

PRIYADARSHINI COLLEGE OF ENGINEERING, NAGPUR

Department: Computer Technology

Semester: VI

Section: A, B

CAT-1(2022-23)

Subject: Compilers

Duration: 1.5 Hrs.

Subject Code: BECT601T
Max Marks: 35

Note:

1. All questions are compulsory.
 2. All questions carry marks as indicated.

	ii) Shift reduce parsers are _____ a) Top down Parser b) Bottom Up parser c) May be top down or bottom up d) None of the mentioned			II
(b)	Explain why Top Down Parser is called left most derivative Parser.	5	CO2	II
(c)	consider the following grammar $S \rightarrow ABC$ $A \rightarrow a/\epsilon$ $B \rightarrow r/\epsilon$ $C \rightarrow b/\epsilon$ Construct parsing table with LL(1) Parser	7	CO2	III
5(a)	i) The graph that shows basic blocks and their successor relationship is called _____ a) DAG b) Flow Graph c) Control Graph d) Hamilton Graph ii) An intermediate code form is _____ a) Postfix notation b) Syntax Trees c) Three Address code d) All of the mentioned	2	CO3	I
(b)	Write Quadruple, Triple and Indirect triples for the following expression. $- (a + b) * (c + d) + (a + b + c)$	5	CO3	I
	OR			
6(a)	i) A synthesized attribute is an attribute whose value at a parse tree node depends on _____ a) Attributes at the siblings only b) Attributes at parent node only c) Attributes at children nodes only d) None of the mentioned ii) In a syntax directed translation scheme, if value of an attribute of a node is a function of the values of the attributes of its children, then it is called a) synthesized attribute b) inherited attribute c) canonical attribute d) none of these	2	CO3	II
(b)	For the given grammar : $E \rightarrow E + T/T$ $T \rightarrow T * F/F$ $F \rightarrow (E)/id$ Construct parse tree and syntax tree for string $W = id + id * id$	5	CO3	III

PRIYADARSHINI COLLEGE OF ENGINEERING, NAGPUR

Department: Computer Technology

Semester: VI

Section: A and B

CAT-I (2022-23)

Subject: Data Warehousing and Mining

SubjectCode: BTCT602T

Duration: 1.5Hrs

Max.Marks: 35

Note:

- 1) All questions are compulsory.
- 2) All questions carry marks as indicated.
- 3) Due credits will be given on neatness.
- 4) Draw diagram wherever it is necessary.

		Questions	Mark s	CO	BT Level
Q.1	A. The data Warehouse is _____. a). read only. b). write only. c). read write only. d). none.		1M	CO1	1
	B. _____ describes the data contained in the data warehouse. a) relational data. b) operational data. c) metadata. d) informational data.		1M	CO1	1
	C. Differentiate between OLTP and OLAP		5M	CO1	2
	D. What is OLAP ? Explain the following OLAP Servers with example : i) ROLAP ii) MOLAP iii) HOLAP		7M	CO1	2
OR					
Q.2	A. The star schema is composed of _____ fact table. <input checked="" type="checkbox"/> a. one. b. two. c. three. d. four.		1M	CO1	1
	B. The type of relationship in star schema is a) many-to-many. b) one-to-one. <input checked="" type="checkbox"/> c) one-to-many. d) many-to-one.		1M	CO1	2
	C. What are the characteristics of data warehouse? Explain		5M	CO1	2
	D. What is data model? With example explain multidimensional data model in detail.		7M	CO1	2
OR					
Q.3	A. Removing duplicate records is a process called _____. a) recovery. <input checked="" type="checkbox"/> b) data cleaning. c) data cleansing. d) data pruning.		1M	CO2	1
	B. Treating incorrect or missing data is called as _____. a) selection. <input checked="" type="checkbox"/> b) preprocessing. c) transformation. d) interpretation.		1M	CO2	1
	C. Explain data mining functionalities in detail.		5M	CO2	2
	D. Describe the steps involved in data mining when viewed as a process of knowledge discovery.		7M	CO2	2

