

Model Questions

Sixth Semester B.C.A. Degree Examination

First Degree Programme under CSS (SDE)

(2017 Admission)

CP 1641 - BUSINESS INFORMATICS

Time: 3 Hours

Max. Marks 80

SECTION- A

(Very short answer type)

(One word to maximum of one sentence. Answer **all** questions.)

1. Define E-Commerce.
2. What do you mean by B2C?
3. Define smart cards.
4. List any two online advertising methods.
5. What you mean by non-repudiation in e-commerce?
6. Define one-to-one marketing.
7. List any two mobile finance applications.
8. What is Web 4.0?
9. Expand OSN.
10. List any two social Medias.

(10 x 1 = 10 Marks)

SECTION - B

(Short answer)

(Not to exceed one paragraph answer any **eight** questions. **Each** Question carries **2 marks**)

11. What are the challenges in e-commerce
12. Difference between e-business and e-commerce?
13. Compare B2C and B2B.
14. What is digital signature?
15. What are the advantages of electronic cheque?
16. List any four applications of e-commerce
17. What is the use of firewalls?
18. Define behavioral marketing and its advantages.
19. Write any four examples of mobile devices.

20. What is mass marketing?
21. What do you mean by computing software? Write an example?
22. Write any four differences between civil law and common law.

(8 x 2 = 16 Marks)

SECTION - C

(Short Essay)

(Not to exceed 120 words answer any **six** questions. **Each** Question carries **4** marks)

23. What are the difficulties and /or issues of e-commerce? Explain.
24. Compare credit cards and debit cards.
25. What are the security concerns in e-commerce?
26. Explain about the firewalls and its classifications.
27. Explain about the basic steps involved in market segmentation.
28. What are the various kinds of wireless communication? Explain.
29. Write note on mobile transactions.
30. Explain the major difference between web 2.0 and web 3.0
31. Define Civil law and its types.

(6 x 4 = 24 Marks)

SECTION - D

(Long Essay)

(Answer any **two** questions. **Each** Question carries **15** marks)

32. Describe the term E-Commerce and its classifications in detail.
33. a) What is public key encryption? In what way is it different from private key encryption? Why is it important in E-Commerce?
b) Explain different types of electronic payment systems.
34. a) Describe various tools used marketing
b) Explain Web advertising
35. Write notes on:
 - a) M-Commerce
 - b) Web 2.0
 - c) Virtual communities
 - d) Intellectual property law

(2 x 15 = 30 Marks)

Model Questions

Sixth Semester B.C.A. Degree Examination

First Degree Programme under CSS (SDE)

(2017 Admission)

CP 1642 – OBJECT ORIENTED ANALYSIS AND DESIGN

Time: 3 Hours

Max. Marks 80

SECTION- A

(Very short answer type)

(One word to maximum of one sentence. Answer **all** questions.)

1. Expand UML.
2. Define class?
3. What you mean by polymorphism?
4. Expand OOD ?
5. Define usecase.
6. Define elaboration.
7. What you mean by dependency?
8. What is qualifier?
9. Define a state.
10. What is artifact in deployment diagram?

(10 x 1 = 10 Marks)

SECTION - B

(Short answer)

(Not to exceed one paragraph answer any **eight** questions. **Each** Question carries **2 marks**)

11. What is Object Oriented Analysis and Design?
12. What do you understand by encapsulation?
13. What is the need for modeling?
14. Define multiplicity of association.
15. What do you mean by Collaboration?
16. Define generalization.
17. What is aggregation?
18. What is the use of component diagram?
19. What is the difference between user and actor?
20. What do you mean by object decomposition?

21. What is the purpose of Interaction modeling?
22. Give the meaning of Event and transition.

(8 x 2 = 16 Marks)

SECTION - C

(Short Essay)

(Not to exceed 120 words answer any **six** questions. **Each** Question carries **4 marks**)

23. How would you identify attributes of a class? Write an example.
24. Define UML. List all the diagrams and relationships used in UML.
25. What are the relationships used in class diagram?
26. Draw state chart diagram for telephone.
27. What is the relationship between sequence diagram and usecases? Take an example to show the relationship, highlighting the advantages.
28. Describe UML notations for collaboration diagram. Explain steps to create collaboration diagrams.
29. When to use activity diagrams? Describe the situation with example.
30. Draw component diagram for online shopping.
31. Explain deployment diagram and its components?

