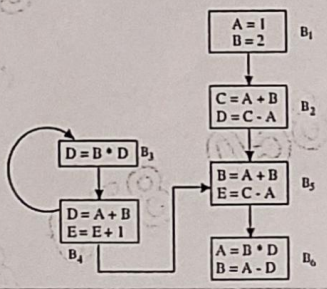
Priyadarshini College of Engineering, Nagpur
Sessional Examination (2022-23) Even Semester
B.Tech. Sixth Semester (Computer Technology) (C.B.C.S.)
Compiler Design

P. Pages: 2 **PCE/KS/23/BTCT601T**

Time: Three Hours **Max. Marks:70**

Notes:
1. All questions carry marks as indicated.
2. Solve Question 1 or Question 2.
3. Solve Question 3 or Question 4.
4. Solve Question 5 or Question 6.
5. Solve Question 7 or Question 8.
6. Solve Question 9 or Question 10.
7. Due credit will be given to neatness and adequate dimensions.
8. Assume suitable data wherever necessary.
9. Illustrate your answers whenever necessary with the help of neat sketches.

Q. No.		Question	CO	BT	Marks
1.	a)	What are different compiler construction tools?	CO1	1	6
	b)	Explain the front end phase of compiler with examples.	CO1	2	8
		OR			
2.	a)	What is Cross Compiler? How boot strapping is needed to develop cross compiler?	CO1	1	7
	b)	Explain Code generation phase with suitable example.	CO1	2	7
3.	a)	What is the significance of FIRST () and FOLLOW () in TOPDOWN Parser?	CO2	1	6
	b)	Construct LL(1) parsing table for following CFG S→ aIJh, I → IbSe/c , J→ KLKr/Є , K→ d/ Є , L→p/ Є	CO2	3	8
		OR			
4.		Consider the following grammar S → AA A → aA A→ b Construct the parsing table using LALR parser.	CO2	3	14
5.	a)	Expain various intermediate code represSentation techniques with example	CO3	2	8
	b)	Show Quadruple , Triple for the following expression . - (a + b) * (c + d) + (a + b + c)	CO3	3	6
		OR			
6.	a)	Translate given expression into TAC if x < y then a= b + c else p= q+ r	CO3	3	7
	b)	Define Attribute. Explain different types of attributes.	CO3	2	7

Q. No.		Question	CO	BT	Marks
7.		Find IN and OUT for every blocks for the following graph 	CO4	3	14
		OR			
8.	a)	What is dominator? How it is used to identify loop in three address code?	CO4	1	6
	b)	Explain the following i) Loop unrolling. ii) Loop Jamming.	CO4	2	8
9.	a)	Explain Register allocation and assignment	CO5	2	7
	b)	Explain error recovery in lexical analysis phase.	CO5	2	7
		OR			
10.	a)	What are the different categories and goals of Error handling?	CO5	1	7
	b)	Explain data structure use for representation of symbol table	CO5	2	7
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Priyadarshini College of Engineering, Nagpur
Sessional Examination (2022-23) Even Semester
B.Tech. Sixth Semester (Computer Technology) (C.B.C.S.)
Data Warehousing and Mining

P. Pages: 2 **PCE/KS/23/BTCT602T**

Time: Three Hours **Max. Marks: 70**

Notes:
1. All questions carry marks as indicated.
2. Solve Question 1 or Question 2.
3. Solve Question 3 or Question 4.
4. Solve Question 5 or Question 6.
5. Solve Question 7 or Question 8.
6. Solve Question 9 or Question 10.
7. Due credit will be given to neatness and adequate dimensions.
8. Assume suitable data wherever necessary.
9. Illustrate your answers whenever necessary with the help of neat sketches.

Q. No.		Question	CO	BT	Marks
1.	a)	Explain various OLAP operations with example.	CO1	2	7
	b)	Discuss: 1) ROLAP 2) MOLAP 3) HOLAP	CO1	2	7
		OR			
2.	a)	With the help of suitable example, explain multidimensional data model for data warehouse.	CO1	2	7
	b)	Differentiate between Data Warehouse and Operational DBMS	CO1	2	7
3.	a)	List and explain the major issues in Data Mining? Explain each in detail.	CO2	2	7
	b)	Discuss data mining functionalities in detail.	CO2	2	7
		OR			
4.	a)	List the major components of a typical data mining? Draw architecture of data mining system and explain it.	CO2	2	7
	b)	Explain the need of Data Preprocessing? Explain Data Cleaning and Data Transformation in short.	CO2	2	7
5.	a)	Describe k-means algorithm. Also illustrate the strength and weakness of k-means in comparison with the k-mediods algorithm.	CO3	2	7
	b)	Discuss Bayesian classification with suitable example.	CO3	2	7
		OR			
6.	a)	Define the hierarchical clustering approach? Compare agglomerative and divisive hierarchical clustering.	CO3	2	6
	b)	Explain tree induction algorithm for building decision tree.	CO3	3	8

