	2
Average	3	2.5	2.75	3	2.75	2.75	2.75	2.25	3	2	3	3	2

#### **B-MMT-N105: Fundamentals of Multimedia**

Time: 3 Hrs. Total Marks: 150 Credits: 6 Theory: 75

Internal assessment: 75

**Course objectives:** This course aims to introduce the fundamental elements of multimedia. The emphasis will be on learning the representations, perceptions and applications of multimedia.

#### **Course Learning Outcomes:**

After completing the Course, the student will be able to:

**B-MMT-N105.1** Understand the basic concepts of Multimedia.

**B-MMT-N105.2** Differentiate the various features and capabilities of different application software.

**B-MMT-N105.3** Communicate ideas and concepts by using the multimedia.

**B-MMT-N105.4** Identify and describe the function of the general skill sets in the multimedia industry.

Note:- The question paper will be divided into five Units containing nine questions. Students are required to attempt five questions in all. There will be two questions in each unit from I to IV and students are required to attempt one question from each unit. Unit V will have only one Compulsory question containing six short notes covering the entire syllabus and students are required to attempt any four. All questions will carry equal marks.

#### Unit-I

Introduction to multimedia
Key elements of multimedia: text, audio, video, graphics, animation
Hardware and software requirements for multimedia
Multimedia equipments
Applications of multimedia

**Unit-II** 

Desktop publishing
Basic design concepts
User interface design
Hypermedia authoring concepts

**Unit-III** 

Process of multimedia production Various file formats of text, audio, video, graphics and animation File compression techniques Creating web based multimedia

**Unit-IV** 

Introduction to animation
Basic audio and video integration techniques
Animation effects
Production process of animation

#### **References:**

- o Multimedia Basics, Volume 1 by Andreas Holzinger, Firewall Media.
- Fundamentals of Multimedia, Ze-Nian Li, Mark S. Drew, Pearson Prentice Hall, 2004
- Multimedia Basics, Suzanne Weixel, Jennifer Fulton, Karl Barksdale, Cheryl Morse, Bryan Morse, Thomson/Course Technology
- o Malik and Agarwal, S. and A. (October 2012). "Use of Multimedia as a New Educational Technology Tool—A Study" (PDF). *International Journal of Information and Education Technology*.

# **B-MMT-N105: Fundamentals of Multimedia**

# **CO-PO Mapping Matrix**

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N105.1	3	3	3	3	3	3	3	3
B-MMT-N105.2	3	3	3	3	3	3	3	3
B-MMT-N105.3	3	3	3	3	3	3	3	3
B-MMT-N105.4	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3

# **CO-PSO Mapping Matrix**

СО	PSO 1	PSO2	PSO3	PSO4	PSO5
B-MMT-N105.1	3	3	3	3	3
B-MMT-N105.2	3	3	3	3	3
B-MMT-N105.3	3	3	3	3	3
B-MMT-N105.4	3	3	3	3	3
Average	3	3	3	3	3

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N105.1	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N105.2	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N105.3	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N105.4	3	3	3	3	3	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3	3	3	3	3	3

# **B-MMT-N106:** Computer Science (Theory)

Time: 3 Hrs. Total Marks:25 Credits: 1 Theory: 20

Internal Assessment: 5

Contact hours per week: 1

**Course Objectives**: This course is designed for theoretical understanding of computer system and its components, functioning and its application software exposure.

Course 1	Learning	0	outcomes:
Course.	Learning	v	utcomes.

After completing the Course, the student will be able to:

**B-MMT-N106.1**: Understand the basic knowledge of computer system.

**B-MMT-N106.2**: Know about the functioning of operating systems.

B-MMT-N106.3 Understand the basic concept of Internet and computer networks .

**B-MMT-N106.4**: Understand the basics of Application Software.

NOTE:- The examiner will set total 10(ten) questions covering the entire syllabus. Student will attempt any five questions. All questions will carry equal marks.

#### **Unit-I**

Operating System - Definition & Functions of Operating System, Basics of Popular Operating Systems; The User Interface, Exploring Computer, Icons, taskbar, desktop, Using Menu and Menu-selection, managing files and folders, Control panel – display properties, add/remove software and hardware, Running an Application, Using help; Creating Short cuts, Basics of O.S Setup; Common utilities.

#### **Unit-II**

**Word Processing:** Introduction to Word Processing, Menus, Creating, Editing & Formatting Document, Spell Checking, Printing, Views, Tables, Word Art, Mail Merge, Macros.

#### **Unit-III**

**Spread Sheet:** Elements of Electronics Spread Sheet, Applications, Creating and Opening of Spread Sheet, Menus, Manipulation of cells: Enter texts numbers and dates, Cell Height and Widths, Copying of cells, Mathematical, Statistical and Financial function, Drawing different types of charts.

#### **Unit-IV**

**Presentation Software:** Creating, modifying and enhancing a presentation, Delivering a presentation, Using sound, animation and design templates in presentation.

