Total No. of Questions—4] [Total No. of Printed Pages—4

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T.Y. B.Sc. (Computer Science) (Semester III)

EXAMINATION, 2015

CS–331 : SYSTEM PROGRAMMING AND

OPERATING SYSTEM–I

Paper I

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. **:—** (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Neat diagram must be drawn wherever necessary.

1. Attempt *all* of the following : [10×1=10]

(*a*) Define the term 'Loader'.

(*b*) "P-code object program can be executed on any machine." True/False ? Justify.

(*c*) What is the purpose of LTORG statement ?

P.T.O.

(*d*) List different kinds of statements used in assembly language.

(*e*) Give any *two* examples of structure editor.

(*f*) Write any *four* elements of programming environment.

(*g*) What is the difference between START and ORIGIN ?

(*h*) What is nested macro calls ?

(*i*) Give syntax and use of AIF statement.

(*j*) Write any *two* limitations of stack based memory allocation.

2. Attempt any *two* of the following : [2×5=10]

(*a*) Write a note on relocatable program and self-relocatable program.

(*b*) What are different code optimizing transformations commonly used in compiler ? Explain any *two*.

(*c*) Given the following source program :

```
            START           100
A           DS              3
L1          MOVER   AREG ,   B
            ADD     AREG ,   C
            MOVEM   AREG ,   D
```

```
D       EQU     A + 1
L2      PRINT   D
        ORIGIN  A – 1
C       DC      '5'
        ORIGIN  L2 + 1
        STOP
B       DC      '19'
        END     L1
```

(*i*) Show the contents of symbol table at end of pass I.

(*ii*) Show the intermediate code generated for the program.

3. Attempt any *two* of the following : [2×5=10]

(*a*) Construct indirect triples and quadruples for the following expression :

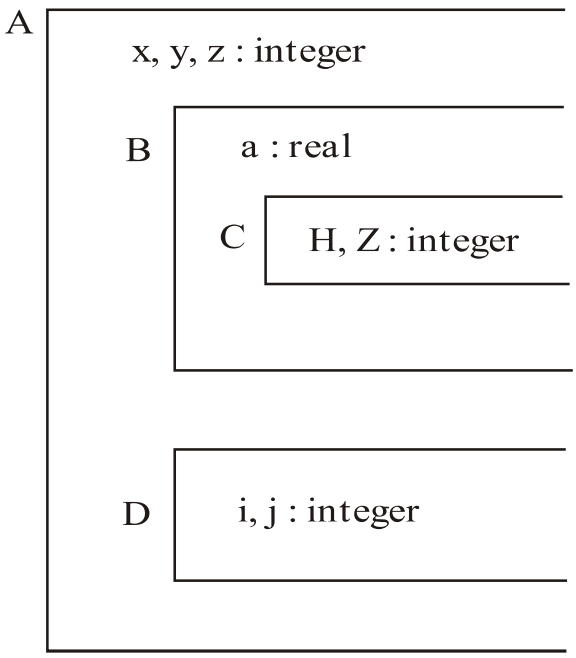
a = b * – c + b * – c

(*b*) List the various factors which affect pass structure. Compare single pass translation and multipass translation.

(*c*) Explain the data structures used in macro preprocessor.

4. Attempt any *one* (A *or* B) : [1×10=10]

(A) (*i*) Construct the local and non-local variable scope or accessibility table for the following blocks A, B, C, D. [5]



(*ii*) What leads to expansion of macrocall ? Explain with example. [3]

(*iii*) Give the syntax of EQU and use of EQU statement. [2]

Or

(B) (*i*) Explain different types of parameters in macro with example. [5]

(*ii*) Write a short note on Debuggers. [3]

(*iii*) List the various phases of compiler. [2]

Total No. of Questions—4] [Total No. of Printed Pages—4

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T.Y. B.Sc. (Third Semester) EXAMINATION, 2015

COMPUTER SCIENCE

Paper II

CS–332 : Theoretical Computer Science and

Compiler Construction–I

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. :— (*i*) *All* questions are compulsory.

(*ii*) *All* questions carry equal marks.

(*iii*) Figures to the right indicate full marks.

(*iv*) Neat diagram must be drawn wherever necessary.

