# MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

## II B.Tech– II Sem (MR 18-2018-19 Admitted Students)
## I Mid Examination Subjective Question Bank

**Subject: Database Management Systems**                    **Branch(s): CSE / IT**

**Instructions:**

**1. All the questions carry equal marks**

**2. Solve all the questions**

| Q.No. | Question | Bloom's Taxonomy Level | CO |
|---|---|---|---|
| | **Module I** | | |
| 1. | Explain various Data Base Languages with syntax and example. | Understanding | 1 |
| | **OR** | | |
| 2. | Explain advantages and disadvantages of DBMS over File System | Understanding | 1 |
| | | | |
| 3. | Illustrate Database System Structure with a neat sketch? | Understanding | 1 |
| | **OR** | | |
| 4. | Explain different types of database users and write the functions of DBA? | Understanding | 1 |
| | | | |
| 5. | Construct an ER Diagram for Banking Enterprise System? | Applying | 1 |
| | **OR** | | |
| 6. | Build an University ER diagram and convert it into a relational schema | Applying | 1 |
| | | | |
| 7. | Explain the structure of RDBMS with a neat sketch? | Understanding | 1 |
| | **OR** | | |
| 8. | What is a data model? Explain in detail about different data models used in database management systems? | Understanding | 1 |
| | | | |
| | **Module II** | | |
| 1. | Discuss about different operations in relational algebra with example. | Creating | 2 |
| | **OR** | | |
| 2. | Discuss about different Types of Relational calculus with Examples. | Creating | 2 |
| | | | |

| 3. | Discuss about Nested queries with an example. | Creating | 2 |
|---|---|---|---|
| OR | | | |

| 4. | Discuss about different types of aggregate operators in SQL with examples? | Creating | 2 |
|---|---|---|---|
| | | | |

| 5. | Classify different join operations (Relational Algebra & SQL) and explain with example. | Understanding | 2 |
|---|---|---|---|
| OR | | | |
| 6. | Explain Active Databases and designing Active Databases with suitable example. | Understanding | 2 |
| | | | |

| 7. | Discuss about views with suitable example. | Creating | 2 |
|---|---|---|---|
| OR | | | |
| 8. | Discuss about trigger with syntax and example. | Creating | 2 |

| **Module III** | | | |
|---|---|---|---|
| 1. | Summarize key terms and Rules for functional dependency. | Understanding | 3 |
| OR | | | |
| 2. | Demonstrate functional dependencies. How are primary keys related to FD's? | Understanding | 3 |
| | | | |
| 3. | Classify different Types of Functional Dependencies. | Understanding | 3 |
| OR | | | |
| 4. | Explain about schema refinement. | Understanding | 3 |

# MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

### II B.Tech– II Sem (MR 18-2018-19 Admitted Students)
### I Mid Examination Objective Question Bank

**Subject: Database Management Systems**                                                    **Branch(s): CSE / IT**

### Objective Questions:

1 DBMS is a collection of _____that enables user to create and maintain a database.          [          ]
   a) Keys
   b) Translators
   c) Program
   d) Language activity

2 In a relational schema, each tuple is divided into fields called          [          ]
   a) Relations
   b) Domains
   c) Queries
   d) All the above

3 In an ER model, _____ is described in the database by storing its data          [          ]
   a) Entity
   b) Attribute
   c) Relation ship
   d) Notation

4 Which of the following are the properties of entities?          [          ]
   a) Groups
   b) Table
   c) Attributes
   d) schema

5 _____defines the structure of a relation which consists of a fixed set of attribute-domain pairs          [          ]
   a) Instance
   b) Schema
   c) Program
   d) Super key

6 _____ is a full form of SQL          [          ]
   a) Standard query language
   b) Sequential query language
   c) Structured query language
   d) Server query language

7 A relational database developer refers to a record as          [          ]
   a) A criteria
   b) A relation
   c) A tuple
   d) An attribute

8 The collection of information stored in a database at a particular moment is called as_____          [          ]

   a) Schema
   b) Instance of data base
   c) Data domain
   d) Independent

9 A _____ is used to define overall design of database          [          ]

   a) Schema
   b) Application program
   c) Data definition language
   d) Code

10 DBMS helps achieve          [          ]
   a) Data independence
   b) Centralized control of data
   c) Neither A or B
   d) Both A and B

11 A database Management System is          [          ]
   a) Collection of interrelated data
   b) Collection of programs to access data
   c) Collection of data describes one particular enterprise

d) All the above

12 Which of the following is not a level of data abstraction? [    ]
   a) Physical level
   b) Critical level
   c) Logical level
   d) View level

13 Disadvantages of file system to store data is [    ]
   a) Data redundancy and inconsistency
   b) Difficulty in accessing data
   c) Data Isolation
   d) All the above

14 In an entity-relationship diagram rectangles represents [    ]
   a) Entity sets
   b) Attributes
   c) Data base
   d) Tables

15 Data manipulation language enables users to [    ]
   a) Retrieval of information stored in data base
   b) Insertion of new information into the database
   c) Deletion of information form data base
   d) All the above

16 Which of the following is not a schema? [    ]
   a) Data base schema
   b) Physical schema
   c) Critical schema
   d) Logical schema

17 Which of the following is data base language [    ]
   a) Data definition language
   b) Data manipulation language
   c) Query language
   d) All the above

18 Which of the following is a data model [    ]
   a) Entity-relationship model
   b) Relational data model
   c) Object-based data model
   d) All the above

19 The attribute that can be divided into other attributes is called [    ]
   a) Simple attribute
   b) Composite attribute
   c) Multi-valued attribute
   d) Derived attribute

20 In an Entity-relationship diagram "Ellipses" represents [    ]
   a) Attributes
   b) Weak entity set
   c) Relationship sets
   d) Multi-valued attributes

21 In an Entity-relationship diagram "diamonds" represents [    ]
   a) Attributes
   b) Multi-valued attributes
   c) Weak entity set
   d) Relationship sets

22 One of the following is a valid record-based data model [    ]
   a) Object-oriented model
   b) Relational model
   c) Entity-relationship model
   d) None of the above

23 The level of data abstraction which describes how the data is actually stored is [    ]
   a) Conceptual level
   b) Physical level
   c) Logical level
   d) External Level

24 A data model is : [    ]
   a) Used to describe structure of a database
   b) Set of basic operations on database
   c) Both A and B

d)   None of these

25 DBA stands for                                                                                           [          ]
   a)   Data Basic Access
   b)   Data Base Access
   c)   Data Bank Administration
   d)   Data Base Administrator

26 Which database level is closest to the users?                                                           [          ]
   a)   External
   b)   Internal
   c)   Physical
   d)   Conceptual

27 A schema describes                                                                                        [          ]
   a)   Record relationship
   b)   Data elements
   c)   Record and files
   d)   All the above

28 An abstraction concept for building composite object from their component object is called:             [          ]
   a)   Specialization
   b)   Normalization
   c)   Generalization
   d)   Aggregation

29 Manager's salary details are hidden from the employee. This is                                          [          ]
   a)   Conceptual level data hiding
   b)   Physical level data hiding
   c)   External level data hiding
   d)   None of these

30 Which one is lowest level data model?                                                                    [          ]
   a)   Physical data model
   b)   Logical data model
   c)   External data model
   d)   None of these

31 Data items grouped together for storage purposes are called a                                          [          ]
   a)   Record
   b)   Title
   c)   List
   d)   String

32 The conceptual model is                                                                                  [          ]
   a)   dependent on hardware.
   b)   dependent on software.
   c)   dependent on both hardware and software .
   d)   independent of both hardware and software.

33 An association between students and courses is:                                                         [          ]
   a)   1:1 relationship
   b)   1:M relationship
   c)   M:M relationship
   d)   None of these

34 A view of a database that appears to an application program is known as:                                [          ]
   a)   Schema
   b)   Subschema
   c)   Virtual table
   d)   None of these

35 The set of all possible values of data items is called:                                                 [          ]
   a)   Domain
   b)   Attribute
   c)   Tuples
   d)   None of these

36 _____ is a property that describes various characteristics of an entity                                [          ]
   a)   ER diagram
   b)   Column
   c)   Relationship
   d)   Attribute

37 _____ level describes what data is stored in the database and the relationships among the data         [          ]
   a)   Physical level
   b)   Logical level
   c)   Conceptual level

d) None of the above

38 _____ denote derived attributes [    ]
    a) Double ellipse
    b) Dashed ellipse
    c) Square ellipse
    d) Ellipse with attribute name underlined

39 A _____is an association between entities [    ]
    a) Relation
    b) One to one
    c) Generalization
    d) Specialization

40 In which of the following is a single-entity instance of one type related to many entity instance of another type [    ]
    a) One to one relationship
    b) One to many relationship
    c) Many to many relationship
    d) Composite relationship

41 An advantage of the data base management approach is [    ]
    a) Data is dependent on programs
    b) Data redundancy increases
    c) Data is integrated and can be accessed by multiple programs
    d) None of the above

42 A relational database developer refers to a record as [    ]
    a) A criteria
    b) A relation
    c) A tuple
    d) An attribute

43 Data independence means [    ]
    a) Data is defined separately and not included in programs
    b) Programs are not dependent on the physical attributes of data
    c) Programs are not dependent on the logical attributes of data
    d) Both B and C

44 ER –model uses this symbol to represent weak entity set [    ]
    a) Dotted rectangle
    b) Diamond
    c) Doubly outlined rectangle
    d) None of these

45 DBMS helps in achieving [    ]
    a) Data independence
    b) Centralized control of data
    c) Neither A nor B
    d) Both A or B

46 What is a relationship called when it is maintained between two entities [    ]
    a) Unary
    b) Binary
    c) Ternary
    d) Quaternary

47 A set of possible data values is called [    ]
    a) Attribute
    b) Degree
    c) Tuple
    d) Domain

48 Which are the two ways in which entities can participate in a relationship? [    ]
    a) Passive and active
    b) Total and partial
    c) Simple and complex
    d) All the above

49 In ER-diagram generalization is represented by [    ]
    a) Ellipse
    b) Dashed ellipse
    c) Rectangle
    d) Triangle

50 In the relational model, the number of attributes and number of types in a relation are termed as_____ and
_____respectively [    ]
    a) Cardinality , domain
    b) Degree , cardinality

c) Domain , degree
d) Cardinality , degree

51 In_____ the unmatched rows of second table are listed along with the common rows of both the tables. [    ]
   a) Left outer join
   b) Right outer join
   c) Full outer join
   d) Half outer join

52 The keywords RESTRICT/CASCADE must always be used with____ [    ]
   a) Create
   b) Drop
   c) Alter
   d) Delete

53 Cost of query processing is directly proportional to _____ [    ]
   a) Number of disk access
   b) Number of cpu access
   c) Memory space
   d) Total number of records

54 Query inside a query is known as _____ [    ]
   a) Correlated query
   b) Nested query
   c) Interrelated query
   d) Query optimizer

55 _____operators merge the result set of two different queries into a single result set [    ]
   a) Set
   b) Aggregate
   c) Comparison
   d) Collation

56 _____ Operator returns a result set that doesn't contain any duplicate rows [    ]
   a) EXCEPT
   b) INTERSECT
   c) UNION ALL
   d) UNION

57 _____ Operator returns a value if an element is in given set, otherwise returns a value false [    ]
   a) EXISTS
   b) ALL
   c) IN
   d) ANY

58 _____operator followed by a column name returns the average value of all the values in the specified column [    ]
   a) COUNT
   b) SUM
   c) MAX
   d) AVG

59 _____ operator removes duplicate rows from the final result set [    ]
   a) EXCEPT
   b) EXCEPT ALL
   c) INTERSECT
   d) INTERSECT[DISTINC]

60 ____uses equity operator to join the two relations [    ]
   a) Equi-join
   b) Outer join
   c) Natural join
   d) Full join

61 It is possible to define a schema completely using [    ]
   a) VDL and DDL
   b) DDL and DML
   c) SDL and DDL
   d) VDL and DML

62 Cartesian product in relational algebra is [    ]
   a) a Unary operator
   b) a Binary operator
   c) a Ternary operator
   d) not defined

63 DML is provided for [    ]
   a) Description of logical structure of database.
   b) Addition of new structures in the database system.

c) Manipulation & processing of database. system
d) Definition of physical structure of database

64 'AS' clause is used in SQL for                                                                  [        ]
   a) Selection operation.
   b) Rename operation
   c) Join operation.
   d) Projection operation.

