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PGIVS-019 B-21
M.Sc. IV Semester Degree Examination
COMPUTER SCIENCE
(Web Design)
Paper - HCT - 4.1
(New)

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

1. Section A is compulsory.
2. Answer any five questions from Section B.

Section - A

Answer the following questions.

(10×2=20)

1.
 - a. Mention any two limitations of HTML.
 - b. List any two CSS font properties.
 - c. How inline style sheet used in CSS?
 - d. Mention any two features of java technology.
 - e. What is meant by Web services?
 - f. List the components of web browser.
 - g. Write the structure of for loop in Javascript.
 - h. Define Javascript function.
 - i. Mention the four file use specification in perl.
 - j. Write String operators in perl.

Section - B

2.
 - a. State the Explain Website design Principles used to design for Medium. (6)
 - b. Explain Web typography design principles. (6)
3.
 - a. Explain the steps in planning site navigation. (6)
 - b. Explain with an example element with all its attributes. (6)

4. a. Explain how Java Technology is used for creating Active Web documents. (6)
 - b. Describe how to define a Schema with an example. (6)
 5. a. Describe CGI technology for dynamic web documents. (6)
 - b. Explain the SAX Approches and DOM Approach of XML Processors. (6)
 6. a. Explain Operator types in JavaScript. (6)
 - b. Describe Document Object Model in detail. (6)
 7. a. Explain the Hashes used in perl. (6)
 - b. Explain Scalars and their operations used in perl. (6)
 8. Write notes on any two of the following. (2×6=12)
 - a. Variables in web design environment.
 - b. HTTP.
 - c. Forms in Javascript.
 - d. Pattern Matching.
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PGIVS-021 B-21
M.Sc. IV Semester Degree Examination
COMPUTER SCIENCE
Digital Image Processing
Paper : SCT 4.1
(New Syllabus)

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

1. Section A is compulsory.
2. Answer any five questions from Section B.

Section - A

Answer the following questions.

(10×2=20)

1.
 - a. What are the elements of visual perception?
 - b. Define contrast.
 - c. What is the storage required in bits for a grayscale image of size 64×64 pixels containing 256 gray levels?
 - d. Write expression for harmonic mean.
 - e. What are the advantages of homomorphic filters?
 - f. Define exponential noise.
 - g. What are the reasons for image degradation?
 - h. What are the spatial transformation?
 - i. Define edge.
 - j. Why data compression is required?

Section - B

2.
 - a. Discuss the construction and working of Vidicon camera. (6)
 - b. Discuss the construction and working of Digital camera. (6)
3.
 - a. Describe the HSI color model. (6)
 - b. Explain the KLT transformation. (6)

4. a. Perform histogram stretching to 0-7 intensity range for the following image information : (6)

Intensity	0	1	2	3	4	5	6	7
No. of pixel.	0	200	120	80	0	0	0	0

- b. How to perform histogram equalization? Explain with an example. (6)

5. a. Describe the color enhancement techniques. (6)

- b. Apply median filter of size 3×3 on the following image segment. For boundary condition only consider pixels within image segment. (6)

112	54	93	09	63
212	32	143	201	76
90	13	52	241	78
69	187	165	0	61
135	230	78	19	60

6. a. How to remove blur caused by uniform linear motion? Explain. (6)

- b. Discuss the image restoration using Geometric transformation. (6)

7. a. Explain compression using Huffman coding with a suitable example. (6)

- b. Given the threshold = 500, find whether a horizontal line exists in the following image segment : (6)

18	76	32
189	132	210
98	115	53

8. Write notes on any two of the following. (2×6=12)

- Dither.
- Directional Smoothing.
- Lagrange multiplier.
- Dam construction.

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PGIVS-020-B-21
M.Sc. IV Semester Degree Examination
COMPUTER SCIENCE
Problem Solving Using Python
Paper : HCT - 4.2
(New syllabus)

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

- 1) **Section A** is Compulsory.
- 2) Answer any **five** questions from section B.

SECTION - A

Answer the following questions.

(10×2=20)

1.
 - a) What are the rules to declare variables in python?
 - b) Give the difference between mutable and immutable.
 - c) Enlist the operations on sets.
 - d) How to access element in a list?
 - e) Write the properties of Dictionary.
 - f) How to copy an existing list?
 - g) Define file handling.
 - h) List the types of errors.
 - i) Write the syntax of classes and objects.
 - j) Define Method overriding.

SECTION - B

2.
 - a) Explain the features of python. How it is differ from other programming? **(6)**
 - b) List out the types of operator and explain any two with an example. **(6)**
3.
 - a) With a suitable example explain various operations performed on string. **(6)**
 - b) Write a python code to check the given string is palindrome or not. **(6)**

4. a) Explain Generator and comprehension with an example. (6)
b) Briefly describe Key value pair as argument. (6)
5. a) Write a python program by defining a function myFun() with 3 arguments and display the same by passing the parameter. (6)
b) Explain default and required argument with an example. (6)
6. a) What are the methods to delete an element from a list? Give an example. (6)
b) With an example explain user defined function. (6)
7. a) How to create and import packages in python? Give an example. (6)
b) With a neat figure explain different forms of inheritance. (6)
8. Write notes on any **two** of the following. (2×6=12)
a) Loops.
b) Data Formatting.
c) File Methods.
d) Constructor.
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