FACULTY OF ENGINEERING AND TECHNOLOGY

Syllabus

For

BACHELOR OF VOCATION (B.VOC.)
(ANIMATION)
(Semester: I – VI)
Session: 2019–20

GURU NANAK DEV UNIVERSITY
AMRITSAR

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Defaulters will be prosecuted.

(ii) Subject to change in the syllabi at any time.
Please visit the University website time to time.
<table>
<thead>
<tr>
<th>S. No.</th>
<th>Subject Name</th>
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<tr>
<td>I.</td>
<td>Computer Fundamentals for Animation – I</td>
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<tr>
<td>II.</td>
<td>Foundation Art</td>
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<tr>
<td>III.</td>
<td>Principles of Animation</td>
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<td>IV.</td>
<td>Creative Design</td>
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<td>V.</td>
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<td>VI.</td>
<td>Punjabi (Compulsory) / **ਮੰਗਲੀ ਪੰਜਾਬੀ /</td>
<td>50</td>
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<tr>
<td></td>
<td>** Punjab History &amp; Culture (From Earliest Times to C 320)</td>
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<td>VII.</td>
<td>* Drug Abuse: Problem, Management and Prevention (Compulsory Paper)</td>
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<tr>
<td>I.</td>
<td>Storyboarding &amp; Screenplay</td>
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<td>II.</td>
<td>2D Digital Animation: Flash</td>
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<td>III.</td>
<td>Introduction to 3D Maya</td>
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<td>IV.</td>
<td>Introduction to 3D Maya Modeling</td>
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<td>V.</td>
<td>Industrial Training</td>
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<td>Punjabi (Compulsory) / **ਮੰਗਲੀ ਪੰਜਾਬੀ /</td>
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<td>** Punjab History &amp; Culture (C 320 TO 1000 B.C.)</td>
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Note: * Marks of this Paper will not be included in the Total Marks.
** (Special Paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
### Semester III

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<tr>
<td>I</td>
<td>Introduction to Photography</td>
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<td>II</td>
<td>Web Designing</td>
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<td>III</td>
<td>Video Editing</td>
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<td>IV</td>
<td>3D Maya Texturing &amp; Lighting</td>
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<td>V</td>
<td>Rigging &amp; Skinning (Practical)</td>
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<td>VI</td>
<td>3D Character Animation using Maya (Practical)</td>
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### Semester IV

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<tr>
<td>I</td>
<td>Camera Techniques</td>
<td>50</td>
<td>25</td>
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<td>II</td>
<td>Maintaining Workplace Health and Safety</td>
<td>75</td>
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<td>III</td>
<td>VFX Design</td>
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<td>Audio Editing</td>
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<td>VI</td>
<td>Minor Project</td>
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<td><em>(ESL-221)</em> Environmental Studies (Compulsory)</td>
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*Note: - This Paper marks are not included in the total marks.*
### SEMESTER – V

<table>
<thead>
<tr>
<th>Paper</th>
<th>Subject Name</th>
<th>Theory</th>
<th>Practical</th>
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<tr>
<td>I.</td>
<td>Electronic Media</td>
<td>50</td>
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<td>II.</td>
<td>Film Direction &amp; Documentary</td>
<td>50</td>
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<td>III.</td>
<td>3D Architecture Visualization using 3D MAX (Interior and Exterior Designing)</td>
<td>50</td>
<td>-</td>
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<tr>
<td>IV.</td>
<td>Acting and Direction for animation</td>
<td>-</td>
<td>100</td>
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<td>V.</td>
<td>3D Architecture Visualization using 3D MAX (Interior and Exterior Designing)</td>
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<td>100</td>
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### SEMESTER – VI

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<td>I.</td>
<td>Publicity Designing &amp; Media Laws</td>
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<td>II.</td>
<td>Career Management For Animation</td>
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<td>III.</td>
<td>Project (Individual)</td>
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<td>Group Project Development</td>
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Paper–I: COMPUTER FUNDAMENTALS FOR ANIMATION – I

Time: 3 Hours

Max. Marks: 50
Theory: 35
Practical: 15

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Note for Candidate:
The students can use only Non–programmable & Non–storage type calculator.

Section–A

Introduction To Computers: Computer basics, Classification of computers, Hardware and software, Components of computer System, Operating system, Input and output devices, Motherboard, CPU, Memory, Storage devices.

Graphics Devices and Supporting Software: Graphic cards, Open GL, Hardware drivers.

Section–B

MICROSOFT WORD: Opening & saving files, editing word documents, converting files to different format and printing documents.

FORMATTING DOCUMENTS:
Text Formatting– Font styles, Font selection– style, size, color etc, Type face– Bold, Italic, Underline, Case settings, Highlighting, Special symbols,
Paragraph Formatting: Alignments, Indents, Line Space, Margins, Bullets & Numbers
Page Setup: Setting margins, layout and orientation.
Creation of table: Table settings, Borders, Alignments, Insertion, deletion, Merging, Splitting, Sorting, and Formula
Create Table of Contents: With index, page number, author name, date and time etc., Creating Master Documents, Web page.
Section–C

MS POWER POINT:

Introduction to Presentation: Opening new presentation, Different presentation templates, setting backgrounds, selecting presentation layouts.

Different Power Point Views: Normal, Slide sorter, Slide show and Notes view.

Creating A Presentation: Setting Presentation style, Adding text to the Presentation

Formatting A Presentation: Adding style, Color, gradient fills, Arranging objects, Adding Header & Footer, Slide Background, Slide layout.

Adding Graphics and Animation to the Presentation: Inserting pictures, movies, tables etc into presentation, Drawing Pictures using drawing tools.

Section–D

Internet: Definition, Uses of Internet–Definition of Web Addressing–URL, web Browsers.

E–MAIL: Anatomy of E–mail, managing an e–mail account

Suggested Readings:

4. Peter Weverka, “Microsoft Office 2016 All–In–One for Dummies”, Wiley
6. Office Complete, BPB Publications
Paper–II: FOUNDATION ART

Time: 3Hours

Max. Marks: 50
Theory Marks: 35
Practical Marks: 15

Instructions for the Paper Setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A

Basics: Visual and creative development of an Artist–(05%) Demonstration and lectures on required skills for an artist, difference between seeing and observing.

Drawing and Sketching: Concept of drawing, free hand drawing exercises from object and nature to study proportion, volume and visual perspective, rapid sketching techniques, rapid sketching from live models, sketching from memory, live action.

Section–B

Various Mediums: Pencil Colors, Charcoal, Pen and Ink, Water Colors, Poster Colors, Oil Pastel Colors, other waste material such as and, stones, grass, hardboard, color papers & clay etc.

Still Life: Study of different forms (basket, artificial fruits books, containers, bottles, round objects, drapery etc), still life with line as well light and shade.