(6 x 4 = 24 Marks)

SECTION - D

(Long Essay)

(Answer any **two** questions. **Each** Question carries **15 marks**)

32. a) Explain object oriented themes in detail.
b) Comparison between algorithmic decomposition and object oriented decomposition.
33. a) What is class diagram? How to show relationships, generalizations, associations and aggregations in a class diagram? Give appropriate example.
b) Draw the usecase diagram for the following specification:

A coffee Vending machine dispenses coffee to customers. Customers order coffee by selecting a recipe from a set of recipes. Customers pay for the coffee using coins. Change is given back, if any, to the customers. The service staff loads ingredients (Coffee powder, milk, water, sugar, chocolate) into the coffee machine. The service staff can also add the recipe by indicating the name of the coffee, the units of coffee powder, milk, sugar, water and chocolate to be added as well as the cost of the coffee.

34. a) Draw a sequence diagram for a validated user in an ATM system, every user has to be validated with a PIN number to make a transaction. A customer is allowed three times to validate card giving the correct pin number.
- b) Explain collaboration diagram with an example.
35. a) Draw the activity diagram for the following scenario. Booking a ticket on the Indian Railways e-ticket system(IRCTC).
- b) What is the purpose of state chart diagram? Explain the basic elements of a state chart diagram through an example.

(2 x 15 = 30 Marks)

Model Questions

Sixth Semester B.Sc CS/B.C.A. Degree Examination

First Degree Programme under CSS (SDE)

(2017 Admission)

CS 1661.3/CP 1643– DATA MINING AND DATA WAREHOUSING

Time: 3 Hours

Max. Marks 80

SECTION- A

(Very short answer type)

(One word to maximum of one sentence. Answer **all** questions.)

1. Define data mining.
2. What do you mean by knowledge?
3. What is 'Big Data'?
4. Expand OLAP.
5. Define metadata.
6. What is the use of data cleaning?
7. What is data mart?
8. Define data warehouse.
9. What do you mean by data transformation?
10. Expand PAM.

(10 x 1 = 10 Marks)

SECTION - B

(Short answer)

(Not to exceed one paragraph answer any **eight** questions. **Each** Question carries **2 marks**)

11. How data differ from information?
12. Why do we need data reduction?
13. List any four features of data warehouse.
14. What do you meant by pre-processing data?
15. What is multidimensional data model? Give examples.
16. Write any four Characteristics of Clustering Techniques.
17. What is histogram?
17. Differentiate classification and prediction.
18. What is the use of Decision Trees?
19. What do you mean by clustering?

20. What is sampling?
21. Write any four requirements for cluster analysis.

(8 x 2 = 16 Marks)

SECTION - C

(Short Essay)

(Not to exceed 120 words answer any **six** questions. **Each** Question carries **4 marks**)

22. How is data mining related to business intelligence?
23. Differentiate between OLTP and OLAP.
24. Explain market basket analysis.
25. An airport security screening station wants to determine if passengers are criminals or not. To do this, the faces of passengers are scanned and kept in a database. Is this a classification or prediction task? Justify
26. Where do we use linear regression? Explain linear regression.
27. What is the significance of tree pruning in decision tree algorithms?
28. How density based clustering varies from other methods?
29. Explain apriori algorithm.
30. What are the types of data available in Cluster Analysis? Explain.

