FACULTY OF ENGINEERING & TECHNOLOGY

SYLLABUS

FOR

BACHELOR OF VOCATION (B.VOC.)
WEB TECHNOLOGY & MULTIMEDIA
(Semester: I – VI)

Session: 2019–20

GURU NANAK DEV UNIVERSITY,
AMRITSAR.

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### Semester – I:

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>Subjects</th>
<th>M. Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Th.</td>
</tr>
<tr>
<td>Paper – 101</td>
<td>Computer Fundamentals and MS Office</td>
<td>50</td>
</tr>
<tr>
<td>Paper – 102</td>
<td>Markup Languages ( HTML, HTML5, and CSS)</td>
<td>50</td>
</tr>
<tr>
<td>Paper – 103</td>
<td>Programming Fundamentals ( C &amp; C++)</td>
<td>50</td>
</tr>
<tr>
<td>Paper – 104</td>
<td>Adobe Photoshop</td>
<td>–</td>
</tr>
<tr>
<td>Paper – 105</td>
<td>Communication Skills in English – I</td>
<td>50</td>
</tr>
<tr>
<td>Paper – 106</td>
<td>Punjabi (Compulsory) / ** ਪੰਜਾਬੀ ਐਨ੍ਹਾਰ ਭਾਸਾ ਵਿੱਚ ਪੱਛਮ ਧਰਾਤਲੀਆਂ ਦੀਆਂ ਬਤਾਇਆਂ / ** Punjab History &amp; Culture (From Earliest Times to C 320)</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>* Drug Abuse: Problem, Management and Prevention (Compulsory Paper)</td>
<td>50</td>
</tr>
</tbody>
</table>

|       | **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 – II:

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>Subject</th>
<th>Theory</th>
<th>Practical</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>Paper – 107</td>
<td>Web Programming with PHP-I</td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Paper – 108</td>
<td>Design &amp; Layout (Dreamweaver)</td>
<td>–</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Paper – 109</td>
<td>Analysis and Design for Web Applications</td>
<td>50</td>
<td>–</td>
<td>50</td>
</tr>
<tr>
<td>Paper – 110</td>
<td>JavaScript-I</td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Paper – 111</td>
<td>Communication Skills in English – II</td>
<td>35</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td>Paper – 112</td>
<td>Punjabi (Compulsory) / ** ਪੰਜਾਬੀ ਐਨ੍ਹਾਰ ਭਾਸਾ ਵਿੱਚ ਪੱਛਮ ਧਰਾਤਲੀਆਂ ਦੀਆਂ ਬਤਾਇਆਂ / ** Punjab History &amp; Culture (C 320 TO 1000 B.C.)</td>
<td>50</td>
<td>–</td>
<td>50</td>
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</tbody>
</table>

|       | **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

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>Subject</th>
<th>M. Marks</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>301.</td>
<td>Java Script II</td>
<td>50 50 100</td>
<td></td>
</tr>
<tr>
<td>302.</td>
<td>Operating System</td>
<td>50 50 100</td>
<td></td>
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<tr>
<td>303.</td>
<td>Java programming</td>
<td>- 100 100</td>
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<tr>
<td>304.</td>
<td>Wordpress</td>
<td>- 100 100</td>
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### Semester IV

<table>
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<tr>
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<th>Subject</th>
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<th>Total</th>
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<tbody>
<tr>
<td>401.</td>
<td>Database System</td>
<td>50 50 100</td>
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<tr>
<td>402.</td>
<td>Software Engineering</td>
<td>100 - 100</td>
<td></td>
</tr>
<tr>
<td>403.</td>
<td>PHP-II</td>
<td>- 100 100</td>
<td></td>
</tr>
<tr>
<td>404.</td>
<td>Adobe Flash</td>
<td>- 100 100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ESL-221: Environmental Studies</td>
<td>100 - 100</td>
<td></td>
</tr>
</tbody>
</table>

* Marks of Paper EVS will not be included in Grand Total.
### Semester : V

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>PAPER</th>
<th>M. Marks</th>
<th>Total</th>
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<tbody>
<tr>
<td>501</td>
<td>Software Re-engineering</td>
<td>50</td>
<td>50</td>
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<tr>
<td>502</td>
<td>Software Project Management and Business Solutions</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>503</td>
<td>ASP.net with C#</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>504</td>
<td>Software Testing &amp; Quality Assurance</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>505</td>
<td>Lab: Software Testing (Case Tools)</td>
<td>-</td>
<td>50</td>
</tr>
<tr>
<td>506</td>
<td>Adobe Muse</td>
<td>-</td>
<td>100</td>
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### Semester : VI

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>PAPER</th>
<th>Marks</th>
<th>Total</th>
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<tbody>
<tr>
<td>601</td>
<td>Major project</td>
<td>200</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>(Industrial Training And Project in Current software Technologies)</td>
<td></td>
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**Total**: 400
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – I

Paper–101: Computer Fundamentals and MS Office

Time: 03.00 Hours each          Max. Marks: 50 (Theory)
                      Max. Marks: 25 (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.

SECTION – A

Introduction to Computers
Computer basics, History of computers, Classification of computers, Hardware and software, Data representation.

Components of Computer
Operating system, Input and output devices, Motherboard, CPU, Memory, Storage devices.

Introduction to Internet: About internet and its working, business use of internet, services offered by internet, evaluation of internet, internet service provider (ISP), internet addressing (DNS) and IP addresses).