6 visual elements of artForm, Shape, Line, Color, Space, Texture

Section–C

Anatomy Study: Simple free–hand drawing from human figure to study proportion. Centre of gravity, inclination of main masses based on anatomical structure.

Memory Drawing and Outdoor Sketching: Exercises in drawing from memory to develop the sense of observation and the capacity to retain and recall images and their co–ordination. Introduction to various aspects and techniques of drawing and sketching both indoor and outdoor.

Light &Shade: The effects of lights on objects, the high light, middle tone and dark tone. Shading of geometrical shapes.
Section–D

Composition: Importance of composition in design, Basic rules of composition, Role of colors in composition, Introduction to human figure, Ideal proportion in parts of human body, Composition of animals and birds, Composition of landscapes, Rural and urban habitation, Poor and rich habitation, Farms, roads, mountains, rivers, seas etc., Drawing compositions of various objects for animation, Making compositions of various landscapes for animation, Character Designing, Creation of Character with Personality, Perspective Drawing.

Suggested Readings:

BACHELOR OF VOCATION (B.VOC.) (ANIMATION)
SEMESTER – I

Paper–III: PRINCIPLES OF ANIMATION

Time: 3 Hours
Max. Marks: 100
Theory Marks: 50
Practical Marks: 50

Instructions for the Paper Setters:-
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Section–A

Drawing for Animation
Meaning of storyboarding and process chart of storyboard development
Meaning of layout and process chart of layout, Different levels under layout
Characterization, steps for character construction, Character Construction with Line of Action and Silhouette Theory

Section–B

Drawing for Animation
Intro to animation production process
Exercises and warm–ups
Quick studies from real life
Sequential movement drawing
Thumbnails, Motion studies, drawing for motion

Section–C

Basic principles in animation: Squash and Stretch, Anticipation, Staging, Straight ahead and pose to pose, Follow through and overlapping action, Slow in and slow out, Arcs, Secondary action, Timing, Exaggeration, Solid drawing, Appeal,

Section–D

Basic principles in animation Mass and weight, Character acting, Volume, Line of action, Path of action, Walk cycles of animal and human
Create a bouncing ball and pendulum animation demonstrating the Principles of Animation.

Suggested Readings:
BACHELOR OF VOCATION (B.VOC.) (ANIMATION)
SEMESTER – I

Paper–IV: CREATIVE DESIGN

Time: 3 Hours

Max. Marks: 100
Theory: 25
Practical: 75

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A
(COREL DRAW)
1. Introduction to Corel draw, Graphical User Interface, vector graphics
2. Difference between vector and raster graphics
3. Work space orientation–setting documents
4. Symbols–patterns
5. Blends, clipping paths and masks.
6. Art work by Trace tools and live paint
7. Concepts of Interface, Navigation and Work spaces
8. About libraries, Rulers and guides, Smart guides, Bounding box, Path tools, Pen tool, About Grouping, layers, patterns, symbol.

Section–B
1. About Blends and meshes, liquefy and envelope tools.
2. Make some graphics using lines
3. Draw some graphics on paper by combining basic shapes
4. Draw logos for the companies
5. Design a text logo for magazine/Newspaper
6. Design visiting cards, greeting cards, Kids magazine cover, college magazine cover, brochure.
7. Make any Advertisements from newspaper
8. Design pamphlets on any company
9. Design information brochures on any company
1. Introduction to Photoshop and its interface, Navigation and All tools. Working with basic selections, advanced selections—1(on the basis of channels, color range, extract, filter etc.).
2. Make a perfect cropping of some images using Photoshop
3. Prepare a cutout of some images using Photoshop
4. Place nice background for those images
5. Prepare nice background using gradient tool
6. Scan various images
7. Color adjustment of those images (Photo Retouching), creating / restore old images
8. Convert a B&W image into color (Use variation)
9. Choose a theme (Music, Festivals, Sports, Dance) and Design 5–8 graphics on them.
10. Color Modes, Color Corrections, Advanced color correction techniques (levels, Curves, Hue, Saturation etc.).
11. Transformation tools
12. Design that Ad from your own style.
13. Create Nature scene (winter and summer) digital painting.

Section–D
1. Make digital painting (Use brush, pencil, smudge etc.).
2. Make something like modern art keeping in mind color combination.
3. Create a collage of Indian art and culture, a collage of wildlife animals, a portrait of celebrity (Digital painting).
5. Photoshop filters –Smart Filters, Filter Gallery, exercises.
6. Create a cartoon character, animal character using pen tool
7. Vector art
8. Plan a story of a character & Make its backgrounds in three/four frames.
9. Make posters on nature/earth.
10. Matte Painting–Composition.
11. Creating images for the web: Exporting images from Photoshop.
12. Designing movie posters, music album posters, Texture making.
13. GIF animation.

Suggested Readings:
2. “Adobe Illustrator CC Classroom in a Book”, Pearson Education India
Instructions for the Paper Setters:—
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The syllabus is divided in four sections as mentioned below:

Section–A

Reading Skills: Reading Tactics and strategies; Reading purposes—kinds of purposes and associated comprehension; Reading for direct meanings.

Section–B

Reading for understanding concepts, details, coherence, logical progression and meanings of phrases/expressions.

Activities:
• Comprehension questions in multiple choice format
• Short comprehension questions based on content and development of ideas

Section–C

Writing Skills: Guidelines for effective writing; writing styles for application, personal letter, official/business letter.

Activities:
• Formatting personal and business letters.
• Organising the details in a sequential order

Section–D

Resume, memo, notices etc.; outline and revision.

Activities:
• Converting a biographical note into a sequenced resume or vice-versa
• Ordering and sub-dividing the contents while making notes.
• Writing notices for circulation/boards

Recommended Books:
• Oxford Guide to Effective Writing and Speaking by John Seely.
• English Grammar in Use (Fourth Edition) by Raymond Murphy, CUP
पाठ-चूँध अठैं पाठ-पुस्तकांि

मैवमत दे

आधुनिक निर्माण (विधिपत्र पत्र),
(मंग. सुधिन्दु भोज अठैं संबंधित संख्य मंगु)
बादः लखचा रैंड पृथवीदेविती, अभिन्निता।
(पृथिवी मात्वा रुपान्धर, मांि)

मैवमत दी

विकल्पतम वारत (विकल्पतम वेश-संशोधित)
संख्य. मंग.अंगिता,
भाषिक संवैषय पृथिवी, डॉ.चित्रपति। (खें 1 ते 6)
(लिखण द्वा मांि, लिखण-ਸ्त्री)

मैवमत दी

(क) पेंड़ा चरण
(अ) पेंड़ा पहुंच वे पृथिवी दे टूटत।

मैवमत दी

(क) भाषिक पुस्तक विधित : पृथिवी भोज, पृथिवी पान दे विद्यालय, मांि, विद्यालय,
पृथिवी-पृथिवी।
(अ) भाषा केंद्रोहुँ : भाषा द्वा राजविभागी तृष, भाषा अठैं दृष्टि-शोध दा भोज, भाषिक
पृथिवी विभागां दे पद्य-शिल्प।

