

Code: 9A04602

1

III B. Tech I Semester (R09) Regular & Supplementary Examinations, November 2012

**MICROPROCESSORS & MICROCONTROLLERS**

(Common to CSS, IT & ECC)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Brief out the special functions of general purpose registers.  
(b) Discuss about 8086 flag register and function of flags.
- 2 Write an ALP in 8086 to divide a 32-bit number by a 16-bit number.
- 3 Interface 2K x 8 EPROM and 2K x 8 RAM to 8086 microprocessor using 74138 Decoder.
- 4 (a) Sketch the interfacing of 8279 to the microprocessor.  
(b) Discuss about DOS and BIOS interrupts.
- 5 What is parity error, over run error & frame error in 8251? What is hunt mode in 8251?
- 6 With neat diagrams explain the five modes of operation of 8253 in detail.
- 7 (a) Discuss the peripheral interface of 8051.  
(b) Explain the memory structure of 8051.
- 8 (a) Brief out the important features of MCS-96 microcontrollers.  
(b) Explain the pin diagram of MCS-96 microcontrollers.

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Time: 3 hours

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- 1 (a) With examples explain, the programming model of 8086.  
(b) Explain the different types of instruction formats used in 8086.
- 2 Write an ALP in 8086 to find the smallest of a set of 16 bit numbers
- 3 (a) Explain 8237 interfacing to 8086 micro processor.  
(b) Explain SRAM, DRAM, EPROM, FLASH memories and their differences.
- 4 Interface an 8-bit DAC to 8255 with an address map of 0804 H to 0807 H. The DAC provides output in the range of +5 V to – 5 V. Write the instruction sequence for generating a square wave with a frequency of 1 KHz.
- 5 (a) Explain the interfacing of 8251 with 8086.  
(b) Explain about high-speed serial communications standards.
- 6 Explain about control word (ICWs and OCWs) formats of 8259.
- 7 (a) Explain the instruction set of 8051.  
(b) Explain about assembly language in 8051 with few examples.
- 8 (a) Explain the internal architecture of MCS-96  
(b) Discuss about the process memory map of MCS-96.

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- 1 Discuss the various addressing modes of 8086. What are displacement, base and index? What is an effective address or offset?
- 2 (a) Write an ALP in 8086 to add five 8 bit numbers and the result is 16 bit.  
(b) Write an ALP in 8086 to add two 8 bit decimal numbers.
- 3 Describe the function of the following pins in 8086 maximum mode of operation.  
(a) MN/MX.  
(b) RQ/GT0 and RQ/GT1.  
(c) QS0 & QS1.  
(d) LOCK.
- 4 (a) Explain about interrupt structure in 8086 micro processor.  
(b) Explain the interrupt sequence in 8086 micro processor.
- 5 (a) Explain high speed serial communication standards.  
(b) Brief about USB. Explain the functionality of various lines on USB. Explain the memory type present in USB.
- 6 Why do we prefer interrupt driven data transfer than programmed I/O transfer? Show the complete hardware design to resolve the multiple interrupts based on priority.
- 7 (a) Give short notes on 8051 counters.  
(b) Give short notes on 8051 timers.
- 8 (a) List the important features of ARM.  
(b) Write short notes on MCS-96 microcontrollers

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- 1 (a) Elucidate instruction set of 8086.  
(b) Write short notes on general purpose registers of 8086.
- 2 (a) Write an ALP in 8086 to find the LCM of two 16 bit numbers.  
(b) Write an ALP in 8086 to subtract two 8 bit decimal numbers.
- 3 (a) Brief out the interfacing of 8086 with 8257.  
(b) Explain Memory Interfacing to 8086.
- 4 Explain how to interface a stepper motor with 4-step input sequence to 8086 based system with the help of hardware design. Write the instruction sequence to move the stepper motor 10 steps in clockwise and 12 steps in anti-clockwise direction.
- 5 (a) Describe high-speed serial communications standards.  
(b) Give short notes on USB.
- 6 With a neat diagram explain the interfacing of 8253 with 8086.
- 7 (a) Explain the function and operating modes of timer in 8051.  
(b) Explain the functional pin diagram of 8051 microcontroller.
- 8 (a) Write short notes on ARM microcontrollers.  
(b) Describe ARM core architecture.