E–Mail Basic Introduction: structure of an e–mail message, working of e–mail (sending and receiving messages).

SECTION – B

Internet Protocol: Introduction, file transfer protocol (FTP), Gopher, Telnet, other protocols like HTTP and TCPIP.

WWW: Introduction, working of WWW, Web browsing (opening, viewing, saving and printing a web page and bookmark)

Search Engine: About search engine, component of search engine, working of search engine, difference between search engine and web directory.
Multimedia Basics
Introduction to multimedia, Multimedia authoring tools and new digital media

Components of Multimedia
Text: About fonts and faces, Using text for multimedia, Introduction to Typography, Designing with text.
Image: Pixel, Vector and Raster graphics, Color Depth, Resolution, Aspect ratio, File formats, Compression.
Audio and Video: TV and video standards, Time code, Digital audio and video, File Formats, Compression, Codecs, Digital editing tools.
Animation: History of Animation, Types of Animation, Animation tools and Development.

SECTION – D

Microsoft Word
- Interface
- Toolbar
- Working with a document (Create, open, Save, Export etc.)
- Working with text
- Images and Tables
- Page layout (Headers and footers, Margins, Page and line numbers)
- Mail Merge
- Automating tasks (Smart documents, Macros)
- File formats and Export features

Microsoft Power Point
- Interface
- Working with a document (Create, open, Save, Export etc.)
- Creating and editing power point presentations (Slideshows, Animations, Transitions, graphics and charts)
- File formats and Export features.

Reference Books:
4. “An Introduction to Digital Multimedia”, T. M. Savage, K. E. Vogel
5. “Multimedia: making it work”, Tay Vaughan
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – I

Paper – 101 (Practical) 25 Marks

(Lab-I)

Lab – I: Based on MS word & MS PowerPoint and Internet usages
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – I

Paper102: Markup Languages (HTML, HTML5, CSS)

Time: 03.00 Hours each                                                            Max. Marks: 50 (Theory)
Max. Marks: 50 (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.

Course Contents:

SECTION – A

Introduction to HTML
• Elements of Web page (Text, Image & Hyperlink Elements)
• Html Tags

Using Tools
• Structure of a page
• Links & Navigation
• Backgrounds
• Animated Graphics

Working with Tables
• Page Design & Layout with Links
• Advanced Layout with Tables
• Working Style Sheets

Forms & Frame
• HTML Forms (<form> element, Form controls, creating labels for control, structuring
  forms, focus, sending form data to server)
• Using Frame (<frame>, <frameset> <noframes> element, creating links between frames,
  nested framesets)
SECTION – B

Introduction to HTML5
- HTML5 New Semantic Elements
- HTML5 Attributes
- HTML5 Document
- HTML5 - WEB FORMS 2.0
- HTML5 – EVENTS
- HTML5 – CANVAS
- HTML5 – SVG
- HTML5 – WEB STORAGE
- HTML5 - AUDIO & VIDEO
- HTML5 – GEOLOCATION
- HTML5 - DRAG & DROP

SECTION – C
- Introduction to CSS and understanding CSS syntax
- Adding Rules to a Style Sheet
- Managing style sheets (creating, Importing and embedding)
- Using selectors and classes
- Controlling page layout
- Understanding grouping and nesting
- Styling text
- Modifying background and foreground elements
- Understanding tables and lists
- Using global styles
- Understanding CSS box model
- Working with images
- Creating navigation bars using CSS

SECTION – D

Introduction to CSS3
- CSS3 Color
- CSS3 Gradients
- CSS3 Columns
- CSS3 Border Image
- CSS3 Background /Multiple backgrounds
- CSS3 Text Overflow
- CSS3 Text shadow
Reference Book:

1. *HTML: The complete reference* by Thomas A. Powell
2. *New perspectives on creating Web pages with HTML/DHTML* by Patrick Carey, Mark Kemper
3. *CSS Cookbook* by Christopher Schmitt
4. *Beginning CSS Web Development: From Novice to Professional* by Simon Collison
5. *Professional CSS: Cascading Style Sheets for Web Design* by Christopher Schmitt.
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – I

Paper – 102 (Practical)

50 Marks

(Lab-II)

Lab – II: Based on HTML & CSS
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – I

Paper–103 Programming Fundamentals (C & C++)

Time: 03.00 Hours each
Max. Marks: 50 (Theory)
Max. Marks: 25 (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.

Course Contents:

SECTION – A
Logic Development and Program Development Tools: Data Representation, Flowcharts, Problem Analysis, Decision Trees/Tables, Pseudo code and algorithms.
Fundamentals: Character set, Identifiers and Key Words, Data types, Constants, Variables, Expressions, Statements, Symbolic Constants.

Data Input and Output: single character Input, single character output, entering input data, more about scan functions, writing output data, more about print functions.

SECTION – B
Control Statements: Preliminaries, While, Do–while and For statements, Nested loops, If–else, Switch, Break – Continue statements
Functions : Declaring and defining function, Local, global variables, Passing argument to function, Reference arguments, Overloading functions

SECTION – C
Object Oriented Programming
Objects & Classes.
Constructor & Destructor.
Operator overloading.
   a) Overloading unary operators.
   b) Overloading binary operators.
   c) Data conversion.
   d) Pitfalls operator overloading and conversion.
SECTION – D

Inheritance
a) Derived class and Base Class.
b) Derived Class Constructors.
c) Overriding member functions.
d) Inheritance in the English distances class, class hierarchies.
e) Public and Private inheritance.
f) Level of inheritance.