ांव-चूँद अठैं पाठधारण चरण उपाधियाँ
1. पृथिवी पान दे चर बाण तेरसी। उठ बाण विर्धन दे पृथिवी पृथिवी साठव।
2. विकल्पतम दे तृष्ण पृथिवी बदले रुढ़। उठ बाण विर्धन दे पृथिवी साठव।
3. उठेव पृथिवी दे चराण पृथिवी रुढ़।
4. देख चेक मैंट बाण तृष्ण पृथिवी आं भूमि चूँद आंचों लेंग दे लेंग चाँद
हृद-पृथिवी विश्व चर मवसा।
पृष्ठ-खूब

पृष्ठ-बिनी

पृष्ठ-बिनी

पृष्ठ-बिनी

पृष्ठ-बिनी

अन्तर्दृष्टि अभ्यास के पक्ष के लिए निर्देश

1. पृष्ठ भंडार दे जान जटा उठाओ। उन जटा निवें दे पृष्ठ बंधे लगें।
2. विफलियों दे बंधे पृष्ठ बंधे उठाओ। उन जटा निवें दें पृष्ठ जटा व्यवस्था है।
3. उपेक्षा पृष्ठ दे घरघर भरा उठा।
4. पृष्ठ कितने ठहर रहा सबक जाए उं पृष्ठ सी ठंड अंदों ठंड दे ठंड जान ठंड-पृष्ठ हिंद जान व्यवस्था है।
Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A
1. Physical features of the Punjab and its impact on history.
2. Sources of the ancient history of Punjab

Section–B
3. Harappan Civilization: Town planning; social, economic and religious life of the Indus Valley People.

Section–C
5. Social, Religious and Economic life during Rig Vedic Age.

Section–D
7. Teachings and impact of Buddhism
8. Jainism in the Punjab

Suggested Readings:
PROBLEM OF DRUG ABUSE

Section – A

Meaning of Drug Abuse:

Section – B

Consequences of Drug Abuse for:
- Family: Violence.
- Society: Crime.
- Nation: Law and Order problem.

Section – C

Management of Drug Abuse:
Medical Management: Medication for treatment and to reduce withdrawal effects.

Section – D

Psychiatric Management: Counselling, Behavioural and Cognitive therapy.
Social Management: Family, Group therapy and Environmental Intervention.
References:
1. Ahuja, Ram (2003), Social Problems in India, Rawat Publication, Jaipur.
BACHELOR OF VOCATION (B.VOC.) (ANIMATION)
SEMESTER – II

Paper–I: STORYBOARDING AND SCREENPLAY

Time: 3 Hours
Max. Marks: 75
Theory Marks: 50
Practical Marks: 25

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A–D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A

STORY BOARD
Story Board Panel: Styles of Story Board, Scene Types, Long Shot or Establishing Shot, Full Shot, Close–up, Medium shot, aerial shot, Extreme Close–up, Sequence, Scene, Shot, Camera Movements, Dialogue, Page Numbering, Flops.

Section–B

STORY BOARD
The Floating Frame, Transitions, Steps for a Great Storyboard.
Medium and target audience, and how this may affect animation processes

Preparing Storyboards Using Digital Software: Animatics or Story Reel, Translate the script/story into a series of illustrated frames

Section–C

Screenplay
Introduction, Script, Three Act Structure, Act One, Act Two, Act Three, Writing Synopsis (Treatment), Dialogue,

Section–D

Screenplay
Formatting Script for Animation, Basic Guidelines for Animation Screenplays.
Casting
Voice Over

Suggested Readings:
2. Simon A Mark “Storyboards: Motion in Art”, Focal Press.
4. Vinod Chopra Films “3 Idiots: The Original Screenplay”, Om Books
Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A
1. WORKING WITH THE DRAWING & SHAPE TOOLS
   a. Drawing Shapes in Flash
   b. Drawing with Primitive Tools
   c. Comparing Merge Drawing Mode vs. Object Drawing Mode
   d. Modifying Shapes with the Direct Selection Tool & Sub selection Tool
   e. Using the Deco Tool
   f. Using Gradients & Mixing Colors
2. WORKING WITH SYMBOLS
   a. Understanding the Characteristics of Symbols
   b. Creating & Editing Symbols
   c. Exploring Button States & the Button Library
3. IMPORTING & MODIFYING GRAPHICS
   a. Importing Bitmap Graphics & Basic Shape Modifications
   b. Importing & Working with Vector Objects
   c. Importing a Photoshop File into Flash
4. WORKING WITH TEXT
   a. Selecting Text & Other Basic Techniques
   b. Modifying Text Properties
   c. Breaking Text Apart & Converting Text to Shapes
   d. Working with TLF Text
Section–B

5. BASICS OF ANIMATION
   a. Timeline Basics & Using Layers
   b. Animating Text with Shape Tweens & Creating Frames & Key frames
   c. Creating a Frame–by–Frame Animation & Onion Skin
   d. Using Motion Tweens & Creating a Motion Tween along a Path
   e. Working with the Motion Editor

6. Adding Actions to Buttons

7. Adding Sounds to Button States

8. Create sequences and scenes/shots.

Section–C

9. Create a cartoon character

10. Creation of emotions, actions and expressions of a Cartoon Character

11. Incorporate audio / music assets to the character

12. Create shadows for animation.

Section–D

13. Animation / Transition of a character from one scene to another.


15. Export the flash document.


Suggested Readings:


Paper–III: INTRODUCTION TO 3D MAYA

Time: 3 Hours  
Max. Marks: 50

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A
Introduction to the Interface of Maya
Creating a Project in Maya, about Project Settings
Saving Files and File Types: about .ma and .mb file types.
Viewing Geometry (Navigation), reviewing the Viewport menus,
Quick layout buttons, Change and resize panels, Change the display of objects.

Section–B
Transformation of 3D coordinates: World space, object space, and local space, Freeze and reset transformations.
QWERTY tool box: About Selection Tool (Q), Move Tool (W), Rotate Tool, (E), Scale Tool (R) and Manipulator Tool (T).
Maya user interface, Menu bar, Tool bar, hot box
Using the shelf, construction history, hot keys, using the spacebar, manipulating a view,
Selecting objects, type of selections. Single selection, adding and subtracting selection
Edit menu selection options.

Section–C
Marquee selection, Lasso selection, selection mask
Using hyper shade, hyper graph, Relationship editor and outliner
The channel box, Layer Editor, Attribute Editor, the connection editor
Duplicating objects duplicate with transform and duplicate special options.
Pivot points, Grouping and Parenting, Working with Shelves, Using layers
Section-D

Introduction to snapping (to grid, point, curves and view planes)

2D snapping and 3D snapping

Helpline, command line, range slider, command line and playback controls, script editor, MEL, preferences. Basic Introduction to Creating of Simple primitives, poly count, and surface normal's, Introduction to materials, Introduction to different Lights, Introduction to camera types.

