

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)
B.C.A. Sem-VI : SUMMER : 2026
SUBJECT: BUSINESS ANALYTICS

Day : Thursday
Date : 18/06/2026

S-18801-2026

Time : 02:00 PM-05:00 PM
Max. Marks : 60

N.B.

1. Attempt any **THREE** questions from SECTION I and any **TWO** questions from SECTION II.
2. Figures to the right indicate **FULL** Marks.
3. Answers to both the sections should be written in **SAME** answer-book.

SECTION I

1. Outline the data mining process and explain how it contributes to extracting meaningful patterns from data. (10)
2. What is data visualization? Explain its role and significance in business analytics. (10)
3. Explain the concept of text mining and describe a business scenario where it can be applied. (10)
4. How can an organization use Competitive Intelligence to gain a sustainable competitive advantage. Explain with an example. (10)
5. How can an e-commerce company use Web Mining to improve customer experience and increase sales? Explain with examples. (10)
6. Write short notes on **ANY TWO** of the following: (10)
 - a. Reports and Queries in Business Analytics
 - b. Geographical Information System
 - c. Automated Decision Support System

SECTION II

7. Explain the applications of Business Analytics in the finance sector. Discuss its role in risk management, fraud detection and investment decision making. (15)
8. Explain how Business Analytics supports marketing strategies through customer analytics, churn analysis and customer lifetime value analysis. (15)
9. Discuss the future trends in Business Analytics. How might emerging technologies like AI and IoT influence the evolution of analytics. (15)

Day : Wednesday

Date : 17/06/2026

S-18800-2026

Time : 02:00 PM-05:00 PM

Max. Marks : 60

N.B.

- 1) Questions No. 4 from Section - I is COMPULSORY.
- 2) Answer ANY TWO questions from Q. No. 1, 2, 3 in Section - I.
- 3) Answer ANY TWO questions from Q. No. 5, 6, 7 in Section - II.
- 4) Figures to the right indicates FULL marks.
- 5) Answer to both the sections should be written in SAME answer book.

SECTION - I

- Q. 1 Describe various techniques used to track and visualize project progress in software project management. (12)
- Q. 2 Explain in brief various phases of software project management life cycle with neat diagram. (12)
- Q. 3 Explain various key areas of Project Management Body Of Knowledge PMBOK. (12)
- Q. 4 Write short note on ANY THREE of the following: (12)
- a) Work Breakdown Structure
 - b) Expert Judgement estimation method.
 - c) Role of Project Manager
 - d) Project Management Framework

SECTION- II

- Q. 5 As a project manager, you are advised by the management to prepare software project management plan document for college website application. Prepare feasible project management plan. (12)
- Q. 6 "Risk management is needed throughout software development ". Justify with your answer to improve quality of software project. (12)
- Q. 7 Describe in brief main steps involved in project planning to deliver successful IT project. (12)

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)
B.C.A. Sem-VI : SUMMER : 2026
SUBJECT: KNOWLEDGE MANAGEMENT

Day : Friday
Date : 19/06/2026

S-22707-2026

Time : 02:00 PM-05:00 PM
Max. Marks : 60

N.B.

- 1) **Questions No. 4 from Section - I is COMPULSORY.**
- 2) Answer **ANY TWO** questions from Q. No. 1, 2, 3 in **Section - I.**
- 3) Answer **ANY TWO** questions from Q. No. 5, 6, 7 in **Section - II.**
- 4) Figures to the right indicates **FULL** marks.
- 5) Answer to both the sections should be written in **SAME** answer book.

SECTION - I

- Q. 1** Explain in brief various difficulties of Knowledge Management. (12)
- Q. 2** Answer the following : (6 Marks x 2 = 12) (12)
- a) How to formulate the Knowledge Management Strategy.
 - b) What is Knowledge Management? Explain the advantages of Knowledge Management
- Q. 3** Answer the following : (6 Marks x 2 = 12) (12)
- a) How Knowledge Management does is useful for corporate transformation.
 - b) Illustrate the role of supply chain in Knowledge Management.
- Q. 4** Write short notes on **ANY TWO** of the following (12)
- a) Technology components of Knowledge Management.
 - b) Organizational Knowledge.
 - c) Learning and Change - Innovation.

