

**Computer Lab - Practical Question Bank**

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**B.Com (Computer Applications) CBCS Semester – VI**  
**Multimedia Systems Practical Question Bank DSE-603 (a)**

Time: 60 Minutes

*Record* : 10  
*Viva-voce* : 10  
*Skill Test* : 15  
*Total Marks* : 35

1. create an image with line, rectangle, square and other basic shapes
2. create a new image adding background colour and foreground colour
3. create a new image fill with various pattern (Fill type)
4. Draw curve, circle, arc, oval using tools panel and the properties panel.
5. Create an animation using the tools panel and the properties panel to draw the following Pen, Pencil, brush, lasso tool
6. Create a heart shape in GIMP using selections.
7. Insert background image and do the following using blender.
  - a) Make annotations on the active area.
  - b) Scale (Resize selected items)
8. Create your own text and apply different font styles, size, alignments and color
9. Create text using text – editor tool apply various formatting like Bold, Italic, underline and strikethrough.
10. Create text using text – editor tool apply Justify like left justify, right justify and centre justify
11. Create an animation in which text HELLO gets converted into GOODBYE (using motion/shapetweening).
12. Create an Outline Around Text ("Text tool option" window)
13. Create text using text – editor tool apply various orientation effects
14. Create a new layer apply Fill with transparency effect
  - a. Flip horizontally
  - b. flip vertically
15. Create your own text and apply Arbitrary rotation
16. Create your college logo that appears to be floating above a background
17. Create your own text and add object mirror effect and Transform- rotate

effect.18.Create your own text and apply viewport shading

19. Insert an image in GIMP and perform the following

- a. Adjust colour curves
- b. Perform Invert, Linear

Invert, and value Invert 20. Insert an image and do the following using blender.

- a) Rotate it in different directions.
- b) Make annotations on the active area.
- c) Scale (Resizes selected items)

21. Apply snake hook, rotate, cloth effects by using sculpting and display it in different viewpoints.

22. Merge An Image From A File To The Current Image In Gimp (Use "File->Open As Layers")

23. Draw box and apply different

colors. 24. Apply different filter effects to the image

age

- a. Blur
- b. Distorts
- c. Artistic with cartoon and

photocopy 25. Insert an image and perform the following

- a. Smudge the image
- b. Dodge/burn the image

26. Insert an image and perform the following using Transform Tool

- a. Distort the image using Wrap Transform
- b. Flip the image
- c. Create a 3-D image
- d. Use Perspective Transform
- e. Use Shear Transform

27. create 2D animation to depict moving object from left to right 28. Insert an image and apply Decor filter

29. Insert an image and apply Map-illusion filter

30. Take two files in one folder with different MB and Show ZIP and UNZIP compression of files with steps.

31. Create an animation using blend animation

effect 32. create a webpage with sample video using video

tag 33. Remove A Window Border In Gimp image (crop tool)

34. Create an animation having an image having fade-in fade-out

- effect35. Create an animation–Pseudo-colour Overlays
36. Create your college LOGO and save it with different file extension like BMP, JPEG, GIF, TIFF and PNG
37. Write about covid safety measures by selecting animation menu showing animation transition and sound effects.
38. Create a water wave effect animation using (wave).
39. Create an animation adding an image and text where image is blur (blur in effect)
40. Create an animation adding a text using Fire Effects in Gimp (using Filters Make 2D still and animated fire! Blur and Noise filters)
41. Create an animation adding a text using Beveled text on Stone
42. Create an animation adding a text using Neon Text
43. Create an animation adding a text using Text on Faces (Blend your text with a person's face.)
44. Create an animation adding a text using Artistic 3D Text (Combine Illustrator 3D effects and Gimp)
45. Create an animation using X-ray Scanner (use the same face and skull images. Rescale tool, I warp, Blur, and Layer Masking.)
46. Create a Text Portrait Poster (half text–half image) in GIMP
47. Write steps to show audio effects.
48. Write steps to show video effects.
49. Write steps to show sound effects.
50. Create a scene to show the sunrise (using multiple layers and motion tweening)

**Note:** Implement the programs using GIMP/Blender/Audacity/animation tools/image editor/video editor



## Computer Lab - Practical Question Bank

Faculty of Commerce and Business Management, Kakatiya University, Warangal

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### B.Com (Computer Applications) CBCS Semester – VI Cyber Security Practical Question Bank DSE-603 (b)

**Objective :** Analyze cyber-attacks, types of cybercrimes, cyber laws and also how to protect the entire Internet community from such attacks. Interpret and forensically investigate security and network incidents. Apply policies and procedures to manage Privacy issues.