Q. No.		Question	CO	BT	Marks
7.	a)	What is Frequent pattern mining and Association Rules? What is the use of both? Explain.	CO4	2	6
	b)	Consider Transactional data for an *AllElectronics* branch. *TID* *List of item IDs* T100 I1, I2, I5 T200 I2, I4 T300 I2, I3 T400 I1, I2, I4 T500 I1, I3 T600 I2, I3 T700 I1, I3 T800 I1, I2, I3, I5 T900 I1, I2, There are nine transactions in this database, that is, $\|D\| = 9$. Apply the Apriori algrithm for finding frequent itemsets in *D*. consider min_support=2 and confidence=50%	CO4	3	8
		OR			
8.	a)	A database has five transactions. Let min sup = 2. TID items bought T1 {A, B, C, D, E,} T2 {B, C, D} T3 {B, C, D, E} T4 {A, B, C, D, E} T5 {B, C, D, E} Find all frequent itemsets using FP-growth Algorithm.	CO4	3	8
	b)	Explain how efficiency of Apriori algorithm can be improved?	CO4	2	6
9.	a)	What are the challenges involved in web data mining ?Explain	CO5	2	4
	b)	How to access accuracy of text retrieval in text mining system?	CO5	2	6
	c)	What are the applications of WEB data mining?	CO5	2	4
		OR			
10.	a)	Discuss i) Web Content Mining ii) Web Usage Mining iii) Web Structure Mining iv) Visual Web Data Mining	CO5	2	14

**********All The Best**********

Priyadarshini College of Engineering, Nagpur
Sessional Examination (2022-23) EVEN Semester
B.Tech. Sixth Semester (Computer Technology) (C.B.C.S.)
Elective-II : Software Testing & Quality Assurance

P. Pages : 2 **PCE/KS/23/ BTCT603T-2**
Time : Three Hours **Max. Marks : 70**

Notes:

1) All questions carry marks as indicated.
2) Solve Question 1 or Question 2.
3) Solve Question 3 or Question 4.
4) Solve Question 5 or Question 6.
5) Solve Question 7 or Question 8.
6) Solve Question 9 or Question 10.
7) Assume suitable data wherever necessary.
8) Illustrate your answer with the help of neat sketches.

Q. No.		Questions	CO	BL	Marks
Q. 1	A	What is SDLC? Describe in detail.	CO1	2	7
	B	What are the different practices for designing good test case? Explain in detail.	CO1	2	7
		OR			
Q. 2	A	Differentiate between verification and validation.	CO1	2	7
	B	What is test case? Design the test case to for the scenario: "Check Login Functionality"	CO1	3	7
Q. 3	A	Differentiate between black box testing and white box testing.	CO2	2	7
	B	What is boundary value analysis? Explain in detail with suitable example.	CO2	2	7
		OR			
Q. 4	A	Enlist any four tools to perform white box testing? Also explain advantages and disadvantages of white box testing.	CO2	2	7
	B	What is equivalence class partitioning? Explain in detail with suitable example.	CO2	2	7

Q. 5	A	What is unit testing? Explain in detail with suitable example.	CO3	2	7
	B	What is integration testing? Explain with an example.	CO3	2	7

OR

Q. 6	A	Explain in detail about advantages and disadvantages of unit testing.	CO3	2	7
	B	Explain in detail about acceptance testing.	CO3	2	7
Q.7	A	What is test data generation? Why test data should be created before test execution?	CO4	2	7
	B	Discuss about the various challenges in test automation.	CO4	2	7

OR

Q.8	A	What is automation testing? Explain in detail with suitable example.	CO4	2	7
	B	Explain the test plan with proper scenario.	CO4	2	6
Q.9	A	Enlist the criteria for selecting a testing tool.	CO5	2	7
	B	Explain in detail about web testing with suitable example.	CO5	2	7

OR

Q.10	A	What is syntax testing? Discuss in detail about its formats and test cases.	CO5	2	7
	B	Define object oriented testing? Explain its related issues.	CO5	2	7