Q.4	A. Incorrect or invalid data is known as _____. a) changing data. b) noisy data. c) outliers. d) missing data.	1M	CO2	1
	B. Data mining helps in _____. a) inventory management. b) sales promotion strategies. c) marketing strategies. d) all of the above.	1M	CO2	1
	B. Discuss: i) Data cleaning ii) Data integration	5M	CO2	2
	C. What are major components of a typical data mining? Draw architecture of data mining system and explain it.	7M	CO2	2

Q.5	A. Which one of the following refers to querying the unstructured textual data? a) Information access b) Information update c) Information retrieval d) Information manipulation	1M	CO3	1
	B. Which of the following statement is true about the classification? a) It is a measure of accuracy b) It is a subdivision of a set c) It is the task of assigning a classification d) None of the above	1M	CO3	1
	C. Discuss Classification in detail.	5M	CO3	2

OR

Q.6	A. Which of the following can be considered as the classification or mapping of a set or class with some predefined group or classes? a) Data set b) Data Characterization Data Sub Structure d) Data Discrimination	1M	CO3	2
	B. Decision nodes are represented by a) Disks b) Circles c) Rectangles d) Triangles	1M	CO3	1
	C. What is decision tree? Explain Decision tree Induction algorithm.	5M	CO3	2

PRIYADARSHINI COLLEGE OF ENGINEERING, NAGPUR

Department: Computer Technology

Semester: VI

Section: A and B

CAT-I (2022-23)

Subject : Software Testing and Quality Assurance
Duration : 1.5Hrs

Subject Code : BECT603T
Max. Marks : 35

Note:

- 1) All questions are compulsory.
- 2) All questions carry marks as indicated.

Questions

Marks CO BL
1M CO1 II

Q.1 A I Test suite is _____

- a) Set of outputs
- b) Set of inputs
- c) Set of test cases
- d) None of the above

1M CO1 II

II Software testing is the process of _____

- a) Demonstrating that errors are not present.
- b) Executing the program with the intent of finding the errors.
- c) Executing the program to show that it executes as per SRS.
- d) All of the above.

5M CO1 II

B Difference between Verification and Validation.

7M CO1 II

C What is SDLC? Describe in detail.

OR

1M CO1 II

Q.2 A I Validation is _____

- a) Checking the product with respect to customer's expectations.
- b) Checking the product with respect to specifications.
- c) Checking the product with respect to constraints of project.
- d) None of the above

1M CO1 II

II Software testing is nothing else but _____

- a) Verification only
- b) Validation only
- c) Both verification and validation
- d) None of the above

5M CO1 II

B What are the different practices for designing good test case? Explain in detail.

7M CO1 III

C What is test case? Design the test case to for the scenario:
"Check Login Functionality"

Questions				Marks	CO	BL
Q.3 A I	Functionality of a software is tested by _____	a) White box testing b) Black box testing c) Regression testing d) None of the above		1M	CO2	II
II	A testing which checks the internal logic of the program is _____	a) White box testing b) Black box Testing c) Both a and b d) None of the above		1M	CO2	II
B	Differentiate between black box testing and white box testing.			5M	CO2	II
C	What is boundary value analysis? Explain in detail with suitable example.			7M	CO2	II

OR

Q.4 A I	Which one is not functional testing?	a) BVA b) Decision table c) regression testing d) None of the above	1M	CO2	II
II	BVA is based upon _____	a) Single fault assumption theory b) Multiple fault assumption theory c) Both a and b d) None of the above	1M	CO2	II
B	Enlist any four tools to perform White box testing? Also explain advantages and disadvantages of white box testing.		5M	CO2	II
C	What is Equivalence class partitioning? Explain in detail with suitable example.		7M	CO2	II
Q.5 A I	Integration testing techniques are _____	a) Top down b) Bottom up c) Sandwich d) All of the above	1M	CO3	II
II	Which of the following validation activities belong to low level testing_____?	a) Unit testing b) Integration testing c) System testing d) Both a and b	1M	CO3	II
B	What is unit testing? Explain in detail with suitable example.		5M	CO3	II