1. Attempt *all* of the following : [10×1=10]

(*a*) Let

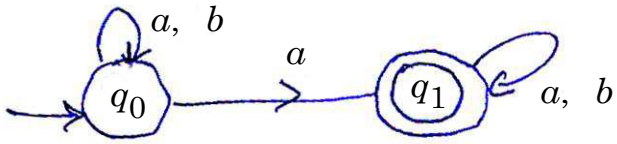
$$A = \{1, 2\} \text{ and } B = \{2, 3\}.$$

Find 2^A.

(*b*) Define useless symbol.

P.T.O.

(*c*) Express in English, the language accepted by given FA and write the regular expression :



(*d*) State true or false : R + R = R ? Justify.

(*e*) Find CFG for the language represent by the following regular expression :

$$(0 + 1)^* \ 01 \ (0 + 1)^*.$$

(*f*) Define context sensitive grammar.

(*g*) State *two* differences between TM and LBA.

(*h*) Define recursively enumerable languages.

(*i*) Write smallest possible string accepted by the regular expression :

$$01 + (0 + 11) \ 0 \ * \ 1.$$

(*j*) Write formal definition of DPDA.

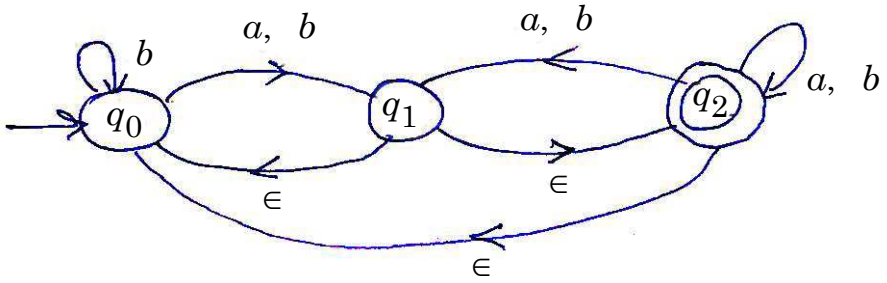
2. Attempt any *two* of the following : [2×5=10]

(*a*) Construct FA for regular expression :

$$(ab)^* + (a + b)^* \ a * b.$$

(*b*) Design Mealy machine to determine the residue (remainder) mod 3 for a decimal number.

(*c*) Construct DFA for the following NFA with $\in$-moves.



3. Attempt any *two* of the following : [2×5=10]

(*a*) Show that context free languages are closed under union with an example.

(*b*) Construct PDA for a language :

$$L = \{W \subset W^R \mid W \in (0 + 1)^*\}.$$

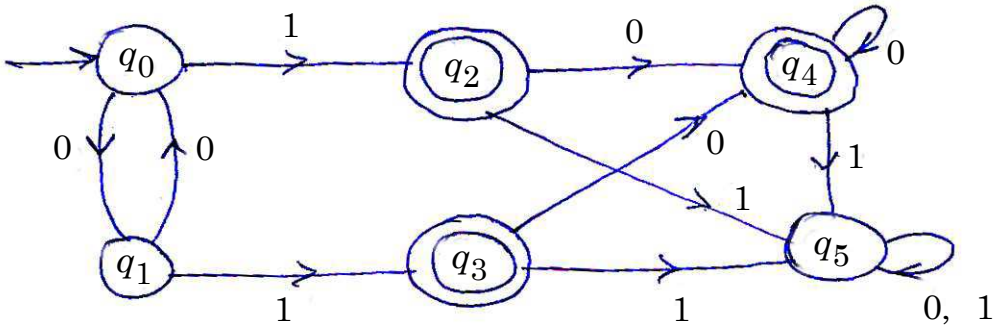
(*c*) Construct TM for a language :

$$L = \{a^n\ b^m\ c^n \mid m, n >= 0\}.$$

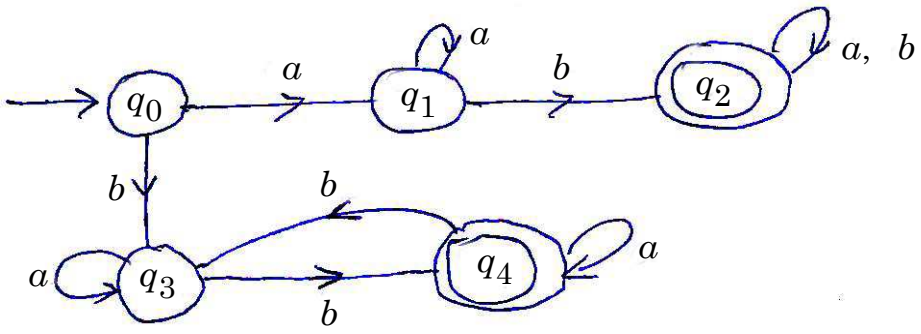
4. Attempt any *one* (either A *or* B) of the following :

(A) (*a*) Find minimum state FA equivalent to the following DFA : [4]

$M = (\{q_0, \ldots, q_5\}, \{0, 1\}, \delta, q_0, \{q_2, q_3, q_4\})$.