Priyadarshini College of Engineering, Nagpur
Sessional Examination (2022-23) Even Semester
B.Tech. Sixth Semester (Computer Technology) (C.B.C.S)

Subject : Mobile Application & Development

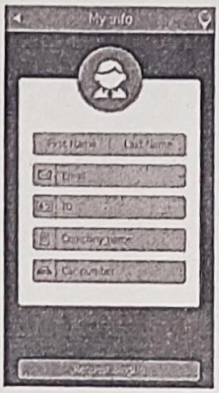
P. Pages: 2 **PCE/KS/23/BTCT604T-2**

Time: Three Hours **Max. Marks: 70**

Notes:
1. All questions carry marks as indicated.
2. Solve Question 1 or Question 2.
3. Solve Question 3 or Question 4.
4. Solve Question 5 or Question 6.
5. Solve Question 7 or Question 8.
6. Solve Question 9 or Question 10.
7. Due credit will be given to neatness and adequate dimensions.
8. Assume suitable data wherever necessary.
9. Illustrate your answers whenever necessary with the help of neat sketches.

Q. No.		Question	CO	BT	Marks
1.	a)	What is android? Explain the features of Android & its Application	CO1	2	7M
	b)	Explain Anatomy of Android Application	CO1	2	7M
		OR			
2.	a)	Explain the procedure steps of Installing Android SDK Tools	CO1	2	7M
	b)	Explain SDK & its Benefits	CO1	2	7M
3.	a)	Write a Short Note On : 1. User Interface 2. Activities	CO2	1	7M
	b)	Define Intent. Explain type of Intent.	CO2	2	7M
		OR			
4.	a)	Explain Architecture of Android	CO2	2	7M
	b)	What is an Activity ? Explain Activity LifeCycle.	CO2	2	7M
5.	a)	Explain Layout & its types.	CO3	2	7M
	b)	Discuss User Interface Screen Elements with XML & JAVA Code.	CO3	2	7M
		OR			
6.	a)	Describe Animation with their types	CO3	2	7M
	b)	Explain 1. View 2. ViewGroup 3. Toast Notification 4. Services	CO3	2	7M

Q. No.		Question	CO	BT	Marks
7.	a)	Write a short note on 1. Content Provider 2. Android Manifest File	CO4	1	7M
	b)	What is Drawable ? Explain type of drawable	CO4	2	7M
		OR			
8.	a)	Explain working with different types of resources	CO4	2	7M
	b)	Write a Short Note On : Sqlite with queries on CRUD in detail	CO4	1	7M
9.	a)	Observe the following GUI and write an XML file using relative layout to create the same.	CO5	2	7M



	b)	Explain 1. Basic type of Android Testing. 2. Tools of Android Testing	CO5	2	7M
		OR			
10.	a)	Discuss Android APIs. Explain Any 3 API's	CO5	2	7M
	b)	Explain the procedure steps of Publishing Android App	CO5	2	7M

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Priyadarshini College of Engineering, Nagpur
Sessional Examination (2022-23) Odd Semester
B.Tech. Sixth Semester (CT/EC/ET/Aero/AI&DS/CE/IT) (C.B.C.S.)
Open Elective: Blockchain Technology

PCE/KS/23/BTECH-CSE-604.3T SET-A

P. Pages: 2 **Max. Marks: 70**

Time: Three Hours

Notes:
1. All questions carry marks as indicated.
2. Solve Question 1 or Question 2.
3. Solve Question 3 or Question 4.
4. Solve Question 5 or Question 6.
5. Solve Question 7 or Question 8.
6. Solve Question 9 or Question 10.
7. Due credit will be given to neatness and adequate dimensions.
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Q. No.		Question	CO	BT	Marks
1.	a)	What is Blockchain? What are its key elements of blockchain?	CO1	1	07
	b)	Explain the Core Components of Blockchain Architecture.	CO1	2	07
		OR			
2.	a)	Discuss about the advantages and disadvantages of blockchain.	CO1	1	07
	b)	Enlist and explain the applications of blockchain in detail	CO1	1	07
3.	a)	Differentiate between Public and Private Ledgers.	CO2	2	07
	b)	What do you understand by the term Hyperledger? Draw and explain its framework.	CO2	2	07
		OR			
4.	a)	Explain the use of Cryptography in Cryptocurrencies.	CO2	1	14
	b)	Describe cryptographic algorithm – SHA 256.			
5.	a)	Discuss in brief about Hardness of Bitcoin Mining.	CO3	1	07
	b)	How does Double Spending Happen? What are its type?	CO3	1	07
		OR			
6.	a)	What do you understand by Bitcoin Wallet? Discuss different types.	CO3	2	07
	b)	Write short notes on POW and POS.	CO3	2	07