SECTION- II

- Q. 5** State and explain in brief different road blocks to success in Knowledge Management. (12)
- Q. 6** Discuss in detail Outcomes of learning in Knowledge Management (12)
- Q. 7** For a private company having various departments viz. Sales Human Resources, Production, Account etc. You have been appointed as Knowledge Management solution provider in the company. Suggest your technological solution for the following. (12)
- i) How will you connect all the departments by using technology components?
 - ii) Draw the block diagram to connect all the departments with the Technological Knowledge Management solution for each department.
 - iii) How the Knowledge Management system does is useful for each department?

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)

B.C.A. Sem-VI : SUMMER : 2026

SUBJECT: WEB PROGRAMMING

Day : Tuesday

Date : 16/06/2026

S-18799-2026

Time : 02:00 PM-05:00 PM

Max. Marks : 60

N.B.

- 1) Q. No 4 from Section - I is **COMPULSORY**
- 2) Attempt any **TWO** questions from Q. No 1 to Q. No 3 in Section - I
- 3) Attempt any **TWO** questions from Q. No 5 to Q. No 7 in Section - II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in the **SAME** answer book.

SECTION - I

- Q.1** What is a function? Explain how to declare, defining and calling function in PHP. (12)
- Q.2** Explain PHP classes with example. (12)
- Q.3** What is file handling in PHP? Explain with suitable example. (12)
- Q.4** Write short notes on any **THREE** of the following: (12)
- a) Conditional Structure in PHP
 - b) PHP tags
 - c) Loops in PHP
 - d) MYSQL Database

SECTION - II

- Q.5** Write a PHP program to destroy a session. (12)
- Q.6** Write a PHP program to sorting 1-D array. (12)
- Q.7** Write a PHP program for cloning of an object. (12)

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2018 COURSE)

B.C.A. Sem-VI : SUMMER : 2026

SUBJECT: DATA WAREHOUSING & DATA MINING

Day : Monday
Date : 15/06/2026

S-18798-2026

Time : 02:00 PM-05:00 PM
Max. Marks : 60

N.B.:

- 1) **Q. No 4 is COMPULSORY.**
- 2) Attempt any **TWO** questions from **Q. No. 1 to Q. No. 3** in Section –I.
- 3) Attempt any **TWO** questions from **Q. No. 5 to Q. No. 7** in Section –II.
- 4) Figures to the right indicate **FULL** marks.
- 5) – Answers to both the sections should be written in **SAME** answer book.

SECTION-I

- Q.1** Explain the difference between OLTP and OLAP in detail. (12)
- Q.2** Describe the Star, Snowflake and fact constellation schemas highlighting their structures. (12)
- Q.3** What is Association Rule Mining? Explain Apriori Algorithm with example. (12)
- Q.4** Write short notes on any **THREE** of the following: (12)
- a) Data Discretization
 - b) Web Mining
 - c) ETL Process
 - d) Decision Trees
 - e) FP Growth Algorithm

SECTION-II

- Q.5** What is data mining? Explain an architecture of data mining in detail. (12)
- Q.6** What are decision trees? Explain how rules extraction takes place from decision trees. (12)
- Q.7** Explain application of data mining in Marketing Analytics. (12)

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)

B.C.A. Sem-VI : SUMMER : 2026

SUBJECT: DATA WAREHOUSING & DATA MINING

Day : Wednesday

Date : 13/05/2026

S-26313-2026

Time : 02:00 PM-05:00 PM

Max. Marks : 100

N.B.

- 1) Attempt any **FIVE** questions from Section – I and any **TWO** questions from Section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in the **SAME** answer book.

SECTION – I

- Q.1 What is a data mart? Compare and contrast the top-down and bottom-up approaches to building data marts. (12)
- Q.2 Discuss the various OLAP models, highlighting their underlying data storage, mechanisms, strengths and weaknesses. (12)
- Q.3 Describe the different data transformation techniques in preparing data for effective analysis and modelling. (12)
- Q.4 What is data mining and how does it differ from traditional data analysis or querying? (12)
- Q.5 Explain the difference between OLTP and OLAP in detail. (12)
- Q.6 Explain the concept of outlier analysis in detail with an example. (12)
- Q.7 Write short notes on any **TWO**: (12)
- a) Types of Data Warehouse users
 - b) Data cleaning mechanisms
 - c) Supervised and unsupervised learning

SECTION – II

- Q.8 What is association rule mining? Explain Apriori algorithm and its applications. (20)
- Q.9 For a spam email detection, would you use a supervised or unsupervised learning approach? Justify your answer. (20)
- Q.10 What is primary objective of clustering? Explain any one clustering algorithm in detail. (20)

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-VI : SUMMER : 2026
SUBJECT: WEB PROGRAMMING (PHP)

Day : Friday
Date : 15/05/2026

S-26314-2026

Time : 02:00 PM-05:00 PM
Max. Marks : 100

N.B.

