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N – 8182

Reg. No. :

Name :

Fourth Semester B.C.A./B.Sc. Degree Examination, August 2022

Career Related First Degree Programme Under CBCSS

Group 2(b)/Group 2(a) – Computer Applications / Physics and Computer Applications

Core Course/Vocational Course

CP 1441/PC 1471 – SOFTWARE ENGINEERING

(2019 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A (Very Short Answer Type)

Answer all questions. Each question carries 1 mark.

1. Define Software engineering.
2. What do you mean by customized software?
3. Differentiate between Classical Waterfall model and Iterative waterfall model.
4. What is the goal of software project management?
5. Define complete COCOMO.
6. Define functional independence among modules.
7. What is stamp coupling?
8. Define top down decomposition approach.

P.T.O.

9. Define Test case.
10. CORBA stands for _____.

(10 × 1 = 10 Marks)

SECTION – B (Short Answer)

Answer any **eight** questions. **Each** question carries **2** marks.

11. Differentiate program and product.
12. What do you mean by control flow based design?
13. Define technical feasibility.
14. What do you mean by Software Development Methodology?
15. List the complexities in software project management.
16. What is empirical estimation technique?
17. Elaborate modifiable and verifiable in terms of SRS?
18. What do you mean by Function Point Metric?
19. Write a short note on characteristics of good design.
20. What do you mean by Modularity?
21. Differentiate Coincidental Cohesion and Temporal Cohesion.
22. Write a note on menu-based interface.
23. Define System testing?
24. What do you mean software reverse engineering?
25. Write a note on software as a service?
26. Write the disadvantages of client-server architecture.

(8 × 2 = 16 Marks)

SECTION – C (Short Essay)

Answer any **six** questions. **Each** question carries **4** marks.

27. Write a note on shortcomings of water fall model.
28. Discuss prototype model in detail.
29. Write in detail about Evolutionary Model
30. Describe project planning in detail..
31. Discuss COCOMO model.
32. Discuss various requirement gathering techniques.
33. Differentiate Control and Content Coupling.
34. Discuss Structured Analysis in detail.
35. Write a note on transformation of DFD Model into structure chart.
36. Write in detail about Code review.
37. Describe in detail about software quality.
38. Write a note on two tier client server architecture.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. **Each** question carries **15** marks.

39. Describe Agile development models in detail.
40. Discuss the Function Oriented in detail.

41. Explain different project estimation techniques in detail..
42. Write in detailed note on black box testing.
43. Write a detailed note on spiral model.
44. Discuss in detail about Software Reliability.

(2 × 15 = 30 Marks)

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Fourth Semester B.C.A. Degree Examination, August 2022

Career Related First Degree Programme under CBCSS

Group 2(b) – Computer Applications

Core Course

CP 1442 : WEB PROGRAMMING AND PYTHON

(2019 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A [Very Short Answer Type]

[One word to maximum of one sentence. Answer **all** questions]

1. _____ tag is used to insert a line-break in HTML.
2. _____ tag is used to create an unordered list in HTML.
3. <input> is an example for _____ tag.
4. _____ tag is used to define options in a drop-down selection list.
5. The output of >>> str1= "python" >>> str1[-1] is _____.
6. _____ are known as read-only lists.
7. The _____ data structure is an unordered collection of elements which avoid duplicates.

P.T.O.

8. The operators *is* and *is not* are known as _____ operators.
9. The built-in function to add an item to the end of a list is _____.
10. Let $s = [1, 2, 3]$. The output of $s * 2 =$ _____.

(10 × 1 = 10 Marks)

SECTION – B [Short Answer]

[Not exceeding 1 paragraph, answer **any eight** questions. Each question carries **2** marks.]

11. What is a Web server?
12. What is the use of <embed> tag?
13. What is POST?
14. What is the purpose of <div> tag?
15. What is the use of <noframes> tag?
16. What is an empty tag? Give example.
17. How will you fetch images to a Web page in HTML?
18. What is the difference between dict.clear() and del dict?
19. Write a Python program to reverse a string.
20. What do you mean by mutable and immutable objects in Python?
21. Mention different types of operators in Python.
22. What is the purpose of pass statement in Python?
23. What are the rules for naming an identifier in Python?

24. What is the purpose of math module in Python?
25. What is the use of update() method in set?
26. How will you insert an item to a dictionary? Give example.

(8 × 2 = 16 Marks)

SECTION – C [Short Essay]

[Not exceeding **120** words, answer **any six** questions. Each question carries **4** marks.]

27. Explain the use of image maps.
28. Differentiate relative and absolute URLs.
29. Explain block level elements with an example.
30. Explain how to create tool tips in HTML.
31. Explain the targeting frames.
32. Write an HTML script to create a table with three columns Roll No, Name and Total Marks and two rows for the table.
33. Explain <audio> tag with example.
34. Explain range () function in Python with an example.
35. Explain lambda functions in Python.
36. Explain the string functions strip() and join() in Python with examples.
37. Explain the concept of string slicing with example.
38. Write a Python program to find the biggest of N numbers without reading N.

(6 × 4 = 24 Marks)

SECTION – D [Long Essay]

[Answer **any two** questions. Each question carries **15** marks]

39. Explain the following with examples.
- (a) Frame tags
 - (b) Text formatting tags
 - (c) Anchor tags
40. Explain the following with examples.
- (a) Marquee tags with its attributes
 - (b) Layer tags
 - (c) Heading tags
41. Explain various looping statements in Python with example programs.
42. Explain different decision making statements in Python with syntax and examples.
43. Write a Python program to implement the following.
- (a) Recursive function to find factorial of a number
 - (b) Bubble sort
44. What do you mean by dictionary? Explain any 5 built-in methods available with dictionaries with examples.