Rendering a still, rendering an AVI, Rendering an image sequence

Suggested Readings:

1. Darakhshani Dariush, “Introduction to Autodesk Maya 2015”. Autodesk
2. PalamarTodd, “Mastering Autodesk Maya 2016”. Wiley
Provided text
**Editing Curves:** duplicate surface curves, attach curves, detach curves, align curves, open/close curves, move seam, cut curve, intersect curves, curve fillet, insert knot, reverse curve direction, rebuild curve, add points tool, curve editing tool, project tangent, modify curves, Bezier curves. Converting Nurbs to polygons and subdivision

**Part – II (PRACTICAL)**
1. Creating all types of Polygon like Cube, Sphere, Cylinder
2. Creating all types of NURBS like NURBSCircle, NURBS Square
3. Create Table Chair, Bed, and LED screen Using polygon
4. Create flower pot and Guiter using NURBS
5. Creating Doors, Windows frame, Panel, using Boolean
6. Import 3D Model File
7. Rendering Model View using Default Renderer
8. Setting the furniture in rooms according to its requirement
9. Create a Cartoon or Realistic character
10. Creating Blanket with Bed, curtains and Table Cloth using special modifiers

**Suggested Readings:**
1. Darakhshani Dariush, “Introduction to Autodesk Maya 2015”. Autodesk
2. Palamar Todd, “Mastering Autodesk Maya 2016”. Wiley
The students will undergo industrial training for 4 – 6 weeks and need to submit the internship certificate for the above said duration and work done during the period. The industrial partners are required to submit the marks of students obtained in training to the course coordinator.
PAPER–VI: COMMUNICATION SKILLS IN ENGLISH – II

Time: 3 Hours

Max. Marks: 50
Theory Marks: 35
Practical Marks: 15

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Course Contents:

SECTION–A
Listening Skills: Barriers to listening; effective listening skills; feedback skills.
Activities: Listening exercises – Listening to conversation, News and TV reports

SECTION–B
Attending telephone calls; note taking and note making.
Activities: Taking notes on a speech/lecture

SECTION–C
Speaking and Conversational Skills: Components of a meaningful and easy conversation; understanding the cue and making appropriate responses; forms of polite speech; asking and providing information on general topics.
Activities: 1) Making conversation and taking turns
2) Oral description or explanation of a common object, situation or concept

SECTION–D
The study of sounds of English, Stress and Intonation, Situation based Conversation in English, Essentials of Spoken English.
Activities: Giving Interviews

PRACTICAL / ORAL TESTING

Marks: 15

Course Contents:-
1. Oral Presentation with/without audio visual aids.
2. Group Discussion.
3. Listening to any recorded or live material and asking oral questions for listening comprehension.

Questions:-
1. Oral Presentation will be of 5 to 10 minutes duration (Topic can be given in advance or it can be student’s own choice). Use of audio visual aids is desirable.
2. Group discussion comprising 8 to 10 students on a familiar topic. Time for each group will be 15 to 20 minutes.

Note: Oral test will be conducted by external examiner with the help of internal examiner.
PAPER-VI: पेपर (कला)  

पाठ-विषय: पाठ-पुस्तक  

50  

सेमेस्टर-II  

मैवमल-पी  

आध्यात्मिक पुस्तक (विषय द्वारा),  
(मं. सुचिपत्र बीजेन ओडे संघभाग मिश्र मैं)  
बाह्य सामग्री देता सुविधाचारी, अभिप्राय  
(प्रशस्न-पाठ, पाठ-प्रश्न)  

मैवमल-ढी  

टिडिकाम जानक (टिडिकाम िलेक्ष-मागद्दि)  
मं. म.म.मंदिर,  
पेपरी माध्यम पूर्वक, अभिभावक। (खंड 7 ते 12)  
(माध, लिखित मैली)  

मैवमल-ढी  

(०) संस्कृत-विषयक अंश संस्कृत उद्देश्य : पुस्तक, मूँटके मंचघर  

(१) संस्कृत मूँटभा  

मैवमल-ढी  

(०) मिष्ट मिष्ट  

(१) भुजाते अंश भुजात  

औं-धर अंश यथी-यथाभाव रही उपकिते 

1. रूपम पृक्त दे चाष बना टेकड़ी। उत बना दिखौ दे रूपम पृक्त टेकड़ी।  
2. दिनागहास्ती के बुख रूप रूपम बनते रहत। उत बना दिखौ दिव रूपम साधसी दे।  
3. धरेज रूपम दे बलयँ भी उ।  
4. पैशाच मैं चलत रात लेखनु रेवल चले उं रूपम से रूपम दे रूपम चल्य रूपम  

(दिख-पृक्तम दिख दे मन्त दे)
BACHELOR OF VOCATION (B.VOC.) (ANIMATION)
SEMESTER – II

PAPER-VI: पृथक धारणा
(In lieu of Compulsory Punjabi)

भाग-काॅर्ट

मैममल-है

माध्यम शैक्षिक: पढ़ात अधे वर्ड
(लघु, पंजिका, विचित्र, विवेक, विविध, विविध, संस्कृत, अक्षर, अक्षर से अक्षरबिच)

मैममल-ढी

पृथक धारणा घटक: पृथक धारणा घटक
(१) माध्यम धारणा, मेन्यु धारणा अधे विवेक धारणा (पढ़ात अधे वर्ड)
(२) विविध धारणा, पृथक धारणा अधे अक्षर धारणा (पढ़ात अधे वर्ड)

मैममल-भी

पृथक धारणा
मेन्यु धारणा

मैममल-बी

मैममल-बी

पृथक धारणा (पृथक धारणा घटक)
अधे अक्षर से अक्षरबिच

भांती-पूर्व अधे पृथक धारणा घटक

1. पृथक धारणा जो चाह जो चाहें। उत जो जो दिखें वह पृथक पढ़े जाएं।
2. विभिन्न भांति जो हैं वह धारणा पृथक बढ़ाएं। उत जो जो दिखें वह पृथक समफाईं।
3. अक्षर जो पृथक अधे सरल रुप रहें।
4. पृथक धारणा जो चाह जो चाहें उत पृथक जो चाहें दें। उत जो जो दिखें वह पृथक धारणा दिखें चाह सबसा रहें।
Time: 3 Hours

Max. Marks: 50

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A
1. Alexander’s Invasion and its Impact
2. Punjab under Chandragupta Maurya and Ashoka.

Section–B
3. The Kushans and their Contribution to the Punjab.
4. The Panjab under the Gupta Empire.

Section–C
5. The Punjab under the Vardhana Emperors
6. Socio-cultural History of Punjab from 7th to 1000 A.D.

