JGi JAIN
DEEMED-TO-BE UNIVERSITY

1st Internal Examination, August-2023

Software Engineering (22BCA3C01)

Programme: BCA   Semester: 3rd
Time allowed: 1 Hour   Maximum Marks: 25

Read the following instructions carefully before attempting the question paper.

- This question paper contain 7 questions. Each question is of 5 marks.
- Answer any FIVE of the following questions.
- Do not write or mark anything on the question paper except for your USN number at the designated space.
- Student must write their answers in black or blue pen.
- Use of whitener/correction pen/red or green ink is strictly prohibited.
- Answer all questions in serial order.
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Section A

Attempt any 5 of the following 7 questions:

Q1.	Define Software. List out various categories of software.	[CO1, L2]
Q2.	Elaborate Software Development Life Cycle phases in detail.	[CO1, L2]
Q3.	Discuss Waterfall model in brief with its pros and cons.	[CO1, L2]
Q4.	Explain how scrum approach is used to develop the software projects.	[CO1, L2]
Q5.	Discuss the requirements elicitation process and the problems associated with requirements elicitation.	[CO2, L2]
Q6.	Explain functional and non-functional requirements with relevant examples.	[CO2, L2]
Q7.	Illustrate five most important characteristics that must be exhibited by set of good software requirements.	[CO2, L2]

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BCA Preparatory Examination, September 2023

Semester: III   Specialization: Common

Software Engineering (22BCA3C01)

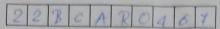Time: 3Hrs   Maximum Marks: 50

SECTION A

Q1. Answer any FOUR from the following Questions   4 X 5 = 20

a) Discuss the Software Development Life Cycle phases with a neat diagram.   [CO 1]

b) Explain any five umbrella activities applicable across the entire software process.   [CO 2]

c) Illustrate a Use-case model in software engineering with an example.   [CO 3]

d) Illustrate any three fundamental design concepts.   [CO 4]

e) Explain Integration Testing with suitable diagram   [CO 5]

SECTION B

2. Answer any TWO from the following Questions   2X 9 = 18

a) Explain the Spiral model with a neat diagram and list its advantages and disadvantages.   [CO 1]

b) Describe the white box testing and its techniques in detail.   [CO 5]

c) "The software that is built for computer-based systems also exhibits one of many architectural styles." Justify the statement elaborating any three software architectural styles   [CO4]

SECTION C

3. Answer the following: 1X 12 = 12

a) Design a use case diagram for the library management system   [CO 3]

b) Design the sequence diagrams for any two uses-cases of library management system.   [CO 3]

THIRD SEMESTER UNIVERSITY EXAMINATION, OCTOBER 2023

SOFTWARE ENGINEERING

Time: 03 HOURS　　　　　　　　　　　　　　　　　　　Maximum Marks:50

SECTION – A

1.　**Answer any FOUR of the following questions.**　　　　　　4×5=20

　　a.　Compare and contrast waterfall model with incremental model.

　　b.　List various principles of agile software development methodology.

　　c.　Describe the purpose of a CRC (Class-Responsibility-Collaboration) model in software design.

　　d.　Elaborate System Testing.

　　e.　Describe layered architecture with an example.

SECTION - B

2.　**Answer any TWO of the following questions.**　　　　　　2×9=18

　　a.　Describe SRS for developing a software for Payroll management system.

　　b.　List out the steps required for constructing component level design.

　　c.　Describe Basis path Testing with an example.

SECTION – C

3.　**Answer the following question.**　　　　　　　　　　　1x12=12

　　a.　Construct an E-R diagram representing a music library with artists and albums. Explain how you would map the entities and relationships to a relational database schema.

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1st Internal Examination, July-2023

Subject: COMPUTER NETWORK (~~   ~~ 22BCA3C03

Course: BCA
Time allowed: 1 Hour

Semester: 3rd
Maximum Marks: 25

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Section A

Attempt any 5 of the following 7 questions:

Questions

Q1. Discuss error detection techniques in detail.	[CO2, L2]
Q2. Explain in detail about types of topologies with a diagram.	[CO1, L2]
Q3. Describe the OSI model and its seven layers. Elaborate on the functions and responsibilities of each layer within the networking context.	[CO1, L2]
Q4. Define the various transmission modes used in computer networks and discuss their characteristics.	[CO1 L2]
Q5. Compare and contrast Packet Switching and Circuit Switching. Provide a real-time example for each switching technique.	[CO3, L3]
Q6. Differentiate the functionalities of HUB, SWITCH, and ROUTER in a computer network.	[CO,1 L2]
Q7. An in-depth explanation of the TCP/IP model, covering its layers, protocols, and their respective roles in facilitating communication across networks.	[CO2, L3]