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Code: 9A05502

1

B.Tech III Year I Semester (R09) Regular and Supplementary Examinations, November 2012

**SOFTWARE ENGINEERING**  
(Common to CSS, IT and CSE)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 What is a process pattern? Explain about the Evolving role of software.
- 2 What are the software requirements? Explain in detail about them.
- 3 Write short notes about:
  - (a) Viewpoints.
  - (b) Use cases.
  - (c) Ethnography.
  - (d) Interviewing.
- 4 Write about Functional dependences and Modularity. Explain with example.
- 5 (a) What are the steps for conducting component level design?  
(b) Explain collaboration diagram with messaging.
- 6 (a) Explain software testing strategy as a spiral model  
(b) Explain software testing as 4 steps.
- 7 (a) Explain about assessing overall project risk.  
(b) Explain about risk component drivers.
- 8 (a) Explain about McCall's Quality factors.  
(b) Explain about Software Reliability.

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Code: 9A05502

2

B.Tech III Year I Semester (R09) Regular and Supplementary Examinations, November 2012

**SOFTWARE ENGINEERING**  
(Common to CSS, IT and CSE)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 How do we define software engineering? Explain about the Evolving role of software.
- 2 Discuss in detail the non-functional requirements of software.
- 3 Clearly explain about object models with diagrams?
- 4 (a) How do we assess the quality of a software design?  
(b) Describe software architecture in your own words.
- 5 (a) What is coupling?  
(b) Explain the categories of coupling.
- 6 (a) Explain about recovery testing.  
(b) Explain about security testing.
- 7 (a) Explain about measuring quality of S/W.  
(b) Explain about defect removal efficiency.
- 8 (a) Discuss about measures of reliability & Availability.  
(b) Explain about software safety.

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Code: 9A05502

3

B.Tech III Year I Semester (R09) Regular and Supplementary Examinations, November 2012

**SOFTWARE ENGINEERING**  
(Common to CSS, IT and CSE)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 Discuss about:
  - (a) What is the difference between PSP and TSP?
  - (b) Artificial intelligence software
  - (c) Practitioners myths?
- 2 Discuss in detail system requirements draw the sequence diagram of ATM withdrawal.
- 3 Write in detail about View Points. Explain with examples.
- 4 What are the various types of design patterns are available for software engineer?  
Describe about pattern based software design?
- 5 (a) Explain about domain engineering.  
(b) Explain about component qualification.
- 6 (a) Explain about graph based testing methods.  
(a) Explain about equivalence partitioning.
- 7 (a) Explain about measuring quality of S/W.  
(b) Explain about defect removal efficiency.
- 8 (a) Explain about 9126 Quality factor.  
(b) Explain about Targeted Quality factor.

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Code: 9A05502

4

B.Tech III Year I Semester (R09) Regular and Supplementary Examinations, November 2012

**SOFTWARE ENGINEERING**  
(Common to CSS, IT and CSE)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 Discuss about:
  - (a) System software.
  - (b) Artificial intelligence software.
  - (c) Engineering / Scientific software.
  - (d) Embedded software.
  
- 2 Discuss about
  - (a) Water fall model.
  - (b) RAD model.
  
- 3 Explain about requirements elicitation and analysis.
  
- 4 What is a architectural style? Describe about different architectural styles.
  
- 5 Explain about component level design compute page cost with diagram.
  
- 6 Explain about dataflow model for safe home system.
  
- 7
  - (a) Explain about Web application metrics.
  - (b) Explain about Use case oriented metrics.
  
- 8 Explain about SQA tasks, goals and metrics.