65 Architecture of the database can be viewed as                                                   [        ]
   a) two levels
   b) four levels
   c) three levels
   d) One level

66 In a relational model, relations are termed as                                                  [        ]
   a) Tuples
   b) Attributes
   c) Tables
   d) rows

67 The database schema is written in                                                               [        ]
   a) DCL
   b) DDL
   c) HLL
   d) DML

68 A primary key is combined with a foreign key creates                                            [        ]
   a) Parent-Child relationship between the tables that connect them
   b) Many to many relationship between the tables that connect them
   c) Network model between the tables that connect them
   d) None of the above

69 Count function in SQL returns the number of                                                     [        ]
   a) Values
   b) Distinct values
   c) Groups
   d) Columns

70 The statement in SQL which allows to change the definition of a table is                        [        ]
   a) Alter
   b) Update
   c) Create
   d) select

71 _____ is a change to the database that activates the trigger                                   [        ]
   a) Event
   b) Condition
   c) Action
   d) Assertion

72 ___ is a query or test that is run when the trigger is activated                                [        ]
   a) Event
   b) Condition
   c) Action
   d) Assertion

73 Which of the following is not a part of a trigger description                                   [        ]
   a) Event
   b) Condition
   c) Action
   d) Assertion

74 A trigger description contains _____ parts                                                     [        ]
   a) 2
   b) 3
   c) 4
   d) 5

75 A database that has a set of associated triggers is called an _____                          [        ]
   a) Active database
   b) Passive database
   c) Data warehouse
   d) Associated database

76 _____ clause is used for row-level triggers.                                                    [        ]
   a) FOR EACH ROW
   b) FOR ROW

c) EACH ROW
d) ROW

77 ___ is a procedure that is executed when the trigger is activated and it's condition is TRUE.          [          ]
   a) Event
   b) Condition
   c) Action
   d) Assertion

78 SQL is used for          [          ]
   a) Data processing in batch mode
   b) Query for relational databases
   c) Dtp work
   d) Command line arguments

79 ____ , _____ keywords are used to refer to the values before and after modification          [          ]
   a) Before, After
   b) Old, New
   c) Older, Newer
   d) Before, After

80 Which command is not used in DDL          [          ]
   a) DROP
   b) REVOKE
   c) ROLLBACK
   d) COMMENT

81 Which command is not used in DCL.          [          ]
   a) COMMIT
   b) GRANT
   c) ROLLBACK
   d) SET TRANSACTION

82 ____ keyword is used to associate a default value with a domain          [          ]
   a) DEFAULT
   b) ANY
   c) UNKNOWN
   d) ALL

83 CHECK clause is used for constraints over _____          [          ]
   a) Two tables only
   b) single table only
   c) Three tables only
   d) Four tables only

84 I n SQL _____ command we can use to sort the table.          [          ]
   a) Group by clause
   b) having clause
   c) order by clause
   d) where clause

85 Constraints not associated with any one table are called as _____          [          ]
   a) Associations
   b) Assertions
   c) Assistants
   d) Associated conditions

86 SQL is relationally          [          ]
   a) Complete language
   b) Incomplete language
   c) Cant handle certain relations
   d) Sound language

87 SQL provides ___ special comparison operator to test whether a column value is null.          [          ]
   a) ARE NULL
   b) NULL
   c) IS NULL
   d) NOTNULL

88 When a column value is unknown or inapplicable, then it is treated as ___ in SQL          [          ]
   a) Null
   b) Zero
   c) 1
   d) Any value

89 The number of unique values in the column A can be obtained by ___          [          ]
   a) COUNT ( [A] )
   b) COUNT ( A )

c) COUNT ( [UNIQUE] A)
d) COUNT( [DISTINCT] A)

90 MAX ( A ) aggregate operator gives _____ [     ]
    a) Maximum value in column A
    b) Maximum value in row A
    c) Maximum value in row A and column A
    d) Maximum of table A

91 We can disallow null values by specifying ___ as part of the field definition. [     ]
    a) NO NULL
    b) NOT NULL
    c) ! NULL
    d) != NULL

92 With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" is "Peter"? [     ]
    a) SELECT [all] FROM Persons WHERE FirstName='Peter'.
    b) SELECT [all] FROM Persons WHERE FirstName LIKE 'Peter'.
    c) SELECT * FROM Persons WHERE FirstName='Peter'.
    d) SELECT * FROM Persons WHERE FirstName LIKE 'Peter'.

93 The _____ statement is used to add or drop columns in an existing table. [     ]
    a) DROP TABLE
    b) DELETE TABLE
    c) INSERT TABLE
    d) ALTER TABLE

94 Which SQL statements used to update the data from databases? [     ]
    a) Save
    b) Update
    c) Modify
    d) Save as

95 I n SQL _____ command we can use to sort the table. [     ]
    a) Group by clause
    b) Having clause
    c) Order by clause
    d) Where clause

96 A _____ is a query that has another query embedded within it. [     ]
    a) Nested query
    b) Relational query
    c) Multi dimensional query
    d) Algebraic query

97 Employee (fname, minit, lname, ssn, bdate, address, sex, salary, superssn, dno) SQL query to retrieve the names of all employees who do not have supervisors? [     ]
    a) SELECT fname,lname FROM Employee WHERE superssn=0.
    b) SELECT fname,lname FROM Employee WHERE superssn=NULL.
    c) SELECT fname,lname FROM Employee WHERE ssn IS NULL.
    d) SELECT fname,lname FROM Employee WHERE superssn IS NULL.

98 Correlated sub query is a [     ]
    a) Query evaluated once for the entire parent statement.
    b) Evaluated once for every row processed by the parent statement.
    c) Query evaluated once only.
    d) The query will never be evaluated.

99 _____ keyword is used to eliminate duplicates in the result of a query. [     ]
    a) SELECT
    b) FROM
    c) WHERE
    d) DISTINCT

100 Which operator stands for zero or more arbitrary characters in SQL query [     ]
    a) LIKE
    b) %
    c) _
    d) ^

101 Functional dependency is represented by which of the following symbol [     ]
    a) →
    b) ^
    c) +
    d) =>

102 _____are a set of rules, that when applied repeatedly, generates a closure of functional dependencies [     ]

a) Armstrong's Axioms
b) Relational Expressions
c) quantifiers
d) Relationships

103 _____ is a systematic approach of decomposing tables to eliminate data redundancy and undesirable characteristics like Insertion, Update and Deletion anomalies [ ]

a) Normalization
b) Transaction
c) Atomicity
d) Durability

104 _____is a constraint between two sets of attributes from the database [ ]

a) Redundancy
b) Functional dependency
c) Decomposition
d) Recoverability

105 The left hand side of the functional dependency is called [ ]

a) determinant
b) dependent
c) closure
d) None of the above

106 The right hand side of the functional dependency is called [ ]

a) determinant
b) dependent
c) closure
d) None of the above

107 A functional dependency X→Y is a _____ relationship between two sets of attributes X and Y of a given table T [ ]

a) one-to-one
b) many-to-many
c) many-to-one
d) None of the above

108 If a functional dependency (FD) X → Y holds, where Y is a subset of X, then it is called [ ]

a) Trivial Functional Dependency
b) Non-Trivial Functional Dependency
c) Completely non-trivial Functional Dependency
d) None of the above

109 If a functional dependency (FD) X → Y holds, where Y is not a subset of X, then it is called a [ ]

a) Trivial Functional Dependency
b) Non-Trivial Functional Dependency
c) Completely non-trivial Functional Dependency
d) None of the above

110 If a functional dependency (FD) X → Y holds, where x intersect Y = Φ, it is said to be a [ ]

a) Trivial Functional Dependency
b) Non-Trivial Functional Dependency
c) Completely non-trivial Functional Dependency
d) None of the above

111 _____ rule specifies if alpha is a set of attributes and beta is subset alpha, then alpha holds beta [ ]

a) Reflexive rule
b) Augmentation rule
c) Transitivity rule
d) Associative rule

112 _____ rule specifies if a → b holds and b → c holds, then a → c also holds [ ]

a) Reflexive rule
b) Augmentation rule
c) Transitivity rule
d) Associative rule

113 _____ rule specifies if a → b holds and y is attribute set, then ay → by also holds [ ]

a) Reflexive rule
b) Augmentation rule
c) Transitivity rule
d) Associative rule

114 A Relation with redundancy can be refined by _____ using with smaller relations that contain the same information but without redundancy [ ]

a) Decomposing it
b) Updating it

c) Inserting it
d) Deleting it

115 Which of the following one is not an example of integrity constraints  [       ]
    a) Functional dependency
    b) Multivalued dependency
    c) Join dependency
    d) Multilevel dependency

116 Which of the following one is not caused by redundancy problems  [       ]
    a) Redundant storage
    b) Update anomalies
    c) Insertion anomalies
    d) Multivalued dependency

117 It may not be possible to store certain information unless some other, unrelated information is stored as well is called [       ]
    a) Redundant storage
    b) Insertion anomalies
    c) Deletion anomalies
    d) Update anomalies

118 If $X \rightarrow Y$ holds, where y is a set of attributes, and there is some subset V of X such that $V \rightarrow Y$ holds then X is a __[       ]
    a) Primary key
    b) Candidate key
    c) Super key
    d) Not a key

119 $X \rightarrow Y$ means  [       ]
    a) X functionally determines Y
    b) Y functionally determines X
    c) X not functionally determines Y
    d) X functionally determines X

120 It may not be possible to delete certain information without losing some other, unrelated information as well is called [       ]
    a) Redundant storage
    b) Insertion anomalies
    c) Update anomalies
    d) Deletion anomalies

121 The _____ of a set F of functional dependencies is the set of all functional dependencies logically implied by F[       ]
    a) Closure
    b) Associative
    c) Normalization
    d) None of the Above

