

R-4655

Sub. Code

546201

M.Sc. DEGREE EXAMINATION, APRIL 2021

Second Semester

Information Technology

DATABASE SYSTEMS

(CBCS – 2019 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. Differential File Processing system and DBMS.
2. What is DDL?
3. State the functions of Data Mart.
4. Define DBMS.
5. What is video – on demand?
6. What is meant by time series data?
7. What is the use of spatial database Queries?
8. Define predicate calculus.
9. What is mobile host?
10. What is WWW?

Part B**(5 × 5 = 25)**

Answer **all** questions, choosing either (a) or (b).

11. (a) Discuss about the levels of Database systems.

Or

- (b) Write a detailed note on ER Model.

12. (a) Discuss the advantages and disadvantages of distributed database.

Or

- (b) Illustrate the problems of client/server system in Distributed Database.

13. (a) Write about the temporal query languages in detail.

Or

- (b) What are the uses of relational operators in Multimedia database? Explain.

14. (a) Discuss the concept of spatial data indexing.

Or

- (b) Write a detailed note on Recursive Query processing.

15. (a) What are the database issues in Mobile computing? Explain.

Or

- (b) Write the benefits and limitations of Web Database.

Part C**(3 × 10 = 30)**Answer **any three** questions.

16. Explain the architecture of DBMS.
 17. Describe about object oriented data model in detail.
 18. Write in detail about the sources of multimedia database.
 19. Discuss in detail about spatial database.
 20. Explain the concept of Mobile Database with architecture.
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546202

M.Sc. DEGREE EXAMINATION, APRIL 2021

Second Semester

Information Technology

DATA MINING

(CBCS – 2019 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is the use of knowledge base?
2. List the stages involved in data preprocessing.
3. Why do we need a data warehouse?
4. What is concept hierarchy?
5. What are the tools available in data classification?
6. What is the purpose of using Apriori algorithm?
7. What is cluster analysis?
8. What is CLARA?
9. List the applications of data mining.
10. Define web mining.

Part B**(5 × 5 = 25)**

Answer **all** questions, choosing either (a) or (b).

11. (a) Discuss about the major issues in Data Mining.

Or

- (b) Write a detailed note on data integration.

12. (a) Compare the features of OLAP and OLTP.

Or

- (b) Discuss various schemas used in data warehouse.

13. (a) Differentiate between data classification and prediction.

Or

- (b) Write a detailed note on constraint based association mining.

14. (a) Discuss any two methods to detect outliers based on the distance.

Or

- (b) Compare hierarchical and non-hierarchical clustering algorithm.

15. (a) Discuss the social impacts of data mining system.

Or

- (b) Write in detail about multimedia database.

Part C**(3 × 10 = 30)**

Answer any **three** questions.

16. Discuss in detail about various steps involved in KDD.
17. Describe a 3-tier Data Warehouse architecture.

18. Explain about decision tree induction algorithm with an example.
 19. Discuss the important requirements of cluster analysis in detail.
 20. Write in detail about the application of Data Mining in Business.
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546203

M.Sc. DEGREE EXAMINATION, APRIL 2021

Second Semester

Information Technology

SOFTWARE TESTING AND QUALITY ASSURANCE

(CBCS – 2019 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define Test Bed.
2. List the different types of system testing.
3. What is boundary value analysis?
4. What are the factors affecting less than 100% degree of coverage?
5. Write the scope of software metrics.
6. What is MTTF?
7. Define the term software quality.
8. What is meant by quality audit?
9. Differentiate CMM and ISO.
10. What is peer review?

Part B**(5 × 5 = 25)**

Answer **all** questions, choosing either (a) or (b).

11. (a) Write about the basic concept of testing.

Or

- (b) Compare Black box and White box testing.

12. (a) Describe the roles and activities in testing.

Or

- (b) Give a brief on life cycle of defect.

13. (a) Discuss on measurement basics.

Or

- (b) Write about In-process quality metrics.

14. (a) What is the difference between quality control and quality assurance?

Or

- (b) Briefly explain software reliability quality attributes.

15. (a) Describe the features of ISO 9000 model.

Or

- (b) Write a note on software configuration management

Part C $(3 \times 10 = 30)$

Answer any **three** questions.

16. Explain various types of testing.
 17. Write in detail about black box approaches.
 18. Discuss on product quality metrics.
 19. Explain Ishikawa's seven basic tools.
 20. Explain the various levels of CMM that predict the quality of an organization.
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Sub. Code

546504

M.Sc. DEGREE EXAMINATION, APRIL 2021

Second Semester

Information Technology

VIRTUALIZATION AND CLOUD COMPUTING

(CBCS – 2019 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. What is cloud?
2. Why parallel computing?
3. Define Virtualization.
4. List the tools available in cloud.
5. What is NIST?
6. Write a note on cloud storage.
7. Write the purpose of using cloud security.
8. Define virtual machine security.
9. What is open nepula?
10. Write about Google App Engine.

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Discuss about the services available in cloud.
Or
(b) Write in detail about elasticity in cloud.
12. (a) Explain the implementation level of virtualization.
Or
(b) What are the mechanisms of virtualization?
13. (a) Briefly explain about cloud storage.
Or
(b) Discuss about RESTful web services.
14. (a) What are the challenges of cloud security? Explain.
Or
(b) Explain about Inter-Cloud Resource Management.
15. (a) Write a detailed note on Mapping Applications.
Or
(b) Describe in detail about open stack.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail about distributed computing.
17. Write a detailed note on virtualization structure.
18. Discuss about peer-to-peer architecture.
19. Explain about saas security.
20. Write a detailed note on Hadoop.