



WEST BENGAL STATE UNIVERSITY
B.A./B.Sc. Honours/Programme 4th Semester Examination, 2023

CMAHGEC04T/CMAGCOR04T-COMPUTER APPLICATION (GE4/DSC4)

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.*

Answer Question No. 1 and any four questions from the rest

1. Answer any *four* questions from the following: 2×4 = 8
 - (a) What is multimedia?
 - (b) What is XML?
 - (c) What are the difference between JPEG and GIF image?
 - (d) Write the function of web browser.
 - (e) Differentiate between NTSC and PAL.
 - (f) Differentiate animation and video.
 - (g) What is VRML?
2.
 - (a) Discuss various techniques of animation in Multimedia. 2
 - (b) Differentiate between Hypertext and Hypermedia. 3
 - (c) Explain CMY color model. 3
3.
 - (a) Define the term “Color Palettes” and “Dithering”. 4
 - (b) Write down various types of audio. 4
4.
 - (a) Define cel animation and path animation. 3
 - (b) Write any four file formats used in video. 2
 - (c) What are the important criteria needed for making successful animation? 3
5.
 - (a) What is called MIDI audio? What are the basic requirements for MIDI audio? 2+2
 - (b) Differentiate between Bitmap and Vector Drawing of image. 2+2
6. Define JPEG. Discuss the different steps involved in JPEG compression process in multimedia system. 2+6
7.
 - (a) How content management systems (CMS) facilitate website creation and management? 2
 - (b) What are browser cookies? 3
 - (c) Explain the concept of website responsiveness and its impact on user experience. 3
8. Write short notes on any *two* of the following: 4×2 = 8
 - (a) FTP
 - (b) Domain Name Service
 - (c) HTML and DHTML.

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CMAACOR08T-COMPUTER APPLICATION (CC8)

Time Allotted: 2 Hours

Full Marks: 40

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All symbols are of usual significance.*

Answer Question Number 1 and any *four* questions from the rest

GROUP-A

1. Answer any *four* questions from the following: 2×4 = 8
- What is Hypertext?
 - What is the function of web browser?
 - What is 'JPEG' file?
 - Write two characteristics of Multimedia Presentation.
 - Define image morphing.
 - What is virtual reality?
 - Give two examples of hypermedia.

GROUP-B

Answer any *four* questions from the following

- 8×4 = 32
- Write two advantages and two disadvantages of MIDI files. 4+4
 - Briefly discuss the various audio file formats used in multimedia systems.
 - Describe client server concept. 4+4
 - What do you mean by lossless and lossy compression?
 - Define sampling and quantization of audio. 3+2+3
 - Write name of any four file formats used in video.
 - What are the important criteria needed for making successful Animation?
 - Mention different types Animation File formats. 3+4+1
 - Write advantages of using Multimedia.
 - Write the full names of MPEG and WMV.
 - What is 3-tier web architecture? Explain with examples. 4+4
 - What is file transfer protocol (FTP) and what is the purpose of it? — Discuss.
 - Difference between a Webpage and a Website. 4+4
 - What is Internet Protocol and mentioned few types of IP.
 - Write short notes on any *two* of the following: 4+4
 - Web Hosting
 - Compression Techniques
 - Document Object Model (DOM).

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CMAACOR09T-COMPUTER APPLICATION (CC9)

OOP'S USING JAVA THEORY

Time Allotted: 2 Hours

Full Marks: 40

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All symbols are of usual significance.*

1. Answer any **four** questions from the following: 2×4 = 8
- (a) What is the significance of “method area”?
 - (b) How Java differs from C++?
 - (c) Where ‘implements’ is more useful than ‘extends’ in Java?
 - (d) How would you access System package in Java?
 - (e) How arrays are declared in a Java program?
 - (f) Define class.
 - (g) Discuss various access specifiers used in Java.

Answer any four questions from the following

8×4 = 32

2. (a) What is thread? 2+2+2+2
- (b) What is the purpose of wait() method in Java?
- (c) Why packages are important in Java?
- (d) What is the use of nextInt() method in Java?
3. (a) Define abstract method and abstract class. 4+4
- (b) Show the working of Interface with a suitable example.
4. (a) Describe method overloading with an example. 4+4
- (b) Differentiate between different access specifiers in Java.
5. (a) What are the primitive data types of Java? 2+3+3
- (b) How can we take input from user in a Java program using scanner class? Explain with an example.
- (c) How can we pass an object as a parameter to a method and return an object from a method in Java?

6. (a) Differentiate between checked and unchecked exception with proper example. 6+2
(b) Differentiate between String and StringBuffer class.
7. (a) What is run-time polymorphism? Discuss with an example. 3+5
(b) Explain the state transition diagram of a Java Thread.
8. Explain the following Java concepts with sample program: 4+4
(a) Dynamic Binding
(b) Abstract Class.

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CMAACOR10T-COMPUTER APPLICATION (CC10)

SOFTWARE ENGINEERING

Time Allotted: 2 Hours

Full Marks: 50

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All symbols are of usual significance.*

GROUP-A

1. Answer any *five* questions from the following: 2×5 = 10
- (a) What is the difference between an error and a failure?
 - (b) What are the roles of a project manager?
 - (c) What are the disadvantages of classic lifecycle model?
 - (d) What is software prototyping?
 - (e) What do you mean by validation?
 - (f) Write down the difference between Alpha and Beta testing.
 - (g) Why are CASE tools important in software engineering?
 - (h) What do you mean by integration testing?

GROUP-B

Answer any *five* questions from the following 8×5 = 40

2. Explain different phases of a classical waterfall model. Mention at least two reasons as to why classical waterfall model can be considered impractical and cannot be used in real projects. What is iterative waterfall model? 3+3+2
3. (a) How to measure the size of a software? 3+(2+3)
(b) What are the shortcomings of LOC? What is the necessity of a feature point metric in the context of software project size estimation?
4. (a) Explain spiral model with proper diagram. 6+2
(b) Write the feature of UML.
5. (a) Explain top down approach and bottom up approach in brief. 6+2
(b) Explain Data-Dictionary.