122 Which of the following one is an example of a integrity constraints  [       ]
    a) Multilevel dependency
    b) Insertion dependency
    c) Multivalued dependency
    d) Deletion dependency

123 Which one is a kind of integrity constraint that generalizes the concept of the key  [       ]
    a) Multilevel dependency
    b) Multivalued dependency
    c) Lossless join
    d) Functional dependency

124 If $X \rightarrow YZ$ then $X \rightarrow Y$, and $X \rightarrow Z$ are called _____  [       ]
    a) Decomposition
    b) Union
    c) Augmentation
    d) Transitivity

125 Which of the following rule specifies, If $X \rightarrow Y$ and $X \rightarrow Z$ then $X \rightarrow YZ$  [       ]
    a) Union
    b) Decomposition
    c) Composition
    d) None of the Above

# MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

**B.Tech– IV Sem (MR 18-2018-19 Admitted Students)**
**I Mid Examination Subjective Question Bank**

**Subject: Environmental Science**                    **Branch /Specialization: CSE/ECE/EEE/IT**
**Name of the faculty: K USHA RANI**

**Instructions:**

**1. All the questions carry equal marks**

**2. Answer all the questions**

| Q.No. | Question | Bloom's Taxonomy Level | CO |
|---|---|---|---|
| 1. | Outline the structure of Ecosystem? | Understanding | 1 |
| **OR** | | | |
| 2. | Explain Flow of energy through various trophic levels in an ecosystem is unidirectional and noncyclical. | Understanding | 1 |
| | | | |
| 3. | Compare Detritus food chain with grazing food chain. | Analyzing | 1 |
| **OR** | | | |
| 4. | Classify different types of ecosystems. | Analyzing | 1 |
| | | | |
| 5. | Explain the scope and importance of ecosystem. | Understanding | 1 |
| **OR** | | | |
| 6. | Outline the functional features of aquatic ecosystem. | Understanding | 1 |
| | | | |
| 7. | Construct a food web in any one ecosystem. | Applying | 1 |
| **OR** | | | |
| 8. | Develop two ecological pyramids basing on number of species and amount of biomass produced. | Applying | 1 |
| **Module II** | | | |
| 1. | Illustrate in- situ and ex-situ conservation of biodiversity? | Understanding | 2 |
| **OR** | | | |
| 2. | Classify different types of energy resources with examples? | Understanding | 2 |

| 3. | Construct the flow chart on impacts of mining activities**?** | Applying | 2 |
|---|---|---|---|
| | **OR** | | |
| 4. | Identify the values of biodiversity. | Applying | 2 |
| | | | |
| 5. | Summarize with the help of case study how big dams have affected forests and the tribal. | Understanding | 2 |
| | **OR** | | |
| 6. | Outline the major threats to biodiversity. | Understanding | 2 |
| | | | |
| 7. | Discuss aquifers and its types? | Creating | 2 |
| | **OR** | | |
| 8. | Discuss briefly about droughts and floods with respect to their occurrence and impacts. | Creating | 2 |
| **Module III** | | | |
| 1. | Summarize all possible methods to Control Air Pollution in the Environment**?** | Understanding | 3 |
| | **OR** | | |
| 2. | Compare point sources with non-point sources of pollution. | Understanding | 3 |
| | | | |
| 3. | Explain the adverse effects and control of water pollution. | Understanding | 3 |
| | **OR** | | |
| 4. | Illustrate major sources of surface water pollution and ground water pollution. | Understanding | 3 |
| | | | |
| 5. | Identify the control methods of automobile and industrial pollution. | Applying | 3 |
| | **OR** | | |
| 6. | Identify the sources of primary and secondary pollutants. | Applying | 3 |

**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**

**Department Of Chemistry**
**II B.TECH II SEM (MR 18)**
**ENVIRONMENTAL SCIENCE**
**(Common to EEE, ECE, CSE & IT)**
**OBJECTIVE QUESTION BANK FOR I MID**

## MODULE I

**Multiple Choice Questions:**

1. The food relation from grass--> deer-->tiger-->decomposer is called                [      ]

    A)  Eco pyramid
    B)  Food chain
    C)  Trophic level
    D)  Energy flow

2.  Pond eco-system food chain can be represented as:                [      ]

    A)  Grass$\rightarrow$ Grasshopper$\rightarrow$Lizard$\rightarrow$ Eagle
    B)  Grass$\rightarrow$ Mouse$\rightarrow$ Snake$\rightarrow$ Hawk
    C)  Phytoplanktons$\rightarrow$ Zooplanktons$\rightarrow$ Small fish$\rightarrow$ Big fish
    D)  None of the above

3.Identify the correct statement about ecosystem?                [      ]

    A)  Primary consumers are least dependent upon producers
    B)  Primary consumers depend on carnivores
    C)  Producers are more than primary consumers
    D)  Secondary consumers are the largest and most powerful

4.Pyramid of numbers deals with the number of                [      ]

    A)  Species in area
    B)  Subspecies in a community
    C)  Individuals in a community
    D)  Individuals in a tropic level

5.Food chain in which microorganisms breakdown the food by primary  producers is  [     ]

    A)  Detritus food chain
    B)  Grazing food chain
    C)  Consumer food chain
    D)  Predator food chain Always inverted

6.A consumer is                [     ]

    A) An organism that produce its own food
    B) An organism that does not need food for survive
    C) An abiotic organism
    D) An organism that cannot produce its own food

7.Ecology deals with the study of                                                [     ]

- A) Living beings
- B) Living and Non-living components interacting with environment
- C) Reciprocal relationship between biotic and abiotic components
- D) Environment

8. Feeding levels in food chain are called as:                                   [     ]

A) Production levels

B) Eltonian pyramids

C) Food web

D) Tropical levels

9. Single channel energy flow model explains the flow of energy through          [     ]

A) Grazing food chain

B) Detritus food chain

C) Both A& B

D) None

10. The interlocking pattern of food chain is called                             [     ]

A) Food chain

B) Food web

C) Ecological pyramid

D) Energy flow

## MODULE-II

**Multiple Choice Questions:**

1. The value is based on the concept of live & let live called                   [     ]

- A) Social value
- B) Option value
- C) Ethical value
- D) Spiritual value

2. A renewable exhaustible natural resource is:                                   [     ]
- A) Petroleum
- B) Forest
- C) Coal
- D) None

3. Which of the following types of coal has maximum carbon and calorific value?   [     ]

A) Anthracite

B) Bituminous

C) Lignite

D) Wood coal

4. The energy harnessed from the hot rocks present inside the earth is called          [     ]

   A) Geothermal energy

   B) Wind energy

   C) Ocean thermal energy

   D) Tidal energy

5. Which of the following is critical mineral?          [     ]

   A) Cobalt

   B) Iron

   C) Chromium

   D) Magnesium

6. World environmental day is celebrated on the following day          [     ]
   A) November 13th
   B) July 20 th
   C) June 5th
   D) April 7th


7. Land Subsidence occurs due to          [     ]

   A) Withdrawal of more ground water than its recharge

   B) More recharge of ground water than its withdrawal

   C) Equal rates of recharge and withdrawal

   D) None

8. Aquifer which are sandwiched between two impermeable layers of rocks or sediments

   Called          [     ]

   A) Unconfined

   B) Confined

   C) Both

   D) None

9. Identify the effects of over utilization of water resources:          [     ]

   A) Land subsidence
   B) Lowering water table
   C) Salt water intrusion
   D) All
10. When variations occurs within a species due to new combination of genes called          [     ]

A) Genetic diversity
B) Species diversity
C) Eco system diversity
D) None

## MODULE III

**Multiple Choice Questions:**

1. Example for secondary pollutants is        [     ]

     A) Smog
     B) PAN
     C) Ozone
     D) All

2. Carbon dioxide content in atmosphere        [     ]

     A) 70%
     B) 0.03%
     C) 0.5%
     D) 2%

3. Oxidation of sulphur in the fossil fuels mainly produces        [     ]

     A) $NO_2$
     B) $SO_2$
     C) $SO_3$

     D) Both B & C

4. Separation of heavy inorganic solids is known as        [     ]

     A) Sedimentation
     B) Floatation
     C) Neutralization
     D) None

5. More BOD in water indicates        [     ]

     A) Poor quality
     B) Good quality
     C) Maintains quality
     D) None

## MODULE I

**Fill in the blanks:**

1. Grazing food chain starts from _____

2. The flow of energy in an eco-system is always _____

3. The pyramid of energy in a food chain is always _____

4. As energy flows through a food chain, energy in each successive level _____

5. The animals that feed on primary consumers directly are known as _____

6. Tropical grasslands in Africa are typically known as _____

7. The concept of ecological pyramid was first proposed by _____

8. _____ indicates who eats whom

9. Pyramid of numbers in a parasitic ecosystem is _____

10. Graphical representation of relationship of producers and consumers in terms of pyramids is known as _____

## MODULE II

**Fill in the blanks:**

1. The percentage of water usage in agriculture sector globally is _____.

2. _____ resources are not generated

3. Solar cells are made up of thin wafers of semiconductors materials like _____ & _____

4. Natural gas contains 95% of _____.

5. Quinine is obtained from the _____

6. The minimum wind speed required for the working of a wind generator is _____ Km/hr

7. _____ is the technique of conservation of all levels of biological diversity outside their natural habitats.

8. _____ can be extracted from bauxite

9. _____ conservation is the on-site *conservation* or the *conservation* of genetic resources in

   natural populations of plant or animal species

10. The hydro power potential of India is estimated to be about _____ Kw/hr

## MODULE III

**Fill in the blanks:**

1. Photo chemical smog is produced by _____ and sun light

2. Any single identifiable source of pollution from which pollutants are discharged is

   Called _____ source.

3. Itai Itai disease occurred due to consumption of _____ contaminated rice

4. The most commonly used devices to control particulate emissions are _____ &
_____

5. $P^H$ value to be maintained for drinking water is _____

# Malla Reddy Engineering College (Autonomous)

Maisammaguda, Dhulapally (Post via Kompally), Secunderabad – 500 100.