Section–D
7. Development of languages and Education with Special reference to Taxila
8. Development of Art & Architecture

Suggested Readings:
1. L. M Joshi (Ed), History and Culture of the Punjab, Art-I, Punjabi University, Patiala, 1989 (3rd Edition)
PAPER – VII: DRUG ABUSE: PROBLEM, MANAGEMENT AND PREVENTION
(COMPULSORY PAPER)

DRUG ABUSE: MANAGEMENT AND PREVENTION
Time: 3 Hours Max. Marks: 50

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section – A
Prevention of Drug abuse:
Role of family: Parent child relationship, Family support, Supervision, Shaping values, Active Scrutiny.

Section – B
School: Counselling, Teacher as role-model. Parent-teacher-Health Professional Coordination, Random testing on students.

Section – C
Controlling Drug Abuse:
Media: Restraint on advertisements of drugs, advertisements on bad effects of drugs, Publicity and media, Campaigns against drug abuse, Educational and awareness program

Section – D
References:
1. Ahuja, Ram (2003), Social Problems in India, Rawat Publication, Jaipur.
Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A
Introduction to photography, meaning of Photography and its applications
Types of Photography: Product Photography, Nature Photography, Event Photography, Travel Photography, Sport photography

Section–B
Camera Lens and its Types,
Aperture, Shutter Speed, Depth of Field, Types of Still Camera

Section–C
Different types of camera angles and shots
Camera angles and shots: Low angle, High angle, Dutch tilt, Ariel shot, Closeup shot, mid shot, long shot

Section D
Composition: Rule of Thirds, Golden Section, Head room, Frame within a frame, Symmetry
Photography golden hours

Suggested Readings:
BACHELOR OF VOCATION (B.VOC.) (ANIMATION)
SEMESTER – III

Paper II: WEB DESIGNING

Time: 3 Hours
Max. Marks: 75
Theory Marks: 50
Practical Marks: 25

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section A
Basics in Web Design: Brief History of Internet, what is World Wide Web, Why create a web site, Web Standards, Audience requirement.

Section B
Introduction to HTML: What is HTML, HTML Documents, Basic structure of an HTML document, creating an HTML document, Mark up Tags, Heading-Paragraphs, Line Breaks, and HTML Tags
Elements of HTML: Introduction to elements of HTML, Working with Text, Working with Lists, Tables and Frames, Working with Hyperlinks, Images and Multimedia, Working with Forms and controls

Section C
Introduction to Cascading Style Sheets: Concept of CSS, Creating Style Sheet, CSS Properties, CSS Styling(Background, Text Format, Controlling Fonts), Working with block elements and objects, Working with Lists and Tables, CSS Id and Class, BoxModel(Introduction, Border properties, PaddingProperties, Margin properties), CSS Advanced(Grouping, Dimension, Display, Positioning, Floating, Align, Pseudo class, Navigation Bar, Image Sprites, Attribute sector), CSS Color, Creating page Layout and Site Designs.

Section D
Introduction to Web Publishing or Hosting: Creating the Web Site, Saving the site, working on the web site, creating web site structure, Creating Titles for web pages, Themes-Publishing web sites.

Suggested Readings:
3. David A. Crowder,” Building a Web Site For Dummies“, John Wiley & Sons
BACHELOR OF VOCATION (B.VOC.) (ANIMATION)
SEMESTER – III

Paper III: VIDEO EDITING

Time: 3 Hours
Max. Marks: 50
Theory Marks: 25
Practical Marks: 25

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section-A

Introduction: What is Premiere Pro, Why and What for, Concept of Non-linear editing.

Digital video principles: Video formats, frame rates, aspect ratios and Video outputs

Introductory project: Workflow, Adding footage, Time code, Basic, Interface of premiere pro, All panels of premiere (tools, project, monitor, source, Timeline, audio meters, misc).

Importing and organizing footage: Project, Sequence, Capturing, Importing, Sorting.

Section-B

Basic video editing: Rough editing, Preliminary, overlay edit, Layers, Ripple edit, Slip edit, Razor tool, moving edit, Navigating, understand all Tools on toolbox for editing clips.

The art of video editing: Establishing, Emotional Fixing, Matching.

Helpful editing techniques: Markers, replacing footage, exporting still, rearranging clips, Targeting, Disconnecting and Offline.

Adjusting clip properties: Rubber band, Position, Anchor, Size.

Playing with time: Speed, Rate, and Backwards
Section–C

Attributes of video: Pixels, Frame rates, HD

Creating moving elements: Layered, Animating and Fading.

Applying video transitions: Applying (various types), Effectively, Default.

Working with audio: Cutting music, Changing, Fixing, and Censoring

Applying video effects: Flare, Lightning, Mirror

Various effects: adjust, blur, sharpen, channel, color correction, Distort, generate, image control, keying, noise, perspective, Stylize, time, transition, transform utility, video.

Section D

Basic compositing: Compositing, Green (keying), Blend.

Color correction: White balance, Contrast, Luminance, Cinematic, Vignette, Night. Making titles, credits and lower thirds: Titling and superimposing, Third, Credits.

Exporting video: Sequences, Media encoder, Formats, Portions, and Letter boxed.

Introduction to other similar applications: Final cut Pro.

Exercises to be implemented (Practical)

1. Slideshow of images
2. Synchronize text with audio
3. Create news ticker (lower third)
4. Mash up
5. Create a video includes shots from different angles
6. Create a one-minute short film

Suggested Readings:

1. Adobe “Adobe Premiere Pro CC Classroom in a Book”, Pearson Education India
Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

MAYA TEXTURING
Section–A
1. Introduction to UV mapping.
2. Creating UV’s Polygons
3. Automatic UV mapping, Planar UV mapping, Cylindrical UV mapping, Spherical UV mapping, User-defined UV mapping, Camera UV mapping, Transfer UVs between meshes, Confirm UV placement.
4. UV Texture editor overview UV sets: Create UV sets, Switch between UV sets, Duplicate, rename, or delete a UV set, assign a texture to a UV set, Copy UVs from one UV set to another.
5. Editing UV’s in Texture editor: Select UVs, Display a subset of UVs, Dolly or track within the UV Texture Editor, Display a texture behind the UVs, Delete UVs, Update a texture image after UV modification, Use the UV Texture Editor grid, Save an image of the UV layout, Modify UVs using the UV Lattice Tool, Modify UVs using the UV Smudge Tool, Separate & attach UV shells, Display overlapping UVs, Map border UVs to a square or circle, Straighten border UVs, Relax and untangle UV’s, Unfold a UV mesh, Flip or rotate UV shells, Copy UVs, Color attributes between polygons.