Polymorphism
a) Problems with single inheritance.
b) Multiple inheritance.

References:
1. Balaguruswamy: “Programming in ANSI C”.
2. Scaum Outline Series: “Programming in C”.
3. Dennis & Ritchie: “Programming in C”.
5. C++ & Graphics by Vijay Mukhi’s
6. Turbo C++ by Robert Lafore.
7. Mastering C++.
8. C++ Programming Language by Schaum’s outline series
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – I

Paper – 103 (Practical) 25 Marks

(Lab-III)

Lab – III: Based on C & C++:
Paper–104: Adobe Photoshop

Time: 03.00 Hours                                                               Max. Marks: 50 (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.

Course Contents:

SECTION – A
Introduction to Photoshop
- About Digital Images
- Creating New Images
- Scanning New images
- Size and Resolution
- Managing Workspace

Using Tools
- Toolbox & Options
- Screen Modes
- Cut , Copy & Paste
- Working with selections
- Color modes

SECTION – B
Working with Layers
- Layer Panel
- Creating , Deleting & Hiding Layers
- Layer Mask
- Clip Mask
- Group & Ungroup Layers
- Blending Modes

Adjustments and Transforming Layers
- Adjustment Layers
- Color correction
- Variations
- Retouching Images
- Clone Sources
SECTION – C

Painting and Drawing Tool
- Brushes
- Strokes
- Work Path
- Painting Tools

Working with Channels & Action
- Working with Channels
- Creating Actions
- Save New Action Group

SECTION – D

Working with Filters
- Applying Filters
- Liquefy
- Vanishing Point
- Filter Gallery

Working with Text and Extensions
- Type Tools
- Text with Path
- Adjusting & converting Text
- Detail of useful Extensions & use

References:
1. “Adobe Photoshop CS6 Bible” by Lisa Danae Dayley, Brad Dayley
2. “Photoshop: The Ultimate Guide for beginners” to learn Photoshop for Lightroom
   Users and Digital Photographers! (Adobe Photoshop - Graphic Design) by Edward Bailey
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.

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
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – I

Paper-106: ਭੂਸ਼ਾਣੀ (ਕਲਾਕਾਰੀ)

ਭਾ਷ਾ : 3 ਪੇਟੀ
ਚਲਾਣ : 50

ਪ੍ਰਤਕਾਲੀ ਅਲੌਕਾ ਪ੍ਰਤਕਾਲ

ਸੈਕਸ਼ਨ - ਏ

ਕੁਆਲਰਾਨਾ ਪ੍ਰਤਕਾਲ (ਕੁਆਲਰਾਨਾ ਲੇਖ-ਸਭਾਗੱਢ)
ਸੇਵਾ: ਸ.ਸ.ਅਖੀਰ,
ਪ੍ਰਸਤੁਤੀ ਮਾਤਾਧਿਪ ਪੁਰਾਣ, ਨਵਾਬਾਦਾ। (ਕੇਂਦਰ 1 ਤੋਂ 6)
(ਕਲੇਬਜ਼ ਦੇ ਮਾਤ, ਕਲੇਬਜ਼-ਸੈਲੀ)

ਸੈਕਸ਼ਨ - ਬੀ

(੧) ਪੇਵਾਰ ਉਤਸ਼ਾਹ
(ਅ) ਪੇਵਾਰ ਪਦੂ ਵੇ ਪ੍ਰਮਾਣ ਦੇ ਖੂਟਾਹ।

ਸੈਕਸ਼ਨ - ਬੀ

(੧) ਭੂਸ਼ਾਣੀ ਸੁਖੀ ਕਦੀਦੁਆ : ਪ੍ਰਤਕਾਲ ਭਾਵ, ਪ੍ਰਤਕਾਲ ਮਾਫਡੀ ਦੇ ਕਿਸੀਵੇਂ, ਮਾਫਟ, ਦੀਕੇਸ਼ਤ, ਮੂਹੂ-ਪੂਰੁਸਕ
(ਅ) ਬੱਲਾ ਦੈਵਤਾਂ ਦੇ ਦਰਸਾਨ ਦੇ ਦੈਵਤਾਂ ਦੇ ਦੈਵਤਾਂ ਦੇ ਦੈਵਤਾਂ ਦੇ ਦੈਵਤਾਂ ਦੇ ਦੈਵਤਾਂ ਦੇ ਦੈਵਤਾਂ ਦੇ ਦੈਵਤਾਂ