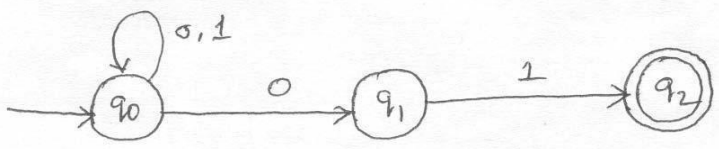**II B.TECH – II  Semester (MR18) I MID EXAMNATIONS**

Subject: **FORMAL LANGUAGES AND AUTOMATA THEORY**                    Branch**: CSE**
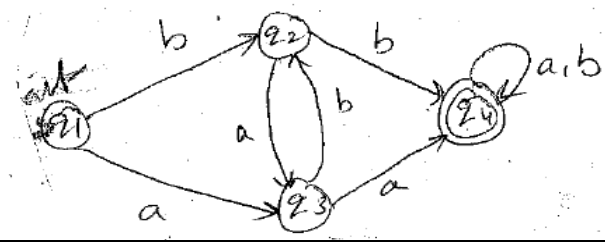
**Subject code: 80503**

**Faculty : Mr Sanjeeva Polepaka , Ms Sireesha Jasti.**

**MODULE-I**

| S No | Question | Blooms Taxonomy Level | CO |
|---|---|---|---|
| 1 | **Consider** the following ε–NFA. Illustrate the  ε–closure of each state and find it's equivalent DFA <br><br> <table><tr><td></td><td>ε</td><td>a</td><td>b</td><td>C</td></tr><tr><td>→ p</td><td>Φ</td><td>{p}</td><td>{q}</td><td>{r}</td></tr><tr><td>q</td><td>{p}</td><td>{q}</td><td>{r}</td><td>Φ</td></tr><tr><td>*r</td><td>{q}</td><td>{r}</td><td>Φ</td><td>{p}</td></tr></table> | **Apply** | 1 |
| | *OR* | | |
| 2 | Convert and **illustrate** the following NFA to its equivalent DFA <br><br> <table><tr><td></td><td>0</td><td>1</td></tr><tr><td>p</td><td>{p,q}</td><td>{p}</td></tr><tr><td>q</td><td>{r}</td><td>{r}</td></tr><tr><td>r</td><td>{s}</td><td>Φ</td></tr><tr><td>*s</td><td>{s}</td><td>{s}</td></tr></table> | **Apply** | 1 |
| | | | |
| 3 | (i) **Define NFA** with epsilon. <br> (ii) Construct and **Give** the DFA equivalent to the NFA given below: <br><br>  | **Understand** | 1 |
| | *OR* | | |
| 4 | **Give** the non-deterministic automata to accept strings containing the substring 0101 | **Understand** | 1 |
| | | | |
| 5 | i.  Design a DFA which can accept a all the strings in which number of a's divisible by 3 over alphabet set {a,b}. <br><br> ii.  Design a DFA for set of all strings over {a,b} ending with  aa | **Apply** | 1 |
| | *OR* | | |
| 6 | An NFA with states 1-5 and input alphabet {a,b} has following transition table. <br><br> <table><tr><td></td><td>a</td><td>B</td></tr><tr><td>q1</td><td>{q1,q2}</td><td>{q1}</td></tr><tr><td>q2</td><td>{q3}</td><td>{q3}</td></tr><tr><td>q3</td><td>{q4}</td><td>{q4}</td></tr><tr><td>q4</td><td>{q5}</td><td>φ</td></tr><tr><td>q5</td><td>φ</td><td>{q5}</td></tr></table> <br> i.  Draw a transition diagram <br> ii.  Calculate  δ(q1,ab) <br> iii.  Calculate  δ(q1,abaab) | **Apply** | 1 |
| | | | |

| 7 | **Explain** about Moore and Mealy machine with examples? | **Apply** | 1 |
|---|---|---|---|
| | OR | | |
| 8 | **Construct** NFA and DFA for the following Languages<br>    i.    L ={ x ∈{a,b,c}* : even number of a's and even b's }<br>    ii.   L ={ x ∈{0,1}*: x is starting with 1 and ends with 2 zero's<br>         } | **Apply** | 1 |

## MODULE-II

| S No | Question | Blooms Taxonomy Level | co |
|---|---|---|---|
| 1 | (i)**Illustrate**  a Regular Expression. Write a Regular Expression for the set of strings that consists of alternating 0's and 1's.<br>(ii).Construct and **examine** Finite Automata equivalent to the regular expression (ab+a)*(a)* | **Understand** | 2 |
| | OR | | |
| 2 | **Translate** the regular expression 0*1* in to a finite automaton . | **Understand** | 2 |
| | | | |
| 3 | **Demonstrate**   a pumping lemma for regular set with example and what are the applications of pumping Lemma | **Understand** | 2 |
| | OR | | |
| 4 | **Show** that L = {a$^p$/p is prime} is not a  Regular using pumping lemma and state pumping lemma.<br><br>**Define** regular grammar, right linear grammar and left linear with examples? | **Understand** | 2 |
| | | | |
| 5 | Find the regular grammar for the following FA given below<br> | **Understand** | 2 |
| | OR | | |
| 6 | **Define** the following a)Regular sets          b)  Regular Expressions<br>          c)Identity Rules | **Understand** | 2 |
| | | | |
| 7 | **Construct** DFA equivalent to the grammar     S→ aS/bS/aA<br>A→bb            B→aC            C→E | **Applying** | 2 |
| | OR | | |
| 8 | Construct a NFA to the regular expression  10+(0+11)0*1 | **Applying** | 2 |

| | | | |
|---|---|---|---|
| | | | |

## MODULE - III

| S No | Question | Blooms Taxonomy Level | co |
|---|---|---|---|
| 1 | **Show** that the grammar is ambiguous for the string aabbabba<br>S→aB\|bA<br><br>A →a\|aS\|bAA    B→ b\|bS\|aBB | **Understand** | **3** |
| | OR | | |
| 2 | **Illustrate** ambiguous grammar and CFG with example? | **Understand** | **3** |
| 3 | **Examine** that the grammar S→a/aAb/abSb, A→aAAb/bS is ambiguous? | **Analyze** | **3** |
| | OR | | |
| 4 | **Simply** a reduced grammar equivalent to S→aAa   A→Sb/bcc/DaA,<br><br>    E→aC       D→aDA | **Analyze** | **3** |
| | | | |

1. Number of states of the FSM required to simulate behavior of a computer with a memory  capable of storing "m" words, each of length 'n'                                                          [  ]
a)      m x 2n    b)    2mn       c)     2m+n     d)    All of these

2.An FSM with                                                                                                              [  ]
 a).One stack is more powerful than an FSM with no stack
 b)Two stacks are more powerful than a FSM with one stack   c)    Both A and B     d)    None of these

3. In FSM Q stands for                                                                                                [  ]
 a)finite set of states     b)finite set of input alphabet   c)initial state    d)final state

4. In FSM $\sum$  stands for                                                                                      [  ]
 A)finite set of states     b)finite set of input alphabet   c)initial state           d)       final state

5. In FSM q0   stands for                                                                                            [  ]
 a)finite set of states     b)finite set of input alphabet  c)initial state   d)final state

6. In FSM final state is represented by                                                                       [  ]
 a)input symbol           b)double circle            c)circle        d)       None of these

7.In five tuple notation DFA and NFA differ in                                                            [  ]
 a)transition function    b)initial states            c)final states    d)None of these

8.Each input symbol on each states must be defined in                                               [  ]
 a)DFA            b)NFA            c)both (a) and (b)        d)       None of these

9. Given the language L = {ab, aa, baa}, which of the following strings are in L*?        [  ]
 a)abaabaaabaa            b)aaaabaaaa   c)baaaaabaa    d)above all

10.  If two finite state machines are equivalent, they should have the same number of        [  ]
 a)states           b)edges            c)states and edges       d)None of these

11. A Language L Is defined as                                                                                   [  ]
 a)set of all possible strings over alphabet set  b)set of all possible symbols c)set of letters  d)
       alphabet only

12. DFA uses _____ tuple notation                                                             [  ]
 a)2             b)3              c)4                d)    5

13.NFA uses _____ tuple notation                                                             [  ]
 a) 2                    b) 3              c) 4    d)     5

14. States in DFA are represented by                                                                       [  ]
a)       cycles   b)     circles   c)    lines    d)        arrow marks

15. Transitions in DFA are represented by                                                               [  ]

a)     cycles      b)  circles      c)  lines      d)      arrow marks

16. Moore Machines has how many tuples representations                    [  ]
a) 1            b) 2      c) 3      d) 6

15. Mealy Machines has how many tuples representations                    [  ]
a) 1            b) 2            c) 3            d) 6

16       Moore Machines Output is associated with                    [  ]
a)      states       b) transition            c) input and state      d) None of these

17. Mealy Machines Output is associated with                    [  ]
a)      States       b) transition            c) input and state or transition      d)  None of these

18. FSM with output can be represented by                    [  ]
a)  Mealy Machines         b)Moore machines         c)  both (a) and (b)         d)None of these

19. _____ number of  final states can be there in FSM                    [  ]
a) only one            b) more than one      c) finite set      d) Zero

20. Major difference between DFA and NFA is                    [  ]
a) Number  of states    b)  Number  of input symbols    c) Transition function      d) Final state

21. Number of tuples in NFA with epsilons is                    [  ]
a) 3            b)  4            c)  5            d)  6

22.  A string W is accepted by FSM if the FC is in                    [  ]
a) Initial state       b) start state         c)   final state         d)      None of these

23 .Total numbers of symbols in the string is called                    [  ]
a) Total      b) input            c)  string length      d)   all of these

24 . Positive closure of a set does not include                    [  ]
a) input         b) epsilon      c)      null      d)      None of these

25. Transition function maps.                    [  ]
a)      Σ * Q         b) Q * Q         c)      c) Σ * Σ         d)      d) Q * Σ

26. CFG is                    [  ]
a)      Type 1 grammar is      b) Type 2  grammar    c) CSG         d )Unrestricted

27. CSG is                    [  ]
a)      Type 3 grammar       b)Type 2  grammar    c)Type 1  grammar    d)Unrestricted

28. There are _____ tuples in finite state machine.                    [  ]
a) 1        b) 4            c) 5            d)  Unlimited

29. The Language formed by Regular grammar is                    [  ]
a) Regular       b)  context free      c) context sensitive         d)   recursively enumerable

30. The Language formed by context free  grammar is                    [  ]
a) Regular      b)context free            c) context sensitive      d)recursively enumerable

31. The Language formed by context sensitive grammar is [ ]
a)Regular          b)context free     c) context sensitive          d)  recursively enumerable

32. The Language formed by unrestricted   grammar is [ ]
a)      Regular          b) context free          c) context sensitive    d)recursively enumerable

33. FSM accepts the grammar [ ]
a)      Regular          b) context free          c) context sensitive          d) recursively enumerable

34. PDA accepts the grammar [ ]
a)Regular          b)context free          c) context sensitive          d)  recursively enumerable

35. LBA accepts the grammar [ ]
a)      Regular          b) context free     c) context sensitive   d) recursively enumerable

36. Turing machine accepts the grammar [ ]
a) Regular          b)  context free          c)  context sensitive          d)  unrestricted

37. Type 0 Grammar is [ ]
a) Unrestricted     b) context sensitive grammar     c) CFG     d) Regular Grammar

38. Type 1 Grammar is [ ]
a)      Unrestricted grammar    b)context sensitive grammar  c)CFG   d) Regular Grammar

39. Finite automata requires minimum _____ number of stacks. [ ]
a)      1          b)  0          c)  2          d)  None of the mentioned

40. Type 3 Grammar is [ ]
a) Unrestricted grammar          b)context sensitive grammar  c)CFG     d)  Regular Grammar

41. Type 3 Grammar is [ ]
a)      a*          b) $a^n$          c) $a^n b^n$          d)   $a^n b^n c^n$

42. Type 2 Grammar is [ ]
a)      a*          b)  $a^n$          c)  $a^n b^n$          d) $a^n b^n c^n$

43. Type 1 Grammar is [ ]
a)      a*          b)  $a^n$          c)  $a^n b^n$          d) $a^n b^n c^n$
44. Type 1 Grammar is [ ]
a)      a*          b)  $a^n$          c)  $a^n b^n$          d) $a^n b^n c^n$