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Code: 9A05505

III B. Tech I Semester (R09) Regular & Supplementary Examinations, November 2012

**OPERATING SYSTEMS**

(Common to IT, ECC & CSE)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Explain the concept of multitasking.  
(b) Explain the special program used to generate a system.
- 2 (a) What is the objective of time sharing system? Explain how it is achieved.  
(b) Explain in detail the analytical method for evaluating scheduling algorithms.
- 3 (a) Give an instance where the producer and consumer routines may not function correctly when executed concurrently.  
(b) What are the different types of storage media? Explain.
- 4 Explain paging scheme for memory management, illustrate the hardware support for paging and explain the concept of paging with an example.
- 5 (a) Consider a system consisting of 'm' resources of the same type being shared by 'n' processes, resources can be requested and released by processes only one at a time. Show that the system is deadlock free if the following two conditions hold:  
(i) The maximum need of each process is between 1 and 'm' resources.  
(ii) The sum of all needs is less than  $m+n$ .  
(b) Under the normal mode of operation, what is the sequence of operations a process performs while utilizing a resource.
- 6 (a) What is file structure? How file structure is supported by different operating systems?  
(b) What are the different types of file access methods?
- 7 (a) Is there any way to implement truly stable storage. Explain your answer.  
(b) What are the dimensions on which the devices vary?
- 8 Explain how operating system provides security.

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III B. Tech I Semester (R09) Regular & Supplementary Examinations, November 2012

**OPERATING SYSTEMS**

(Common to IT, ECC & CSE)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Enumerate on time-shared operating system.  
(b) In what ways is the modular kernel approach similar to the layered approach? In what ways does it differ from the layered approach?
- 2 (a) What is the objective of multiprogramming? Explain how it is achieved.  
(b) Give a note on CPU scheduling in Linux.
- 3 (a) Explain critical section problem.  
(b) What is serializability? Explain in detail.
- 4 Explain in detail paging with an example. Give the paging hardware and explain page table implementation.
- 5 (a) Consider the dining philosopher's problem when the chopsticks are placed at the center of the table and any two of them could be used by philosopher. Assume that the requests for chopsticks are made one at a time. Describe a simple rule for determining whether a particular request could be satisfied without causing deadlock given the current allocation of chopsticks to philosophers.  
(b) Illustrate resource allocation graph.
- 6 (a) What are the various operations that can be performed on the file?  
(b) What are the various pieces of information associated with an open file?
- 7 (a) Give a brief note on the I/O performance.  
(b) Explain about host-attached storage. What are its limitations?
- 8 (a) What are the ways of realizing a domain?  
(b) Explain domain switching in the context of protection.

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III B. Tech I Semester (R09) Regular & Supplementary Examinations, November 2012

**OPERATING SYSTEMS**  
(Common to IT, ECC & CSE)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Explain how the networks are characterized based on the distance between their nodes.  
(b) Explain in detail about protection and security offered by operating system in a computer system.
- 2 (a) What are the different states a process can be in? Explain process state diagram in detail.  
(b) State the criteria for evaluating CPU scheduling algorithms. Also state whether the criteria is to be optimized for minimal or maximum value.
- 3 (a) What is race condition? Explain with an example.  
(b) Explain log-based recovery in detail.
- 4 Explain the most common techniques for structuring the page table.
- 5 Explain the different strategies that operating system designers can adopt vis-à-vis the problem of deadlock.
- 6 (a) What is file? What are the different types of files?  
(b) What are the attributes of a file? What is their significance?
- 7 (a) What are the various kinds of performance overheads associated with servicing an interrupt?  
(b) Give a note on selection of a disk scheduling algorithm.
- 8 (a) The separation of policy and mechanism is important for flexibility in providing protection. Comment on it.  
(b) What are the two methods for association between a process and a domain?

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**OPERATING SYSTEMS**  
(Common to IT, ECC & CSE)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) What the operating system services that provides functions helpful to the user? Explain.  
(b) What is the main function of a microkernel? What are its benefits?
- 2 (a) Explain various states and transitions between states with the help of a diagram.  
(b) Explain the following scheduling algorithms with examples:  
(a) First-come, First served.  
(b) Shortest-job first.
- 3 (a) What is critical section? Give the general structure of a typical process sharing logical address space with other process and explain.  
(b) Explain locking protocol to ensure serializability.
- 4 (a) Explain why sharing a reentrant module is easier when segmentation is used than pure paging is used.  
(b) Compare the main memory organization schemes of contiguous memory allocation, pure segmentation and pure paging with respect to the following issues:  
(a) External fragmentation.  
(b) Internal fragmentation.  
(c) Ability to share code across processes.
- 5 Why can a deadlock not be prevented easily? Discuss this with respect to the necessary conditions for deadlock, considering each of them one by one.
- 6 (a) File system is the most visible aspect of an operating system. Discuss.  
(b) A file is an abstract data type. Discuss.
- 7 (a) Explain how the operating system transforms I/O requests to hardware operations.  
(b) Discuss the problems with RAID.
- 8 Explain Cambridge cap system approach for protection.