ਅੰਤਰਵੱਢ ਅਲੌਕਾ ਧਿਰੀਖਾਲ ਕੇਂਦਰ ਵਰਗਾਂ

1. ਪ੍ਰਤਕਾਲ ਪੇਦੂ ਵੇ ਪਰਵਾ ਵਾਲੇ ਦੀਵਾਨ ਦੀ ਪ੍ਰਤਕਾਲ ਪ੍ਰਤਕਾਲ ਪ੍ਰਤਕਾਲ ਪ੍ਰਤਕਾਲ ਪ੍ਰਤਕਾਲ ਪ੍ਰਤਕਾਲ ਪ੍ਰਤਕਾਲ ਪ੍ਰਤਕਾਲ ਪ੍ਰਤਕਾਲ ਪ੍ਰਤਕਾਲ
2. ਕਾਰਨਕਾਲੀ ਕੇ ਕੁੱਝ ਪਹਿਸਾ ਪ੍ਰਤਕਾਲ ਕੁੱਝ ਪ੍ਰਤਕਾਲ ਕੁੱਝ ਪ੍ਰਤਕਾਲ ਕੁੱਝ ਪ੍ਰਤਕਾਲ ਕੁੱਝ ਪ੍ਰਤਕਾਲ ਕੁੱਝ ਪ੍ਰਤਕਾਲ ਕੁੱਝ ਪ੍ਰਤਕਾਲ ਕੁੱਝ ਪ੍ਰਤਕਾਲ
3. ਤਦ ਪ੍ਰਤਕਾਲ ਦੇ ਪਰਵਾ ਪ੍ਰਤਕਾਲ
4. ਪਹਿਲਾ ਮੈਂ ਕੁਝ ਵਾਲੇ ਦੀਵਾਨ ਦੀਵਾਨ ਦੀਵਾਨ ਦੀਵਾਨ ਦੀਵਾਨ ਦੀਵਾਨ ਦੀਵਾਨ ਦੀਵਾਨ ਦੀਵਾਨ ਦੀਵਾਨ ਦੀਵਾਨ
पेशी भाषी, भाषा कृत, भेल विद्वी वाले लड़के अनुभव पेट हिंदी पेट
लड़के लड़के अन्य अनुभव (पेशी नाट-पड़ात)
उत्साहत (विधि, दिक्क, भंडार) : पड़ात अनुभव दूर दूर

पेशी महत्व-प्रतियोगिता : पेशी नाट-पड़ात
(गणार्थ महत्व, मनुष्य महत्व, भिन्न महत्व, भूत महत्व, शोधन अनुभव दूर दूर)

पेशी-भी
हिंदी विषय की पेशी महत्व-प्रतियोगिता : भाषा, भाषा, विद्वी-रण, भेल अनुभव अन्य अनुभव भाषा महत्व

पेशी-भी
उड़े व उड़े पिठां के तम, दानूं अर्थियां के तम, ठूंढ़े व ठूंढ़े, दिच्चे व में उड़ विषों महत्व दिच्चे

भेल-बेंक अनुभव भी भी भी भी उड़ियां

1. पुनर्वाप हेतु व चल जगा हेतु। तुम जगा दिखाई दे पुनर्वाप हेतु जगा हेतु।
2. विभिन्न भागी के वह भाग पुनर्वाप बताने उत्तर। तुम जगा दिखाई दिव भाग पुनर्वाप बतानी है।
3. वह भाग पुनर्वाप के सदाबहार भेल उत्तर।
4. भेल बैंट वाला दाना सेवा करें ता पुनर्वाप की दूर भेल बैंट उं दें बैंट चल दिन-पुराना

भेल-बेंक अनुभव भी भी भी भी उड़ियां
Paper–106: Punjab History & Culture (From Earliest Times to C 320)

(Special Paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)

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. 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:

<table>
<thead>
<tr>
<th>Individual</th>
<th>Education, Employment, Income.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>Violence.</td>
</tr>
<tr>
<td>Society</td>
<td>Crime.</td>
</tr>
<tr>
<td>Nation</td>
<td>Law and Order problem.</td>
</tr>
</tbody>
</table>

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:
Time: 03.00 Hours Each                                                            Max. Marks: 50 (Theory)
Max. Marks: 50 (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.

SECTION – A

INTRODUCTION TO PHP
- Basic Syntax
- Integrating PHP with HTML
- Defining variable and constant
- PHP Data type

OPERATORS & EXPRESSIONS
- Arithmetic, Assignment, Comparison, Logical Operators
- Concatenation, Bitwise, Error Suppression, Increment & Decrement operators
- Ternary operator

WORKING WITH FLOW CONTROL THROUGH CONTROL STATEMENT
- If statement
- If–else statement
- If–else ladder statement
- If–elseif–else statement
- Switch statement

WORKING WITH FLOW CONTROL THROUGH LOOP STATEMENT
- For statement
- While statement
- Do–while statement
- For and Foreach statement
- Nesting of Loops statement
SECTION – B

PHP FUNCTIONS
- Defining functions
- Using built-in functions
- Defining User functions
- Returning a value from a function
- Using variables in functions
- Passing values to a function
- Nesting of Functions
- Anonymous Functions
- Recursion
- Passing parameter (Call By Value & Call By Reference) & return value
- Trends of PHP Functions (Missing Parameter, Formal parameter declaration)
- Importing content of one page into another

HANDLING HTML FORM WITH PHP
- Capturing Form Data
- Dealing with Multi-value filed
- Generating File uploaded form
- Redirecting a form after submission

SECTION – C

USING ARRAYS IN PHP
- Anatomy of an Arrays
- Creating index based and Associative Arrays
- Storing Data in Arrays
- Accessing array Element
- Looping with Index based Arrays
- Converting Strings to and from Arrays
- Splitting and Joining Arrays

USING STRINGS IN PHP
- Introduction to string.
- Creating and Working with String
- Creating string
- Viewing string
- Modifying string
- Introduction of String Function
- Working with string function
THE CORE LOGICS AND TECHNIQUES