#### **REFERENCES BOOKS**

- o Help files from Apache Open Office, https://wiki.openoffice.org/wiki/Documentation
- o Channelle Andy, "Beginning OpenOffice 3: From Novice to Professional", aPress Publications
- o Beginning OpenOffice 3: From Novice to Professional, Andichannele, Apress.
- Microsoft Office 2016 Step by Step: MS Office 2016 Step by S\_p1, By Joan Lambert, Curtis Frye
- o Computer Fundamentals By Pradeep K. Sinha, Priti Sinha, <u>BPB Publications</u>, <u>6th Edition</u>
- o Getting Started with LibreOffice 5.0, Friends of OpenDocuments Inc., Http://friendsofopendocument.com
- o Documentation from LibreOffice, <a href="https://documentation.libreoffice.org/en/english-documentation/">https://documentation.libreoffice.org/en/english-documentation/</a>

# **B-MMT-N106:** Computer Science (Theory)

# **CO-PO Mapping Matrix**

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N106.1	3	3	3	3	3	3	3	3
B-MMT-N106.2	3	3	3	3	3	3	3	3
B-MMT-N106.3	3	3	3	3	3	3	3	3
B-MMT-N106.4	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3

# **CO-PSO Mapping Matrix**

СО	PSO1	PSO2	PSO3	PSO4	PSO5
B-MMT-N106.1	3	3	3	3	3
B-MMT-N106.2	3	3	3	3	3
B-MMT-N106.3	3	3	3	3	3
B-MMT-N106.4	3	3	3	3	3
Average	3	3	3	3	3

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N106.1	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N106.2	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N106.3	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N106.4	3	3	3	3	3	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3	3	3	3	3	3

# **B-MMT-N107: Computer Science (Practical)**

Time: 2 Hrs. Total Marks: 25
Credits: 1 Practical: 20

Internal Assessment: 5

Contact hours per week: 2

**Course Objectives**: This course is designed for practical understanding of commonly used application software and its functioning to the students.

Course Learning Outcomes:
After completing the Course, the student will be able to:
B-MMT-N107.1: Use MS-Word
B-MMT-N107.2: Use MS-Excel
<b>B-MMT-N107.3</b> : Use PowerPoint
B-MMT-N107.4: Create Email account, compose & send emails for personal and
professional communication.

Note:- The students will do practical assignments assigned by the concerned teacher throughout the whole semester and will submit them in the form of hardcopy/softcopy to the teacher. External Examiner will evaluate the work done by the student, will conduct the practical and viva voce.

List of Practical Exercises:
Starting with basics of Operating Systems and its functionalities
Create and format word documents.
Use tables, word Art and other features in your documents.
Use macros to simplify the tasks in a document.
Use mail merge to write once for many.
Use spreadsheet for basic data handling
Apply formulas to sheet for automation.
Use if-else to make certain decisions in a sheet.
Use Charts & Shapes for better visualization of data.
Use filters and data validation controls for control of data
Prepare and format presentations.
Apply slide transitions, animations and sequencing for slides.
Apply different formatting and insert options to make presentation better.
Use rehearse and timing options for a presentation with handouts.

# **B-MMT-N107: Computer Science (Practical)**

# **CO-PO Mapping Matrix**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N107.1	3	3	3	3	3	3	3	3
B-MMT-N107.2	3	3	3	3	3	3	3	3
B-MMT-N107.3	3	3	3	3	3	3	3	3
B-MMT-N107.4	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3

# **CO-PSO Mapping Matrix**

CO	PSO1	PSO2	PSO3	PSO4	PSO5
B-MMT-N107.1	3	3	3	3	3
B-MMT-N107.2	3	3	3	3	3
B-MMT-N107.3	3	3	3	3	3
B-MMT-N107.4	3	3	3	3	3
Average	3	3	3	3	3

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N107.1	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N107.2	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N107.3	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N107.4	3	3	3	3	3	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3	3	3	3	3	3

### **B-MMT-N108:** Activity/Hobby

Gita-A Manual of Life (Option-i)

Course Credit: 02 Total Marks: 50 Marks

Contact Hours: 02 per week

Teaching will be based on the discussion in the class room

Note: There will be no written examinations, knowledge and understanding of Gita teachings will be assessed through discussion by the Students describing the knowledge and implementation of Gita's teachings in daily life for the betterment of our day today life.

#### **Course Outcomes:**

Unit-1: After studying the first unit of the course students will be able to understand meaning, background & relevance of Gita's teaching's in contemporary times.

Unit-II: After studying the second unit of the course students will be able to understand benefits of Karma Yoga, Bhakti Yoga and Gyana Yoga in our daily life.

#### Unit-1

Gita for all: Meaning, background and relevance of Gitaopdesha. Karmayoga as a way to right knowledge; Necessity of Loksamgraha for the service of Humanity.

#### **Unit-II**

Gita for Spiritual world: Karm Yogi as an Ideal Man of Gita, Sthitaprajna as a symbol of ideal master in Gita, Swadharma and Pradharma as a secret of Blissful society, Atma Samyama Yoga; a technique for building an ideal person according to Gita.