(2 × 15 = 30 Marks)

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Fourth Semester B.C.A. Degree Examination, August 2022

Career Related First Degree Programme under CBCSS

Group 2(b) — Computer Application

Core Course

CP 1444 : DATAMINING AND WAREHOUSING

(2019 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A (Very Short Answer type)

One word to maximum of one sentence. Answer all questions. Each carries 1 mark.

1. What is data?
2. Define information.
3. KDD stands for?
4. What is a data warehouse?
5. Define instance.
6. What is a neural network?
7. What do you mean by web mining?
8. What is the purpose of regression analysis?

P.T.O.

9. What is a cluster?

10. Define outlier.

(10 × 1 = 10 Marks)

SECTION – B (Short Answer)

Not exceeding **one** paragraph. Answer any **eight** questions. Each carries **2** marks.

11. What is a data cleansing?

12. What are the benefits of data mining?

13. What is meant by data reduction?

14. What is datamart?

15. Describe snowflake schema.

16. What is done in text mining?

17. What is meant by multi-dimensional model?

18. Write a note on metadata.

19. What is base cuboid?

20. Name any four areas in which data mining is used.

21. What is a fact table?

22. What are the types of data that can be mined?

23. How decision trees are used for classification?

24. Write down the definition of cluster analysis.

25. What do you mean by virtual warehouse?

26. What is a data model?

(8 × 2 = 16 Marks)

SECTION – C (Short Essay)

Not exceeding **120** words. Answer any **six** questions. Each carries **4** marks.

27. Explain the need for data integration.
28. What are the challenges/issues faced in data mining?
29. Write a note on visual data mining.
30. Differentiate database systems and data warehouses.
31. Discuss the importance of data warehousing.
32. What are various fields that use data warehousing? How it helps in data availability?
33. Write notes on the schemas used for multi-dimensional data models.
34. Write brief notes on supervised learning, unsupervised learning and reinforcement learning.
35. What is Bayes theorem?
36. Explain the characteristics of clustering techniques.
37. Write notes on basic clustering methods.
38. Write the algorithm for K-Mean partitioning.

(6 × 4 = 24 Marks)

SECTION – D (Long Essay)

Answer any **two** questions. Each carries **15** marks.

39. Explain the tasks done in data cleansing.
40. Discuss the scope of data mining.
41. Explain the working of Apriori algorithm.

42. What is done in rule-based classification?
43. Explain the working of naive Bayesian classifier.
44. What are the applications of cluster analysis?

(2 × 15 = 30 Marks)

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Fourth Semester B.Sc./B.C.A. Degree Examination, August 2022

Career Related First Degree Programme under CBCSS

Group 2(b) – Computer Science/Computer Applications

Core Course

CS 1444/CP 1443 : PHP AND MYSQL

(2019 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Very Short Answer Type. One word to maximum of one sentence. Answer **all** questions.

1. _____ or _____ is used to display output in PHP.
2. _____ is the built-in function to find the length of a string in PHP.
3. _____ function is used to set cookie in PHP.
4. _____ function converts a string to all uppercase.
5. What is the output of the following program?

```
<?php  
echo "Welcome" . "to" . "PHP";  
?>
```
6. _____ function is used to connect with MySQL database.

P.T.O.

7. The information sent from an HTML form using the _____ method is visible to everyone in the browser's address bar.
8. `$salary=array("Sonoo" => "550000" , "Vimal" => "250000", "Ratan" => 200000);` is an example for _____ array.
9. _____ function finds the number of items in an indexed array.
10. _____ array represents an array containing one or more arrays in PHP.

(10 × 1 = 10 Marks)

SECTION – B

Short Answer. Not exceeding one paragraph, answer any **eight** questions. Each question carries **2** marks.

11. List the different operators used in PHP.
12. What do you mean by form validation?
13. What is `settype()` in PHP?
14. What do you mean by typecasting?
15. What is the use of `isset()` function?
16. Explain `ksort()` with example program.
17. What is the use of `mysqli_fetch_array()`?
18. What is the difference between open source DBMS and proprietary DBMS? Give example for each.
19. What is `fread()` and `fwrite()` functions in PHP?
20. Mention any four superglobals in PHP.
21. Write a PHP script to delete a table stored in MySQL.
22. Mention the logical operators in MySQL.

23. Differentiate float and double data type in MySQL.
24. Mention any four features of MySQL.
25. Explain the use of LIKE operator in MySQL.
26. What do you mean by INNER JOIN in MySQL? Write the syntax.

(8 × 2 = 16 Marks)

SECTION – C

Short Essay. Not exceeding 120 words, answer any **six** questions. **Each** question carries 4 marks.

27. What are the rules for naming a variable in PHP?
28. Explain break and continue in PHP with examples.
29. Explain with an example how to create functions in PHP.
30. Explain the time() function in PHP.
31. Explain getDate() function in PHP.
32. Discuss various types of cookies.
33. How will you upload a file in PHP?
34. Explain include() function in PHP.
35. Explain \$_FILES in PHP.
36. Explain the purpose of \$_REQUEST.
37. Differentiate asort() and ksort() functions in PHP.
38. Explain how PHP sends mail using the mail() function.

(6 × 4 = 24 Marks)

SECTION – D

Long Essay. Answer any **two** questions. **Each** question carries **15** marks.

39. Explain with examples various data types in PHP.
40. Explain the following with examples.
 - (a) Cookie management
 - (b) \$_GET
41. Discuss various loops used in PHP.
42. Write a PHP script to fetch and display the records stored in MySQL.
43. Explain session management in PHP.
44. Explain different types of arrays in PHP.

(2 × 15 = 30 Marks)