- Introduction HTML Form Elements and Fields
- Understanding Functions, Important PHP Functions
- What are the Scope of variables
- String and Math functions in PHP
- Usage of Include and require statements
- Accessing PHP, HTTP Data
- Query Strings and Hyperlinks
- Describing Pre–Defined Variables – Super Global Arrays

Reference:
2. “Sams Teach Yourself PHP, MySQL and Apache All in One” by Julie C. Meloni
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – II

Paper – 107 (Practical) 50 Marks

(Lab-IV)

Lab – IV: Practical based on above mentioned syllabus of PHP–I.
Paper–108: Design & Layout (Dreamweaver)  
(Practical)

Time: 03.00 Hours  
Max. Marks: 50

SECTION – A

- The Dreamweaver Interface
- Site Controls
- Creating New Documents
- Adding Text and Structure
- Controlling font sizing

SECTION – B

- Working with Images
- Creating Links
- Working with Tables
- Working with Forms

SECTION – C

- Building Templates
- Behaviors and Rollovers
- Working with Flash and Video

SECTION – D

- Checking for browser compatibilities
- Synchronizing sites
- Updating and publishing files

References:

1. “Adobe Dreamweaver CS6 Classroom in a Book” by Adobe Creative Team
2. “Adobe Dreamweaver CS6 Bible” by Joseph Lowery
3. “Building Websites All-in-One For Dummies” by David Karlins, Doug Sahlin
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – II

Paper-109: Analysis and Design for Web Applications
(Theory)

Time: 03.00 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

Introductions to systems
• Basic principles of successful systems
• Systems models and types
• Types of system models
• Business system concept
• Real life business sub system
• Materials management sub systems
• Financial management sub system
• Marketing management
• Real time system
• Distributed system
• Manual and automated system
• What is participatory design?

SYSTEM ANALYST
• Introduction
• A brief history
• Attributes of effective system analyst
• Role of system analyst and designer
• Ethical considerations
• Need of system analyst
• Structured analysis tools
• Academic and personal qualification
• Responsibilities of system analyst
• System analyst as an agent to change

System Modeling
• Data flow diagram
• Decision table
SECTION – B


Software Requirement Specification (SRS): Definition, Problem analysis, structuring information, Data flow diagram and data dictionary, structured analysis, Characteristics and component of (SRS), Design Objectives Design Principles, Design Methodology, Design Review.

SECTION – C


Business Models of E-Commerce and Infrastructure: E-Commerce Models, Supply Chain Management, Product and Service Digitization, Remote Servicing, Procurement; Online Marketing; Advertising; E-Commerce Resources and Infrastructure; Resources and Planning for Infrastructure.

SECTION – D

Web-Site Design: Role of Web site in B2C E-Commerce; Web-site strategies and Web-site Design Principles; Push and Pull technologies; Alternative methods of Customer communication.

References:

1. “System Analysis & Design” by Puneet Wadhwa
2. “Systems Analysis and Design” by Elias M Award
3. “E - Business and E - Commerce Management: Strategy, Implementation and Practice” by Dave Chaffey
4. “50 Reasons for Mastering Business Requirements Analysis” by Mohsin Baig
Paper- 110: JavaScript - I

Time: 03.00 Hours each Max. Marks: 50 (Theory)
Max. Marks: 50 (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.

SECTION – A

JAVASCRIPT BASICS
• Introduction to JAVASCRIPT
• Client-Side JavaScript
• Comments in JavaScript
• Structure of javascript

JavaScript Datatypes
JavaScript Variables
JavaScript Reserved Words
JavaScript Operators

SECTION – B

JavaScript control Structures
• If Statement
• If...else Statement
• If...else if... Statement
• Loop Control
• While Loop
• Do...while Loop
• For Loop
• For-in Loop
• Switch-Case

Functions
• Function Definition
• Calling a Function
• Function Parameters
• The return Statement
• Nested Functions
• Function () Constructor
• Function Literals
SECTION – C

Events
- Introduction to an event
- Onclick event type
- Onsubmit event type
- Onmouseover and onmouseout
- Html 5 standard events

Page Redirect
- What is Page Redirection?
- JavaScript Page Refresh
- Auto Refresh
- How Page Re-direction Works?

SECTION – D

Dialog Box
- Alert Dialog Box
- Confirmation Dialog Box
- Prompt Dialog Box

Void Keyword

Page Printing
- How to Print a Page?

References:

1) The ABCs of JavaScript by Lee Purcell, Mary Jane Mara ,BPB Publications
2) Mastering JavaScript and jscript by James Jaworski , BPB Publications
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – II

Paper – 110 (Practical)

50 Marks

(Lab-V)

Lab – V: Based on JAVASCRIPT
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – II

Paper–111: COMMUNICATION SKILLS IN ENGLISH – II

Time: 3 Hours

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.
पेयर-112: भिक्षी (कृत्यभूमि)

संख्या: 3 पृष्ठ

पठ-पुस्तक अथवा पठ-पुस्तकां

मैवस्त्र-पहि

आरम्भ अक्षरों (कण्ठी भाषा).
(संघ. मुद्रित धीर अथवा पत्रिकाभ निधि मंगल)
ताला वर्ग करा सुप्रीमालिती. अंशभागमत।
(हिन्दी-बंगाल, शास्त्र जिहाद)

मैवस्त्र-वी

निकिरण ज्ञान (निकिरण लेख-संगीत)
मंच. म.म.अभिषेक,
भोजनी मनिटू पृथ्वीरत, स्थियकरण। (लेख 7 ते 12)
(महा. लिखत बैंड)