**Note :** a) Write the below Program using C language or Python.

Time: 60 Minutes

Record	: 10
Skill Test	: 15
Viva	: 10
<b>Total Marks</b>	<b>: 35</b>

1. What are the Roles and Responsibilities of System Administrator? Write the steps for creating the User account, setting permissions and protecting your files with password.
2. Write the steps for disk partitioning and perform operations like shrinking, Extending, deleting and formatting.
3. Prepare a Case study on Ransomware attacks. (Ex: MediaMarkt)
4. Write the steps for installation of software from Open source Mode and Paid subscription mode
5. Write the steps to make Microsoft Chrome as a default browser, Add Active X Controls and Add-on to the Browser.
6. Write the steps to establish peer to peer network connection using two systems in a LAN
7. What is WiFi? How do you configure the Wifi on Windows operating system
8. Write the steps to Install and configure Network Components like switches, Hub and Modem and how do you connect to Dial-Up networking
9. What are the features of firewall? Write the steps in providing network security and to set Firewall Security in windows.

10. Write the steps for installation of System Software, Application software and Antivirus.
11. What do you mean by Spooling printers? Write the steps for spooling printer.
12. Write a Program to identify the category of IP address for a given IP address
13. Write a Program to check the strength of the password.
14. Write the steps to transfer files between Wireless communication using Blue Tooth and FTP
15. Prepare a case study on Cosmos Bank Cyber attack in Pune
16. Write a Program to search the given pattern using optimized algorithm
17. Prepare a case study on Social Media Crime that occurred in Pune 2021.
18. Prepare a case study on Japanese Bank for Keylogger Scam
19. Write the steps to prevent the denial of Service attacks.
20. Write the steps to demonstrate intrusion detection system (ids) using the tool SNORT
21. What is Malware? Write the steps to remove the malware from your PC.
22. What are the various types of Vulnerabilities for hacking the web applications.
23. Write steps for sharing files and printer remotely between two system
24. List out the various Mobile security apps . Write the steps to install and use ,one of the mobile security app
25. Write the algorithm for encoding and decoding the Hash-Based Message Authentication Code(HMAC)
26. Prepare a case study on Mahesh Bank cyber attack.
27. Prepare a case study of cyber attack through Facebook Account
28. Create a Presentation on " Ethical Hacking" at least 10 slides
29. Write a Program to download a file from HTTP server
30. Create a Presentation on "Security Protocols" ( atleast 5 protocols)
31. Write the steps to detect the number of devices connected to wifi and block unauthorized devices
32. Prepare a case study on Crypto currency Cyber attack. (Ex: Grim Finance)
33. Write an algorithm and Program for encrypting a plain text and decrypting a cipher text using Caesar Cipher.

34. Write an algorithm and Program to implement Data Encryption Standard (DES) for encryption and decryption
35. Write RSA algorithm and Program to implement RSA Standard for encryption and decryption
36. Write the steps to analyze the E-Mail Application's security vulnerabilities.
37. What is SQL Injection? Write steps for SQL Injection attack on Insert, Update and Delete.
38. Write an algorithm and a Program to implement Diffie Hellman Key
39. Write an RSA algorithm and Program to implement digital Signature Scheme
40. Write an algorithm and Program to generate Pseudo Random numbers in a range
41. Create a Presentation on "Cyber Security Regulations" with at least 10 slides
42. Create a Presentation on "Role of International Law" with at least 10 slides
43. Create a Presentation on "Cyber Forensics" with at least 10 slides
44. Create a Presentation on "Cyber Security Standards" with at least 10 slides
45. Create a Presentation on "Cyber Security Attacks" with at least 10 slides
46. Write a Program to validate your Email address
47. Write the steps to check the devices connected to your internet and about data usage
48. Create a Presentation on "Cyber Security Policies 2013" with at least 10 slides
49. Create a Presentation on "State and Private sectors in Cyber Space" with at least 10 slides
50. Write the steps to read Email Headers and identify them as SPAM.





