

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester B.Sc Computer Science Degree Examination, November 2024

BCS5B08 – Computer Organization & Architecture

(2022 Admission onwards)

Time: 2 ½ hours

Max. Marks : 80

PART A

Answer All Questions
Each question carries Two marks
Ceiling - 25 marks

1. What is a ring counter?
2. What are synchronous counter ?
3. What are registers?
4. What is CPU? Explain its functions.
5. Explain the stored programme concept of architecture.
6. What is Instruction Code ?
7. What is priority interrupt?
8. What is strobe control?
9. Explain the concept of asynchronous data transfer.
10. List three different memory access method.
11. What is virtual memory?
12. What is meant by random access memory?
13. What is parallel processing?
14. Explain MISD.
15. What is cache coherence?

PART B

Answer All Questions
Each question carries Five marks
Ceiling - 35 marks

16. Explain the working of Johnson's counter.
17. Explain the working of Shift registers.
18. What is accumulator? Explain its functions.
19. Explain general register organisation.
20. Explain the concept of handshaking in data transfer.
21. Explain the role of DMA controller.
22. Explain MESI protocol.
23. Compare and contrast CISC and RISC.

PART C

Answer any two questions

Each question carries Ten marks

- 24. Describe up/down asynchronous counter.
- 25. Explain about different addressing modes.
- 26. Explain I/O interface and modes of transfer.
- 27. Write an essay about magnetic and optical devices.

(2x10=20 marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fifth Semester B.Sc Computer Science Degree Examination, November 2024

BCS5B09 – Java Programming

(2022 Admission onwards)

Time: 2 ½ hours

Max. Marks : 80

PART – A

Answer all questions.

Each question carries Two marks.

Ceiling -25 Marks

1. What is a *final* class in java? Give an example for its use.
2. Is *default* mandatory in java *switch* statement? Show how it is used in *switch* statement.
3. Differentiate between *explicit type casting* and *implicit type casting* in java. Give example.
4. What is Inet Address ?
5. What is the syntax of *substring()* method with two parameters in Java? Give an example.
6. What is the purpose of *synchronized* key word in java?
7. 'The *JVM* is the backbone of Java's platform independence.' Do you agree with this statement? Discuss with points supporting your argument.
8. When an *Array Index Out Of Bounds Exception* is raised in a java program?
9. What are streams in java? What is their purpose?
10. Name the four JDBC drivers.
11. What is the syntax and usage of *drawRect ()* in java applets.
12. The *add()* method is crucial for building the user interface of an *applet*. Discuss.
13. Name the two methods in *Mouse Motion Listener* interface.
14. Describe the *FlowLayout* in AWT?
15. What is an *abstract* method? Give the syntax for declaring an *abstract* method.

PART – B
Answer all questions.
Each question carries Five marks.
Ceiling -35 Marks

16. Discuss the *method overloading* in java with suitable example.
17. Develop an *applet* to draw a solid circle in blue colour.
18. What is a *constructor*? Show how a *parameterized constructor* works.
19. Describe the lifecycle of an *Applet*.
20. Distinguish between *Class* and *Object*. Show how each is defined in java.
21. Demonstrate *Arithmetic Exception* in java.
22. Describe the general structure of a java program and steps in executing the same.
23. Explain the architecture of JDBC.

PART - C
Answer any two questions.
Each question carries Ten marks.

24. Demonstrate the *method overriding* with respect to methods in two levels in a java program.
25. Develop a java program with a class *Employee* and variables *empid*, *name*, *salary*. Also, create two objects *emp1* and *emp2*. Print the total salary of two employees.
26. Discuss how the *Exception Handling* works in java.
27. Explain the lifecycle of a *thread* in java. Demonstrate the working of threads with a suitable java program.

(2x10 marks = 20 marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fifth Semester B.Sc Computer Science Degree Examination, November 2024

BCS5B10 – Web Programming Using PHP

(2022 Admission onwards)

Time: 2 ½ hours

Max. Marks : 80

PART — A

Answer *all* questions.

Each question carries Two mark.