मैवस्त्र-ढी

(ढ) माहौल-विविध अथवा मध्य उठता : पवित्रमण, मुख्य मंच

(ए) शहीद शुकात

मैवस्त्र-ढी

(ढ) मिष्टि उठता

(ए) भुजाते अथवा अभास

अंब-टूड़ अथवा धीरविधियाँ चाही उत्तिष्ठितां

1. पृथ्वी बंदू के चाँद जगा टोफ़ो। उन जगा डिचे दे पृथ्वी भूटेन साधो।
2. निकिरणबन्धी दे वृंद भंग पृथ्वी चलने उठ। उन जगा डिचे हिये पृथ्वी लामभी दे।
3. उत्सव पृथ्वी दे बल्लब भोज उठ।
4. भूल भूल वर्तन तांता सेवत उठे उं पृथ्वी ची बंद भूटों वें वें वें वें चल वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें वें
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – II

Paper–112: मैंढली धीमादी (In lieu of Compulsory Punjabi)

मंथं: 3 अंडे
बुल अंबं: 50

मैवमल-के

मस्त गैम्सर्न द्भाव: पड़ाट एते दलउँ (रंग, पड़ाट, रंग, पूर्ण, पूर्ण, रंग, पूर्ण, पूर्ण, पूर्ण, पूर्ण)

मैवमल-ची

भण्डरी द्वार मडल : मैंढली नाट-पड़ाट
(ए) मण्डल द्वार, मेंढल द्वार अथे भूम्यत्व द्वार (पड़ाट एते दलउँ)
(ब) फिफतरीग द्वार, पूर्णंपर्ग द्वार अथे पूर्ण द्वार (पड़ाट एते दलउँ)

मैवमल-ची

पैठु नचर
मेध नचर

मैवमल-सी

हिंदी धून (पूर्ण अथे दलउँ)
अथ अथे भूमिपछ

अल्ल संग अथे पूर्णिक्षक सती उतारिएं

1. भूमि धून द्वारे चरत बन देखतीं। उप बन दिच्चें द्वारे पूर्ण द्वारे सहते।
2. भूमि धून द्वारे रंगत पूर्ण बन देखते उप। उप बन दिच्चें हित पूर्ण सहती भई।
3. रंगत पूर्ण द्वारे चरत अंब्र उठ।
4. हेल पूर्ण द्वारे चरत रंगतीं देखत अथे उप पूर्ण द्वारे ढंग देह देह देह चरत उप-भूमि दिच्च तत्र सहते।
Paper–112: Punjab History & Culture (C 320 to 1000 B.C.)
(Special Paper in lieu of Punjabi compulsory)
(For those students who are not domicile of Punjab)

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)
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:

2. Extent, Pattern and Trend of Drug Use in India, Ministry of Social Justice and
   Publication.
   Epidemiological Unit, All India Institute of Medical Sciences, 2004.
   Publications.
   Publications.
    Guru Nanak Dev University.
11. Singh, Chandra Paul 2000. *Alcohol and Dependence among Industrial Workers*: Delhi:
    Shipra.
    Cambridge University Press.
13. Verma, P.S. 2017, “*Punjab’s Drug Problem: Contours and Characteristics*”, Economic and
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – III

JavaScript -II

Time: 03.00 Hours each
Max. Marks: 50 (Theory)
Max. Marks: 50 (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.

Section A

Section B
Arrays in JavaScript: Introduction to arrays, Array Properties, Constructor, length, Prototype, Array Methods [concat(), every(), filter(), forEach(), join(), lastIndexOf(), map(), pop(), push(), reduce(), reverse(), shift(), slice(), some(), sort(), splice(), toString(), unshift(),...]

Section C
Cookies: Introduction to cookies, Storing Cookies, Reading Cookies, Setting Cookies Expiry Date, Deleting a Cookie.

Section D
Objects: Introduction to objects, Object Properties, Object Methods, User-Defined Objects, Defining Methods for an Object, The ‘with’ Keyword

Usage of DOM structure in JavaScript
Handling Errors and Exceptions in JavaScript
Form Validation
Animation: Manual Animation, Automated Animation, Rollover with a Mouse Event
Multimedia: Checking for Plug-Ins, Controlling Multimedia.
Debugging in JavaScript

References:
1. Learn Advanced Java Script Programming by Tomer Shiran and Yehuda Shiran
2. JavaScript: The Complete Reference1 by Thomas Powell and Fritz Schneider
Paper-301: Lab-JavaScript

Time: 3 Hrs.  Max. Marks: 50

Practical Based on lab on JavaScript
Paper- 302: Operating System

Time: 03.00 Hours Each  Max. Marks: 50 (Theory)
Max. Marks: 5 (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.

Section A

Introduction: Definition, Early Systems, Simple Batch system, Multi programmed Batch. Time
Sharing Systems, Personal Computer System, Parallel Systems, Distributed Systems, Real–time
Systems.


Section B

CPU–Scheduling: Basic concepts, scheduling criteria, scheduling algorithms, algorithm
evaluation.

Process Synchronization: Background critical – section problem, semaphores, classical
problem of synchronization.

Section C

Memory Management: Background, Logical v/s Physical address space, mapping, continuous
allocation, paging, segmentation.