OR

Q.6 A I	Number of sessions for integration testing is given by _____	a) Sessions = nodes + leaves - edges b) Sessions = nodes - leaves - edges c) Sessions = nodes + leaves - edges d) None of the above	1M	CO3	II
II	An MM-path graph refers to _____	a) Module to module path graph b) Manager to manager path graph c) Many module path graph d) None of the above	1M	CO3	II
B	Explain in detail about advantages and disadvantages of unit testing.		5M	CO3	II

PRIYADARSHINI COLLEGE OF ENGINEERING, NAGPUR

Department : Computer Technology

Semester : VI

Section

: A & B

CAT- 1 (2022-23)

Subject : Mobile Application Development
Duration : 1.5Hrs

Subject Code : BTCT604T-2
Max Marks : 35

Note :

- 1) All question are compulsory
- 2) All question carry marks as indicated

Q No	Questions	Marks	CO	BL
Q 1	A. 1. What is an activity in android? a) Android Class b) Android Package c) A Single Screen in an Application with Java Code d) None of the above	1	CO1	I
	2. Identify the language on which Android is based upon a) Python b) JAVA c) C++ d) NONE	1	CO1	II
	B. Explain the procedure steps of Installing Android SDK Tools	5	CO1	II
	C. Explain Anatomy of Android Application	7	CO1	II

OR

Q 2	A. 1. While developing android application developers can test their apps on a) Emulator b) An Android Phone c) Third Party Emulator d) None of the above	1	CO1	I
	2. OHA in android stands for - a) Open Health Academy b) Open Handset Alliance c) Open Handset Application d) Open Handset Association	1	CO1	II
	B. Discuss Android Manifest file	5	CO1	II
	C. Explain Architecture of Android	7	CO1	II
Q 3	A. 1. Which of the following is contained in the src folder? a) Java source code b) XML c) Manifest d) None of the above	1	CO2	I
	2. Which method is used to launch a new activity or get an existing activity to do something new? a) Context.startActivity() b) Context.startService() c) Context.sendBroadcast() d) All of the above	1	CO2	II
	B. Define Intent. Explain type of Intent.	5	CO2	II

	C.	What is an Activity ? Explain Activity LifeCycle.	7	CO2	I
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OR

Q 4.	A.	1. How many main components can be used within an Android application? a) 2 b) 3 c) 4 d) 5	1	CO2	I
		2. Which component handles background processing associated with an application? a) Activities b) Services c) Broadcast Receivers d) Content Providers	1	CO2	I
	B.	Explain Receiving & Broadcasting Intent	5	CO2	II
	C.	Explain Content Provider	7	CO2	II
Q 5	A.	1. What is true about the Intents component? a) External elements, such as strings, constants and drawable pictures. b) UI elements that are drawn on-screen including buttons, lists forms etc. <input checked="" type="checkbox"/> c) View hierarchies that control screen format and appearance of the views. <input checked="" type="checkbox"/> d) Messages wiring components together	1	CO3	I
		2. What is contained in manifest.xml? a) Source code b) List of strings used in the app <input checked="" type="checkbox"/> c) Permission that the application requires d) None of the above	1	CO3	I
	B.	Write a short note on 1) Intent Filter 2) User Permission	5	CO3	I

OR

Q 6	A.	1. Which of the following statements is false about Broadcast Receivers? a) broadcast receiver is implemented as a subclass of Activity class b) broadcast receiver is implemented as a subclass of Service class c) broadcast receiver is implemented as a subclass of ContentProvider class <input checked="" type="checkbox"/> d) broadcast receiver is implemented as a subclass of BroadcastReceiver class	2	CO3	I
		B. What is Drawable ? Explain type of drawable	5	CO3	I

PRIYADARSHINI COLLEGE OF ENGINEERING, NAGPUR

Dept.:CT/IT/EC/ETC/Aero/AI&DS/EE/EP

Semester VI

Subject: Open Elective-1: Blockchain
Technologies

CAT- I (Session 2022-23)