(*b*) Construct regular grammar for the following DFA. [4]



(*c*) Define left linear and right linear grammar. [2]

Or

(B) (*a*) Convert the following CFG into CNF (Chomsky normal form) : [4]

S → bA | aB

A → bAA | aS | a

B → aBB | bS | b

(*b*) Determine whether the following language is regular ? Justify : [4]

$L = L_1 \cap L_2$

where :

$L_1 = \{a^n\ b^m \mid n \geq m \text{ and } n > 0\}$

$L_2 = \{b^m\ a^n \mid m > 0,\ n > 1\}$.

(*c*) Construct CFG for $L = L_1 L_2$ [2]

where :

$L_1 = \{a^n\ b \mid n >= 1\}$ and

$L_2 = \{a^n\ b^{n+2} \mid n >= 0\}$

Total No. of Questions—4] [Total No. of Printed Pages—**3**

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T.Y. B.Sc. (Computer Science) (Semester III)

EXAMINATION, 2015

CS-333 : COMPUTER NETWORKS–I

Paper III

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. **:—** (*i*) *All* questions are compulsory.

(*ii*) *All* questions carry equal marks.

(*iii*) Neat diagram must be drawn wherever necessary.

1. Attempt *all* of the following : [10×1=10]

(*a*) Using diagram, write the protocol stack of TCP/IP model.

(*b*) What is attenuation ?

(*c*) Define the term protocol and state its key elements.

(*d*) Using bit stuffing, what will be the transmitted frame for the bit pattern — 1011111011111111001.

(*e*) List the random access protocols.

P.T.O.

(*f*) What is Autonegotiation ?

(*g*) Define analog and digital transmission.

(*h*) Define piggybacking.

(*i*) Define contention system.

(*j*) Why is the system called ethernet ?

2. Attempt any *two* of the following : [2×5=10]

(*a*) Explain design issues of the layer.

(*b*) What is pipelining ? Discuss selective repeat protocol.

(*c*) What is Ethernet ? What are its types ?

3. Attempt any *two* of the following : [2×5=10]

(*a*) Explain the factors that affect protocol efficiency.

(*b*) What are the different services offered by ISDN ?

(*c*) Discuss the functions of transport layer.

4. Attempt any *one* of the following (A *or* B) :

(A) (*i*) Calculate the maximum bit rate for a channel having bandwidth 1600 Hz if : S/N ratio is 0dB and S/N ratio is 20dB. [4]

(*ii*) Explain any *two* framing methods in data link layer. [4]

(*iii*) State the difference between De-facto and De-jure standard. [2]

Or

(B) (*i*) What is Channelization ? Discuss three channelization protocols. [4]

(*ii*) Given a 12 bit sequence 110111100101 and the divisor of 1001. Find the CRC. [4]

(*iii*) Explain bit synchronization function of physical layer. [2]

Total No. of Questions—4] [Total No. of Printed Pages—**3**

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T.Y. B.Sc. (Computer Science) (Semester III)

EXAMINATION, 2015

CS–334 : WEB DEVELOPMENT AND PHP PROGRAMMING–I

Paper IV

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. **:—** (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

1. Attempt *all* of the following : [10×1=10]

(*a*) "In Php resource variable can hold anything."

Justify True or False.

(*b*) Find the output

```
< q Php
$ life = 30;
Function meaning of life( )
        {
Print "the meaning of life is $ life <br>";
        }
Meaning of life( );
        q >.
```

P.T.O.

(*c*) What function could you use to add library code to the currently running script ?

(*d*) Consider the following array :

$a = array (1 ⇒ "one", 5 ⇒ "five", 3 ⇒ "three", 4 ⇒ "four");

Sort above array on key and what will be the output.

(*e*) Which keyword is used to refer to properties or methods within the class itself ?