Virtual Memory: Background, demand paging, performance of demand paging, page
replacement, page replacement algorithms, allocation of frames, thrashing.

Secondary Storage Structures: Disk structures, Disk scheduling, Disk Reliability.

Section D

Deadlocks: System Model, Deadlock characterization, methods for handing deadlocks,
Deadlocks Prevention, Deadlock avoidance, Deadlock detection, Recovery from deadlock,
combined approach to deadlock handling.

Open source operating systems: LINUX: Introduction, General Overview, Kernel Mode and
user mode, Process, Advanced Concepts, Scheduling, Personalities, Cloning, Signals,
Development with Linux.

References:
2. “Operating Systems: A Design Oriented Approach” by Crowley, Published by Tata
McGraw Hill.
Paper-302: Lab - Operating System (Linux)

Time: 3 Hrs.  Max. Marks: 50

Practical Based on lab on Shell command on DOS and Linux.
Time: 03.00 Hours each

Max. Marks: 100

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: Concept of Java Virtual Machine and Byte code, Basic Data types, Type Conversion and Casting,


Section B

Object Oriented concepts in java, Declaring objects, introducing methods, constructors, this keyword, Overloading constructors, Recursion, Nested and Inner classes.

Inheritance: Basics, Creating Multilevel hierarchy, Method Overriding, Abstract Classes.

Section C


Exception Handling: Fundamentals, Exception Types, uncaught exceptions, try and catch.

Section D

Swings: Window Fundamentals, Working with Frame Windows, panels, checkbox, radiobutton, textbox, combobox, listbox etc swing controls.

References:
1. Programming with Java by Balagurusamy
2. Java: The Complete Reference, Seventh Edition by Herbert Schildt
Paper -304: Wordpress
(Practical)

Time: 03.00 Hours each
Max. Marks: 100

- Introduction to Wordpress
- Creating posts and pages
- Formatting text
- Publishing and scheduling posts
- Adding images, audio, and video
- Managing content
- Customizing Appearance
- Using widgets
- Working with plug-ins
- Editing users profiles
- Configuring settings
- Interacting with readers
- Security and maintenance
- Using Google Blogger

Assignments: Create a website using Wordpress.
Paper-401: Database System

Time: 03.00 Hours each 
Max. Marks: 50 (Theory) 
Max. Marks: 50 (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.

Section A
Basic Concepts: Database, Database system, Database management system, Data independence, advantages and disadvantages, 3 level architecture and mapping DBMS vs. File System, DBA’s Role, RDBMS.

Data Models: Relational model, Hierarchical model, Network model, comparison of these model, An overview of the E/R Model, E/R diagrams, Database design with the E/R model.

Section B
Normalization: Introduction to Normalization, Need of Normalization, various forms of Normalization (1NF, 2NF, 3NF, BCNF)

SQL: Introduction, Data Definition Language (DDL), Data Manipulation Language (DML), Data Control Language (DCL) statements, Views, Sub–queries, Access Rights.

Section C
Transaction Management and Concurrency Control: Introduction to Transaction Processing, Properties of Transactions, Concurrency Control, purpose of concurrency control, Techniques for concurrency control.

Section D

References:
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – IV

Paper-401: Lab- Sql and Pl/Sql

Time: 3 Hrs. Max. Marks: 50

Practical Lab Based on SQL and PL/SQL
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

Software Project Management: Introduction, Project planning, metrics for project size estimation, project estimation techniques, Cost estimation, COCOMO model, Project scheduling and milestones.

Section B
Software Requirement Specification (SRS): Definition, Problem analysis, structuring information, Data flow diagram and data dictionary, structured analysis, Characteristics and component of (SRS), Metrics of SRS.

Section C
Software Design and Coding: Introduction, classification of design activities and design Methodologies, Cohesion and Coupling, Verification and validation, approaches to software design, introduction to various design approaches, Structured programming, Coding standards and guidelines.

Section D
Software Testing and Metrics: Software Testing, levels of testing, Test case design, Design metrics, Coding metrics, Technical metrics, testing metrics.

Software Maintenance: Definition need and types of Software maintenance.


References:
2. Flecher and Hunt: Software Engineering and CASE: Bridging and Culture G
Array: Anatomy of an Array, Creating index based and Associative array, Accessing array Element, looping with Index based array, Looping with associative array using each() and for each()

PHP FUNCTIONS: Defining functions, Using variables in functions, Passing values to a function, Nesting of Functions, Anonymous Functions, Recursion, Returning a value from a function, Using built-in functions, Defining User functions, Passing parameter(Call By Value & Call By Reference) & return value, Trends of PHP Functions(Missing Parameter, Formal parameter declaration), Importing content of one page into another

Database Connectivity with Database: Connection with Database, Performing basic database operation (DML) (Insert, Delete, Update, Select), Setting query parameter, Executing query Join (Cross joins, Inner joins, Outer Joins, Self joins.)

Object Oriented Concepts in PHP

CREATING WEB FEATURES: Redirecting users to other pages, Creating an Email, Sending an Email, Configuring Email, File Uploading and File Downloading

ERROR & EXCEPTION HANDLING
Concept of Exception handling, Using Try/catch/throw, Checked & Unchecked Exception Creating Custom exception

Practical based on above syllabus.
Final assignments
Website Design with PHP
Paper- 404: Adobe Flash
(Practical)

Time: 3 Hrs.  
Max. Marks: 100

Flash workspace
- Understanding tools
- Drawing basic shapes
- Masking content
- Organizing a file into layers
- Importing content into the Library
- Understanding symbols and instances
- Use Graphic, Button and Movie clip
- Inserting frames and key frames in the Timeline
- Understanding Tweens
- Animating with Motion and Shape Tweens
- Creating animations
- Using Action Script code snippets to control video playback
- Publishing HTML, SWF, and AIR files from Flash

Practical based on above syllabus.
Final assignments
Web Banner and Animated web buttons
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

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 alternate 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.