- 1) Attempt **ANY FIVE** questions from Section – I and **ANY TWO** questions from Section II.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SAME** answer book.

SECTION – I

- Q.1** Explain Arithmetic, Logical and Comparison Operators in PHP with example. (12)
- Q.2** What is function? Explain in detail to create user define function and call the function with example. (12)
- Q.3** Describe the steps of Installation and Configuration of XAMPP server on a local computer. (12)
- Q.4** What do you mean by file handling? Explain built-in file handling function with example. (12)
- Q.5** Explain looping structure statement in PHP with proper Example. (12)
- Q.6** What is Associative array? Explain with example. (12)
- Q.7** Write short notes on **ANY THREE** of the following : (12)
- a) GET and POST method
 - b) Cookies in PHP
 - c) DDL command in MYSQL
 - d) Date() function

SECTION – II

- Q.8** Write a PHP code to set and access the values of username variable through cookies. (20)
- Q.9** Write a PHP code to design a feedback form with MYSQL database connection. (20)
- Q.10** Write a PHP code to check whether the given number is prime or not? (20)

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-VI : SUMMER : 2026
SUBJECT: SOFTWARE PROJECT MANAGEMENT

Day : Monday
Date : 18/05/2026

S-26315-2026

Time : 02:00 PM-05:00 PM
Max. Marks : 100

N. B. :

- 1) Attempt **ANY FOUR** questions from section-I and attempt **ANY TWO** questions from section-II.
- 2) Answer to both the sections should be written in **SAME** answer book.

SECTION – I

- Q. 1** Define software project management. Illustrate various phases of software project management. Also explain how software projects are different than other types of projects. [15]
- Q. 2** What do you mean by cost estimation? Discuss the costs to be considered during cost estimation of software project. Discuss factors affecting the software cost. [15]
- Q. 3** What is risk? Discuss top ten risks in software projects. [15]
- Q. 4** Discuss the stepwise project planning in detail. [15]
- Q. 5** What do you mean by quality management? Describe the stages of software quality management. [15]
- Q. 6** Write short notes on **ANY THREE** of the following: [15]
- a) Quality standards
 - b) Team leader
 - c) Parkinson's law
 - d) Scope management

SECTION – II

- Q. 7** Draw the activity network diagram and find EST, EFT, LST and LFT. Also find the critical path. [20]

Activity	Predecessor	Duration (Weeks)
A	--	6
B	--	7
C	A	6
D	A	9
E	A	7
F	E	5
G	D,F	10
H	B,C	10
I	G,H	7

Q. 8 Calculate the total function point value for the project given below. [20]

Number of programmers – 20,

Number of algorithms – 30,

Number of inputs – 15,

Number of outputs – 21,

Number of internal files – 13,

Number of external files – 12,

Number of enquiries – 30,

Number of programs – 32

Compute for all the three complexities. (consider Σfi or $DI=4$)

Q. 9 a) “Software project management and software engineering goes hand in hand”. [10]
Justify.

b) As a project manager of IT project, identify the key stakeholders involved in [10]
project. Define the role of each.

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BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-VI : SUMMER : 2026
SUBJECT: DATA ANALYSIS: DATA ANALYSIS USING R PROGRAMMING

Day : Wednesday

Time : 02:00 PM-05:00 PM

Date : 20/05/2026

S-26316-2026

Max. Marks : **100**

NB :

1. Section - I Attempt any FIVE questions. Each question carries 12 marks.
2. Section - II Attempt any TWO questions. Each question carries 20 marks.
3. Answer to both the sections should be written in the SAME answer book.
4. Figures to the right indicate FULL marks.