(*f*) What is first step to list files in a directory ?

(*g*) How would you destroy session variables both within the current script and the session ?

(*h*) Define Introspection.

(*i*) State the purpose of var-dump( ).

(*j*) What is purpose of func_num_orgs( ) ?

2. Attempt any *two* of the following : [2×5=10]

(*a*) Explain the following control statement with their two ways syntax with suitable example :

(*i*) for

(*ii*) while.

(*b*) Explain anonymous function ? Write an anonymous function to find smallest of two numbers.

(*c*) What is an array in Php ? Explain different iterator function.

3. Attempt any *two* of the following : [2×5=10]

(*a*) Write Php script to create class shape & its sub-class triangle, square, circle and display the area of the selected shape (use the concept of inheritance).

(*b*) Weather forcasting department has a file with 20 parameters and 1000 lines. All parameters are separated by comma and all lines are separated by "\n". Accept file name from user and read that file and print first two parameter of the file.

(*c*) Explain any *five* string manipulation function with a suitable example.

4. Attempt any *one* (A or B) : [10]

(A) (*i*) Explain difference between GET and POST Method.

(*ii*) Write a script to keep track of number of times the web page has been accessed.

(B) (*i*) To fill online exam form students has to fill up self information on first page then on second page he will fill the details of current year's papers of which he will give exam. On third page you have to print information of student, papers and total amount he has pay.

Write a Php script to automate above process.

(*ii*) Write a note on cookies.

Total No. of Questions—4] [Total No. of Printed Pages—**3**

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T.Y. B.Sc. (Computer Science) (Semester III)

EXAMINATION, 2015

CS–335 : PROGRAMMING IN JAVA–I

Paper V

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. **:—** (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Neat diagram must be drawn wherever necessary.

1. Attempt *all* of the following : [10×1=10]

(*a*) What is the purpose of javadoc tool ?

(*b*) What happens when we are trying to access index of an array that is greater than size of an array ?

(*c*) List any *two* methods of object class.

(*d*) Inheriting two classes into one class is allowed in Java. State true or false. Justify.

(*e*) What is the use of throws statement ?

(*f*) Give the name of predefined final class.

P.T.O.

(*g*) Write a statement to check if file exist or not.

(*h*) List any *two* methods from keylistener interface.

(*i*) Write name of the package which contains applet class.

(*j*) List any *two* names of wrapper classes.

2. Attempt any *two* of the following : [2×5=10]

(*a*) Write a program to store phone book information (name, phone no) in file "phone book . dat". Accept 'n' details of phone book and store them in file.

(*b*) Create a package "college" which contains teacher class (name, degree). Teacher has two methods accept( ) and display( ). Write a test class outside of package to access teacher class.

(*c*) What is checked and unchecked exceptions ? Explain the use of try, catch and finally block.

3. Attempt any *two* of the following : [2×5=10]

(*a*) What is listener ? Explain any *two* listeners.

(*b*) What is the difference between method overloading and method overriding ?

(*c*) Design a swing program to display three labels, two text boxes and two buttons as "Addition" and "Subtraction" respectively. In first label display text as "First Number" and in second label display text as "Second Number". Accept two numbers from two text box perform addition and subtraction operations, display the result in third label.

4. Attempt any *one* (either A *or* B) of the following : [1×10=10]

(A) (*i*) Write an applet program to handle keyboard events. [4]

(*ii*) Explain final variable, final method and final class with example. [4]

(*iii*) What is the output of the following program ? [2]

Justify your answer.

If input is : java-enable assertions test –5

```
Public class test
{
    Public static void main (string [ ] arg)
    {
        int a = Integer . parse Int (arg to);
        assert (a > 0) : "a is negative or zero";
        system . out . printm ("Result :" + (a * a));
    }
}
```

Or

(B) (*i*) Explain any *two* swing components. [4]

(*ii*) Discuss any *four* java features. [4]

(*iii*) What is wrong in the following piece of code ? [2]

Justify your answer.

```
interface    A {    }
interface    B implements A {    }
```

Total No. of Questions—4] [Total No. of Printed Pages—**2**

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T.Y. B.Sc. (Computer Science) (Semester III)

EXAMINATION, 2015

CS–336 : OBJECT ORIENTED SOFTWARE ENGINEERING

Paper VI

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. **:—** (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) Neat diagram must be drawn wherever necessary.

