

TE SEM - V - comp - old - NID-14
Sub - EVS - 16112114

(OLD COURSE)

(2 Hours)

QP Code : 12171

[Total Marks : 50

- N. B. :** (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions from questions 2 to 7.
(3) Draw **diagram** wherever **necessary**.
(4) **Figures** to the **right** indicate **full** marks.

1. Attempt any **five** of the following :- 10
- (a) What is Ecological Sucession?
 - (b) Explain the term 'Hot Spots' of biodiversity.
 - (c) What are the causes and effects of ozone layer depletion?
 - (d) How value education is important for better environment?
 - (e) What is ecosystem? What are the components of any ecosystems?
 - (f) What causes marine pollution? What are its effect?
 - (g) Why there is need for gender equity?
2. (a) What are the reasons of depletion of natural forest resources? What is its impact? 5
(b) What are endangered species? What steps are taken for conservation of biodiversity? 5
3. (a) Which are the important pollutants who cause air pollution? What effects are produced by them? 5
(b) Explain briefly the characteristic features & functions of grassland ecosystem. 5
4. (a) Why solid waste management is essential? Explain different methods of its management. 5
(b) Describe the important features of water pollution prevention act. 5
5. (a) What is population explosion? What is its impact on environment? 5
(b) What are the reasons and effects of global warming? 5
6. (a) How Information Technology is useful for better human health and environment? 5
(b) What causes soil pollution? How it affects us? 5
7. (a) What is disaster management? Explain its significance in the event of landslides. 5
(b) What role an indivisual can play in prevention of pollution? 5
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5/12/14 TE-COMP - SEM-VI(R) - ACN -

DEPT

QP Code : 15153

(3 Hours)

[Total Marks : 100

- N.B.** (1) Solve any **five** questions **out of seven** questions.
(2) Question No. 1 is **compulsory**.
(3) **Assumptions** if any, must be **clearly** stated.

1. (a) What is subnetting. Explain with the help of suitable example using CIDR notations. 10
(b) Explain the following internetworking devices :— 10
 - (i) HUB
 - (ii) L2 Switch
 - (iii) Router
 - (iv) Gateway.
2. (a) What is MPLS and how it gives guarantee of Q. O. S. 10
(b) Explain the SDH/SONET Architecture with the help of diagram. 10
3. (a) Explain ATM Adaptation layers in detail. 10
(b) What is Intra domain and Inter domain routing. Explain any one routing protocol belonging to Intra domain routing. 10
4. (a) Explain SNMP in detail. 10
(b) Explain various topologies for backbone N/W. 10
5. (a) Explain X-25 N/W layer functions in detail. 10
(b) Explain all the TCP timers. 10
6. (a) Compare IPV4 and IPV6, giving the details of class based addressing scheme of IPV4. 10
(b) Write a socket program for client server based communication. 20
7. Write short notes on any **two** of the following :—
 - (a) DWDM
 - (b) DMZ
 - (c) X-75
 - (d) Frame Relay.

LM-Con. 10082-14.

N. B. : (1) Question No.1 is compulsory.

(2) Answer any **four** out of the remaining questions.

(3) Answer to **sub** questions must be **written** together.

1. (a) What are the different characteristics of a Data Warehouse? 5
(b) For a Supermarket Chain consider the following dimensions, namely Product, store, time, promotion. The schema contains a central fact table, sales facts with three measures unit_sales, dollars_sales and dollar_cost. Design star schema for this application. 5
(c) Explain Web usage mining. 5
(d) Illustrate how the supermarket can use clustering methods to improve sales. 5
2. Define the following terms :- 20
(a) Dimension Tables
(b) Snowflake Schema
(c) Web Structure Mining
(d) Supervised learning
3. (a) Explain Hierarchical Clustering methods. 10
(b) Explain the Page Rank algorithm 10
4. (a) Describe the following OLAP operations using an example: 10
(1) Slice
(2) Dice
(3) Rollup
(4) Drill Down
(5) Pivot
- (b) Consider the following transaction database: 10

TID	Items
01	A,B,C,D
02	A,B,C,D,E,G
03	A,C,G,H,K
04	B,C,D,E,K
05	D,E,F,H,L
06	A,B,C,D,L
07	B,I,E,K,L
08	A,B,D,E,K
09	A,E,F,H,L
10	B,C,D,F

[TURN OVER

- Apply the Apriori algorithm with minimum support of 30% and minimum confidence of 70% and find all the association rule in the data set. 10
5. (a) Explain Classification Algorithms 10
(b) Explain the ETL (Extract, Transform Load) cycle. 10
6. (a) Define multidimensional and multilevel association mining. 10
(b) Explain the role of Meta data in a data warehouse. 10
7. (a) Write detailed notes on 20
(a) Data Warehouse Architecture
(b) K-Means Clustering

LM-Con.:11103-14.

QP Code :15111

(3 Hours)

[Total Marks : 100

- N.B.** (1) Question No. 1 is **compulsary**.
 (2) Attempt any **four** of remaining questions.
 (3) Make suitable assumptions if **required**.

1. Solve any **four** of the following :—
 - (a) Explain different functions of loader in brief. 5
 - (b) Explain positional parameter in macro. 5
 - (c) Explain heap allocation. 5
 - (d) Explain role of finite automata in compiler. 5
 - (e) What are system software and application software ? 5
2. (a) Explain code optimization in compiler designing with suitable example. 10
 (b) Explain two pass macro with flowchart and databases. 10
3. (a) Explain the working of direct linking loader with a proper example. Show the entries in different databases built by direct linking loader. 10
 (b) Explain different error recovery techniques used by compiler. 10
4. (a) Explain one pass assembler with flowchart and respective databases. 10
 (b) Explain operator preceeding parsing with example. 10
5. (a) Consider the following grammer with terminals (.,, and]. 10
 $S \rightarrow TS \mid [S]S \mid S \mid \epsilon$
 $T \rightarrow (X)$
 $X \rightarrow TX \mid [X]x \mid \epsilon$
 - (i) Construct first and follow set for the nontenninals.
 - (ii) Construct its LL(1) parsing table.
 - (iii) Is this LL(1) grammer ?
- (b) Explain syntax directed translation. 5
 (c) Explain three address code. 5
6. (a) Consider the following grammer :— 10
 $S \rightarrow aSbS \mid bSaS \mid \epsilon$
 - (i) Frame the transition table and action / goto table of the given grammar.
 - (ii) Demonstrate if the grammer is LR(O) or not.
- (b) Explain handle, first set and follow set. 5
 (c) Explain role of lexical analyser. 5
7. Solve any **four** of the following :—
 - (a) Explain DAG. 5
 - (b) Explain LEX and YACC. 5
 - (c) Explain the working and need of linkage editor. 5
 - (d) What is forward reference problem? How it is resolved in two pass assembler ? 5
 - (e) Explain activation record. 5

LM-Con.:8948-14.