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**B.Com (Computer Applications) CBCS Semester – VI**  
**Data Analytics Practical Question Bank DSE-603 (c)**

- 1) To setup and install Hadoop in Pseudo-Distributed Mode.
- 2) Install, Deploy & configure Apache Spark.
- 3) Implement the following file management tasks in Hadoop: Adding Files and Directories, Retrieving Files, Deleting Files
- 4) Exploring various shell commands in Hadoop.
- 5) To install and run Apache Pig in Ubuntu so as to work with Hadoop.
- 6) To explore basic Data Processing operators in Pig.
- 7) To explore Hive with its basic commands: create, alter, and drop databases, tables, views, functions and indexes.
- 8) Data analytics using Apache Spark on Amazon food dataset, find all the pairs of items frequently reviewed together.
- 9) To perform data analysis on weather dataset using MapReduce.
- 10) To count the number of lines in a document using MapReduce Programs.  
Find the average, max and min temperature for each year in NCDC data set?
- 11) Write Pig Latin program to sort, group, join, project, and filter your data.  
Find out Number of Products Sold in Each Country.
- 12) Implement word count / frequency programs using Map Reduce
- 13) Implement an MR program that processes a weather dataset
- 14) Implement Linear and logistic Regression
- 15) Implement SVM / Decision tree classification techniques
- 16) Implement clustering techniques
- 17) Visualize data using any plotting framework
- 18) Implement an application that stores big data in Hbase / MongoDB / Pig  
Using Hadoop / R.

**19) READING AND WRITING DIFFERENT TYPES OF DATASETS**

Reading different types of data sets (.txt, .csv) from web and disk and writing in file in specific disk location.

20) Reading Excel data sheet in R.

21) Reading XML dataset in R

22) VISUALIZATIONS find the data distributions using box and scatter plot.

23) VISUALIZATIONS find the outliers using plot.

24) VISUALIZATIONS Plot the histogram , bar chart and pie chart on sample data

25) REGRESSION MODEL Import a data from web storage. Name the dataset and now do Logistic Regression to find out relation between variables that are affecting the admission of a student in a institute based on his or her GRE score, GPA obtained and rank of the student. Also check the model is fit or not. require (foreign), require(MASS)

26) MULTIPLE REGRESSION MODEL Apply multiple regressions, if data have a continuous independent variable. Apply on above dataset.

27) REGRESSION MODEL FOR PREDICTION Apply regression Model techniques to predict the data on above dataset

28) CLASSIFICATION MODEL Install relevant package for classification.

29) CLASSIFICATION MODEL Choose classifier for classification problem.

30) CLASSIFICATION MODEL Evaluate the performance of classifier.

31) To get the input from user and perform numerical operations (MAX, MIN, AVG, SUM, SQRT, ROUND) using in R.

32) To perform data import / export (.CSV, .XLS, .TXT) operations using data frames in R.

33) To get the input matrix from user and perform Matrix addition, subtraction, multiplication, inverse transpose and division operations using vector concept in R.

34) To perform statistical operations (Mean, Median, Mode and Standard deviation) using R.

35) To perform data pre-processing operations

i) Handling Missing data ii) Min-Max normalization

- 36) To perform dimensionality reduction operation using PCA for Houses Data Set
- 37) To perform Simple Linear Regression with R.
- 38) To perform K-Means clustering operation and visualize for iris data set
- 39) Write R script to diagnose any disease using KNN classification and plot the results.
- 40) To perform market basket analysis using Association Rules
- 41) Creation of a Data Warehouse.
- 42) Apriori Algorithm
- 43) One Hierarchical clustering algorithm.
- 44) Bayesian Classification
- 45) Decision Tree Induction algorithm
- 46) Support Vector Machine
- 47) Applications of classification for web mining.
- 48) Case Study on Text Mining.
- 49) Visualize data using any plotting framework
- 50) Study and implementation of Data Visualization with ggplot2

**LIST OF SOFTWARE:**

- > Hadoop
- > YARN
- > R Package
- > Hbase
- > MongoDB
- > Excel