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BCA Preparatory Examination, September 2023

Semester: III   Specialization: CSIT

Computer Networks (22BCA3C03)

Time: 3Hrs   Maximum Marks: 50

SECTION A

Q1. Answer any FOUR from the following Questions   4 X 5 = 20

a) List any FIVE differences between OSI Model & TCP/IP Model.   [CO1]

b) Explain the concept of error detection in the Data Link Layer and discuss the different error detection techniques used in networks.   [CO2]

c) Explain the IPV6 datagram header format.   [CO3]

d) Differentiate between connection less and connection-oriented protocol.   [CO4]

e) Explain in detail about WWW.   [CO5]

SECTION B

Q2. Answer any TWO from the following Questions   2X 9 = 18

a) Differentiate between repeaters, hubs, bridges, switches, routers, and gateways in terms of their functions and where they operate in the network.   [CO2]

b) Compare IPv4 and IPv6.   [CO3]

c) Compare and contrast between UDP and TCP.   [CO4]

SECTION C

Q3. Answer the following: 1X 12 = 12

a) Illustrate the following protocols of the application layer in detail   [CO5]

   i) HTTP

   ii) FTP

   iii) SMTP

Reg. No. 2 2 B C A R 0 4 6 7   [22BCA3C03]

THIRD SEMESTER UNIVERSITY EXAMINATION, OCTOBER 2023

COMPUTER NETWORKS

Time: 03 HOURS   Maximum Marks:50

SECTION – A

1.   Answer any FOUR of the following questions.   4×5=20

   a.   Demonstrate how do ping and trace route work? Give the output for both the Commands.

   b.   Explain the concept of error detection in the Data Link Layer.

   c.   Explain about the Routing algorithms.

   d.   Describe the protocols used at transport layer.

   e.   Describe a short note on FTP, TFTP and SFTP.

SECTION - B

2.   Answer any TWO of the following questions.   2×9=18

   a.   Compare Stop-and-Wait and Sliding Window protocols in the Data Link Layer, highlighting their advantages and limitations.

   b.   Explain OSI model with suitable diagram.

   c.   Compare and contrast between UDP and TCP.

SECTION – C

3.   Answer the following question.   1x12=12

   a.   i.   Configure two e-mail servers with different domain names and with at least four users in each domain, write step by step process with neat diagram.

         ii.   Discuss the configuration steps of DNS server with a neat diagram.

1ˢᵗ Internal Examination, July-2023

Subject: DATABASE MANAGEMENT SYSTEM(22BCA3CO2)

Course: BCA   Semester: III
Duration: 1 Hour   Maximum Marks: 25

Read the following instructions carefully before attempting the question paper.

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Attempt any 5 of the following 7 questions: **[5X5=25MARKS]**

Q1	Explain the view of the database with a neat diagram	[CO1 , BL2]
Q2	Illustrate an ER diagram for the library management system	[CO1, BL2]
Q3	Differentiate ORDER BY and GROUP BY clause with an example.	[CO1, BL4]
Q4	A) Write query to find the employee name, deptno, job of the employees whose salary range between 500 and 1500. B) Write a query to fetch employee details whose name start with S and not belongs to department 10 or 20.	[CO1, BL6]
Q5	Discuss about functional dependencies and multi-valued dependencies.	[CO2, BL2]
Q6	Describe 1NF, 2 NF and 3 NF with an example.	[CO2, BL2]
Q7	Demonstrate DBMS Anomalies with example.	[CO2, BL3]

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SCHOOL OF COMPUTER SCIENCE AND IT
DEEMED-TO-BE UNIVERSITY

BCA Preparatory Examination, September 2023

Semester: 3

Specialization:BCA COMMON

DBMS (22BCA3C02)

Time: 3Hrs

Maximum Marks: 50

SECTION A

Q1. Answer any FOUR from the following Questions

4 X 5 = 20

a) Draw an ER diagram for Bank Database.

[CO1]

b) Define any five Codd's rules.

[CO1]

c) Explain the properties of transaction.

[CO2]

d) Describe the set operators with syntax and an example for each.

[CO4]

e) Create a trigger to convert ename and job to uppercase

[CO5]

SECTION B

2. Answer any TWO from the following Questions

2X 9 = 18

a) Define Normalization. Explain 1NF,2NF,3NF and BCNF.

[CO2]

b) Create the table book with primary key constraint for book_no as mentioned in the schema description above.

