Hall Ticket Number :										

R-15

Code: 5G451

III B.Tech. I Semester Supplementary Examinations May 2019

Android Application Development

(Information Technology)

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1. What is android? Explain its versions along with its features 14M

OR

2. Describe the anatomy of an android application 14M

UNIT–II

3. Summarize how to resolve intent filter calling & passing of data using an intent object 14M

OR

4. Consider the example of Google maps and explain the use of intent class to invoke built in application 14M

UNIT–III

5. Design a student registration page using basic views 14M

OR

6. Create different apps for displaying the list of cities in Andhra Pradesh opting for smart cities using Options menu & Context menu. Compare the Pros and Cons of each menu 14M

UNIT–IV

7. Discuss the CRUD operations of SQLite Database 14M

OR

8. Create an SOS message using intents and broadcast receiver class 14M

UNIT–V

9. Compare XML web services with JSON services and explain socket programming for establishing a connection between a client and a server 14M

OR

10. Compile the procedure to publish your app on the Android market 14M

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Hall Ticket Number :										

R-15

Code: 5G452

III B.Tech. I Semester Supplementary Examinations May 2019

Automata and Compiler Design

(Information Technology)

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1. a) Describe the key properties of Regular Expressions with suitable examples.

   b) Design a DFA that accepts the language over = {a, b} of all strings that contain the sub-string either aa or bb

OR

2. a) Write a procedure to combine two NFA into a single NFA. The operations to be performed are those of concatenation, union and closure

   b) Obtain the Non-Deterministic Finite Automaton (NFA) corresponds to the Grammar,
   G = ({S, X, Y}, {a, b}, P, S), where P is defined as follows:
   P → aS | bS | bX X → bY | b Y → aY | bY | a | b

UNIT–II

3. a) Explain the different phases of the compiler, showing the output of each phase using the example for the statement z = (a*20) + b – c

   b) What is meant by input buffering? Explain the use of sentinels in recognizing tokens.

OR

4. a) Show that the following grammar is LL(1) S → AaAb | BbBa , A → ε, B → ε

   b) What do you mean by ambiguity in context free grammars? Give an example for ambiguous grammar. Show that the grammar in your example is ambiguous.

UNIT–III

5. Paradigm to SLR Parsing table for the below grammar and check the input string
   W=id+id*id is accepted by the grammar are not
   A→A+B/C B→B*C/C C→A/id

OR

6. Write about type conversions and write about polymorphic function?

UNIT–IV

7. a) Explain the process of organizing a symbol table for a block structured language

   b) Construct Quadruples, Triples and Indirect Triples of the following expression: A = – B * (C + D).

OR

8. a) Explain the syntax directed translation in details?

   b) Different forms of Intermediate code? with example

UNIT–V

9. a) Discuss the Principle source of optimization and explain its types?

   b) Describe the peep-hole Optimization?

OR

10. Explain the DAG based local Optimization. Construct DAG for the following expression: A = B * – C + B * – C

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Hall Ticket Number :										

R-15

Code: 5G152

III B.Tech. I Semester Supplementary Examinations May 2019

Computer Networks

(Common to CSE & IT)

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1. a) Explain about the OSI Reference Model and its importance over the TCP/IP Reference Model. 9M

   b) Ten signals, each requiring 4000 Hz, are multiplexed onto a single channels using FDM. What is the minimum bandwidth required for the multiplexed channel? Assume that the guard bands are 400 Hz wide. 5M

OR

2. a) Make a list of activities that you do every day in which computer networks are used. How would your life be altered if these networks were suddenly switched off? 7M

   b) Draw and explain the structure of the telephone system. 7M

UNIT–II

3. a) What is the maximum overhead in byte stuffing algorithm? Explain 7M

   b) A 100 byte IP packet is transmitted over a local loop using ADSL protocol stack. How many ATM cells will be transmitted? Briefly describe their contents. 7M

OR

4. a) Data link protocols almost always put the CRC in trailer rather than in a header. Why? 9M

   b) Sketch the Manchester encoding on a classic Ethernet for the bit stream 0001110101. 5M

UNIT–III

5. a) Explain the building and distribution of link state packets in link state routing algorithm. 7M

   b) Are there any circumstances when connection oriented service will deliver packets out of order? Explain 7M

OR

6. a) How Congestion control is different from Flow Control? Explain 7M

   b) Explain about Distance vector routing algorithms. 7M

UNIT–IV

7. Draw the format of UDP header. The following is a dump of a UDP header in hexadecimal format. 14M

CB84000D001C001C

a) What is the source port number?

b) What is the destination port number?

c) What is the total length of the user datagram?

d) What is the length of the data?

e) Is the packet directed from a client to a server or vice versa?