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Code: 9A005506

III B. Tech I Semester (R09) Regular & Supplementary Examinations, November 2012

**COMPUTER NETWORKS**

(Common to Information Technology & Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Explain the principle difference between CO communication and CL communication.  
(b) Explain about WAN.
- 2 Explain in detail about the two data link layer in protocols widely used in internet.
- 3 (a) Discuss about MAC addresses.  
(b) Briefly explain spanning tree bridges and remote bridges.
- 4 Discuss the different algorithms for broadcasting and compare them.
- 5 (a) Discuss in detail about the importance of fragmentation.  
(b) Draw and explain the concatenated virtual circuit diagram.
- 6 (a) What is the role of transport address in establishing the connection to a remote application?  
(b) What are the different primitives used for transport service? Explain them in detail.
- 7 (a) How do you make an image clickable in HTML? Give an example.  
(b) Write a program in java script that accepts an integer greater than 2 and tells whether it is prime number.
- 8 (a) Discuss the substitution cipher mechanism with a suitable example.  
(b) Explain the transposition ciphers with an example.

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III B. Tech I Semester (R09) Regular & Supplementary Examinations, November 2012

**COMPUTER NETWORKS**

(Common to Information Technology & Computer Science & Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 Describe ISO-OSI model with a neat sketch.
- 2 (a) Explain one-bit sliding window protocol. Give the advantages and disadvantages of the protocol.  
(b) Discuss the services provided by the data link layer to the network layer.
- 3 (a) Explain how static channel allocation is done in LANs and MANs.  
(b) Write brief note on differential Manchester encoding.
- 4 Explain multi destination routing and reverse path forwarding technique with examples.
- 5 (a) What is connectionless internetworking? Explain it in detail.  
(b) Explain the internetworking using the concatenated virtual circuits.
- 6 (a) Explain how to establish the connection using the transport protocols.  
(b) Write a short note on transport service primitives.
- 7 (a) Discuss in detail about the multicast back bone.  
(b) Explain the distribution network in detail.
- 8 (a) Explain how the plain text is converted into cipher text by using the DES algorithm with an example.  
(b) Discuss the technique used to convert the plain text to cipher text by using the transposition cipher.

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III B. Tech I Semester (R09) Regular & Supplementary Examinations, November 2012

**COMPUTER NETWORKS**

(Common to Information Technology & Computer Science & Engineering)

Time: 3 hours

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- 1 (a) With a neat diagram, explain the functionality of layers, protocols and interfaces.  
(b) What is the difference between connection-oriented and connection-less switching.
- 2 (a) Discuss the use of hamming code to correct the burst errors.  
(b) Explain sliding window protocol using go-back-n. What are the advantages and disadvantages of it?
- 3 Briefly discuss about key assumptions in dynamic channel allocation in LANs and MANs.
- 4 Discuss the different algorithms for broadcasting and compare them.
- 5 (a) Discuss some of the ways in which the networks differ.  
(b) How is internetworking can be done? Explain in detail.
- 6 (a) Draw the state diagram for a simple connection management scheme. Explain it.  
(b) What is forbidden region? Explain it in detail.
- 7 (a) Explain the video server storage hierarchy.  
(b) Discuss the role of discrete cosine transformation in of video by using the JPEG format.
- 8 (a) Explain one time pads with a suitable example.  
(b) Discuss about the redundancy and freshness.