1. Attempt *all* of the following : [10×1=10]

(*a*) Consider single object "Savings Account" and draw object diagram with possible attributes, visibility and data types.

(*b*) "A class is object type", state true/false and justify.

(*c*) Give names of any *two* initial methodologyst of UML.

(*d*) Which are three kinds of building blocks of UML ?

(*e*) Define Recursive Association.

(*f*) What is meant by tagged values ?

(*g*) What is meant by interface ?

(*h*) Define link attribute.

(*i*) Define forking and joining.

(*j*) Define a test case.

P.T.O.

2. Attempt any *two* of the following : [2×5=10]

(*a*) What do you mean by Relationship ? Explain different kinds of relationships.

(*b*) What is aggregation ? Draw multilevel aggregation diagram for microcomputer.

(*c*) Give benefits of iterative development.

3. Attempt any *two* of the following : [2×5=10]

(*a*) Explain integration testing and its two types.

(*b*) Explain elaboration with some key ideas and best practices.

(*c*) Books in a library are categorized as reference book and text book. A member of library can be a faculty or student. Librarian issues book to members.

Draw a class diagram for this applying relationship, association with multiplicity. Use Generalization concept.

4. Attempt the following : [10]

(*a*) Consider a generalized hospital management system and draw the following diagrams :

(*i*) Use case diagram. [3]

(*ii*) A sequence diagram for patient treatment to discharge process. [4]

(*b*) Explain the interaction diagram. [3]

Or

Draw state transition diagram for stack operations. [3]

Total No. of Questions—4] [Total No. of Printed Pages—4

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T.Y. B.Sc. (Computer Science) (IV Sem.) EXAMINATION, 2015

CS-341 : SYSTEM PROGRAMMING AND OPERATING SYSTEM—II

Paper I

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. :— (*i*) Neat diagram must be drawn wherever necessary.

(*ii*) Figures to the right indicate full marks.

(*iii*) *All* questions are compulsory.

1. Attempt *all* of the following : [10×1=10]

(*a*) RR is non-preemptive. True/False ? Justify.

(*b*) Write a primary function of Medium term scheduler.

(*c*) What do you mean by Pthread ?

(*d*) What is the role of dispatcher ?

(*e*) Define claim edge.

(*f*) What is Belady's Anomaly ?

(*g*) Wait for graph is used for deadlock avoidance in the system. True/False ? Justify.

(*h*) Define bootstrap loader.

(*i*) Define starvation.

(*j*) Give any *two* disk allocation methods.

P.T.O.

2. Attempt any *two* of the following : [2×5=10]

(*a*) Explain the working of MVT with example.

(*b*) What is deadlock ? Explain deadlock recovery in detail.

(*c*) Consider the following set of processes with the length of CPU burst time and arrival time in milliseconds :

Process	**Burst time**	**Arrival time**	**Priority**
P_1	5	1	1 (*h*)
P_2	6	0	2
P_3	2	1	1
P_4	4	0	3 (*l*)

Illustrate the execution of these processes using pre-emptive priority and FCFS scheduling algorithm.

Calculate waiting time and turnaround time for each process and calculate average waiting time and average turnaround time.

Give the contents of Gantt chart.

3. Attempt any *two* of the following : [2×5=10]

(*a*) Explain in brief Indexed File allocation method with advantages and disadvantages.

(*b*) Explain any *two* types of Multithreading.

(*c*) Consider the following snapshot of a system. A system has five processes, A through E and Four types of the resources, R_1 through R_4. There are three (3) instances of type R_1, Fourteen (14) instances of type R_2, Twelve (12) instances of type R_3 and Twelve (12) instances of type R_4.

Process	**Allocation**				**Max**			
	R_1	**R_2**	**R_3**	**R_4**	**R_1**	**R_2**	**R_3**	**R_4**
A	0	6	3	2	0	6	5	2
B	0	0	1	2	0	0	1	2
C	1	0	0	0	1	7	5	0
D	1	3	5	4	2	3	5	6
E	0	0	1	4	0	6	5	6

Answer the following questions using banker's algorithm :

(*i*) What is the contents of the matrix need ?

(*ii*) If the system is in safe state, give safe sequence.

(*iii*) If the request from process E arrives for (0, 0, 4, 1), can the request immediately granted.