Section–B
1. Maya shader Blinn, Lambert Ocean shader
4. Mix Materials and presets and ambient occlusion
6. Texture a match box
7. Texture a Cartoon Character.
8. Texture an interior or exterior 3d model
MAYA LIGHTING

Section–C

1. Introduction to Lighting.
2. Working with Maya Lights 1-Point, Direct, Spot.
3. Working with Maya Lights 2-Ambient, Area and Volume.
4. Direct Illumination-Creating and Illuminating a Stage Show.
5. Three Point Lighting and Exterior Lighting.
6. Cast shadows, decay rate, Previewing lighting and shadows
7. Creating depth map Shadow, creating ray traced shadows
8. Concept of lighting system and shadows.
9. Creating area light shadows, setting area light visibility,
10. Creating soft shadows with spot lights

Section D

11. Setting illumination for interiors
12. Tuning global illumination and Global illumination photons
13. Using final gather for indirect lighting
14. Tuning final gather and reusing
15. Lighting Passes& Composting in editing software
16. Light an interior or exterior 3d model
17. Light a character model

Suggested Readings:

1. Lanier Lee, “Advanced Maya Texturing and Lighting”, Wiley
Paper V: RIGGING & SKINNING (Practical)

Time: 3 Hours  Max. Marks: 50

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Introduction to rigging concepts – hierarchies, skinning
Naming conventions
Creating, organizing and parenting joints
Joint quantity/placement strategy
Understanding and fixing joint orientation
  • Modify>Freeze transformations
  • Skeleton>orient joint
  • Flipping local rotation axis
  • Mirroring skeletons.
Skinning and weight painting
Exporting, importing and mirroring skin weights
FK VS IK
Setting up IK for feet
Grouped IK structure + foot controls
Freezing transforms to zero out controllers
Locking and hiding attributes
Adding finger joints
Adding influences with locked weights
Using curve controls to drive joints
Facial blendshapes
Rig a new bipedal character

Suggested Readings:
Paper VI: 3D CHARACTER ANIMATION USING MAYA (Practical)

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

1. Maya Timeline, Manual key & Auto Key
2. Animation Graph editor
3. Play blast
4. Principles of Animation in MAYA
5. Create a character and animate it
6. Create a Walk cycle
7. Animating a character using Blocking Techniques
8. Creating an interaction between two characters
9. Creating and Animating grappling hook
10. Creating a Character poses using blend shapes
11. Creating Anatomy of expression for facial Animation
12. Facial expressions’ animation
13. Creating and Animating realistic eyes
14. Creating and Animating a dialogue scene
15. Incorporate music / audio assets to a character

Suggested Readings:
Paper I: CAMERA TECHNIQUES

Time: 3 Hours
Max. Marks: 75
Theory Marks: 50
Practical Marks: 25

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four
Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are
required to attempt five questions, selecting at least one question from each Section. The fifth
question may be attempted from any Section.

Section–A
1. Digital Photography: Introduction
2. Meaning of Camera Techniques and its uses
3. Key elements for High Photos

Section–B
1. Creative white balance
2. Nature Photography with different angles
3. Using Marcos in an indoor and outdoor setting
4. Using HDR

Section–C
1. Time lapse shots
2. Image editing and standard image formats
3. Advanced editing techniques in product photography

Section D
1. Travel Photography
2. Sport Photography
3. Use of Dutch angles in Photography

Suggested Readings:
   Digital Pictures”, CreateSpace Independent Publishing Platform
Paper II: MAINTAINING WORKPLACE HEALTH AND SAFETY

Time: 3 Hours

Max. Marks: 75

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A
Importance of High Standards of Health and Safety at workplace
Identification of health and Safety hazards
Identification of people responsible for health and safety and mechanisms to reach out to them

Section–B
Ensuring the success of safety and health management system: monitoring, reporting various incidents and revision of plan.
Types of emergencies, Emergency plans, Evacuation and other emergency procedures in case of fire, flood, earthquake etc.

Section–C
Fire safety in the workplace, Different types of fire extinguishers, classification and usage
Medical assistance in case of health, symptoms and first aid for different medical conditions like cardiac failure, choking, unconsciousness etc.

Section D
Safety guidelines of System/equipments and machines, various safety symbols: meaning and importance.
Governmental norms and regulations regarding Health and Safety at workplace
A fire drill exercise

Suggested Readings:
Paper III: VFX DESIGN

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A
1. Importing Footage and Editing it, Data Management
2. Key-framing and tweening
3. Workflow, Exporting and File Formats
4. Masks, Layer Modes, Basic Effects

Section–B
1. Keying Layer Properties
2. Nesting, Pre-comping
3. Non-destructive Workflow
4. Text & Title effect

Section–C
1. Color Correction in After Effects
2. Manipulating Footage
3. Green Screening
4. Wire and rig removal

Section D
1. Rotoscoping with mask and Roto brush
2. Tracking and stabilizing
3. Advanced Effects-Rain,
4. 3D Camera
5. Particles and Physics

Suggested Readings:
1. Adobe “Adobe After Effects CC Classroom in a Book”, Pearson Education India
Note: The question paper will be set on the spot by the examiner.

1. Creating a 2D Slide show.
2. Designing a text animation.
3. Developing a 3D layer animation.
4. Create a stabilized video.
5. Removing a green screen and adding a background.
6. Use of a mask effect.
8. Creating a rough footage and using the wire removal option.
9. Designing a motion graphics with basic effects.
10. Creating a matte painting.
11. Designing a text shatter and flow like liquid using tools.
12. Creating a text and following the path with the light effects.
13. Creating a water effect using CC particle world and median.
14. Creating a fire effect, smoke effects using particles.
15. Creating rain using particles.
16. Rotoscoping & tracking of a footage
17. After Effects template
18. 3D Camera Tracking
19. Motion graphics
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SEMESTER – IV

Paper V: AUDIO EDITING

Time: 3 Hours
Max. Marks: 50
Theory Marks: 25
Practical Marks: 25

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A
INTRODUCTION: Analog and digital audio, Basic Preferences, working in the Waveform View, Level Meters, Supported File Types, Basic Recording. Understanding various digital audio formats like .WAV, .MP3, etc.,
SOUND FILE EDITING: Trimming, Adjusting Volume Levels, Opening Files with Bridge, Applying Fades with Fade in and Fade Out, Applying and Controlling fades, Changing Volume with Key frames, Editing Key frames, Adjusting Volume, Combining Sound files with Mix Paste, Workflow, waveform volume, and pan envelopes.

Section–B
MANIPULATING AUDIO: trim/crop, mute, reverse, smooth/enhance, Fade in/out, insert silence, etc.
WORKING WITH MULTI TRACK PROJECTS: Starting a Multi-track Project, Adding Tracks to an Existing Multi-track Project, Multi track Project Control and Tools, Muting and Soloing, Trimming and Fading, Key framing, Replacing and Moving Tracks, Internal Edits, Finalizing the Two-Track Mix, insert track markers, adding multiple tracks, adjusting track, time.

Section–C
CREATE LOOP: Create Loop Overview, Selecting and Trimming the Loop, Multi tracking with Loops, Equalize Volume and Match Volume.