SubjectCode:BTech_CSE-604.3T

Duration: 1.5 hrs

Max. Marks: - 35

Note: All questions are compulsory

Q. No.	Questions	Marks	CO	BL
1. a)	i) A blockchain is a _____ database or ledger that is shared among the nodes of a computer network. ✓ a) distributed b) centralized c) combined d) none of the above	1	CO1	1
	ii) The innovation with a blockchain is that it guarantees the fidelity and security of a record of data and generates trust without the need for a trusted third party.	1	CO1	1
	True or False			
b)	What is Blockchain? What are its key elements?	6	CO1	2
c)	Discuss about the advantages and disadvantages of blockchain.	6	CO1	2
OR				
2. a)	i) Scalability is one of the biggest drawbacks of blockchain technology.	1	CO1	1
	True or False			
	ii) Blockchain removes any _____ party intervention between transactions and removes the mistake making the system efficient and faster. ✓ a) third b) first c) second d) none of the above	1	CO1	1
b)	Discuss about the blockchain architecture. Give advantages and disadvantages of each.	12	CO1	2
3. a)	i) _____ is used to identify the particular block in the entire blockchain. ✓ a) Header b) Footer c)Nonce d) Hash	1	CO2	1
	ii) Timestamp is a system verifying the data into the block and assigning a time or date of creation for digital documents.	1	CO2	1
	True or False			
b)	Write short notes on types of blockchain with their pros and cons.	12	CO2	2
OR				
4. a)	i) A _____ blockchain is a concept where it is permissioned by the government and a group of organizations, not by one person like a private blockchain.	1	CO2	1

- a) consortium b) public c) private d) none of the above

ii) A transaction refers to a contract or agreement and transfers of assets between parties

1 CO2 1

True or False

- b) Explain the number Core Components of Blockchain Architecture. 5 CO2 1
- c) Write short notes on applications of Blockchain. 7 CO2 2
5. a) i) The word "crypto" literally means concealed or secret. 1 CO3 1

True or False

ii) In _____ cryptography guarantees the security of the transactions and the participants, independence of operations from a central authority, and protection from double-spending.

1 CO3 1

- a) cryptocurrency b) physical currency c) cash d) cheque

- b) Explain the Cryptography in Cryptocurrencies. 5 CO3 1

OR

6. a) i) _____ keys are the most important aspect of cryptography. 1 CO3 1
- a) Encryption b) Masking c) Digits d) None of the above
- ii) Cryptography is a technique to send secure messages between two or more participants. 1 CO3 1
- a) True b) False
- b) Write short notes on Cryptography Methods Used in Cryptocurrencies. 5 CO3 2

Semester: VI

Subject: Economics in IT Industry

Duration: 1 Hr.

Subject Code: BTCT606T

Max. Marks: 20

Note: 1. Solve Q.1 or Q.2, Q.3 or Q.4

2. All questions carry marks as indicated.

Q.N.	Questions	Marks	CO	BL
1.A	What do you understand by Deflation? Describe its impact on Economy.	5	CO 1	2
1.B	Explain the term Recession. Illustrate in detail its impact on Economy.	4	CO 1	2
1.C	The sum total of the goods and services produced within a country IS: 1.FBI, 2.MPS 3. GDP 4. GIP	1	CO 1	1
OR				
2.A	Evaluate the term Industrial-Economics? Differentiate between Micro and Macroeconomics.	5	CO 1	2
2.B	Discuss the law of demand and explain various factors on which Demand depends.	4	CO 1	3
2.C	One of the main causes of Deflation is: Increased supply of goods 2. Increase in demand 3. Increase in cashflow 4. Supply-demand ratio	1	CO 1	1
3.A	Elaborate the role & significance of IT Industry in the Economic Growth of the nation.	4	CO2	3
3.B	Evaluate IT industry as the Driver of Economic Growth.	5	CO2	3
3.C	State whether TRUE or FALSE Recession is measured by the GDP of a country.	1	CO1	1
OR				
4.A	Differentiate between Labour Intensive & Capital Intensive Industry.	5	CO2	2
4.B	Analyze the concept of Elasticity of Demand and explain various types.	4	CO2	4
4.C	State whether TRUE or FALSE Recession is measured by Decrease in Consumer Price Index	1	CO1	1