4. Attempt any *one* (A *or* B) : [1×10=10]

(A) (*i*) Write a short note on Dinning Philosophers problem. [5]

(*ii*) Write a note on sequential access. [3]

(*iii*) What is resource allocation graph ? Explain in brief. [2]

Or

(B) (*i*) Consider the following page reference string : [5]

7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 7, 0, 1.

How many page faults would occur for the following page replacement algorithm ?

(*a*) FIFO page replacement

(*b*) Optimal page replacement.

Assume three frames.

(*ii*) What is system call ? Explain any *two* system calls related to process control. [3]

(*iii*) What is semaphore ? Define its types. [2]

Total No. of Questions—4] [Total No. of Printed Pages—4

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[4718]-42

T.Y. B.Sc. (Computer Science) (IV Sem.) EXAMINATION, 2015

CS-342 : THEORETICAL COMPUTER SCIENCE AND COMPILER CONSTRUCTION—II

Paper II

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. **:—** (*i*) Neat diagrams must be drawn wherever necessary.

(*ii*) Figures to the right indicate full marks.

(*iii*) *All* questions carry equal marks.

(*iv*) *All* questions are compulsory.

1. Attempt *all* of the following : [10×1=10]

(*a*) YACC is a LR Parser. Justify.

(*b*) Find follow for the following productions :

$$S \rightarrow aAb \mid A$$

$$A \rightarrow dSb \mid a.$$

(*c*) Define Self Compiler.

(*d*) Define DAG.

(*e*) For each parse-tree node (say X) the dependency graph has a node for each attribute associated with that node. State True/False.

P.T.O.

(*f*) When do we use the inherited attributes ?

(*g*) List the actions performed by LR parser.

(*h*) Dominator's set is never empty. State True/False.

(*i*) % {

#include<stdio.h>

% }

State the name of above section used in lex program.

(*j*) Which parser is not able to handle left recursion ?

2. Attempt any *two* of the following : [2×5=10]

(*a*) Check whether the given grammar is LL(1) or not :

$S \rightarrow ADB \mid DbB \mid Ba$

$A \rightarrow da \mid BD$

$B \rightarrow g \mid \in$ (epsilon)

$D \rightarrow h \mid \in$ (epsilon).

(*b*) For the input expression (4 + 6) * (2 + 4), design SDD and draw annotated tree using the following grammar :

$L \rightarrow E$

$E \rightarrow E_1 + T \mid T$

$T \rightarrow T_1 * F \mid F$

$F \rightarrow (E) \mid digit.$

(*c*) Write a lex program which find out factors of a given number.

3. Attempt any *two* of the following : [2×5=10]

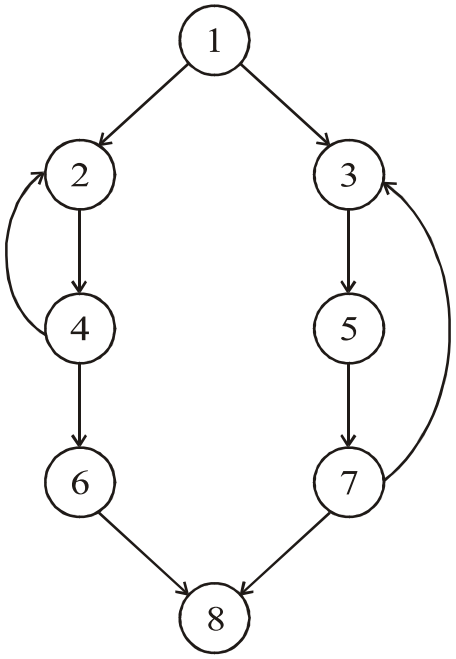
(*a*) Check whether the given grammar is SLR(1) or not :

$S \rightarrow AaAb \mid BbBa$

$A \rightarrow \in$ (epsilon)

$B \rightarrow \in$ (epsilon).

(*b*) Construct the DOM tree for the following flow graph and compute the set of dominators for each node :



(*c*) Write a RDP for the following grammar :

$S \rightarrow aAb \mid aA$

$A \rightarrow Ab \mid b.$

4. Attempt any *one* (either A *or* B) of the following :

(A) (*a*) Check whether the given grammar is LALR(1) or not : [6]

$S \rightarrow AaB \mid B$

$A \rightarrow bB \mid d$

$B \rightarrow A.$

(*b*) Explain dependency graph with example. [4]

Or

(B) (*a*) Compare Recursive Descept Parser and Predictive Parser. [6]

(*b*) Consider the following grammar : [4]

$S \rightarrow (L) \mid a$

$L \rightarrow L, S \mid S.$

Find the operator precedence relation and parse the string (a, (a, a)) using precedence relation.