45. Set of all possible strings over a alphabet is called [ ]
a)      language          b) set          c)  string          d) language

46. A string whose length is zero is represented by [ ]
a) epsilon          b)  NULL          c)     zero          d) one

47.  Positive closure of language does not consists [ ]
a)      epsilon     b) NULL          c)  zero          d)  one

48. Real time application of FSM                                                                    [  ]
a)Human brain          b) Lift                  c)  Counters            d) All the above

49 .Which of the following is mathematical model of computer                                        [  ]
a) FSM              b) States      c)  transitions        d)  None

50. String length is defined as                                                                     [  ]
a) Number  of symbols in the string  b)  Number  of zeros  c)Number  of ones  d) None

51. Find the regular expression for the set of all strings over {a,b} in which there are atleast two
occurrences of b between any two occurrences of a                                                   [  ]
a) b*(aa+bb)*a*        b) (aa)*ba(bb)*              c)  b*+(b+abb)*ab*        d)None of the above

52. (1+00*1)+(1+00*1)(0+10*1)*(0+10*1)                                                               [  ]
a) (0+10*1)*0*1       b) (1+00*1)(0+10*1)*          c) All the above        d)None of the above

53.The empty string is the string with                                                              [  ]
a)Zero occurrence of the symbol       b)Non-zero occurrence of the symbol
c) No occurrence of the symbol         d)      All the above

54.  +1*(011*)*(1*(011*))*                                                                           [  ]
a)1*(011)*          b)(1+011)*              c)  All the above        d)  None of the above

55. Which of the following is false                                                                 [  ]
a)      (r1+r2)*= (r1*r2*)*          b) (r*)*=r*            c)  Both A and B      d)None of  the above

56. The set of regular languages over the given alphabet set is not closed under                    [  ]
a)      Intersection        b)  Union      c) Complement        d) None

57. Which of the following pairs are equivalent                                                     [  ]
a)(a*+b) and (a+b)*          b) (ab)*a and a(ba)*          c)  (a+b)* and (a*+b*)          d)  None

58. Which of the following is accepted by L(aa*+aba*b*)                                              [  ]
a) abab            b) aaab          c) abba          d) None

59.A language L={awa : w {a,b}*} is                                                                  [  ]
a)      Context sensitive            b)  Regular              c)  Context free        d)  None

60. A solution for the equation R=Q+RP is                                                           [  ]
a)      R=PQ*            b)  P=RQ*              c)  Q=RP*              d)  R=QP*

61. The value of the relation (P*+Q*)* is                                                           [  ]
a)      (P*Q*)*            b)  *            c) P*Q*        d) None

62.The value of the relation (P+Q)*
a)      P*+Q*        b) (P*Q*)*              c) P*Q*                d)      *

63. Regular expression {0,1} is equivalent to                                                       [  ]
a)      0 U 1          b) 0 / 1          c) 0 + 1        d)  All of above

64 .A regular language over an alphabet a is one that can be obtained from                           [  ]
a)      Union                b)Concatenation                c)Kleene        d)All of above

65. Precedence of regular expression in decreasing order is                                                    [  ]
a)      * , . , +    b). , * , +        c). , + , *        d)+ , a , *

66.Regular expression Φ* is equivalent to                                                                        [  ]
a) ε              b) Φ              c)0                      d)1

67. a? is equivalent to                                                                                          [  ]
a)      A              b) a+Φ        c)  a+ε        d)  wrong expression

68.  (a+b)* is equivalent to                                                                                      [  ]
a)b*a*              b)  (a*b*)*              c) a*b*        d)   none of above

69. Which of the following pair of regular expression are not equivalent?                                         [  ]
a)      1(01)* and (10)*1        b)  x(xx)* and (xx)*x        c)(ab)* and a*b*        d)x+ and x*x+

70.  Regular sets are closed under union, concatenation and kleene closure.                                       [  ]
a)      True        b)  False        c) Depends on regular set              d)   Can't say

71. Complement of regular sets are _____ .                                                                   [  ]
a)      Regular              b)  CFG        c) CSG        d)  RE

72. If L1 and L2 are regular sets then intersection of these two will be                                          [  ]
a)      Regular              b) Non Regular Recursive        c)Recursive  d)      Non Recursive

73. If L1 is regular L2 is unknown but L1-L2 is regular ,then L2 must be                                          [  ]
a)      Empty set    b)      CFG    c)      Decidable    d)      Regular

74.Reverse of (0+1)* will be                                                                                      [  ]

a)      Phi        b) Null        c) (0+1)*        d) (0+1)

75. Complement of (a+b)* will be                                                                                  [A]
a)      Phi        b) Null        c) A        d)  B

76. L= language of words containing even of a's .Regular Expression is                                            [  ]
a)      (a+b)aa(a+b)        b)  (b+aba)        c)    a+bbaaba        d)   (a+b)ab(a+b)

77. How many strings of length less than 4 contains the language described by the regular expression
(x+y)*y(a+ab)*?                                                                                                   [  ]
a)      7              b)      10        c) 12        d) 11

78. Which of the following if true?                                                                              [  ]
a)      (01)*0=0(10)*        b)(0+1)*0(0+1)*1(0+1)= (0+1)*01(0+1)*
c)      (0+1)*01(0+1)*+1*0* = (0+1)*                        d)  All of the mentioned

79. Regular grammar is                                                                                          [  ]
a)Context free grammar        b)Non  context free grammar   c)English grammar   d)none

80. Let the class of language accepted by finite state machine be L1 and the class of languages
represented by regular expressions be L2 then                                                                   [  ]
a)      L1+L2        b)      L1 U L2 = .*   c)      L1=L2        d)      None

81. Which of the following is not a regular expression?                                        [  ]
a)[(a+b)*-(aa+bb)]*    b)[(0+1)-(0b+a1)*(a+b)]*          c)(01+11+10)*          d)(1+2+0)*(1+2)*

82. Regular grammar is                                                                          [  ]
a)Type 3 grammar      b)Type 2 grammar    c)Type 1 grammar    d)Unrestricted

83. Which of the following is true?                                                             [  ]
a)Every subset of a regular set is regular      b)Every finite subset of non-regular set is regular
c)      The union of two non regular set is not regular   d)  Infinite union of finite set is regular

84. L and ~L are recursive enumerable then L is                                                 [  ]
a)      Regular                b)  Context free        c)  Context sensitive          d)  Recursive

85. Regular expressions are closed under                                                        [  ]
a)Union                b) Intersection        c)  Kleen star          d)  All of the mentioned

86. Finite state machines_____ recognize palindromes                                          [  ]
a)      May not                b)  May         c)  Can't       d)  Can

87. The logic of Pumping lemma is a good example of                                             [  ]
a)Iteration      b)Recursion        c)The divide and conquer technique     d)The pigeon hole principle

88. Which of the following is not regular                                                       [  ]
a)String of zero whose length is prime   b)  String of zero whose length is perfect square
c)      Set of palindromes over 0 and 1    d)  All of the above

89. Pumping lemma can be used                                                                   [  ]
a) Whether two languages are equivalent      b)To check whether a language is regular
c) check whether a language is irregular      d)      None of the above

90. Which of the following is regular                                                           [  ]
a)String of odd number of zeroes      b)String of 0's whose length is prime number
c) String of all palindromes made up of 0's and 1's  d)String of 0's whose length is perfect square

91. The recognizing capability of NDFA and DFA                                                  [  ]
a)      Must be same      b)  May be different            c) Must be different    d)None of the above

92. Suppose h is the homomorphism from the alphabet {0,1,2} to the alphabet {a,b} defined by
h(0)=a,h(1)=ab, h(2)=ba what is h(0120)                                                          [  ]
a)      ababa         b) abbbb                c)      aaabb        d)  aabba

93. If  L is regular, then {x:revese (x) in L} is also regular                                   [  ]
a)May or may not be      b)  Yes          c)  No          d)  None of the above

94. The grammar generated by production rule S->aCa, C->acab is                                 [  ]
a)      anan, n>0            b)  anban ,n>0          c)  anan,n>=0          d)no of the above

95. The language L{0n1n2k3k} is a                                                               [  ]

a).Recursively  enumerable language      b) Regular language  c) CSL      d)    CFL

96.Choose the correct statements [ ]
 a)Some regular languages can't be generated by an CFG     b)Some non regular languages can't be generated by an CFG     c)Any regular language has not an equivalent CFG     d)All languages can be generated by CFG

97. Chomsky hierarchy is representation of [ ]
 a)     Parsers     b) Grammars          c)  Machines          d)  None of these

98. Type 2 Grammar is [ ]
 a) Unrestricted grammar b) context sensitive grammar   c) context free grammar   d) regular Grammar

99. which of the following language is context free [ ]
 a)     anbi:n=j2          b)  A          c)  $a^n b^n$     d)     $a^n b^n c^n$

100.    A recursive language is also [ ]
 a)Deterministic          b)CFL     c)Recursive and not left linear     d)Both left linear and right linear

101.A context free language is called ambiguous if [ ]
 a)It has two or more leftmost derivations for some terminal string $w \in L$ (G)
 b)It has two or more leftmost derivations for some terminal string $w \in L$ (G
 c)Both (a) and (b)               d)     None of these

102. The language $L=\{0^m 1^m 0^m | m \geq 1\}$ is a [ ]
 a)Regular language     b)Context free language          c)Both (a) and (b)          d)None of these

103. The context free grammar S → A111|S1, A → A0 | 00 is equivalent to
          [A]
 a)$\{0^n 1^m | n=2, m=3\}$   b)$\{0^n 1^m | n=1, m=5\}$   c)$\{0^n 1^m | $ n should be greater than two and m should be greater than four}          d)     None of these

104. The context free grammar S → SS | 0S1 | 1S0 | ε generates [ ]
 a)Equal number of 0's and 1's     b)  Unequal number of 0's and 1's
 c)     Any number of 0's followed by any number of 1's          d)  None of these

105. Which of the following statement is false? [ ]
 a)In derivation tree, the label of each leaf node is terminal   b)In derivation tree, the label of all nodes except leaf nodes is a variable          c)     In derivation tree, if the root of a sub tree is X then it is called –tree     d)     None of these

106. While converting the context free grammar into Greibach normal form, which of the following is not necessary [ ]
 a)Elimination of null production          b) Elimination of unit production
 c) Converting given grammar in Chomsky normal form     d)None of these

107. Which of the following statement is false? [ ]
 a)A recursive language is also a regular language     b)A context free language is also a regular language     c)A context free language is also recursive enumerable language     d)Both (a) and (b)

108. A context free grammar G is in Chomsky normal form if every production is of the form     [ ]
 a)A → BC or A → A     b)  A → BC or A → a          c)  A → BCa or B → b     d)None of these

109. Which of the following CFG's can't be simulated by an FSM? [ ]

a)s --->sa | a          b)  s --->abX , X -->cY, Y --> a | axY        c)s ---> a sb | ab          d)None of these

110.Basic limitation of FSM is that it                                                                        [  ]
a)cannot remember arbitrary large amount of information    b)sometimes fails to recognize grammars
that are regular          c)sometimes recognizes grammars are not regular    d)None of these

111. Which of the following is not possible algorithmically?                                                  [  ]
a)Regular grammar to context free grammar    b)    Non-deterministic FSA to deterministic FSA
c)      Non-deterministic PDA to deterministic PDA          d)None of these

112. The set {anbn | n = 1, 2, 3 ...} can be generated by the CFG                                            [  ]
a)S ->aaSbb + abS            b)S ->ab | aSb    c)S-> ab | aSb | E    d)S ->aaSbb | ab | aabb

113. The context free grammar is ambiguous if                                                                [  ]
a)      the grammar contains useless non-terminals   b)it produces more than one parse tree from some
sentence        c)some production has two non-terminals side by side on the right hand side
d)      none of the above.