Section D
OVERVIEW OF EFFECTS: Working with the Effects Rack, optimizing a Voice Track, mastering a Music Track, Working more with Presets, Reverb, Delay, Sound level, Equalization, Special.
AUDIO EFFECTS: EQ, Volume, chorus, distortion, Delay/echo, pitch
Practical:
1. Record one-minute voiceover using microphone
2. Editing the recording and add background music

Suggested Readings:
During Semester-IV, the students need to submit an animation project prepared using techniques and tools taught during the course (Adobe Photoshop, Adobe Illustrator, Corel Draw, Adobe Flash, Adobe Premiere, Autodesk Maya and Adobe AfterEffects).

**Following points should be taken care of while working on project:**

1. Students can choose themselves the subject matter and scenes
2. A project can be done jointly by maximum of two students
3. Minimum of 750 frames
4. Use at least two different software
5. Effective use of cameras, focus on viewers’ attention
6. Project report showcasing the stages of the project
Teaching Methodologies
The Core Module Syllabus for Environmental Studies includes class room teaching and field work. The syllabus is divided into 8 Units [Unit-1 to Unit-VII] covering 45 lectures + 5 hours for field work [Unit-VIII]. The first 7 Units will cover 45 lectures which are class room based to enhance knowledge skills and attitude to environment. Unit-VIII comprises of 5 hours field work to be submitted by each candidate to the Teacher in-charge for evaluation latest by 15 December, 2019.

Exam Pattern:  
End Semester Examination- 75 marks  
Project Report/Field Study- 25 marks [based on submitted report]  
Total Marks- 100

The structure of the question paper being:

Part-A, Short answer pattern with inbuilt choice  
25 marks

Attempt any five questions out of seven distributed equally from Unit-1 to Unit-VII. Each question carries 5 marks. Answer to each question should not exceed 2 pages.

Part-B, Essay type with inbuilt choice  
50 marks

Attempt any five questions out of eight distributed equally from Unit-1 to Unit-VII. Each question carries 10 marks. Answer to each question should not exceed 5 pages.

Project Report / Internal Assessment:

Part-C, Field work – 25 marks [Field work equal to 5 lecture hours]
The candidate will submit a hand written field work report showing photographs, sketches, observations, perspective of any topic related to Environment or Ecosystem. The exhaustive list for project report/area of study are given just for reference:

1. Visit to a local area to document environmental assets: River / Forest/ Grassland / Hill / Mountain / Water body / Pond / Lake / Solid Waste Disposal / Water Treatment Plant / Wastewater Treatment Facility etc.
2. Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
3. Study of common plants, insects, birds
4. Study of tree in your areas with their botanical names and soil types
5. Study of birds and their nesting habits
6. Study of local pond in terms of wastewater inflow and water quality
7. Study of industrial units in your area. Name of industry, type of industry, Size (Large, Medium or small scale)
8. Study of common disease in the village and basic data from community health centre
9. Adopt any five young plants and photograph its growth
10. Analyze the Total dissolved solids of ground water samples in your area.
11. Study of Particulate Matter (PM₂.₅ or PM₁₀) data from Sameer website. Download from Play store.
12. Perspective on any field on Environmental Studies with secondary data taken from Central Pollution Control Board, State Pollution Control Board, State Science & Technology Council etc.
Unit-I
The multidisciplinary nature of environmental studies
Definition, scope and importance, Need for public awareness

(2 lectures)

Unit-II
Natural Resources: Renewable and non-renewable resources:
Natural resources and associated problems.
(a) Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
(b) Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
(c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
(d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
(e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alterante energy sources, case studies.
(f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
  • Role of an individual in conservation of natural resources.
  • Equitable use of resources for sustainable lifestyles.

(8 Lectures)

Unit-III
Ecosystems
• Concept of an ecosystem
• Structure and function of an ecosystem
• Producers, consumers and decomposers
• Energy flow in the ecosystem
• Ecological succession
• Food chains, food webs and ecological pyramids
• Introduction, types, characteristic features, structure and function of the following ecosystem: Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)

(6 Lectures)

Unit-IV
Biodiversity and its conservation
• Introduction – Definition: genetic, species and ecosystem diversity
• Biogeographical classification of India
• Value of biodiversity: consumptive use, productive use, social, ethical aesthetic and option values
• Biodiversity at global, national and local levels
• India as a mega-diversity nation
• Hot-spots of biodiversity
• Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts
• Endangered and endemic species of India
• Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity

(8 Lectures)
Unit-V

Environmental Pollution:
Definition:
- Causes, effects and control measures of Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear pollution
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution
- Pollution case studies
- Disaster management: floods, earthquake, cyclone and landslides

(8 Lectures)

Unit-VI

Social Issues and the Environment
- From unsustainable to sustainable development
- Urban problems and related to energy
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people; its problems and concerns. Case studies.
- Environmental ethics: Issues and possible solutions
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- Wasteland reclamation
- Consumerism and waste products
- Environmental Protection Act, 1986
- Air (Prevention and Control of Pollution) Act, 1981
- Water (Prevention and control of Pollution) Act, 1974
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation
- Public awareness

(7 Lectures)

Unit-VII

Human Population and the Environment
- Population growth, variation among nations
- Population explosion – Family Welfare Programmes
- Environment and human health
- Human Rights
- Value Education
- HIV / AIDS
- Women and Child Welfare
- Role of Information Technology in Environment and Human Health
- Case Studies

(6 Lectures)
Unit-VIII

Field Work

- Visit to a local area to document environmental assets River / forest / grassland / hill / mountain
- Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
- Study of common plants, insects, birds
- Study of simple ecosystems-pond, river, hill slopes, etc

(Field work equal to 5 lecture hours)

References:

2. Down to Earth, Centre for Science and Environment, New Delhi.
Paper I: ELECTRONIC MEDIA

Time: 3 Hours

Max. Marks: 50

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section - A
1. Evolution and growth of Electronic Media (Radio, TV)
2. Characteristics of various Electronic Media (Radio, TV)
3. Radio vs. TV
4. Print vs. Electronic Media

Section - B
5. Effect of Electronic Media on Culture and Society
6. Broadcasting Writing Technique and Style
7. Script Formats
8. Editing

Section - C
9. Principles of Video Production
10. Basic TV Production Techniques
11. Production Team
12. Camera Crew

Section - D
13. Types of Cameras
14. Budgeting
15. Channel Analysis, Media Appreciation – Film review
16. Distribution of Films
17. Introduction to Editing Software – Adobe Premiere, After Effects, Sound Forge.