Total No. of Questions—**4**] [Total No. of Printed Pages—**2**

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[4718]-43

T.Y. B.Sc. (Computer Science) (IV Sem.) EXAMINATION, 2015

CS-343 : COMPUTER NETWORK—II

Paper III

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. **:—** (*i*) Neat diagrams must be drawn wherever necessary.

(*ii*) *All* questions carry equal marks.

(*iii*) *All* questions are compulsory.

1. Attempt *all* of the following : [10×1=10]

(*a*) State the applications of Wireless LAN.

(*b*) Find out the class, Netid and Hostid of IP address 130.140.10.2.

(*c*) List the Network layer protocols.

(*d*) State any *two* applications of UDP.

(*e*) Which file types can be transferred on FTP ?

(*f*) Name the internetworking devices used in network layer.

(*g*) By using substitution cipher transform the message : "WELCOME IN COMPUTER SCIENCE FIELD" Key is 5.

(*h*) Define subnetting.

(*i*) Name the *four* terms define by the URL.

(*j*) What is steganography ?

P.T.O.

2. Attempt any *two* of the following : [2×5=10]

(*a*) Differentiate between virtual circuit and datagram subnet.

(*b*) Explain duties performed by Transport layer.

(*c*) What is cryptography ? Explain *two* fundamental cryptographic principles.

3. Attempt any *two* of the following : [2×5=10]

(*a*) For the given IP address 205.16.37.39/28 in some block of address, calculate : Address mask, first and last address of the block and number of address in the block.

(*b*) Discuss different methods used in HTTP request message.

(*c*) What is Switch ? How does it differ from Hub ?

4. Attempt any *one* of the following (A *or* B) :

(A) (1) By using transposition cipher convert the following : Plain Text : "The key for encryption is Go back from border and the key for decryption is welcome to India" Key is : ZQARXPM [4]

(2) Explain stream delivery and byte segment service of TCP protocol. [4]

(3) What is piconets and scatternet ? [2]

Or

(B) (1) Explain in detail architecture of WWW. [4]

(2) Write a note on Gateway. [4]

(3) What is proxy ARP ? [2]

Total No. of Questions—**4**] [Total No. of Printed Pages—**2**

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[4718]-44

T.Y. B.Sc. (Computer Science) (IV Sem.) EXAMINATION, 2015

CS-344 : WEB DEVELOPMENT AND PHP PROGRAMMING—II

Paper IV

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. **:—** (*i*) *All* questions are compulsory.

(*ii*) Figures to the right indicate full marks.

(*iii*) *All* questions carry equal marks.

1. Attempt *all* of the following : [10×1=10]

(*a*) What are different placeholders used in SQL query ?

(*b*) What is DSN ?

(*c*) What function would you use to write a string to a dynamic image ?

(*d*) How would you draw a polygon ?

(*e*) What is XML parser ?

(*f*) What is Binding ?

(*g*) What is Ajax ?

(*h*) Write any *two* advantages of web services.

(*i*) What is call back function ?

(*j*) What is UDDI ?

P.T.O.

2. Attempt any *two* of the following : [2×5=10]

(*a*) Write a short note on error handling in Pear DB.

(*b*) Write a php script to read image file name from user and display half size of the original image.

(*c*) Write a note on DOM.

3. Attempt any *two* of the following : [2×5=10]

(*a*) Consider the following entities and their relationships :

Student(SNo, Sname, Address, Class)

Subject(SubNo, Subname)

Student-Subject(SNo, SubNo, Marks)

Write a php script which accept class and list the name of student along with subject and marks.

(*b*) Explain E-mail-id validation and verification.

(*c*) Write a note on SOAP XML-RPC.

4. Attempt any *one* (A *or* B) : [2×5=10]

(A) (*i*) Discuss three kinds of popup boxes in JavaScript.

(*ii*) Write a note on WSDL.

(B) (*i*) Movie(Mvid, Mvname, releaseyear, budget)

Write an Ajax program to accept movie name and budget and increase budget by 20% in the database.

(*ii*) Explain rules to write XML elements and attributes with example.