OR

8. a) Why does UDP exist? Would it now have been enough to just let user processes send raw IP packets? 7M

b) Explain the differences in using the sliding window protocol at the link layer and at the transport layer in terms of protocol timeouts. 7M

UNIT–V

9. a) Draw and explain the figure that shows the purpose of DNS. 7M

b) When are external viewers needed? How does a browser know which one to use? Explain 7M

OR

10. a) Can a machine with a single DNS name have multiple IP address? How could this occur? Explain 7M

b) Write an XML page for university registrar listing multiple students, each having a name, an address and a GPA. 7M

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Hall Ticket Number :										

R-15

Code: 5G153

III B.Tech. I Semester Supplementary Examinations May 2019

Data Warehousing and Data Mining

(Information Technology)

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1. a) What is data mining and what factors lead to the mining of data? 4M

   b) What is data mining functionality? Explain different types of data mining 10M

OR

2. Explain the various data reduction techniques in the preprocessing step of data mining. 14M

UNIT–II

3. a) Briefly compare Snowflake schema, fact constellation and Starnet query model. 7M

   b) What are the differences between operational database systems and Data Warehouses? 7M

OR

4. a) Explain any three variations of the Apriori-based mining for improving the efficiency of the Apriori-based mining. 7M

   b) Explain multidimensional association rules. 7M

UNIT–III

5. a) What is Backpropagation? How does Backpropagation work? Explain in detail. 10M

   b) Write the backpropagation algorithm. 4M

OR

6. a) What are Bayesian classifiers? 4M

   b) Why is naïve Bayesian classification called “naïve”? Briefly outline the major ideas of naïve Bayesian classification. 10M

UNIT–IV

7. a) What is good clustering? What are the requirements of clustering in data mining? 6M

   b) Briefly explain Distance based and Deviation based approaches in outlier discovery. 8M

OR

8. Explain Density-Based clustering. Explain DBSCAN and DENCLUE in detail. 14M

UNIT–V

9. Summarise the role of data mining in web and text mining. 14M

OR

10. a) Discuss the major algorithms of the sequence mining problem. 7M

    b) Explain multimedia data mining. 7M

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Hall Ticket Number :										

R-15

Code: 5G356

III B.Tech. I Semester Supplementary Examinations May 2019

Microprocessors and Interfacing

(Common to CSE & IT)

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1.	a)	List different flags and give the importance of each.	7M
	b)	How the memory is organized and accessed different segments in 8086	7M

OR

2.	a)	What is addressing mode list 5 different addressing modes in 8086	7M
	b)	Compare two different string of length 100 bytes are same or not using string instruction	7M

UNIT–II

3.	a)	Differentiate I/O mapped and Memory mapped I/O	4M
	b)	Display digits 0 to 8 by Interfacing seven segment display to 8086	10M

OR

4.	a)	Interface stepper motor and rotate in clockwise continuously.	7M
	b)	Give the importance of BSR mode	7M

UNIT–III

5.	a)	What is the importance of interrupt	4M
	b)	Discuss the interrupt structure of 8086	10M

OR

6.		Draw the architecture of 8257 and give the function of each block	14M

UNIT–IV

7.	a)	Distinguish synchronous and asynchronous data transfer	4M
	b)	Determine different configuration registers in 8251	10M

OR

8.	a)	Why RS232 to TTL conversion is required	4M
	b)	Explain architecture of 8253	10M

UNIT–V

9.	a)	Compare real and protected mode	7M
	b)	Elaborate the architectural features of 80286	7M

OR

10.	a)	List the salient feature of Pentium pro processor	7M
	b)	Summarize the architectural features of Pentium.	7M

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Hall Ticket Number :										

R-15

Code: 5G455

III B.Tech. I Semester Supplementary Examinations May 2019

Software Testing Methodologies

(Information Technology)

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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UNIT–I

1. Why is it impossible for a tester to find all the bugs in a system? Why might it not be necessary for a program to be completely free of defects before it is delivered to its customers?

OR

2. State and explain various dichotomies in software testing?

UNIT–II

3. State and explain various kinds of predicate blindness with examples?

OR

4. What is meant by statement coverage(C_1) and branch coverage(c_2) explain with an example how to select enough paths to achieve c1+c2.

UNIT–III

5. a) What is meant by transaction flow testing? Discuss its significance
   b) What are the applications of data flow testing

OR

6. a) Discuss in detail about testability of Domains.
   b) Explain various properties related to Ugly-domains.

UNIT–IV

7. Discuss Path Sums and Path Product., Discuss in brief applications of paths

OR

8. What is the purpose of decision tables? Explain in detail?

UNIT–V

9. Explain about good state and bad state graphs

OR

10. What are graph matrices and their applications?

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