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**COMPUTER NETWORKS**

(Common to Information Technology & Computer Science & Engineering)

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Answer any FIVE questions  
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- 1 (a) Write short notes on interface, service and protocol.  
(b) What are the advantages and disadvantages of optical fiber as a transmission medium?
- 2 (a) Give the detailed description of PPP frame format.  
(b) Explain the following terms of the data link layer:  
i) Framing                      ii) Error control                      iii) Flow control
- 3 Two CSMA/CD stations are each trying to transmit long (multi frame) files. After each frame is sent, they contend for the channel, using the binary exponential back off algorithm. What is the probability that the contention ends on round k and what is the mean number of rounds per contention period?
- 4 Define route. Why routing algorithm is required. Routes can be predetermined and then use them when required (or) routes can be determined when needed and use them immediately. First method is proactive and second method is reactive. Which one is preferred for wired networks? Justify your answer.
- 5 (a) Give brief description about the different types of networks.  
(b) Write short notes on internetworking devices.
- 6 (a) What is a two army problem? How can we solve it? Explain.  
(b) Explain the three way handshake protocols with suitable diagram.
- 7 (a) What is MOSPF? Explain its role in multicast back bone.  
(b) Explain some of the applications of multimedia.
- 8 (a) What are the basic elements of a product cipher? Explain them in detail.  
(b) Explain the data encryption standard with a neat sketch.

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Code: 9A12501

III B. Tech I Semester (R09) Regular &amp; Supplementary Examinations, November 2012

**AUTOMATA & COMPILER DESIGN**

(Common to Computer Science &amp; Systems Engineering &amp; Information Technology)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

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- 1 (a) Define a regular expression. Give regular expressions for the following languages.
  - (i) String over the alphabet {a, b} ending with ab.
  - (ii) Strings over the alphabet {0, 1} that contain substring 10.
  - (iii) Strings over the alphabet {0, 1} that contain 1 in the 3<sup>rd</sup> position from right end.
 (b) Explain in brief about FA and its applications for the lexical analysis.
  
- 2 (a) Write about removing left recursion and left factoring from a given grammar with examples.
 (b) Compute first and follow sets for the variables in the following grammar.  
 $E \rightarrow A / B$      $A \rightarrow a / c / \epsilon$      $B \rightarrow b / c / bB / cB / \epsilon$
  
- 3 (a) What is handle of a sentential form? Write about handle pruning with an example.
 (b) Discuss the general method of shift reduce parsing technique.
  
- 4 Write a syntax directed translation scheme for producing postfix expression for the expressions generated by the following grammar:  
 $E \rightarrow TR$      $R \rightarrow +TR / -TR / *TR / \epsilon$      $T \rightarrow \text{num}$   
 Draw the annotated parse tree for  $9*3+2$ .
  
- 5 (a) Explain type conversion. Give the type conversion rules for converting the type from integer to real.
 (b) Explain the algorithm for testing the structural equivalence.
  
- 6 Explain hash table organization of symbol tables for block structure languages.
  
- 7 (a) Explain briefly about the global optimization.
 (b) Distinguish machine dependent and machine independent optimization.
  
- 8 Explain about dynamic programming for code generation algorithm.

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Code: 9A12501

III B. Tech I Semester (R09) Regular &amp; Supplementary Examinations, November 2012

**AUTOMATA & COMPILER DESIGN**

(Common to Computer Science &amp; Systems Engineering &amp; Information Technology)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Define a regular expression. List any five identities (algebraic laws) for regular expressions.  
(b) Discuss in detail about Lex tool.
- 2 Eliminate left recursion from the following grammar and then construct predictive parsing table for the resultant grammar. Show the moves of the parser for (a,a).  

$$S \rightarrow (L) / a \quad L \rightarrow L,S / S$$
- 3 Write short notes on:  
(a) Bottom up parsing.      (b) Handle pruning.      (c) Ambiguity in CFGs.
- 4 Consider the following C – program segment.  

```

i = 1;
while ( i <= 10)
{ a[i] = 0; i = i + 1; }

```

Translate the above code into  
(a) Syntax tree.  
(b) Three address code.  
(c) Quadruples.
- 5 (a) Give the specification of simple type checker.  
(b) Write the translation scheme for checking type of statement:  

$$S \rightarrow id = E / \text{if } E \text{ then } S_1 / \text{while } E \text{ then } S_1 / S_1; S_2.$$
- 6 Write and explain about algorithm for construction of equivalence trees.
- 7 (a) Explain how loop invariant computation can be eliminated.  
(b) Explain how “Redundant Sub-expression Eliminates” can be done at level in a give program.
- 8 Explain about macros and their features.