Book_No	Book Name	Author	Cost	Category
101	Let us C	Denis Ritchie	450	System
102	Oracle – Complete Ref	Loni	550	Database
103	Mastering SQL	Loni	250	Database
104	PL SQL-Ref	Scott Urman	750	Database

a. Insert above records in Book table using & operator in the insert Statement.

c. Create table Book101 similar to Book in structure with no data in it.

d. Insert into Book101 all the data in Book table using Select statement

e. Modify the price of book with id 103 to Rs 300 and category to RDBMS

f. List all the books that are written by Author Loni and has price less than 600.   [CO4]

THIRD SEMESTER UNIVERSITY EXAMINATION, OCTOBER 2023

DATABASE MANAGEMENT SYSTEMS

Time: 03 HOURS   Maximum Marks:50

SECTION – A

1. **Answer any FOUR of the following questions.**   4×5=20

   a.   Explain Architecture of database with neat diagram.

   b.   i.   Write a query to display ENAME, SAL, DEPTNO, display only employees who are not working under any manager.

        ii.   WAQ to display ename, mgr, sal and comm where employees are not working under any manager as a value as NO MANAGER and comm as NO COMMISSION where employees are not taking any commission from the deptno 10 Or 20.

   c.   Explain the rule for a table to be in 1NF and 2NF with an example.

   d.   i.   Create the table **book** with field **book_no, book_name, author, cost, category** with primary key constraint for book_no.

        ii.   Insert records in Book table using & operator in the insert Statement.

        iii.   Create table Book101 similar to Book in structure with no data in it.

   e.   i.   Create a complex view dept_sum_view, store dname, minimum salary, maximum salary and average salary department wise.

        ii.   Create a view empvu20 which has all details about deptno 20. Make sure DML statements should perform only for deptno 20 not for any other departments.

SECTION - B

2. **Answer any TWO of the following questions.**   2×9=18

   a.   i.   Explain the properties of transaction. 4 marks

        ii.   Define Serializability and explain its types. 5 Marks

   b.   i.   Define constraints. Mention any four constraints.

        ii.   Write the syntax to drop the primary key constraint from the table.

        iii.   Write SQL queries for the following statements.

            iii.i   Create a new user called StudentIII with the password BCAJU.

            iii.ii   As admin Provide **create session** and **create table** privileges to **StudentIII** user.

            iii.iii   Provide privileges to insert, update and delete records to the USER Student**III** on table emp.

            iii.iv   Write a query to change the password of a user StudentIII.

            iii.v   Remove the user **StudentIII**.

   c.   i.   Write a PL\SQL program to create the trigger where data cannot be edited on Saturday and Sunday on emp table.

JGi JAIN
DEEMED-TO-BE UNIVERSITY

Student USN_____

1st Internal Examination, July-2023

Subject :Emotional Intelligence (21JUDGE1901)

Course: BCA (CS+AI)   Semester: III sem
Time allowed: 1 Hours   Maximum Marks: 25

Read the following instructions carefully before attempting the question paper.

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Section A

Attempt any 5 of the following 7 questions:

Q.No.	Questions	CO	BTL
01	Explain the components of Emotional Intelligence	1	2
02	Define Emotional Intelligence and Describe the types of emotions with Physiological changes	1	2
03	Examine the importance of Emotional Intelligence in everyday life	1	4
04	Examine the difference beteen General Intelligence (IQ) and Emotional Intelligence (EI)	1	4
05	Explain Ability Model of Emotional Intelligence	2	2
06	Explain the Biology of Emotion	2	2
07	Explain the influence of culture in understanding emotions	1	2

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BCA Preparatory Examination, September 2023

Semester: 3rd Sem

Specialization: BCA (CS&IT)

Subject name: EMOTIONAL INTELLIGENCE

Time: 3Hrs

Maximum Marks: 50

SECTION A

Q1. Answer any FOUR from the following Questions   4 X 5 = 20

a) Define Emotional Intelligence and differentiate between Emotion, Feeling and   [CO-1]
Mood

b) Describe the relationship between health and emotional intelligence.   [CO-4]

c) Define Self- Motivation and discuss the types of motivation with example   [CO-3]

d) Discuss the role of Emotional Intelligence in sports   [CO-4]

e) Outline the strategies to Enhance Empathy and Social skills   [CO-3]

SECTION B

2. Answer any TWO from the following Questions   2X 9 = 18

  a) Define self-Management and discuss the Competencies of self-management   [CO-3]

  b) Discuss Trait Model of Emotional Intelligence   [CO-2]

  c) Define Academic Stress and Discuss the components of academic stress along with the source
    of academic stress   [CO-4]

SECTION C

3. Answer the following: 1X 12 = 12

a) Resilience is a crucial trait in today's fast-paced and unpredictable world, and emotional
intelligence (EQ) plays a pivotal role in developing and enhancing this resilience. This case study
explores how a multinational technology company implemented a program to build resilience among
its employees using emotional intelligence as a core component.

