

C 80019-A

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Name.....

Reg. No.....

**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME]
EXAMINATION, APRIL 2020**

Computer Science Engineering

CS/IT 14 801—COMPUTER ARCHITECTURE AND PARALLEL PROCESSING

Time : Three Hours

Maximum : 100 Marks

Part A

Answer any **eight** questions.

Each question carries 5 marks.

1. Explain about the technology trends in Computer Architecture. ✓
2. What is meant by bandwidth and latency ? Mention its usage. ✓
3. Explain the indirect addressing mode and the immediate addressing mode with examples. ✓
4. Explain the concepts and challenges in Instruction Level Parallelism. ✓
5. Write a note on compiler vectorization. ✓
6. Explain the memory hierarchy design. ✓
7. How is protection mechanism incorporated Intel Pentium Processor ? Explain. ✓
8. Explain the role of cache memory and mention the advantages of using it. ✓
9. Define Synchronization. How is it implemented in a multiprocessor system ? ✓
10. Explain the procedure involved in connection more than two computers. ✓

(8 × 5 = 40 marks)

Part B

Answer any **four** questions.

Each question carries 15 marks.

11. (A) Explain in detail about the quantitative principles of computer design.

Or

- (B) Explain the different types of hazards in detail.

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12. (A) Write a detailed note on dynamic hardware prediction.

Or

(B) Explain in detail about the mechanism for enhancing vector performance.

13. (A) Explain about the working of the Unix File System in detail.

Or

~~(B)~~ Describe the working of Virtual memory in detail with appropriate sketches.

14. ~~(A)~~ Explain the working of distributed shared memory architecture in detail.

Or

(B) Explain the working of centralized shared memory architecture in detail.

(4 × 15 = 60 marks)

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**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME]
EXAMINATION, APRIL 2020**

Information Technology

IT 14 302—MOBILE COMMUNICATION SYSTEMS

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 5 marks.

1. Write short note on the generations of Tele-communication networks.
2. Write down the functions of HLR (Home Location Register) and VLR (Visitors Location Register) in GSM.
3. List out the needs and benefits of using spread spectrum in wireless communication.
4. Explain PICONET with the help of neat diagram.
5. Write benefits of WAP (Wireless Access Protocol).
6. List out the steps involved in DHCP for assigning an IP address to a newly connected host machine.
7. What are the advantages of using Android OS for mobile devices ?
8. Write short note on Creating map-based activities in android app development.

(8 × 5 = 40 marks)

Part B

Answer all questions.

Each question carries 15 marks.

MODULE 1

9. Write on IS-95 Channel Structure with neat diagrams.

Or

10. List the properties Second generation networks and explain the architecture of GSM in detail.

MODULE 2

11. Explain the following. Spread spectrum with suitable examples and diagrams :

- i) Direct Sequence Spread Spectrum (DSSS).
- ii) Frequency Hopping Spread Spectrum (FHSS).

Or

12. Compare different Modulation techniques used in tele-communication networks.

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MODULE 3

13. Explain WAP Architecture with neat diagrams.

Or

14. Briefly explain the following protocols with neat diagrams :

- i) DHCP.
- ii) IPv6.

MODULE 4

15. Explain the Life cycle android activity and different Layouts used to design the activity.

Or

16. Write short note on :

- i) SMS and MMS in Android Application.
- ii) Creating and Controlling Android Activities.

(4 × 15 = 60 marks)

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**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, APRIL 2020**

Information Technology

IT 14 803—NATURAL LANGUAGE PROCESSING

(2014 Admissions)

Time : Three Hours

Maximum : 100 Marks

Part A

Answer any **eight** questions.
Each question carries 5 marks.

1. Mention the applications of text-based natural language. *text-based*
2. List the different forms of knowledge relevant to natural language understanding. *↓*
3. Find out the possible meanings of the following sentences by giving paraphrase of each interpretation :--
(a) He drew one card. (b) Bird flies like an arrow.
4. What are the general classes of the determiners ?
5. Classify the following verbs as transitive, intransitive or bi-transitive. Give example sentence for each form :
(a) Cry. (b) Sing.
6. Write about the different categories of knowledge.
7. Give examples for predicate logic. *predicate*
8. What are the production rules ? Give examples.
9. State the characteristics of large search space.
10. Write the disadvantages of production systems. *Adv*

(8 × 5 = 40 marks)

Part B

Answer **all** questions.
Each question carries 15 marks.

1. (A) Illustrate the complexity of evaluating language understanding system using examples.
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- (B) Explain the type of information represented using logical form with examples.

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2. (A) Consider the following CFG that generates sequence of letters :

$s \leftarrow a \times c$

$s \leftarrow b \times c$

$s \leftarrow b \times d$

$s \leftarrow b \times e$

$s \leftarrow c \times e$

$s \leftarrow f \times$

$x \leftarrow g$

(a) Which top-down or bottom-up approach would be better for writing the parser for the grammar ?

(b) Trace the parser to operate on the input "bffge".

Or

(B) Give an example for a simple top down parsing algorithm and explain the working of top down parsers.

3. ~~(A)~~ Draw the framework of knowledge representation schemes and explain.

Or

(B) Describe propositional logic using suitable examples.

4. ~~(A)~~ Explain the classification of black board models.

Or

(B) Describe the principle of least commitment.

(4 × 15 = 60 marks)

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**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE [2014 SCHEME]
EXAMINATION, APRIL 2020**

Information Technology

IT 14 804 D--MANAGEMENT INFORMATION SYSTEMS

Time : Three Hours

Maximum : 100 Marks

Part A

Answer any **eight** questions.
Each question carries 5 marks.

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1. Identify the sub-systems in a library.
2. Write the differences between open and closed system.
3. How can a manufacturer of designed shoes differentiate their products by using information technology ?
4. Differentiate synchronous and asynchronous transmission.
5. Draw a network with bus topology and explain.
6. What is network response time ? State the factors that affect the response time.
7. List the advantages of management information system.
8. Write few applications of expert system.
9. List the advantages of critical success factor.
10. Mention any four common types of threats to computer system.

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(8 × 5 = 40 marks)

Part B

Answer **all** the questions.
Each question carries 15 marks.

- 1/ A) Draw the model of an information system and explain its components.

Or

- B) Information technology supports business activities. Explain.

- 2/ A) Explain the hardware used for Wide Area Network (WAN).

Or

- B) Describe the reasons for implementing Local Area Network (LAN) in an office.

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3. A) Discuss about any five information systems in an organization.

Or

B) Explain the features of transaction processing system with the help of a suitable diagram.

4. A) How can computer virus damage an information system? Explain the preventive measures and methods to recover from the damages.

Or

B) A systems development methodology should be in place before introducing a computer aided software engineering tools. Justify.

(4 × 15 = 60 marks)