114. In machine language the operand can be                                                                  [  ]
a)an addressable register      b)the location of an instruction in memory    c)literal numbers to be used
by the program                  d)    any of the above

115.Consider the CFG with {S, A, B) as the non-terminal alphabet, {a,b) as the terminal alphabet, S as
the start symbol and the following set of production rules.  Which of the following strings is generated
by the grammar?
S -->aB      S -->bA
B --> b      A --> a
B -->bS      A -->aS
B -->aBB      A -->bAA                                                                                       [  ]
a)      aaaabb        b)      aabbbb      c) aabbab      d) abbbba

116.Correct hierarchical relationship among context- free, right-linear, and context-sensitive language
is                                                                                                          [  ]
a)context-free ⊂ right-linear ⊂ context-sensitive    b)      context-free ⊂ context-sensitive ⊂ right-
linear        c) context-sensitive ⊂ right-linear ⊂ context-free        d)right-linear ⊂context-free
⊂context-sensitive

117.    In the following grammar :  x : : = x  ⊕ y | 4   y : : = z * y I 2  z : : = id
which of the following is true ?                                                                            [  ]
a)⊕ s left associative while * is right associative      b)      Both ⊕ and * are left associative
c)⊕ is right associative while * is left associative      d)      None of these

118. ADG is said to be in Chomsky Form (CNF), if all the productions are of the form A --> BC or A --
> a. Let G be a CFG in CNF. To derive a string of terminals of length x, the number of productions to
be used is                                                                                                  [  ]
a).2x - 1            b) 2x            c) 2x + I      d) None of these

119. Which of the following statements is correct?                                                          [  ]
a)A = { If an bn | n = 0,1, 2, 3 ..} is regular language        b)Set B of all strings of equal number of
a's and b's defines a regular language   c)L (A* B*)∩ B gives the set A        d)None of these

120. The CFG   s---> as | bs| a | b    is equivalent to regular expression (a + b)                          [  ]

a) (a + b) (a + b)*      b)  (a + b) (a + b)      c) None of these      d) Consider the grammar :
S —>ABCc | Abc
BA —> AB
Bb —> bb
Ab —> ab
Aa —> aa
Which of the following sentences can be derived by this grammar      [  ]
a)abc            b)  aab            c)  abcc        d)   abbb

122.Pumping lemma is generally used for proving that      [  ]
a)given grammar is regular    b)given grammar is not regular    c) whether two given regular
expressions are equivalent or not          d)  None of these

123. The language of all words with at least 2 a's can be described by the regular expression      [  ]
a)(ab)*a and a (ba)*          b) (a + b)* ab* a (a + b)*        c)  b* ab* a (a + b)*    d)  all of these

124. Any string of terminals that can be generated by the following CFG is
S-> XY
X-->aX | bX | a
Y->Ya | Yb | a      [  ]
a)      has atleast one 'b'
b)      should end in a 'a'
c)      has no consecutive a's or b's
d)      has atleast two a's

125.  If Σ = (0, 1), L = Σ* and R = (0n 1nsuch that n >0) then languages L ∪ R and R respectively are
      [  ]
a)      Regular, Regular
b)      Regular, Not regular
c)      Not regular, Not regular
d)      None of the above

**Subject:** OOAD                                                      **Branch /Specialization:** CSE/CSE

**Name of the Faculty**: Ms.S.Sandhya Rani, Ms.T.Harika, Mr.P.Venkateshwarrao,Ms.R.Jyothsna

### Module I

| S.No | Question | Bloom's Taxonomy Level | CO |
|------|----------|------------------------|----|
| 1. | Explain the importance of Modeling. | Understanding | 1 |
| | OR | | |
| 2. | Demonstrate Object Oriented Modeling. | Understanding | 1 |
| 3. | Summarize the overview of the UML. | Understanding | 1 |
| | OR | | |
| 4. | Classify Structural things in UML. | Understanding | 1 |
| 5 | Explain briefly about the Principles of Modeling | Understanding | 1 |
| | OR | | |
| 6 | Explain about Software Development Life Cycle with a neat sketch. | Understanding | 1 |
| 7 | Explain about Modeling System's Architecture with a neat diagram. | Understanding | 1 |
| | OR | | |
| 8 | Classify different diagrams in UML. | Understanding | 1 |

### Module II

| S.No | Question | Bloom's Taxonomy Level | CO |
|------|----------|------------------------|----|
| 1. | Explain about common modeling techniques for usecase diagram. | Understanding | 2 |
| | OR | | |
| 2. | Summarize all possible relationships in UML. | Understanding | 2 |
| 3. | Explain about common modeling techniques of a usecase. | Understanding | 2 |
| | OR | | |
| 4. | Demonstrate a usecase diagram for Library Management System. | Understanding | 2 |
| 5. | Compare and Contrast fork and join with examples. | Understanding | 2 |
| | OR | | |
| 6. | Explain about common modeling techniques of Classes. | Understanding | 2 |
| 7. | Explain about common modeling techniques for Activity diagram. | Understanding | 2 |
| | OR | | |
| 8. | Demonstrate an activity diagram for Online Ticket Reservation System. | Understanding | 2 |

### Module III

| S.No | Question | Bloom's Taxonomy Level | CO |
|------|----------|------------------------|----|
| 1. | Explain about Advanced classes with common modeling techniques. | Understanding | 3 |
| | OR | | |
| 2. | Summarize interfaces, types & roles. | Understanding | 3 |
| 3. | Explain common modeling techniques for packages. | Understanding | 3 |
| | OR | | |
| 4. | Outline the concept of Advanced relationships with common modeling techniques. | Understanding | 3 |

1.UML stands for                                                                                          [   ]

a)Unified modeling language b)Uniform modeling language

c)United modeling language   d)Unified manipulating language

2.OOAD stands for                                                                                        [   ]

a)Object oriented analysis and data    b)Oriented object analyze and data

c)Object oriented analysis and designd)Object orientation analysis and design

3.Use case is represented in the form of                                                      [   ]

a)Circle          b)Oval c)Rectangle     d)ellipse

4.Actors and use cases are present in                                                          [   ]

a)Class diagram            b)Use case diagram   c)Sequence diagram   d)Activity diagram

5.Normally use cases and actors are connected through                            [   ]

a)Dependencies            b)Realizations c)Associations d)generalizations

6.---------------------- are used to communicate desired structure and behavior          [   ]

a)Models        b)Examples   c)Prototypes   d)none

7.Models are considered to be as                                                              [   ]

a)Step by step processb)Well accepted engineering technique

c)Simplification of reality       d)All the above

8.Aims of modeling are                                                                            [   ]

a)Visualize      b)Specify        c)Construct      d)All the above

9.How many principles are there for modeling?                                        [   ]

a)4       b)3       c)2       d)1

10.Class diagram is represented in the form of                                         [   ]

a)Square        b)Rectangle     c)Rhombus      d)circle

11.Class consists of how many parts?                                                      [   ]

a)1      b)2       c)3       d)4

12.Attributes of a class represents_____                          [   ]

a)Properties of class       b)Examples of class

c)Simplification of class  d)None

13.Dependency is represented in the form of_____          [   ]

a)Straight line b)Curved line  c)Dashed line  d)None

14.Aggregation is represented with a straight line which ends with_____          [   ]

a)Square      b)Rectangle    c)Rhombus    d)Circle

15.Inheritance property is given by _____ relationship      [   ]

a)Dependency b)Aggregation c)Composition d)Generalization

16.Generalization relationship is represented in the form of      [   ]

a)Straight line ends with triangle     b)Straight line ends with rectangle

c)Straight line ends with circle      d)Straight line ends with rhombus

17.UML is the standard language for writing _____      [   ]

a)Stories      b)Software blue prints c)Bills d)None

18.Basic relationships are classified into _____ types?      [   ]

a)4     b)5     c)6     d)7

19.In software how many ways exists to build a model?      [   ]

a)1     b)2     c)3     d)4

20.Main building block of algorithmic perspective in software developing is_____ [   ]

a)Procedure    b)Function     c)Use case     d)Both A, B

21.Object has how many states?      [   ]

a)1     b)2     c)3     d)4

22._____ perspective is to decompose large algorithms into smaller ones. [   ]

a)Object oriented perspective b)Algorithmic perspective

c)Software perspective      d)Prototype perspective

23._____ is considered as contemporary view of software development. [   ]

a)Object oriented perspective b)Algorithmic perspective

c)Software perspective      d)Prototype perspective

24.Interface is represented in the form of _____      [   ]

a)Ellipse      b)Circle      c)Dashed ellipse      d)Dashed circle

25.Collaboration is represented in the form of _____      [   ]

a)Ellipse      b)Circle      c)Dashed ellipse      d)Dashed circle

26.Cube represents a _____      [   ]

a)Node b)Component   c)Active class d)collaboration

27.Active class emphasizes _____ activity.      [   ]

a)Software activity    b)Controlling activity

c)Object oriented activity     d)Algorithmic activity

28._____ is an expressive language.      [   ]

a)C     b)C++ c)UML d)Java

29.UML is used in      [   ]

a)Telecommunications      b)Transportation     c)Defense     d)All the above

30. UML is a language for [　]

a) Visualizing   b) Constructing   c) Specifying   d) All of the above

31. Models in UML should be [　]

a) Precise      b) Lengthy      c) Confusing   d) None of the above

32. For developing and deploying software systems we need to carry the following things. [　]

a) Analysis      b) Design       c) Implementation decisions   d) All of the above

33. Conceptual model of UML consist of _____ elements. [　]

a) 3      b) 4      c) 5      d) 6

34. Building blocks of UML consist of how many elements? [　]

a) 1      b) 2      c) 3      d) 4

35. Things / Basical elements of UML consist of how many elements? [　]

a) 5      b) 6      c) 7      d) None

36. _____ are considered to be as nouns of UML. [　]

a) Structural things     b) Behavioral things   c) Grouping things     d) Annotational things