#### **Suggested Books:**

- Swami Ramsukhdas, Gita Sadhak Sanjivani Teeka
- Hnuman Prasad Poddhar, Gita Tattvavivechni Teeka
- Gandhi Gita Matta
- Gurudatta Srimadbhagvadgita Vyakhya
- Satyavarta, Srimadbhagvadgita Vyakhya
- Swami Jyanananda, Gita Prerna
- Paramhamsa Yogananda, Srimadbhagvadgita God-Arjuna, Discoruse Aurvind, Essays on Gita.
- S. Radhakrishna, Bhagwvadgita Vyakhya
- Jyaneshwar, Jyaneshwari Gita

### **B-MMT-N108:** Activity/Hobby

Public Speaking (Option-ii)

Course Credit: 02 Total Marks: 50 Marks

Contact Hours: 02 per week

Teaching will be based on the discussion in the class room

Note: There will be no written examinations. Understanding and art of Public speaking will be assessed through discussion and presentation by the Students in the class room.

#### **Course Outcomes:**

Unit-1: After studying the first unit of the course students will be able to understand relevance of Public speaking in their academic and professional life.

Unit-II: After studying the second unit of the course students will be able to write their own speech and analyze the intricacies of speeches of renowned speakers.

#### Unit-1

Public speaking: Meaning and relevance, Characteristics of an effective speaker, Power of words, Use of body language, dressing, mannerisms, Use of effective memory techniques, Overcoming the fear of public speaking- Glossophobia

#### **Unit-II**

Speech: Introduction, body and conclusion, Writing your own speeches, famous speeches of World's greatest orators, Case studies of effective public communicators like TED speakers of both Indian and foreign origin

#### **Suggested Books:**

- The Art of Public Speaking author Dale Carnegie, along with J. Berg Esenwein, Rupa Publications, India (English and Hindi)
- Speak with no fear, Mike Acker, Advantage Publishing Group
- TED Talks, Chris Anderson, Headline Publishing Group
- 50 Prernadayak Bhashan, Fingerprint Publishing

#### **AECC-N200: Environment Studies**

Time: 3 Hrs. Total Marks: 50 Credits: 2 Theory: 25

Internal Assessment: 25

**Scheme of paper:** Total number of questions will be nine. Students have to attempt five questions in all. Questions no. 1 is compulsory. All questions carry equal marks. Each question is of 8 marks.

Course objectives: The aim of this course is to make the students aware about the environmental problems and current global issues related to environment. It provides knowledge about concepts of ecosystem and biodiversity and develops interest in the students about their role in conservation of environment and reducing pollution and waste generation in their surroundings. By understanding the environmental problems, their causes and solutions, the students can apply these to their daily lives.

#### **Course Outcomes (COs) for Theory:**

	comes (COS) for Theory.
COs	On successful completion of the course, the students will be able to:
CO 1	Understand the concept of environmental studies, its scope and importance in the conservation of environment. Understand the concept of ecosystem and different types of natural and artificial ecosystems in the world, the biogeochemical cycling and energy flow in an ecosystem.
CO 2	Describe the various renewable and non-renewable natural resources and their over-exploitation due to increasing demands of rising population. Become aware about biodiversity, its importance and the various threats for biodiversity. Have knowledge of the endangered species and their conservation measures that are needed to be adopted at different levels.
CO 3	Have understanding about the types of pollution and how to reduce pollution levels in air, soil, water, land and from marine bodies, as to develop interest in reducing the solid waste generation as well as its management at household level. Gain knowledge of various global environmental issues like climate change, global warming and ozone depletion and also about different environmental laws implemented to conserve the environment.
CO 4	Understand the concept of population growth, disaster management, impacts of drug abuse and various environmental movements.

#### Course outcome for practical/field work:

CO 1	To get practical knowledge of various environmental issues through project file/assignment
	with case studies.

**Mode of Paper Setting:** Total number of questions set will be nine. Questions no. 1 is compulsory covering the entire syllabus. Two questions will be set from each unit. Students have to attempt five questions in all, one question from each unit including the compulsory question. Each question is of 5 marks. All questions carry equal marks. Final theory exam time allowed will be of 3 hours.

#### Unit I

**Introduction to environmental studies:** Multidisciplinary nature of environmental studies; Scope and importance; Concept of sustainability and sustainable development.

**Ecosystems**: What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems: a) Forest ecosystem, b) Grassland ecosystem, c) Desert ecosystem, d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) (8 lectures)

#### Unit II

#### Natural Resources: Renewable and Non-renewable Resources

- •Land resources and landuse change; Land degradation, soil erosion and desertification.
- •Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations.
- •Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state).

•Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

#### **Biodiversity and Conservation**

- •Levels of biological diversity: genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots
- •India as a mega-biodiversity nation; Endangered and endemic species of India
- •Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.
- •Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value. (16 lectures)

#### Unit III

#### **Environmental Pollution**

- •Environmental pollution: types, causes, effects and controls; Air, water, soil and noise pollution
- •Nuclear hazards and human health risks
- •Solid waste management: Control measures of urban and industrial waste, Pollution case studies.

#### **Environmental Policies & Practices**

- •Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture
- •Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).
- •Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.

(15 lectures)

#### Unit IV

#### **Human Communities and the Environment**

- •Human population growth: Impacts on environment, human health and welfare.
- •Resettlement and rehabilitation of project affected persons; case studies.
- •Disaster management: floods, earthquake, cyclones and landslides.
- •Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan.
- •Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.
- •Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi).

Drugs and their effects; Useful and harmful drugs; Use and abuse of drugs; Stimulant and depressant drugs. Concept of drug de-addiction. Legal position on drugs and laws related to drugs.

(6 lectures)

#### Practical/Field work

- •Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc.
- •Visit to a local polluted site-Urban/Rural/Industrial/Agricultural.
- •Study of common plants, insects, birds and basic principles of identification.
- •Study of simple ecosystems-pond, river, Delhi Ridge, etc.

(Equal to 5 lectures)

#### **Suggested Readings:**

- 1. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
- 2.Gadgil, M., & Guha, R. 1993. This Fissured Land: An Ecological History of India. Univ. of California Press.
- 3. Gleeson, B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.
- 4.Gleick, P. H. 1993. Water in Crisis. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
- 5.Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates, 2006.
- 6.Grumbine, R. Edward, and Pandit, M.K. 2013. Threats from India's Himalaya dams. Science, 339: 36-37.
- 7.McCully, P. 1996. Rivers no more: the environmental effects of dams (pp. 29-64). Zed Books.
- 8.McNeill, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century.
- 9.Odum, E.P., Odum, H.T. & Andrews, J. 1971. Fundamentals of Ecology. Philadelphia: Saunders.
- 10.Pepper, I.L., Gerba, C.P. & Brusseau, M.L. 2011. Environmental and Pollution Science. Academic Press.
- 11. Rao, M.N. & Datta, A.K. 1987. Waste Water Treatment. Oxford and IBH Publishing Co. Pvt. Ltd.
- 12. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. 2012. Environment. 8th edition. John Wiley & Sons.
- 13. Rosencranz, A., Divan, S., & Noble, M. L. 2001. Environmental law and policy in India. Tripathi 1992.
- 14. Sengupta, R. 2003. Ecology and economics: An approach to sustainable development. OUP.
- 15.Singh, J.S., Singh, S.P. and Gupta, S.R. 2014. Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.
- 16.Sodhi, N.S., Gibson, L. & Raven, P.H. (eds). 2013. Conservation Biology: Voices from the Tropics. John Wiley & Sons.
- 17. Thapar, V. 1998. Land of the Tiger: A Natural History of the Indian Subcontinent.
- 18. Warren, C. E. 1971. Biology and Water Pollution Control. WB Saunders.
- 19. Wilson, E. O. 2006. The Creation: An appeal to save life on earth. New York: Norton.
- 1) 20. World Commission on Environment and Development. 1987. Our Common Future. Oxford University

#### **B-HIN-N200: Communicative Hindi**

Time: 2 Hrs. Total Marks: 50 Credits: 2 Theory: 25

Contact hours per week: 2 Internal assessment: 25

**Course Objectives:** The Paper is designed to enhance proficiency in Hindi Language. It seeks to develop the basic of Hindi Language through different modules. Each unit will enable the learner to have the communication in Hindi and to share and express ideas and experiences.

Course Learning Outcomes:
After completing the Course, the student will be able to:
<b>B-HIN-N200.1</b> : Develop the knowledge of basics of Hindi language.
<b>B-HIN-N200.2</b> : Improve vocabulary in Hindi language.
<b>B-HIN-N200.3</b> : : Inculcate the knowledge of grammar in Hindi language
<b>B-HIN-N200.4</b> : Learn correct uses of Hindi language in media writing

Note:- The question paper will be divided into five Units containing nine questions. Students are required to attempt five questions in all. There will be two questions in each unit from I to IV and students are required to attempt one question from each unit. Unit V will have only one Compulsory question containing six short notes covering the entire syllabus and students are required to attempt any four. All questions will carry equal marks.