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Code: 9A12501

III B. Tech I Semester (R09) Regular &amp; Supplementary Examinations, November 2012

**AUTOMATA & COMPILER DESIGN**

(Common to Computer Science &amp; Systems Engineering &amp; Information Technology)

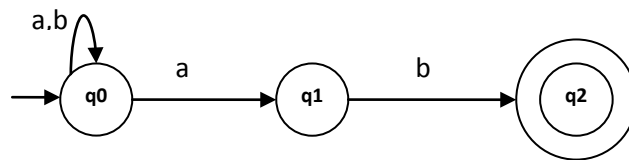
Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Write a lex program for recognizing the conditional and loop keywords in C.  
(b) Convert the following NFA into DFA



- 2 Check whether the following grammar is LL (1) or not by constructing predictive parsing table. Show the moves of the parser for the string ahfbf.

 $S \rightarrow aABbCD / \epsilon$  $A \rightarrow ASd / \epsilon$  $B \rightarrow Sac / hc / \epsilon$  $C \rightarrow Sf / Cg$  $D \rightarrow aBD / \epsilon$ 

- 3 Write short notes on:  
(a) First and follow sets of variables in a CFG.  
(b) Ambiguity in CFGs.  
(c) Shift reduce parsing.
- 4 (a) What do you mean by synthesized attribute and inherited attribute? Give one example for each with detailed description.  
(b) Explain about three address code in detail.
- 5 (a) What is type checker? How does it work?  
(b) Write short notes on dynamic and static type checking.
- 6 (a) Explain scope and life time of variable with some suitable examples.  
(b) Explain copy- restore mechanism.
- 7 (a) What is the need for optimization in detail?  
(b) What is use of machine idioms?
- 8 Explain the concept of label tree for code generation.

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Code: 9A12501

III B. Tech I Semester (R09) Regular &amp; Supplementary Examinations, November 2012

**AUTOMATA & COMPILER DESIGN**

(Common to Computer Science &amp; Systems Engineering &amp; Information Technology)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Discuss in detail about the lexical analysis.  
(b) Describe the languages denoted by the following regular expressions in simple words.  
(i)  $0(0 + 1)^*0$  (ii)  $((\epsilon + 0)1^*)^*$   
(iii)  $(0 + 1)^+ 0(0+1)(0+1)$  (iv)  $0^*10^*10^*10^*$
- 2 (a) Consider the following grammar:  
 $S \rightarrow 0A / 1B / 0 / 1$        $A \rightarrow 0S / 1B / 1$        $B \rightarrow 0A / 1S$   
Find leftmost derivations and the parse tree for (i) 0101 (ii) 1100101  
(b) Write the recursive decent parser routines for the following grammar:  
 $E \rightarrow E+T / T$        $T \rightarrow T*V / V$        $V \rightarrow (E) / id$
- 3 Write short notes on:  
(a) Top down Vs bottom up parsing.  
(b) Handles and handle pruning.  
(c) Error recovery in LR parsers.
- 4 (a) Define syntax directed definition. Write the syntax directed definition for a simple desktop calculator program (grammar). Draw the annotated parse tree for  $3 + 4 * 5$ .  
(b) Explain in brief about quadruples.
- 5 (a) List out various typical semantic errors. Explain the procedure to rectify them.  
(b) What is static checking? List out some examples of static checks.
- 6 (a) Explain the dynamic storage allocation facilities provided by PASCAL language.  
(b) Explain the static storage allocation facilities provided by FORTRAN language.
- 7 Write explain about organization for an optimizing compiler.
- 8 Write and explain heuristic ordering algorithm for DAG with one example.