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)

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

(2 lectures)
(8 Lectures)
(6 Lectures)
(8 Lectures)
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

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

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
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.
9. State of India’s Environment 2018 by Centre for Sciences and Environment, New Delhi
Paper-501: Software Re-engineering  
(Theory)  

Time: 3 Hrs. 

Max. Marks: 50 

Note:  
(i) The paper setter is required to set eight questions in all and the candidates will be required to attempt any five questions out of these eight questions. All questions will carry equal marks.  
(ii) The student can use only Non-programmable & Non-storage type calculator.  

Introduction to Software Re-engineering: Software Reengineering and its importance, goals of re-engineering, Software reengineering process model, software reengineering tools and Business process reengineering: Business processes, A BPR Model.  


Reverse Engineering: Need of reverse engineering, Reverse engineering process, Reverse engineering to understand data, Reverse engineering user interfaces, Tools for reverse engineering.  

Restructuring: Code restructuring: Characteristics of unstructured code, Characteristics of structured code, Restructuring problems, Data restructuring (Data reengineering): Data reengineering process, Data problems, Approaches: Data cleanup, Data extension, Data migration, Need for Data migration, data migration process, Tools for restructuring.  

Refactoring: Introduction to re-factoring, Principles of re-factoring, Need for re-factoring, Problems with refactoring, Refactoring and design, Re-factoring and performance. Different re-factoring techniques and their use, refactoring tools.  

Forward Engineering: Introduction to forward engineering, Goals of forward engineering, Forward engineering for client/server applications, Tools for forward engineering, forward engineering v/s reverse engineering  


Recommended Books:  
Paper-502: Software Project Management and Business Solutions
(Theory)

Time: 3 Hrs.                                      Max. Marks: 50

Note:
(i) The paper setter is required to set eight questions in all and the candidates will be required to attempt any five questions out of these eight questions. All questions will carry equal marks.
(ii) The student can use only Non-programmable & Non-storage type calculator.

Introduction to Software Project Management: Project Definition, Contract Management, Activities covered By Software Project Management, Overview of Project Planning, Stepwise Project Planning.


Business Solutions Information system in Global Business: How Businesses use Information system, ethical and Social Issues in IS, DSS: Enhancing Decision making, Business Intelligence tools, E-commerce: types, web based business, ERP, EDI.

Recommend Books
Basics concepts of .NET framework

C# Basics: Data types, control Structure, Operators, Arrays, Functions and OOPs Concept, Classes and Objects, Inheritance, Polymorphism, Abstraction and Encapsulation.

Introduction to Standard Controls in .NET: Display information, Accepting user input, Submitting form data, Displaying images, Using the panel control, Using the hyperlink control.

Introduction to Validation Controls: Using the required field validator control, Using the range validator control using the compare validator control, Using the regular expression validator control, Using the custom validator control, Using the validation summary controls.

Introduction to Rich Controls: Accepting file uploads, Displaying a calendar, Displaying advertisement, Displaying different page views, Displaying a wizard.

Designing Website with Master Pages: Creating master pages, Modifying master page content, Loading master page dynamically.

List Controls: Dropdown list control, Radio button list controls, list box controls, bulleted list controls, custom list controls.

Grid View Controls: Grid view control fundamentals, Using field with the grid view control, Working with grid view control events extending the grid view control.

Database Connectivity with MS SQL Server and ODBC

Reference Book:
ASP.NET 3.5: Stephen Walther, Pearson Education.
BACHELOR OF VOCATION (B.VOC.)
(WEB TECHNOLOGY & MULTIMEDIA) SEMESTER – V

Paper-504: Software Testing & Quality Assurance
(Theory)

Time: 3 Hrs. Max. Marks: 50

Note:
(i) The paper setter is required to set eight questions in all and the candidates will be required to attempt any five questions out of these eight questions. All questions will carry equal marks.
(ii) The student can use only Non-programmable & Non-storage type calculator.


References:
Paper-505: Lab - Software Testing (Case Tools)

Time: 3 Hrs.  Max. Marks: 50

Practical Lab Based on Software Testing (Case Tools)
Paper-506: Adobe Muse
(Practical)

Time: 3 Hrs.  Max. Marks: 100

Introduction to Adobe Muse
Working with Pages
Working with Panels
Understanding Plan, Design & Preview modes.
Working with Graphics
Creating and Formatting Objects
Working with Text
Working with Colors
Working with Hyperlinks
Creating Menus in MUSE
Working with Widgets
Working with video embeds
Working with Parallax Scroll
Understanding Publishing

Practical based on above syllabus.
General Instructions:

Report based on Industrial Training and project shall be submitted to the College/Institute. The evaluation of the work shall be done by the following panel of examiners prior to the theory examination:

(a). Internal Examiner
(b). Head/ Head Nominee of coordinating department of the college for this UGC scheme
(c). External Examiner (to be appointed by the University)