Unit – I

Hkk"kk dh ladYiuk Hkk"kkbZ Hksn&ekSf[kd ,oa fyf[kr Hkk"kk dk ekudhdj.k&fLFkfr ,oa pqukSfr;k; Hkk"kk rFkk lekt dk ikjLifjd vUrlZcU/kA

Unit – II

fgUnh O;kdj.k 'kCn :i vkSj okD; jpuk nsoukxjh fyfi vkSj o`fr mPpkj.k vo;o] i;kZ;] foykse] lekukFkhZ] vusdkFkhZ 'kCn fgUnh dh iz;ksxkRed =qfV;ka

Unit – III

fgUnh lkfgR; dk laf{klr bfrgkl fgUnh lkfgR; dh vk/kfud izo`fRr;ka fgUnh dh lkfgfR;d fo/kkvksa dk ifjp; fgUnh x|,oa i|

Unit – IV

iz;kstu ewyd fgUnh dk vfHkizk; ,oa vko';drk tulapkj ek/;e vkSj fgUnh Hkk"kk] ehfM;k dh Hkk"kk dh izd`fr ,oa fopyu {ks=h; izHkko ,oa {ks=h; Hkk"kkbZ iz;ksx eqfnzr ek/;e vkSj fgUnh jsfM;ks ,oa Vsyhfotu dh Hkk"kk foKkiu ,oa lks'ky ehfM;k dh Hkk"kk

Suggested Readings:

HkkfV;k] MkW- dSyk'kpUn] vuqokndyk % fl)kar vkSj iz;ksx] r{kf'kyk izdk'ku] u;h fnYyhA

'kekZ] j?kquUnu izlkn] iz;kstu ewyd fgUnh % fl)kar vkSj O;ogkj] fo'ofo|ky; izdk'ku] okjk.klhA

v;~;j] fo'oukFk] vuqokndyk] izHkkr izdk'ku] fnYyh

frokjh] HkksykukFk] fgUnhHkk"kk dh lkekftd Hkwfedk] nf{k.k Hkkjr fgUnhizpkj lfefr] enzkl

>kYVs] MkW- naxy] iz;kstu ewyd fgUnh % fl)kar vkSj iz;ksx] ok.kh izdk'ku] u;hfnYyh

xksnjs] MkW- fouksn] iz;kstu ewyd fgUnh] ok.kh izdk'ku] u;h fnYyh jk.kk] egsUnz flag] iz;kstu ewyd fgUnh ds vk/kqfud vk;ke] g"kkZ izdk'ku] vkxjkA

dqekj pan] tulapkj ek/;eksa esa fgUnh] Dykfldy ifCyf'kax dEiuh] fnYyh

#### **B-HIN-N200: Communicative Hindi**

### **CO-PO Mapping Matrix**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-HIN-N200.1	3	3	3	3	2	2	2	3
B-HIN-N200.2	3	3	3	3	2	2	2	3
B-HIN-N200.3	3	3	3	3	2	2	2	3
B-HIN-N200.4	3	3	3	3	2	2	2	3
Average	3	3	3	3	2	2	2	3

### **CO-PSO Mapping Matrix**

CO	PSO1	PSO2	PSO3	PSO4	PSO5
B-HIN-N200.1	2	2	2	2	2
B-HIN-N200.2	2	2	2	2	2
B-HIN-N200.3	2	2	2	2	2
B-HIN-N200.4	2	2	2	2	2
Average	2	2	2	2	2

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-HIN-N200.1	3	3	3	3	2	2	2	3	2	2	2	2	2
B-HIN-N200.2	3	3	3	3	2	2	2	3	2	2	2	2	2
B-HIN-N200.3	3	3	3	3	2	2	2	3	2	2	2	2	2
B-HIN-N200.4	3	3	3	3	2	2	2	3	2	2	2	2	2
Average	3	3	3	3	2	2	2	3	2	2	2	2	2

### **B-MMT-N201:** Internet Technology and web design (Theory)

Time: 3 Hrs. Total Marks: 100

Credits: 4 Theory: 50

Internal assessment: 50

**Course Objectives:** This course is designed for understanding the process of static website making and creating software application tools like lists, tables, hyperlinks etc. using html tags.

#### **Course Learning Outcomes:**

After completing the Course, the student will be able to:

**B-MMT-N201.1**: Become familiar with web design and learn how to implement web theories into practice.

**B-MMT-N201.2**: Learn the language of the web using HTML tags and CSS.

**B-MMT-N201.3**:Use knowledge of HTML and CSS code and HTML editor to create personal and business websites following current professional and/or industry standards.

**B-MMT-N201.4**: Use critical thinking skills to design and create websites.

Note:- The question paper will be divided into five Units containing nine questions. Students are required to attempt five questions in all. There will be two questions in each unit from I to IV and students are required to attempt one question from each unit. Unit V will have only one Compulsory question containing six short notes covering the entire syllabus and students are required to attempt any four. All questions will carry equal marks.