Suggested Readings:
2. India’s communication revolution, “Arvind Singhal, Everett M. Rogers”, Sage India
BACHELOR OF VOCATION (B.VOC.) (ANIMATION)
SEMESTER – V

Paper II: FILM DIRECTION AND DOCUMENTRY

Time: 3 Hours

Max. Marks: 100
Th : 50 Pr: 50

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section - A

Introduction, history, and future: The Director’s Role, A brief And Function History of Documentary; Aesthetics and authorship: Authorship Challenges and Opportunities, Reconstruction, and docudrama, Documentary Theory, Project: Critical writing

Section - B

Identity and authorship: Project: Recognizing your Creative Identity, Developing Your Story Idea; Screen craft: Screen Grammar, Project: screen craft Analysis, Projects; Basic Production

Section - C

Production: Camera Equipment and Shooting Procedure, Lighting, Location Sound and Postproduction: Designing a Structure, Editing, Using Music and Working with a Composer, Fine Cut to Sound Mix

Section - D

Shots, 180-Degree Rule, 30-Degree Rule, Screen Direction, Film-Time, Compression; Organizing Actions in a Dramatic Scene; Staging: Patterns of Dramatic Movement, Changing the Stage within a Scene, Staging as Part of a Film’s Design, Working with a Location Floor Plan; Camera: The Camera as Narrator, Objective Camera, Subjective Camera, Subjective Camera, Shot Lists, Storyboards and Setups.

Suggested Readings:
Paper III: 3D ARCHITECTURE VISUALIZATION USING 3DS MAX  
(INTERIOR AND EXTERIOR DESIGNING)  

Instructions for the Paper Setters:-  
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section - A  
1. Basic introduction of 3ds Max software  
2. Understanding viewports and tool options  
3. Modeling Fundamentals  
4. Types of modeling (Spline and Polygon modeling)  
5. Tools and Techniques in depth  

Section - B  
6. Props Modeling  
7. Texturing Fundamentals  
8. Understanding different types of Materials  
9. Advanced Texturing  

Section - C  
10. Working on UVW Unwrap  
11. Lighting Techniques (different types of lights)  
12. 3 Point lighting techniques  
13. Indoor & outdoor lighting  

Section- D  
14. Camera Animation  
15. Scene Composition  
16. Rendering techniques  
17. Scan Line, Mental & V-Ray Rendering  
18. Create exterior or interior model

Suggested Readings:  
1. Architectural Rendering with 3ds Max and V-Ray, “Enrico Eggert”, Markus Kuhlo  
Paper IV: ACTING & DIRECTION FOR ANIMATION - PRACTICAL

Time: 3 Hours
Max. Marks: 100

Note for Practical Examiner: Paper will be set on the spot by practical examiner.

Section - A
Essential of Acting Concepts: ACTING - Basic Performance skills, physical preparation
VOICE, SPEECH & MUSIC - Exercises that focus on breathing, humming, pitch, volume and singing

Section - B
IMPROVISATION & ACTING - Through improvisation, both silent and word-oriented,
learning to see, hear, believe, react, observe and concentrate.
Facial expressions & Lip synchronization: How to use Character’s body, voice and imagination?

Section - C
How to be aware of Character’s body, facial expressions and to concentrate on its rhythm, enter
space and loosen their limbs
Acquiring acting skills through sessions focused on an understanding of the self.
Mimicking & Voice Modulation

Section - D
Directing Animation:
Developing a Story for Animation, Scripting & Storyboarding
Fundamentals of Cinematography – Camera Angles, Lighting & creating mood, Shots,
Screenplay

Practical Submissions:–
Animation with dialogue & expressions (minimum 500 frames) Using Adobe Flash or Maya

Suggested Readings:
1. Acting for Animators – Ed Hooks Publisher: Heinemann Drama; Revised edition
2. The artist’s complete guide to facial expressions – Gary Gaigin Publisher: Watson-Guptill
Paper V: 3D ARCHITECTURE VISUALIZATION USING 3D MAX
(INterior AND EXTERIOR DESIGNING)

PRACTICAL

Time: 3 Hours

Max. Marks: 100

PRACTICAL based on PAPER AM 503

Note: The question paper will be set on the spot by the examiner.
Time: 3 Hours

Max. Marks: 50

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section - A
Different Media used for Publicity: Digital media: Internet Websites, Social media, online advertisements etc.

Section - B
Print media: Newspapers, Magazines, Hoardings, posters etc.

Section - B

Section – D
Copy rights in India: Legal definition, Types of copyrights, Infringement and consequences

Suggested Readings:
1. Truth, Lies and Advertising: The Art of Account Planning by John Steel, Publisher - Wiley.
2. Bare Acts of Indian Copyright Act, Contempt of Court Act.
Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section – A

Career opportunities in Animation:
Exploring different opportunities in Animation, A list of local, national, and international studios Existing studios and Industries which require animation

Section – B

Formal Communication: Etiquettes of Public speaking, Business meetings, Telephonic communication, Email etiquettes.
Informal Communication: Introduction, expressing gratitude, expressing regret, Apologize, Resolving conflicts.
Presentation Skills: Preparing presentation, making presentation meaningful and engaging, making effective use of the visual aid, interacting with audiences, dealing with queries from the audiences.

Section – C

Creative use of Animation: Prepare a Digital resume, prepare a Motion graphic resume
Preparing for Interviews: Key factors for being successful in an interview, body language, confidence, subject expertise

Section – D

Awareness of various platform for enhancing skills and professional growth
Creating Account on websites like animation express, bloggers.com, freelance.com, upwork.com for project work
Lifecycle of the project to be developed as a freelancer
Creating and maintaining account on professional networks like LinkedIn for career growth opportunities

Suggested Readings:
5. Angela Rose (Author) ,“Linkedin in 30 Minutes (2nd Edition): How to Create a Rock-Solid LinkedIn Profile and Build Connections That Matter”, I30 Media Corporation; 2nd edition
The student has to make a short animation film by students as their Project Show reel so that the student can be easily assimilated in the Industry. The students can choose the area of Specialization keeping in view their interest.

For Specialization Project/ Show reel (AM-603) the students will have choice between the following Specializations:

1. Short Animation Movie (2-D /3-D)
2. Special Effects (VFX) Short Movie
3. Advertising Campaign (Short Ad Film/Print Media)
4. Promotional Material (Promotional film, Brochure, Hanging, Posters)

**Note:** The students shall work partly in the college and partly in the concerned Industry.
Following points should be taken care of while working on project:

1. The students must submit the certificate from the organization for which project work is carried out.
2. The project can be done by maximum of 4 members and every student should highlight the contribution made to the project.
3. The duration of the project should be minimum 1500 frames.
4. The project evaluation criteria primarily focuses on:
   a) Effective use of camera and various software tools
   b) The project (i.e. animated movie/sequence) undertaken must convey the message successfully for which it is undertaken.
   c) Project Report
   d) Viva Voce
5. The project report must include:
   a) Title and abstract overview of the work done during project.
   b) Brief introduction to the company and specific area of project being carried out.
   c) Requirements:
      Hardware and environment needed for the project
      Various Software/Tools used to make the project
   d) Project plan: The subject matter/script/scenes as required for the project.
   e) Implementation of the project: Script Writing, Design, Recording, Audio/Video Editing etc.