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Code: 9A12502

III B. Tech I Semester (R09) Regular & Supplementary Examinations, November 2012

**WEB PROGRAMMING**

(Information Technology)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Explain primary tag with supported attributes to insert image on to the web page.  
(b) Discuss about ordered list and various options available for ordered list.
- 2 Write a script that tests as many of the math library functions exercise each of these functions by having your program display tables of return values for a diversity of argument values in an HTML text area.
- 3 Design an XML schema for hospital information management. Include every feature available into the schema.
- 4 (a) Define java bean. Explain the java bean class preparation.  
(b) With relevant examples explain the different types of beans properties.
- 5 (a) Give brief description about the origin of the scripting languages.  
(b) Differentiate between scripts and the programs.
- 6 (a) Explain the usage of the following statements: last, next and revisited.  
(b) Find the similarities and differences between pack and join.
- 7 (a) Draw and explain the Tcl embedded system structure.  
(b) Discuss in detail about the Tcl parser.
- 8 Discuss in detail about the python exception handling mechanism with suitable examples.

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III B. Tech I Semester (R09) Regular & Supplementary Examinations, November 2012

**WEB PROGRAMMING**

(Information Technology)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 Explain the concept of forms or online forms with suitable examples.
- 2
  - (a) Give a note on java script variables.
  - (b) Write a script that reads three nonzero values entered by the user in prompt dialogs and determines whether they could represent the sides of a triangle.
- 3
  - (a) How XML is useful in defining data for web applications? Explain.
  - (b) Discuss the various terms related to document type definition
- 4 "Enterprise Java Bean is a managed, server-sided component for modular construction of enterprise applications". Substantiate this statement use appropriate situation examples.
- 5
  - (a) Discuss in detail about the universe of scripting languages.
  - (b) What is web scripting? Explain it in detail.
- 6
  - (a) What is a pipe? Explain the use of it in perl scripting.
  - (b) Define typeglobs. Explain about them in detail.
- 7
  - (a) Discuss in detail about the different loops and branching used in Tcl.
  - (b) Explain with suitable examples, the different types of lists present in Tcl
- 8
  - (a) Discuss in detail about the python string data types.
  - (b) Explain in detail about the elif and pass statements of python.

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Code: 9A12502

III B. Tech I Semester (R09) Regular & Supplementary Examinations, November 2012

**WEB PROGRAMMING**

(Information Technology)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 What is a frame? What are the advantages of frames? Discuss their usage in webpages.
- 2 How a simple java script to check the presence of first string in the second string, if found display the location of first character?
- 3
  - (a) List the advantages and disadvantages of XML schemas.
  - (b) Create a DTD for a motor bikes catalogue, where each bike has the elements-make, model, year, color, engine, chassis number and accessories. The engine elements have sub elements-engine number of cylinders, types of fuel. The accessories elements-dies brake, auto-start and radio, each of which is required and has the possible values yes and no. Entities must be declared for the names of the popular motorbike makes.
- 4 What is a bean box? Demonstrate with a suitable example connecting beans with events in the bean box.
- 5
  - (a) What are the activities that comprise traditional scripting languages? Explain them in detail.
  - (b) Give brief description about the scriptable components.
- 6
  - (a) Explain the binary data with suitable example.
  - (b) Give brief description about the navigation of the file system present in Perl.
- 7
  - (a) Write short notes on arrays of Tcl.
  - (b) Explain with example, the input and output statements uses in Tcl.
- 8
  - (a) Define a function. What are the rules to be followed while defining the function using python? Explain them in detail.
  - (b) What is the role of import statement in python? Explain with example.

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**WEB PROGRAMMING**

(Information Technology)

Time: 3 hours

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Answer any FIVE questions  
All questions carry equal marks

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- 1 Write HTML code to construct a form for Indian railway reservation to a customer need to collect necessary data from customer.
- 2 Discuss the structure and execution procedures of a java script program with an example script.
- 3 Construct an XML schema for library information management system. Include every XML feature in to the schema.
- 4 What is Bean Info Interface? Explain the importance of a Bean Info interface. Create a simple code which utilizes the Bean Info interface effectively.
- 5
  - (a) List and explain the characteristics of the scripting languages.
  - (b) Discuss in detail about the traditional scripting.
- 6
  - (a) What is a module? Explain its role in the Perl scripting.
  - (b) Explain how we can determine the calling of a context.
- 7
  - (a) Discuss in detail about the glob and regular expression matching.
  - (b) Explain with an example, the switch statement used in Tcl.
- 8
  - (a) Give brief description about the python language.
  - (b) List and explain the advantages of the python language.

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