#### Unit I

Introduction to Internet, History and Its applications Browser, Search Engine, FTP, URL Email and Blog Introduction to Network- LAN, WAN, MAN, Network Topologies-Ring, Bus, Star, Mesh and Tree topologies Hardware requirements for Network

#### Unit II

Process of static web designing
Basic elements of web page
HTML: introduction and basic elements;
Tags and functions
Head, title and body elements

#### **Unit III**

Block and text level elements
Layout designing of a webpage
Links, images, fonts, colour, style sheet and character entities
Text formatting
Interface between HTML and other coding languages

#### **Unit IV**

HTML tables and frames Creating Page Structure with HTML Tables Diagramming an HTML Table Web browser support for HTML

# **References:**

"An Introduction to HTML and JavaScript: for Scientists and Engineers" By David R. Brooks, Springer, 2007

"Head First HTML and CSS" **By Elisabeth Robson, Eric Freeman, O'Reilly Media Inc.** "Schism's Easy Outline HTML" **By David Mercer, Mcgraw Hill Professional**Matthew MacDonald, "HTML 5 - The Missing Manual", 3rd ed, 2015, O'Reilly
David Sawyer McFarland, "CSS 3 - The Missing Manual", 3rd ed, 2013, O'Reilly
W3School HTML/CSS Tutorials, References and Examples, http://www.w3schools.com

# **B-MMT-N201: Internet Technology and web Design (Theory)**

# **CO-PO Mapping Matrix**

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N201.1	3	3	3	3	3	3	3	3
B-MMT-N201.2	3	3	3	3	3	3	3	3
B-MMT-N201.3	3	3	3	3	3	3	3	3
B-MMT-N201.4	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3

# **CO-PSO Mapping Matrix**

СО	PSO1	PSO2	PSO3	PSO4	PSO 5
B-MMT-N201.1	3	3	3	3	3
B-MMT-N201.2	3	3	3	3	3
B-MMT-N201.3	3	3	3	3	3
B-MMT-N201.4	3	3	3	3	3
Average	3	3	3	3	3

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N201.1	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N201.2	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N201.3	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N201.4	3	3	3	3	3	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3	3	3	3	3	3

### **B-MMT-N202: Internet Technology and Web Design (Practical)**

Time: 3 Hrs. Total Marks: 50 Credits: 2 Practical: 25

Internal Assessment: 25

**Course Objectives:** This course is designed for practical understanding of static website making and creating software application tools like lists, tables, hyperlinks etc. using html tags.

#### **Course Learning Outcomes:**

After completing the Course, the student will be able to:

**B-MMT-N202.1**: Insert graphic elements within a webpage.

**B-MMT-N202.2**: Create a link/hyperlink with in a webpage.

B-MMT-N202.3: Insert table, headings, ordered list, unordered list with in a

**B-MMT-N202.4**: Use Cascading style sheet (CSS) with in a web page.

Note:- The students will do practical assignments assigned by the concerned teacher throughout the whole semester and will submit them in the form of hardcopy/softcopy to the teacher. External Examiner will evaluate the work done by the student, will conduct the practical and viva voce.

List of Practical Exercises:
Introduction to HTML. Create a basic HTML file
Create a static web page which defines all text formatting tags of HTML
Create a Time table using table tags of HTML
Create webpage using list tags of HTML(ordered, unordered, definition list)
Create webpage to include image using HTML tag
Create link using HTML tag
Create a layout of webpage using HTML tag
Create employee registration form using HTML tag
Apply style sheet in Web page (inline, embedded and link)
Create a static website using HTML tags according to their own interest

# B-MMT-N202: Internet Technology and Web Design (Practical) CO-PO Mapping Matrix

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N202.1	3	3	3	3	3	3	3	3
B-MMT-N202.2	3	3	3	3	3	3	3	3
B-MMT-N202.3	3	3	3	3	3	3	3	3
B-MMT-N202.4	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3

# **CO-PSO Mapping Matrix**

СО	PSO1	PSO2	PSO3	PSO4	PSO5
B-MMT-N202.1	3	3	3	3	3
B-MMT-N202.2	3	3	3	3	3
B-MMT-N202.3	3	3	3	3	3
B-MMT-N202.4	3	3	3	3	3
Average	3	3	3	3	3

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N202.1	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N202.2	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N202.3	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N202.4	3	3	3	3	3	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3	3	3	3	3	3

### **B-MMT-N203: Graphic Design & DTP (Theory)**

Time:3 Hrs. Total Marks: 100 Credits: 4 Theory: 50

Internal assessment: 50

**Course Objectives**: This course is designed for thorough understanding of computer graphic designing software concepts and their user interface and for learning the graphic tools using that interface.

#### **Course Learning Outcomes:**

After completing the Course, the student will be able to:

**B-MMT-N203.1**: Understand the basic concepts of graphic elements

**B-MMT-N203.2**: Know the functioning of basic colour aesthetics

**B-MMT-N203.3**: Develop the capacities to elaborate the process of graphic design

**B-MMT-N203.4**: Develop ability to merge and design text and images for publishing various desktop publishing modules.

Note:- The question paper will be divided into five Units containing nine questions. Students are required to attempt five questions in all. There will be two questions in each unit from I to IV and students are required to attempt one question from each unit. Unit V will have only one Compulsory question containing six short notes covering the entire syllabus and students are required to attempt any four. All questions will carry equal marks.