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Q. No.		Question	CO	BT	Marks
7.	a)	What do you understand by Ethereum Virtual Machine (EVM)? How Does EVM Works?	CO4	1	07
	b)	Discuss about pros and cons in case of EVM.	CO4	2	07
		OR			
8.	a)	Write short notes on Ethereum Solidity.	CO4	2	07
	b)	What are smart contracts on blockchain?	CO4	1	07
9.	a)	Discuss about different Blockchain Implementation Challenges.	CO5	1	07
	b)	Explain about Zero Knowledge proofs and protocols in Blockchain.	CO5	1	07
		OR			
10.		Write notes on: i) Succinct non interactive argument for Knowledge (SNARK) ii) Pairing on Elliptic curves iii) Zcash - attacks on Blockchains	CO5	2	14

Priyadarshini College of Engineering, Nagpur

Department: IT / C TECH /CSE Semester: VI Section: A/B

Sessional Exam (2022-23)

Subject: ECONOMICS IN IT INDUSTRY Subject Code: BT CT/IT/CSE606T

Duration: 2 Hrs.

Marks:35

Note: 1) All questions carry marks as indicated.
2) Solve Questions 1 or 2 3) 3 or 4
4)5 or 6 5)7 or 8

Q.N.	Question	Marks	CO	BT
1a)	What do you understand by Deflation? Describe its impact on Economy.	5	1	4
1b)	Explain the term Recession. Illustrate in detail its impact on Economy.	4	1	2
	OR			
2a)	Evaluate the term Industrial Economics? Differentiate between Micro and Macroeconomics.	5	1	2
2b)	Discuss the law of demand and and explain various factors on which Demand depends.	4	1	2
3a)	Elaborate the role & significance of IT Industry in the Economic Growth of the nation	5	2	3
3b)	Differentiate between Labour Intensive & Capital Intensive Industry.	4	2	3
	OR			
4a)	Write short notes on: 1.Digital economy 2.Digital age	5	2	1
4b)	Explain various phases of Business cycle.	4	2	2
5a)	Illustrate the concept of Mergers & Acquisitions.Explain different types of mergers you have learnt.	5	3	4
5b)	Write short notes on Hostile Takeover Contribution of E-commerce in Economic Growth	4	3	2
	OR			
6a)	How has information technology impacted the environment in E-waste Management?	4	3	4
6b)	What are the advantages of Mergers and Acquisitions?	5	3	2
7a)	Differentiate between organic and inorganic growth model.	4	4	3
7b)	Write short notes on: Agile organization Venture Capitalists	4	4	2
	OR			
8a)	Justify the statement "Start ups generally consider Angel Funding as a source of finance"	4	4	4
8b)	What are the 5 levels of the Capability Maturity Model of IT Industry?	4	4	2

Priyadarshini College of Engineering, Nagpur
Department: Computer Technology
Sessional Examination (2022-23)

Subject: Organizational Behaviour **Semester:** VI **Subject code:** BTCT608T
Duration: 02 Hrs **Max. Marks:** 35

Note: 1. All questions carry marks as indicated
2. Solve Q.1 or Q.2
3. Solve Q.3 or Q.4
4. Solve Q.5 or Q.6
5. Solve Q.7 or Q.8

Q.No	Question	CO	BT	Marks
1 a)	Explain the concept of Organizational Behaviour.	CO 1	2	4
b)	Discuss the key elements of Organizational Behaviour.	CO 1	1	5
	OR			
2 a)	Write the objectives of Organizational Behaviour.	CO1	2	5
b)	Enumerate the Scope of Organizational Behaviour.	CO1	2	4
3	Describe the Johari Window Model in detail.	CO 2	2	9
	OR			
4	Interpret the four life positions in Transactional Analysis.	CO2	2	9
5	Describe the determinants/factors of personality.	CO3	2	9
	OR			
6	Discuss the Psychoanalytic Theory of personality.	CO 3	2	9
7	Explain the concept of motivation and discuss Maslow's theory of motivation.	CO4	2	8
	OR			
8	Explain the concept of leadership. Discuss various styles of leadership.	CO4	2	8