R6773	Sub. Code 546201

M.Sc. DEGREE EXAMINATION, APRIL – 2022

Second Semester

Information Technology

DATABASE SYSTEMS

(CBCS – 2019 onwards)

Time : Three Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is Weak Entity?

2. Define Schema.

3. What is data warehouse?

4. What are the types of data independence?

5. What is time stamp?

6. Define Texture.

7. Write a note on vector data.

8. What is recursive query?

9. Define handoff.

10. Write about web database.

Part B (5 × 5 = 25)

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

11. (a) Write the functions of database administrator in detail.

Or

(b) Discuss about database languages with its types.

12. (a) Compare between OLAP and OLTP.

Or

(b) Describe the preliminaries of distributed database.

13. (a) Write in detail about Bi-temporal database.

Or

(b) What are the queries involved in multimedia database? Explain.

14. (a) Describe about Domain Relational Calculus with example.

Or

(b) What are the operators used in spatial database.

15. (a) Write the characteristics of mobile computing.

Or

(b) Describe the concept of Internet databases in detail.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Explain in details about data model and its type.

17. Write the architecture of distributed database.

18. Explain in detail about temporal database.

19. What are the techniques applied for spatial database? Explain.

20. Explain in detail about the functions of web database.

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R6774	Sub. Code 546202

M.Sc. DEGREE EXAMINATION, APRIL – 2022

Second Semester

Information Technology

DATA MINING

(CBCS – 2019 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define KDD.

2. What is Data Cleaning?

3. List out the steps involved in Association Rule mining.

4. How data warehouse differs from database?

5. Define Star schema.

6. Write about the two step process of classification?

7. What is outlier?

8. What are the different types of data used for cluster analysis?

9. Write the applications of spatial database?

10. List out some of the challenges of WWW.

Part B (5 × 5 = 25)

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

11. (a) Discuss about various functionalities of data mining.

Or

(b) Explain about the concept of data reduction?

12. (a) Write in detail about the features of data warehouse?

Or

(b) Discuss the various OLAP operations with example.

13. (a) How are decision trees related to classification rules? Explain.

Or

(b) Describe in detail about Aprori Algorithm?

14. (a) Distinguish between supervised and unsupervised learning.

Or

(b) Write a detailed note on nearest neighbor data mining techniques.

15. (a) Discuss in detail about the application of data mining for financial data analysis.

Or

(b) Explain the concept of spatial database.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. What are the various data cleaning tasks? Explain in detail.

17. Design and construction of Data Warehouse using various schemas.

18. Explain how Bayesion Algorithm applied on Datasets?

19. Explain in detail about K-means clustering Algorithm.

20. Discuss in detail about various web mining techniques.

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R6775	Sub. Code 546203

M.Sc. DEGREE EXAMINATION, APRIL – 2022

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. Distinguish between fault and failure.

2. Define Alpha and Beta test.

3. List the work of test planner.

4. Define path.

5. What is a measure?

6. What is a function point?

7. Mention the roles of inspection participants.

8. What is portability?

9. List out the weakness of ISO 9000.

10. Write the special SCM function needs in during implementation.

Part B (5 × 5 = 25)

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

11. (a) Describe the need of testing.

Or

(b) Compare verification and validation.

12. (a) Write a note on testing life cycle.

Or

(b) Give a brief on defect tracking and defect detection stages.

13. (a) Discuss the classification software measures.

Or

(b) Write metrics for software maintenance.

14. (a) Brief on SQA activities.

Or

(b) Mention and explain the quality attributes.

15. (a) Describe the features of capability maturity model.

Or

(b) Write about process change management

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Explain about testing principles.

17. Discuss in detail on white box approach.

18. Write a detailed note on product quality metrics.

19. Explain the concepts of quality.

20. Explain about the development of CMM.

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R6776	Sub. Code
	546504

M.Sc. DEGREE EXAMINATION, APRIL – 2022

Second Semester

Information Technology

VIRTUALIZATION AND CLOUD COMPUTING

(CBCS – 2019 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is cloud computing?

2. What are the services available in cloud?

3. List the types of virtualization.

4. What are the mechanisms applied in virtualization?

5. Define IaaS.

6. Write note on public cloud.

7. What are the challenges of cloud security?

8. Discuss about security governance.

9. Write a note on Eucalyptus.

10. What is MapReduce?

Part B (5 × 5 = 25)

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

11. (a) What are the characteristics of cloud computing? Explain.

Or

(b) Discuss about On-demand provision.

12. (a) Illustrate the virtualization structure in detail.

Or

(b) Describe about Desktop virtualization.

13. (a) What are the types of cloud? Explain.

Or

(b) Explain about NIST cloud computing.

14. (a) Discuss about SaaS security.

Or

(b) Write in detail about global exchange of cloud resources.

15. (a) Explain about parallel programming paradigm.

Or

(b) Describe in detail about cloud software environment.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Describe the evolution of cloud computing.

17. Explain in detail about server virtualization.

18. Illustrate the cloud computing architecture.

19. Discuss in detail about virtual inactive security.

20. Explain about open stack with structure.

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