#### Unit-I

Introduction to graphics, tools of graphics
Uses & Types of graphics, Presentation graphics
Elements and principles of graphic design
Study of vector images- its advantage and application areas,
Difference between vector and raster images

#### **Unit-II**

Introduction to Photoshop workspace, tools and menus

Layers and blending modes

Color theory; saturation, tint, shades, tones, hue

Color modes, colour palette, editing a Swatch, using patterns, colour wheel

#### **Unit-III**

Introduction to Logo: types, elements and purpose of logo

Process of logo designing

Introduction to poster and types

Page layout and page design

Designing Pamphlets, ad banners, photo collage

#### **Unit-IV**

Introduction to desktop publishing (DTP)

Hardware requirements

**Desktop Publishing Softwares** 

Publication media, E-books and digital library management

Publishing as a business, Economics of E-Publishing

### **References:**

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- o Computer Graphics by Sinha & Udai, Tata McGraw Hill, India
- Fundamentals of Computer Graphics By Peter Shirley, Michael Ashikhmin, Steve Marschner, CRC Press
- o Fundamentals of Computer Graphics And Multimedia by D. P. Mukherjee, PHI Learning Pvt. Ltd.
- o Graphic Designers : Occupational Outlook Handbook: U.S. Bureau of Labor Statistics
- o Sarkar, N.N.; Art and Print Production; Oxford University Press;2013.
- o Eckhardt, C. Robert, Weibel Bob and Nace, Ted *Desktop Publishing Secrets*, Peachpit Press Berkeley, California, 1992.
- o *Bear, Jacci Howard*. "What's Involved in Desktop Publishing?". *Lifewire*. Retrieved 2019-05-02.
- Amanda Presley (2010-01-28). "What Distinguishes Desktop Publishing From Word Processing?". Bright Hub. Retrieved 2019-05-02
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# **B-MMT-N203: Graphic Design & DTP (Theory)**

# **CO-PO Mapping Matrix**

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N203.1	3	3	3	3	3	3	3	3
B-MMT-N203.2	3	3	3	3	3	3	3	3
B-MMT-N203.3	3	3	3	3	3	3	3	3
B-MMT-N203.4	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3

# **CO-PSO Mapping Matrix**

CO	PSO1	PSO2	PSO3	PSO4	PSO5
B-MMT-N203.1	3	3	3	3	3
B-MMT-N203.2	3	3	3	3	3
B-MMT-N203.3	3	3	3	3	3
B-MMT-N203.4	3	3	3	3	3
Average	3	3	3	3	3

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N203.1	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N203.2	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N203.3	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N203.4	3	3	3	3	3	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3	3	3	3	3	3

### **B-MMT-N204: Graphics Design & DTP (Practical)**

Time:3 Hrs. Total Marks: 50 Credits: 2 Practical: 25

Internal Assessment: 25

**Course Objectives**: This course is designed for practical understanding of graphic designing and menus, tools and its applications and production formats.

#### **Course Learning Outcomes:**

After completing the Course, the student will be able to:

**B-MMT-N204.1**: Make use of graphic elements

**B-MMT-N204.2**: Demonstrate the concept of image retouching, smoothing.

**B-MMT-N204.3**: Design ad banners for websites and digital campaigning banners.

**B-MMT-N204.4**:Design various desktop publishing elements such as logos, newsletters, pamphlets, calendars, book and magazine covers etc.

Note:- The students will do practical assignments assigned by the concerned teacher throughout the whole semester and will submit them in the form of hardcopy/softcopy to the teacher. External Examiner will evaluate the work done by the student, will conduct the practical and viva voce.

List of Practical Exercises:
Selection and cutting of objects
Creating backgrounds and textures
Image retouching, Smoothing skin & wrinkles
Photo Manipulation
Working with texts and paragraph styles
Creating of logo
Working with colours
Designing ad banners for websites
Creating digital campaigning banners
To create a newspaper page in page design software
To create a magazine cover using page designing software
To create a flex banner advertisement
To edit the image using layers
To retouch and refurnish the image files
To study the paper selection for print outputs
To create a graphic ad banner for a portal

# **B-MMT-N204: Graphic Design (Practical)**

# **CO-PO Mapping Matrix**

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N204.1	3	3	3	3	3	3	3	3
B-MMT-N204.2	3	3	3	3	3	3	3	3
B-MMT-N204.3	3	3	3	3	3	3	3	3
B-MMT-N204.4	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3

# **CO-PSO Mapping Matrix**

СО	PSO1	PSO2	PSO3	PSO4	PSO5
B-MMT-N204.1	3	3	3	3	3
B-MMT-N204.2	3	3	3	3	3
B-MMT-N204.3	3	3	3	3	3
B-MMT-N204.4	3	3	3	3	3
Average	3	3	3	3	3

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N204.1	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N204.2	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N204.3	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N204.4	3	3	3	3	3	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3	3	3	3	3	3

### **B-MMT-N205: Basics of Animation (Theory)**

Time: 3 Hrs. Total Marks: 150

Credits: 6 Theory: 75

Internal assessment: 75

**Course Objectives**: This course is designed to teach the students very fundamentals of Animation. They will get to learn all the principles which will help them to learn and understand how actual animation works

#### **Course Learning Outcomes:**

After completing the Course, the student will be able to:

**B-MMT-N205.1**: Familiarize with various approaches, methods and techniques of Animation Technology.

**B-MMT-N205.2**: Explore different approaches in computer animation.

**B-MMT-N205.3**:Get knowledge about Flipbook, Storyboarding.

B-MMT-N205.4: Get knowledge about production stages of animation.