1. How did you use comments in PHP.
2. What is the role of client-side script?
3. Differentiate internal and inline CSS.
4. What is the use of NULL datatype in PHP?
5. Differentiate echo and print.
6. Write the advantages of PHP as sever side script.
7. What is the use of size attribute in select tag?
8. What is the use of \$GLOBALS super global array?
9. What is a function? Write the syntax of defining a function in PHP.
10. Explain on Submit JavaScript event.
11. What is the use of type attribute of <input> tag?
12. Differentiate == and === relational operators in PHP.
13. With an example write the use of strstr() function in PHP.
14. What is a Data type? Name the data types used in MySQL.
15. What is mean by undefined datatype in JavaScript?

Ceiling -25 Marks

PART — B

Answer *all* questions.

Each question carries Five marks.

16. Differentiate HTTP GET and POST method.
17. Briefly explain about popup boxes in JavaScript.
18. With example program differentiate for loop and foreach loop.
19. What are the roles of a Webserver and how do we set up a Webserver
20. Briefly explain different types of arrays in PHP.

21. Differentiate Number () and parseInt () function in JavaScript.
22. Briefly explain about various types of selectors in CSS.
23. Write a JavaScript code to check a given number is Perfect or not.

Ceiling -35 Marks

PART- C

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

24. What is a form in HTML? Briefly explain various form controls in HTML.
25. Explain the basic PHP functions for MYSQL operations.
26. With example program briefly explain about various Form events in JavaScript.
27. Explain the following

- (a) String functions in PHP (5)
- (b) Operators in PHP (5)

2 x 10 = 20 Marks

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester B.Sc Computer Science Degree Examination, November 2024

BCS5B11 – Computer networks

(2022 Admission onwards)

Time: 2 hours

Max. Marks : 60

PART A

Answer all questions. Each question carries *two* marks, Ceiling 20 Marks

1. Define Analog and Digital Data.
2. Differentiate Circuit Switching and Packet Switching.
3. Define TCP/IP protocol.
4. Briefly explain Error detection and Error Correction.
5. Define the concept of Framing.
6. What is Stop-and-Wait Protocol?
7. Describe Network Address Transilation ?
8. Compare and Contrast IPV4 & IPV6.
9. Explain the functions of Transport layer.
10. Define User Datagram Protocol.
11. What is Domain Name Systems ?
12. Differentiate FTP & TFTP.

PART B

Answer all questions. Each question carries Five Marks. Ceiling 30 Marks.

13. Illustrate various topologies of Networks.
14. Elucidate Frequency Division Multiplexing and Wave Division Multiplexing.
15. Elaborate on Vertical Redundancy Check and Cyclic Redundancy Check.
16. Defineand differentiate ALOHA and Slotted ALOHA.
17. Expand Link State Routing and Distance Vector Routing.
18. Enumerate various flow characteristics to attain Quality of Service in networks.
19. List and explain any two fundamental cryptographic principles.

PART C

Answer any one question. Each question carries *ten* Marks.

20. Illustrate OSI Reference Model with a neat block diagram.
21. Elaborate
 - a. General principles of congestion control
 - b. SCTP

(1 x 10 = 10 Marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester B.Sc Computer Science Degree Examination, November 2024

(Open Course)

BCS5D01 – Office Automation

(2022 Admission onwards)

Time: 2 hours

Max. Marks : 60

PART A

Answer all questions.

Each question carries two Marks. Ceiling 20 Marks

1. Define Ribbon in MS Word.
2. How do we modify a Transition Duration in PowerPoint?
3. What is Quick Access Tool Bar in MS Word?
4. Explain layering.
5. What is Find and Replace option in MS Word?
6. What is Joomla?
7. What is Data Validation in MS Excel?
8. What is Joomla Front End? How do we access it?
9. What are the four main database objects in MS Access?
10. What are Categories in Joomla?
11. What is Database Management System?
12. What are the four requirements to work with Joomla?

PART B

Answer all questions.

Each question carries five Marks. Ceiling 30 Marks

13. Explain Hyperlink and Bookmark.
14. Explain the steps to create a new database and table.
15. What is a Macro? How to set up a Macro?
16. How do we plan a Database?
17. What are mathematical functions in MS Excel? Explain the different mathematical functions.
18. How can you give sound effects in presentation.
19. Explain the advantages of Joomla.

PART C

Answer any one.

Each question carries ten Marks

20. Explain the different Slide Views. How do we select a Slide View?
21. What are Charts in MS Excel? Explain its importance. Explain the different types of charts with Diagrams.

(1x10=10 Marks)