XYZ Company. Recognized the need to equip its workforce with tools and skills to navigate
challenges, stressors, and uncertainties in the workplace effectively. The company's leadership

understood that fostering resilience would not only enhance individual well-being but also improve overall productivity, job satisfaction, and employee retention.

i)   Define Resilience and state the strategies to enhance resilience

ii)   Analyze the role of leadership in analyzing the need for building resilience in the workplace

iii)   From the above case study illustrate how XYZ Company successfully built resilience among its employees by incorporating emotional intelligence into its organizational culture. By investing in the emotional well-being and EQ development of its workforce, the company not only improved individual lives but also reaped the benefits of a more resilient, productive, and loyal workforce. Building resilience with emotional intelligence proved to be a strategic move that contributed to the company's long-term success and sustainability.   [CO-5]

THIRD SEMESTER UNIVERSITY EXAMINATION, OCTOBER 2023

EMOTIONAL INTELLIGENCE

Time: 03 HOURS   Maximum Marks:50

SECTION – A

1. **Answer any FOUR of the following questions.**   4×5=20

   a. Define Emotion and explain universal Emotions with example.

   b. Explain Ability Model of Emotional Intelligence.

   c. Discuss importance of self-awareness in everyday life.

   d. Discuss the role of Assertiveness in Emotional Intelligence.

   e. Sarah is a high school student in her sophomore year. She has always been academically capable, but lately, her grades have been declining. She used to be actively engaged in class discussions and extracurricular activities, but now she seems distant and disinterested. Concerned teachers and parents notice the change and decide to investigate. Therefore, Sarah's school decides to administer an emotional intelligence assessment to better understand her emotional state and its impact on her academic performance. The assessment reveals that Sarah has been experiencing heightened levels of stress, anxiety, and self-doubt due to various personal and academic pressures.

   On this regard discuss the various forms of academic stress.

SECTION - B

2. **Answer any TWO of the following questions.**   2×9=18

   a. Explain Mixed Model of Emotional Intelligence.

   b. Illustrate a situation from your life where, resilience helped you in dealing with life problems.

   c. Imagine you're driving and another car suddenly swerves into your lane, forcing you to quickly react to avoid a collision. Your body's fight or flight response might kick in, allowing you to make split-second decisions to either manoeuvre your vehicle out of danger or hit the brakes.

   Explain Flight or Fight Response and Interpret the Physiological and cognitive changes during the above-mentioned situation.

1ˢᵗ Internal Examination, August -2023

Subject : Personality and Career Management (22BCA3SE01)

Course: BCA –AI and CS   Semester: III
Time allowed: 1 Hours   Maximum Marks: 25

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Section A

Attempt any 5 of the following 7 questions:

1.	What is personality? How does personality influence an individual's behavior and attitude?	[CO 1, BTL 1]
2.	Explain the O.C.E.A.N. model in terms of personality types using your own test results.	[CO 1, BTL 3]
3.	Describe the SMART goal you have set for yourself and provide an update on its current status.	[CO 1, BTL 2]
4.	Discuss the significance of values in personal, moral, and social contexts.	[CO 1, BTL 2]
5.	What is the importance of emotional intelligence?	[CO 2, BTL 1]
6.	Define emotional intelligence and elaborate on its components.	[CO 2, BTL 1]
7.	Explain the process of developing and cultivating emotional intelligence using examples.	[CO 2, BTL 3]

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THIRD SEMESTER UNIVERSITY EXAMINATION, OCTOBER 2023

PERSONALITY AND CAREER MANAGEMENT

Time: 03 HOURS   Maximum Marks:50

SECTION – A

1. **Answer any FOUR of the following questions.**   4×5=20

   a. State the factors that shape up a person's attitude.

   b. Illustrate the challenges that how an individual face in life due to low confidence.

   c. Briefly outline the components of emotional intelligence in a short note.

   d. Analyse how short-term goals contribute to the achievement of long-term objectives.

   e. Describe different challenges faced while exploring career options.

SECTION - B

2. **Answer any TWO of the following questions.**   2×9=18

   a. Analyse how a person's emotional intelligence aids in effectively managing their attitude.

   b. Apply the concept of time management quadrants and discuss the importance of prioritizing in life.

   c. Justify how parental pressure sometimes lead to wrong career choices.

SECTION – C

3. **Answer the following question.**   1x12=12

   a. Explicate why effective communication is crucial during job interviews. Provide communication tips that can help candidates leave a positive impression on interviewers.