Note:- The question paper will be divided into five Units containing nine questions. Students are required to attempt five questions in all. There will be two questions in each unit from I to IV and students are required to attempt one question from each unit. Unit V will have only one Compulsory question containing six short notes covering the entire syllabus and students are required to attempt any four. All questions will carry equal marks.

Unit-I

Introduction to Animation
Definition and types of animation
Terms used in animation
Overview of animation Film History: Earlier stage and Modern Era
Indian Animation Industry

**Unit-II** 

Basic Principles of animation Role of computer in animation Animation production process: preproduction stage, Production and post-production stage.

**Unit-III** 

Story writing/script writing Model sheets and its types Flipbook animation Storyboard and types of Storyboard

**Unit-IV** 

Keyframes ,Inbetweens —cleanups Layouts and backgrounds,Illustrations X-sheets,Animatics Sound mixing, special effects, rendering

# B-MMT-N205: Basics of Animation (Theory) <a href="#">CO-PO Mapping Matrix</a>

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N205.1	3	3	3	3	3	3	3	3
B-MMT-N205.2	3	3	3	3	3	3	3	3
B-MMT-N205.3	3	3	3	3	3	3	3	3
B-MMT-N205.4	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3

# **CO-PSO Mapping Matrix**

СО	PSO1	PSO2	PSO3	PSO4	PSO 5
B-MMT-N205.1	3	3	3	3	3
B-MMT-N205.2	3	3	3	3	3
B-MMT-N205.3	3	3	3	3	3
B-MMT-N205.4	3	3	3	3	3
Average	3	3	3	3	3

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N205.1	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N205.2	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N205.3	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N205.4	3	3	3	3	3	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3	3	3	3	3	3

#### **B-MMT-N206: Human values and Ethics**

Time: 2 Hrs. Total Marks: 50 Credits: 2 Theory: 25

Contact hours per week: 2 Internal Assessment: 25

**Course Objectives:** This paper will help the learners to understand the need and significance of human values and ethics in their life.

#### **Course Learning Outcomes:**

After completing the Course, the student will be able to:

**B-JMC-N207.1**: correlate the need of human values to sustained happiness and prosperity- the core aspirations of human beings.

**B-JMC-N207.2**: express the knowledge of human values and analyse their importance in holistic perspective for a peaceful world.

#### Unit -1

Human Values: Meaning and Definitions

- (a) Understanding the need of human values and value education. Self-exploration, Concept of happiness and prosperity. Right understanding, understanding body as an instrument of I, Living in harmony, reaching highest potential in digital age through care & empathy balancing interests and expectations.
- (b) Basic human values: Honesty, kindness, integrity, courage, co-operation, commitment, cleanliness, spirituality, understanding duties & rights.

#### **Unit-II**

Life Values and universal ethics

- (a) Life Values:- Understanding of harmony in yourself family: Trust and respect, society; Coexistence & unity in diversity Nature mutually interacting units and universe.
- (b) Universal Ethics-Loyalty, respect for others, adherence to the law, doing good and avoiding harm to other, accountability, sensitive towards environment. Transparency, impartiality and objectivity.

#### **Suggested Books:-**

- 1) Ethics. Integrity and Aptitute (3rd Edition)- M. Karthikeyan Pub: McGraw Hill,
- 2) A foundation course in Human Values and Professional Ethics- RR Gaur. R Sangal. GP Bagaria Pub: abe books
- 3) Ebook-lg- UGC (26-11-2019)
  - PDF- Human Value www.uge.ac.in (available on UGC Website)
- 4) Patanjala Yoga Sutra- Samadhi Pada

# **B-MMT-N206: Human values and Ethics**

# **CO-PO Mapping Matrix**

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
B-MMT-N206.1	3	3	3	3	3	3	3	3
B-MMT-N206.2	3	3	3	3	3	3	3	3
B-MMT-N206.3	3	3	3	3	3	3	3	3
B-MMT-N206.4	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3

# **CO-PSO Mapping Matrix**

CO	PSO1	PSO2	PSO3	PSO4	PSO5
B-MMT-N206.1	3	3	3	3	3
B-MMT-N206.2	3	3	3	3	3
B-MMT-N206.3	3	3	3	3	3
B-MMT-N206.4	3	3	3	3	3
Average	3	3	3	3	3

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
B-MMT-N206.1	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N206.2	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N206.3	3	3	3	3	3	3	3	3	3	3	3	3	3
B-MMT-N206.4	3	3	3	3	3	3	3	3	3	3	3	3	3
Average	3	3	3	3	3	3	3	3	3	3	3	3	3