SECTION - I

- Q. 1 Describe the structure and components of RStudio. How does it support efficient data analysis workflows? (12)
- Q. 2 Write an R script to create and manipulate vectors, matrices, lists, and data frames. Demonstrate indexing and slicing operations. (12)
- Q. 3 Solve: A bag contains 4 red, 5 green, and 6 blue balls. Two balls are drawn randomly i) with replacement ii) without replacement. Find the probability that both are green. (12)
- Q. 4 Most graduate schools of business require applicants for admission to take the Graduate Management Admission Council's GMAT examination. Scores on the GMAT are roughly normally distributed with a mean of 527 and a standard deviation of 112. What is the probability of an individual scoring above 500 on the GMAT? (12)
- Q. 5 What is Monte Carlo Simulation? Design a simple experiment in R to estimate the value of π using random sampling. (12)
- Q. 6 A sample of 30 students has a mean score of 72 and standard deviation of 8. Test the hypothesis that the population mean is 70 using a t-test. (12)
- Q. 7 Attempt ANY THREE of the following: (Short Notes) (4x3)
- a) Permutation and Combination
 - b) Exponential Distribution
 - c) Standard Error
 - d) Pie Chart in R

SECTION - II

- Q. 8 Perform an F-Test in R to compare variances of two samples. Include assumptions and interpretation. (20)
- Q. 9 Create bar charts and pair plots using R for a dataset. Interpret the visual output. (20)
- Q. 10 Use R to perform ANOVA on a dataset comparing three groups. Include assumptions, code, and interpretation. (20)

100

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-VI : SUMMER : 2026
SUBJECT: DATA SCIENCE: INTRODUCTION TO DATA SCIENCE

Day : Wednesday
Date : 20/05/2026

S-26318-2026

Time : 02:00 PM-05:00 PM
Max. Marks : **000**

N.B.:

- 1) Attempt **ANY FIVE** questions from Section – I and **ANY TWO** questions from Section – II.
- 2) Answers to both the section should be written in the **SAME** answer book.
- 3) Figures to the right indicate **FULL** marks.

SECTION – I

- | | | |
|-------------|---|------|
| Q.1 | What are frequent patterns, association and correlation in data mining? | [12] |
| Q.2 | Explain the holdout method and random sub-sampling for model validation. | [12] |
| Q.3 | How is clustering evaluated for effectiveness and accuracy? | [12] |
| Q.4 | What is polynomial regression and how does it improves model performance? | [12] |
| Q.5 | Compare logistic regression with linear regression in terms of output and uses cases. | [12] |
| Q.6. | Discuss the issues related to classification. Write about Hold out method. | [12] |
| Q.7 | Write short notes on ANY TWO of the following: | [12] |
| | a) Accuracy and error measures in prediction | |
| | b) Titanic Survival Dataset | |
| | c) Convolution neural networks | |
| | d) Logistic Regression | |

SECTION – II

- | | | |
|-------------|---|------|
| Q.8 | Discuss the history and current scope of deep learning. Why has deep learning become prominent in recent years? | [20] |
| Q.9 | Differentiate between Agglomerative versus Divisive Hierarchical Clustering. | [20] |
| Q.10 | Explain the working of classification by decision tree induction. | [20] |

BACHELOR OF COMPUTER APPLICATIONS (CBCS - 2022 COURSE)
B.C.A. Sem-VI : SUMMER : 2026
SUBJECT: INFORMATION SECURITY: INFORMATION SECURITY
ADMINISTRATION

Day : Wednesday
Date : 20/05/2026

S-26317-2026

Time : 02:00 PM-05:00 PM
Max. Marks : **100**

N. B. :

- 1) Attempt **ANY FIVE** questions from Section – I. Each question carries **12** marks.
- 2) Attempt **ANY TWO** questions from Section – II. Each question carries **20** marks.
- 3) Figures to the right indicate **FULL** marks.
- 4) Draw neat and labelled diagrams **WHEREVER** necessary.
- 5) Answers to both the sections should be written in **SAME** answer book.

SECTION – I

- Q. 1** How to manage and secure a desktop PC. Describe the different client side devices. (12)
- Q. 2** What is WAN? Describe WAN devices in detail. (12)
- Q. 3** Describe NAT and PAT settings in detail. (12)
- Q. 4** What is Network? Describe Local Area Network with security measures. (12)
- Q. 5** What is Website hosting? How to setup, manage and secure a web server. (12)
- Q. 6** Describe how to secure and manage Client OS and Applications. (12)
- Q. 7** Write short notes on **ANY THREE** of the following: (12)
- a) Mobile Device
 - b) Router
 - c) Firewall
 - d) Ports

SECTION – II

- Q. 8** Describe use of Print Server and File Server with its security measures. (20)
- Q. 9** Explain the terms Mobile Detection Management (MDM) and Mobile Threat Detection (MTD) in detail. (20)
- Q. 10** Describe the advantages of resource sharing over a LAN and discuss File Server setup. (20)