Total No. of Questions—**4**] [Total No. of Printed Pages—**2**

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[4718]-45

T.Y. B.Sc. (Computer Science) (IV Sem.) EXAMINATION, 2015

CS-345 : PROGRAMMING IN JAVA—II

Paper V

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. **:—** (*i*) *All* questions carry equal marks.

(*ii*) Figures to the right indicate full marks.

(*iii*) *All* questions are compulsory.

1. Attempt *all* of the following : [10×1=10]

(*a*) List the different ways by which session tracking can be done.

(*b*) List the methods used for inter-thread communication.

(*c*) What is the purpose of prepared statement ?

(*d*) State any *two* differences between Array List and Vector.

(*e*) What are the parameters of the doGet method in servlet ?

(*f*) List the types of scripting elements used in JSP.

(*g*) "A Datagram socket performs operation faster than stream socket." True/False ? Justify.

(*h*) Write any *two* advantages of Java Beans.

(*i*) State the methods that are used in life-cycle of servlet.

(*j*) Which are the *two* ways that are used to create a new thread in Java ?

P.T.O.

2. Attempt any *two* of the following : [2×5=10]

(*a*) What is a cookie ? Explain how a cookie can be created and accessed in a servlet.

(*b*) Write JDBC program to accept student information from database and update first tuple and display after updation.

(*c*) Write a note on Hash table class.

3. Attempt any *two* of the following : [2×5=10]

(*a*) Explain the different types of JDBC drivers.

(*b*) Write a java servlet code to get information about the server on which the servlet is running.

(*c*) Write a note on InetAddress class and explain its method.

4. Attempt any *one* (A *or* B) : [1×10=10]

(A) (*i*) Explain JSP directives in detail. [4]

(*ii*) Write a java program to read n strings into ArrayList collection. Display the elements of collection in reverse order. [4]

(*iii*) What is Metadata ? How is it obtained ? [2]

Or

(B) (*i*) Explain URL and URL Connection class. [4]

(*ii*) Explain the priority of the thread with example. [4]

(*iii*) Write use and syntax of CopyArea( ) method. [2]

Total No. of Questions—**4**] [Total No. of Printed Pages—**2**

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[4718]-46

T.Y. B.Sc. (Computer Science) (IV Sem.) EXAMINATION, 2015

CS-346 : BUSINESS APPLICATIONS

Paper VI

(2008 PATTERN)

Time : Two Hours **Maximum Marks : 40**

N.B. **:—** (*i*) Neat diagrams must be drawn wherever necessary.

(*ii*) Figures to the right indicate full marks.

(*iii*) *All* questions are compulsory.

1. Attempt *all* of the following : [10×1=10]

(*a*) What is the purpose of CRM Software ?

(*b*) Explain the function of Knowledge Management System.

(*c*) What is the role of MRP-II ?

(*d*) Explain how training benefits the individual.

(*e*) Give any *two* basis for segmentation.

(*f*) Explain disadvantages of ATM.

(*g*) Define EOQ.

(*h*) Give the activities of Supply Chain Management.

(*i*) State basic objectives of customer order processing.

(*j*) Explain any *two* methods of Sales Analysis.

2. Attempt any *two* of the following : [2×5=10]

(*a*) Explain the need of employee appraisal in detail.

(*b*) What are the importance of Production Planning ?

(*c*) Explain different types of Biometric devices with its scope.

P.T.O.

3. Attempt any *two* of the following : [2×5=10]

(*a*) Explain the process of Customer Enquiry and Preparation of Quotation.

(*b*) What are different modules of ERP ?

(*c*) What is meant by six sigma ? Explain different steps under six sigma.

4. Attempt the following :

(*a*) The Kirloskar group of companies produces Pumps, Engines, Compressors, Screw, Laths and Electrical equipments. Each product requires different raw materials which are purchased from different suppliers. Company places purchase orders to different suppliers after receiving purchase indents from various departments.

After material is received from the suppliers, it is send to Quality Control Department for checkups. During this lot of time is spend and situations may arise that the right material is not available during production. To improve the current situation company wants an automated system. To specify the business process :

(*i*) Suggest main process using any *one* diagram from DFD/ HIPO chart/class diagram. [2]

(*ii*) Suggest at least 3 Input documents in detail. [3]

(*iii*) Suggest at least 2 report layouts in detail. [2]

(*b*) Give any *three* techniques of recruitment. [3]

Or

Explain any *three* E-banking methods in detail. [3]