(6 x 4 = 24 Marks)

SECTION - D

(Long Essay)

(Answer any **two** questions. **Each** Question carries **15 marks**)

31. a) What is Data Mining? Explain different kinds of data that can be mined.
b) Discuss data preprocessing and data preprocessing cycle in detail.
32. a) Explain data cubes in multidimensional data model.
b) Explain association rule with example.
33. Write short note on:
 - a) Baye's theorem
 - b) Naive Bayesian classifier
 - c) Lazy learner
 - d) K-Nearest neighbor method
 - e) Rule based classification
35. a) What is Clustering? What are the different clustering methods? Describe the partitioning methods of clustering in detail.
b) Discuss outlier detection in clustering in detail.

(2 x 15 = 30 Marks)

Model Questions

Sixth Semester B.C.A. Degree Examination

First Degree Programme under CSS (SDE)

(2017 Admission)

CP 1661.2 – TRENDS IN COMPUTING

Time: 3 Hours

Max. Marks 80

SECTION- A

(Very short answer type)

(One word to maximum of one sentence. Answer **all** questions.)

1. What is cloud computing.
2. Define ANN.
3. Expand SOA.
4. Define scalability.
5. What do you mean by intelligence?
6. Define distributed computing.
7. Expand RPC?
8. What is data grid?
9. Define fuzzification?
10. What is crossover ?

(10 x 1 = 10 Marks)

SECTION - B

(Short answer)

(Not to exceed one paragraph answer any **eight** questions. **Each** Question carries **2 marks**)

11. What are the components of a cloud?
12. Define reinforcement learning.
13. Write any four characteristics of ANN?
14. Discuss fuzzy equivalence relations?
15. What is neural trained fuzzy logic?
16. Difference between human and machine intelligence?
17. Define learning and list out any two learning methods.
18. What is the scope of neural network?
19. Compare hard computing and soft computing.
20. What is defuzzification?

21. Differentiate traditional algorithm and genetic algorithm.
22. Write any four applications of GA.

(8 x 2 = 16 Marks)

SECTION - C

(Short Essay)

(Not to exceed 120 words answer any **six** questions. **Each** Question carries **4 marks**)

23. Write note on grid computing.
24. How to access various Web Services in Cloud?
25. What is Web 2.0 and its benefits?
26. Write note on virtualization in cloud computing.
27. Define artificial neural network, Draw its mathematical model?
28. Discuss fuzzy equivalence relations and list out its properties?
29. Compare supervised and unsupervised training.
30. Explain genetic algorithm cycle.
31. Explain Various selection methods in GA?

(6 x 4 = 24 Marks)

SECTION - D

(Long Essay)

(Answer any **two** questions. **Each** Question carries **15 marks**)

32. a) What is a Cloud? What are the characteristics of a Cloud? Discuss the uses of clouds in detail.
b) Discuss various Cloud Services in detail with suitable examples.
33. Write short notes on:
 - a) SOA.
 - b) Cloud-Based Data Storage.
 - c) Threats.
34. a) Let U be the universe of military aircraft of interest as defines as below,

$$U = \{a_{10}, b_{52}, c_{130}, f_2, f_9\}$$

Let A be the fuzzy set of fighter class aircraft:

$$\underline{A} = \left\{ \frac{0.3}{a_{10}} + \frac{0.4}{b_{52}} + \frac{0.2}{c_{130}} + \frac{0.1}{f_2} + \frac{1}{f_9} \right\},$$

$$\underline{B} = \left\{ \frac{0.1}{a_{10}} + \frac{0.2}{b_{52}} + \frac{0.8}{c_{130}} + \frac{0.7}{f_2} + \frac{0}{f_9} \right\}, \text{ then find the following:}$$

- i) $\underline{A} \cup \underline{B}$ ii) $\underline{A} \cap \underline{B}$ iii) $\overline{\underline{B}}$ iv) $\underline{A}/\underline{B}$ v) $\underline{B}/\underline{A}$

vi) $\overline{A \cup B}$ vii) $\overline{A \cap B}$ viii) $\overline{A} \cup \overline{B}$ ix) $\overline{B} \cup \overline{A}$

b) Explain formation of fuzzy sets with an example.

35. a) With the help of examples, Explain the various crossover techniques employed in genetic algorithms.

b) Illustrate the Mutation process in GA?

(2 x 15 = 30 Marks)