37. _____ is a collection of objects. [　]

a) Use case      b) Collaboration       c) Active class   d) None

38. Fourth part of a class represents_____. [　]

a) Responsibilities      b) Operations   c) Attributes    d) Name

39. Service of a class is specified by _____ [　]

a) Use case      b) Interface     c) Collaboration       d) Component

40. _____ represents complete / partial behavior of class. [　]

a) Use case      b) Interface     c) Collaboration       d) Component

41. _____ provides cooperative behavior. [　]

a) Use case      b) Interface     c) Collaboration       d) Component

42. Processes and threads are inscribed in [　]

a) Use case      b) Interface     c) Collaboration       d) None

43. _____ is a modular part of a system. [　]

a) Node b) Component  c) Active class  d) Class

44. Components resides on a _____ [　]

a) Node b) Component  c) Active class  d) Class

45. _____ are considered as verbs of a model. [　]

a) Structural things     b) Behavioral things   c) Grouping things     d) Annotational things

46. Behavioral things consists of [　]

a) Interactions  b) State machines      c) Both a, b     d) none

47. State machine is represented in the form of _____. [　]

a)Rectangle     b)Circle          c)Square          d)Rounded rectangle

48._____ represents various states of an object which passes in its lifeti[   ]

a)Interactions  b)State machines     c)Both a, b     d)none

49._____ are the organizational parts of UML.                    [   ]

a)Structural things     b)Behavioral things    c)Grouping things     d)Annotational things

50.Models are decomposed into                                            [   ]

a)Structural things     b)Behavioral things

c)Annotational things d)Grouping things

51.Example of grouping thing is a                                        [   ]

a)State machine          b)Package        c)Component  d)Class

52.These are the explanatory parts of UML.                               [   ]

a)Structural things     b)Behavioral things    c)Grouping things     d)Annotational things

53.Explanatory part of UML is represented in the form of _____    [   ]

a)Note b)Nodec)Cube d)Rectangle

54._____ are used to describe, illuminate and remark about element in a model. [   ]

a)Structural things     b)Behavioral things

c)Grouping things      d)Annotational things

55._____ is a semantic relationship between two things.        [   ]

a)Dependency b)Association  c)Generalization       d)Aggregation

56.Association represents set of _____.                            [   ]

a)Nodes          b)Notes          c)Links          d)Classes

57.In _____ relationship objects of one entity is substituted with the objects of other entity.
                                                                         [   ]

a)Dependency b)Association  c)Generalization       d)Aggregation

58._____ is  relationship between classifiers.                 [   ]

a)Dependency b)Composition          c)Aggregation d)Realization

59._____ reflects the graphical representation of a system to be developed in UML.
                                                                         [   ]

a)Diagrams     b)Prototypes   c)Blueprints    d)None of the above

60.UML diagrams are classified into how many types?                      [   ]

a)10    b)11    c)12    None

61._____ diagram is commonly used in modeling object oriented systems?[   ]

a)Use case      b)Class          c)Object         d)activity

62.There are _____ stereotyped dependencies apply among classes.       [   ]

a)7     b)8     c)9     d)6

63._____ contains list of actual arguments that map to the formal arguments.[   ]

a)Bind b)Derive  c)Friend  d)Instance

64._____ specifies that the target may be computed from the source. [ ]

a)Bind b)Derive  c)Friend  d)Instance

65._____ specifies that the source is given special visibility into the target. [ ]

a)Bind b)Derive  c)Friend  d)Instance

66.____ is used to represent connection between a class and an object in the same diagram.[ ]

a)Bind b)Derive  c)Friend  d)Instance

67._____ specifies which element creates objects of another elements. [ ]

a)Bind b)Derive  c)Friend  d)None

68.Powertype specifies that the target is a _____ of the source.  [ ]

a)Powertype   b)Bind c)Derive  d)Friend

69._____specifies that the source is at a finer degree of abstraction than the target. [ ]

a)Powertype   b)Bind c)Refine  d)None

70._ specifies contrary to the normal dependency that the source depends on target. [ ]

a)Use  b)Bind c)Refine  d)None

71._____ is represented as a tabbed folder.    [ ]

a)Nodeb)Note c)Package  d)Component

72.How many stereotypes are used among packages?    [ ]

a)1 b)2 c)3 d)4

73.How many dependencies exists among use cases?    [ ]

a)2 b)3 c)4 d)5

74.How many types of stereotyped dependencies exists among interactions? [ ]

a)4 b)5 c)6 d)None

75._____ specifies that the target is the same object as the source but at a later point in time with possibly different values, states or roles.    [ ]

a)Become  b)Call c)Copyd)None

76._____ specifies source operation which invokes the target operation. [ ]

a)Become  b)Call c)Copyd)None

77._____ specifies that the target object is an exact but independent copy of the source.
            [ ]

a)Become  b)Call c)Copyd)None

78._____ objects of the parent may have more than one children.  [ ]

a)Complete b)Incomplete c)Disjoint  d)Overlapping

79.What relation means that the objects of the parent may not have more than one children? [ ]

a)Complete b)Incomplete c)Disjoint  d)Overlapping

80._____ specifies that not all children in the generalization have been specified. [ ]

a)Complete     b)Incomplete  c)Disjoint     d)Overlapping

81._____specifies that all children in the generalization have been specified in the model. [  ]

a)Complete     b)Incomplete  c)Disjoint     d)Overlapping

82.Most common modeling idioms in association is _____.          [   ]

a)High up     b)Low up     c)Look up     d)None

83.In _____ relation an object may be a part of only one composite at a time. [  ]

a)Composite aggregation     b)Generalized aggregation

c)Associated aggregation     d)None

84.How many constraints are applies to association relationships?          [  ]

a)6     b)7     c)8     d)None

85._____ relation links between objects that may be added, removed and changed freely.  [  ]

a)Implicit     b)Ordered     c)Changeable d)Add only

86.In _____ relation new links may be added.          [  ]

a)Implicit     b)Ordered     c)Changeable d)Add only

87.In which relation if a link is added once which may not be modified?          [  ]

a)Frozen     b)Ordered     c)Changeable d)Add only

88.Realization is represented in how many forms?          [  ]

a)1     b)2     c)3     d)4

89.In which form interface stereotype is used and a directed dashed line with a large arrow head?

[  ]

a)Simplified form     b)Elided form c)Canonical form     d)None

90.Which specifies a package that is only a view on some other package?          [  ]

a)Façade     b)Framework c)Stub d)Subsystem

91.Which specifies a package which consists of patterns?          [  ]

a)Façade     b)Framework c)Stub d)Subsystem

92.Which specifies a package that serves as a proxy for the public contents of another package?  [ ]

a)Façade     b)Framework c)Stub d)Subsystem

93.Which specifies a package representing an independent part of the entire system to be modeled?

[  ]

a)Façade     b)Framework c)Stub d)Subsystem

94Swimlanes are present in _____ diagram.          [  ]

a)Activity     b)Class     c)Use case     d)Sequence

95.Objects are the _____ of classes.          [  ]

a)Examples  b)Instances  c)Proxies     d)None

96._____ are represented in the form of partitioned regions.          [  ]

a)Columns     b)Rows     c)Swimlanes  d)None

97.Each _____ has its name, which is written on top of column.  [  ]

a)Classb)Use case    c)Object      d)None

98.Branching is represented by a _____.          [  ]

a)Diamond    b)Square      c)Rhombus    d)Triangle

99_____ is a process of splitting a single flow of control into multiple flows. [  ]

a)Joining      b)Forking      c)Both d)None

100._____ diagram models the dynamic aspects of the system      [  ]

a)Use case    b)Activity      c)Classd)Both a,b

101.Which diagram emphasize the flow of control from object to object?      [  ]

a)Interaction   b)Activity      c)Classd)Sequence

102.Which diagram concentrates on the flow of control from activity to activity?  [  ]

a)Interaction   b)Activity      c)Classd)Sequence

103.Activity diagram consists of _____          [  ]

a)Action statesb)Transitions  c)Objects      d)All the above

104.In which diagram use cases, actors and their relationships are present?      [  ]

a)Classb)Sequence    c)Use case      d)Object

105.A _____ is a contract or an obligation of a class.          [  ]

a)constraint    b)note c)responsibility      d)none

106.A use case diagram is used to model _____ of a system.      [  ]

a)structure      b)behavior      c)organization d)none

107.In a class, a private operation is shown by:          [  ]

a)+     b)#     c)*     d)none

108.A relationship between use cases and collaboration can be viewed as__relationship.
                                                          [  ]

a)association   b)generalization      c)link  d)realization

109.In the description of a class, a protected operation is shown by:      [  ]

a)+     b)#     c)–     d)none

110.A _____ is a condition or situation during the life of an object during which it satisfies some condition, performs some activity, or waits for some events.          [  ]

a)class b)state c)activity      d)specification

111.The _____ view addresses the performance, scalability and throughputof the system. [  ]

a)use case      b)process      c)implementation      d)design

112.Which is not one of the model of OMT?          [  ]

a)dynamic      b)staticc)functional    d)none

113.A use case view represents _____ aspects of the view.      [  ]

a)static b)dynamic      c)both a and b d)none

114.The _____ view addresses the distribution, delivery and installationthe parts that make up of the physical system.                                                                    [  ]

a)use case      b)process      c)implementation      d)none

115.A tagged value extends the _____ of a UML building blocks[  ]

a)vocabulary  b)properties   c)semantic      d)definition

116.A class diagram shows relationship between/among:                    [  ]

a)Classes       b)Interfaces   c)Collaborations        d)all of these

117.A ___ allow us to you to create new kind of building blockderived from existing on[  ]

a)tagged value b)stereotype   c)interface      d)class

118.Which is not one of the characteristic of object orientation?          [  ]

a)Abstraction  b)Encapsulation        c)Polymorphism        d)Generalization

119.A model is not used for:                                              [  ]

a)documentation       b)visualizationc)understanding       d)realization

120.A class is used for:                                                  [  ]

a)generalization       b)classification       c)specification d)collection

121.In a class, a public operation is shown by:                          [  ]

a)*      b)#     c)–      d)none

122.Which view doesn't represents a software-intensive system.          [  ]

a)class b)use case     c)implementation      d)deployment

123.The architecture of a software-intensive system can be described by _____views. [  ]

a)three b)five  c)nine  d)none

124.Which is not an attribute of an object?                              [  ]

a)behavior      b)state c)time  d)space

125.Which is not the attribute of an entity?                            [  ]

a)behavior      b)state c)time  d)space

# MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

## B.Tech– II Year II Semester (MR18 : 2019-20)

### I Mid Examination Question Paper January -2020

**Subject :  Software Engineering**                                    **Branch: CSE**
**Subject Code:  80511**                                                   **Max. Marks: 20**
**Faculty Name: Mr. G. Venugopal & P. Babu**

| Q.No. | Question | Bloom's Taxonomy Level | CO |
|-------|----------|------------------------|----|
| | **MODULE -I** | | |
| 1. | Summarize the software engineering and its layers? | Understanding | 2 |
| | **OR** | | |
| 2. | Demonstrate the capability Maturity Model Integration (CMMI) and Explain in detail? | Understanding | 2 |
| | | | |
| 3. | Explain "Software myth"? Discuss on various types of software myths and the true aspects of these myths? | Understanding | 2 |
| | **OR** | | |
| 4. | Illustrate the Incremental process models and explain them? | Understanding | 2 |
| | | | |
| 5. | Analyze  the changing nature of software in detail? | Analyzing | 4 |
| | **OR** | | |
| 6. | Compare the Waterfall model and Spiral model? | Analyzing | 4 |
| | | | |
| 7. | Construct the diagram of unified process model? | Applying | 3 |
| | **OR** | | |
| 8. | Choose any two evolutionary process models? | Applying | 3 |
| | **MODULE -II** | | |
| 1 | Compare functional requirements and Non-functional requirements? | Analyzing | 4 |
| | **OR** | | |
| 2 | Analyze User and System requirements? | Analyzing | 4 |

| | | | |
|---|---|---|---|
| 3 | Explain requirement validation is needed and discuss briefly? | Understanding | 2 |
| **OR** | | | |
| 4 | Illustrate the requirements elicitation and analysis | Understanding | 2 |
| | | | |
| 5. | Outline the SRS document and explain along with its contents? | Understanding | 2 |
| **OR** | | | |
| 6. | Demonstrate interface specification in detail? | Understanding | 2 |
| | | | |
| 7. | Summarize requirement engineering process? | Understanding | 2 |
| **OR** | | | |
| 8. | Explain about requirements management? | Understanding | 2 |
| **MODULE -III** | | | |
| 1. | Demonstrate System Models and Context models? | Understanding | 2 |
| **OR** | | | |
| 2 | Illustrate the Behavioural models? | Understanding | 2 |
| | | | |
| 3. | Summarize the Structured methods and discuss briefly? | Understanding | 2 |
| **OR** | | | |
| 4. | Explain Design process and design quality and discuss briefly? | Understanding | 2 |

**MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)**
**Maisammaguda, Dhulapally,(Post Via Kompally), Secunderabad - 500100.**
**Department of Computer Science and Engineering**
**II B.Tech II Sem I Mid Examination - (MR18 Regulation)**
**Subject: 80511 & Software Engineering**
**Faculty Name:** G. Venugopal & P. Babu

1.Which is focused towards the goal of the organization [ ]

   a)  Feasibility study                          b) Requirement gathering

   c) Software requirement specification     d) Software requirement validation

2.Which model is also known as Classic life cycle model? [ ]

  a) Waterfall model   b) Big Bang model     c) V-model     d) Spiral model

3.Software project management is the process of managing all activities that are involved in

   software development, they are _____ . [ ]

a) Time          b) Cost          c) Quality management          d) All mentioned above

4.Which of the following cannot be applied with the software according to Software Engineering

   Layers? [ ]

a) Process      b) Methods     c) Manufacturing       d) None of the above.

5.Which software is used to control products and systems for the consumer and industrial

   markets? [ ]

a)System software                   b) Artificial intelligence software

c)Embedded software                  d)Engineering and scientific software

6.Which software enables the program to adequately manipulate information? [ ]

a)Instructions  b) Data Structures      c) Documents  d)All of the above

7.In which elicitation process the developers discuss with the client and stakeholders and know

their expectations from the software? [ ]

a)Requirement gathering       b) Organizing requirements

c) Negotiation & discussion   d) Documentation

8.If requirements are easily understandable and defined then which model is best suited?  [ ]

a) Spiral model          b) Waterfall model      c) Prototyping model  d) None of the above

9.CASE Tool stands for _____ [ ]

a) Computer Aided Software Engineering     b) Component Aided Software Engineering

c) Constructive Aided Software Engineering   d) Computer Analysis Software Engineering

10.Software is defined as ____ . [ ]

a) Instructions          b) Data Structures      c) Documents          d) All of the above

11.What are the characteristics of software? [ ]

a) Software is developed or engineered; it is not manufactured in the classical sense.

b) Software doesn't "wear out".

c) Software can be custom built or custom build.     d) All mentioned above

12.Compilers, Editors software come under which type of software _____ [ ]

a) System software     b) Application software       c) Scientific software  d) None of the above.

13.RAD Software process model stands for _____ . [ ]

a) Rapid Application Development              b)Relative Application Development

c) Rapid Application Design                  d)Recent Application Development

14.Software project management comprises of a number of activities, which contains ____[ ]

a) Project planning     b) Scope management   c) Project estimation d)All mentioned above

15.Which of the following is not defined in a good Software Requirement Specification (SRS)

   document? [ ]

a)Functional Requirement      b) Non-functional Requirement

c) Goals of implementation    d)Algorithm for software implementation

16. What is the simplest model of software development paradigm? [ ]

a) Spiral model        b) Big Bang model     c) V-model     d)Waterfall model

17.Software Requirement Specification (SRS) is also known as specification of _____. [ ]

a) White box testing   b) Acceptance testing c) Integrated testing    d) Black box testing

18.Which one of the following is a functional requirement? [ ]

a) Maintainability      b) Robustness c) Testability   d) None of the mentioned

19.Which one of the following is a requirement that fits in a developer's module ? [ ]

a) Availability        b) Testability        c) Usability          d) Flexibility

20. How many classification schemes have been developed for NFRs ?                    [ ]

a) Two                    b)Three            c) Four            d) Five

21. Which is not one of the types of prototype of Prototyping Model?                    [ ]

 a)  Horizontal Prototype      b) Vertical Prototype  c) Diagonal Prototype   d) Domain Prototype

22. Which one of the following is not a phase of Prototyping Model?                    [ ]

a)  Quick Design        b)  Coding        c)  Prototype Refinement        d) Engineer Product

23. RAD Model has _____                                                       [ ]

a) 2 phases                b) 3 phases        c) 5 phases                    d) 6 phases

24. SDLC stands for _____                                                 [ ]

a) Software Development Life Cycle            b) System Development Life cycle

c) Software Design Life Cycle                d) System Design Life Cycle

25. Which model can be selected if user is involved in all the phases of SDLC?          [ ]

a) Waterfall Model      b) Prototyping Model   c) RAD Model                  d) both b & c

26. The level at which the software uses scarce resources is _____               [ ]

a) Reliability            b) Efficiency            c) Portability          d) All of the above

27. Which is the way where the CMMI process Meta model can be represented?              [ ]

a) A continuous model          b) A staged model      c) Both A & B            d) None of the above

28. The software design paradigm is a part of software development and it includes __     [ ]

a) Design, Maintenance, Programming                        b) Coding, Testing, Integration

c) Requirement gathering, Software design, Programming   d) None of the above

29. The software becomes more popular if its user interface is _____                  [ ]

a) Attractive    b) Simple to use        c) Responsive in short time    d) All mentioned above

30. Software consists of _____                                                        [ ]

a) Set of instructions + operating procedures

b)Programs + documentation + operating procedures        c) Programs + hardware manuals

d) Set of programs

31. Which of the following is/are considered stakeholder in the software process?       [ ]

a) Customers              b) End-users            c) Project managers            d) All of the above

32.Which SDLC activity does the user initiates the request for a desired software product?[ ]

a) Requirement gathering     b) Implementation     c) Disposition     d) Communication

33.What is a measure of how well a computer system facilities learning?     [ ]

a) Usability     b) Functionality     c) Reliability     d) None of the above

34.The process together the software requirements from Client, Analyze and Document is known

as _____     [ ]

a)Requirement engineering process   b) Requirement elicitation process

c) User interface requirements     d) Software system analyst

35.Who manages the effects of change throughout the software process003F     [ ]

a) Software project tracking and control     b) Software configuration management

c) Measurement     d) Technical reviews

36.Abbreviate the term CMMI     [ ]

a) Capability Maturity Model Integration     b) Capability Model Maturity Integration

c) Capability Maturity Model Instructions     d) Capability Model Maturity Instructions

37.First level of prototype is evaluated by _____ .     [ ]

a) Developer     b) Tester     c) User     d) System Analyst

38.Which of the items listed below is not one of the software engineering layers?     [ ]

a) Process     b) Manufacturing     c) Methods     d) Tools

39.What is the main aim of Software engineering?     [ ]

a) Reliable software     b) Cost effective software

c)Reliable and cost effective software     d) None of the above

40.For the best Software model suitable for the project, in which of the phase the developers

decide a roadmap for project plan?     [ ]

a)  Software Design     b) System Analysis     c) Coding     d) Testing

41.How many numbers of maturity levels in CMM are available?     [ ]

a) 3     b) 4     c) 5     d)6

42.Design phase is followed by _____ .     [ ]

a) Coding     b) Testing     c) Maintenance     d)None of the above.

43. CMM model in Software Engineering is a technique of _____ .                    [ ]

a) Develop the software.            b) Improve the software process.

c) Improve the testing process.       d) All of the above.

44. Which design defines the logical structure of each module and their interfaces that is used to

communicate with other modules?                                      [ ]

a) High-level designs   b) Architectural designs  c) Detailed design   d) All mentioned above

45. Which tools are used in Implementation, Testing and Maintenance?             [ ]

a) Upper case tools    b) Lower case tools    c) Integrated case tools      d) None of the above

46. Find out which phase is not available in SDLC?                              [ ]

a) Coding           b) Testing           c) Maintenance          d) Abstraction

47. Who deliver the technical skills that are necessary to engineer for a product or an application?
                                                                      [ ]

a) Project managers   b) Practitioners      c) End users           d) Customers

48. Which phase is refers to the support phase of software development?           [ ]

a) Acceptance Phase  b) Testing           c) Maintenance          d) None of the above

49. Which model is also called as the classic life cycle or the Waterfall model?     [ ]

a) Iterative Development             b) Linear Sequential Development

c) RAD Model.                       d) Incremental Development

50. Which document is created by system analyst after the requirements are collected from

Various stakeholders?                                              [ ]

a) Software requirement specification        b) Software requirement validation

c) Feasibility study                        d) Requirement Gathering

51. Which helps software engineers to better understand the problem they will work to solve? [ ]

a) Design engineering   b) Software engineering  c) Requirements  engineering    d) both a and b

52. Software engineers referred to as _____                              [ ]

a) System engineers    b) analyst in IT world       c) customers   d) both a and b

53.Requirements engineering begins with inception –a task that defines _____          [ ]

a) problem coincide                    b) scope  of the problem

c) scope and nature of the problem     d) none of the above

54.Requirements engineering process is accomplished through execution of _____          [ ]

a) 5 distinct functions    b) 6 distinct functions    c) 7 distinct functions    d) all the above

55.Distinct functions of requirement engineering process _____          [ ]

a) inception          b)elicitation          c)elaboration          d)all the above

56.Requirement engineering establishes a solid base for _____          [ ]

a)customer needs     b) design and construction     c) end users    d) none of the above

57.Without requirement engineering resulting software has a high probability of not meeting  [ ]

    a) system engineers     b)user needs   c) customer needs     d) both b and c

58.Which is the component of larger system domain?          [ ]

        a) software    b)hardware    c)software and hardware     d)none of the above

59.The priorities that guide and will have a profound impact on resulting design _____     [ ]

a) information          b)functions    c) behaviours          d) all of the above

60.Stakeholders are _____          [ ]

a) business managers         b) marketing people    c) both a and b         d) none of the above

61.At project inception intent  is to establish a _____          [ ]

a) basic understanding of the problem        b) feasibility analysis

c) both a and b                              d) none of the above

62.The information obtained from the customer during _____          [ ]

a) inception          b) analysis          c)elicitation          d)both a and c

63.Problems that help us understand why requirements elicitation is difficult _____          [ ]

a) problems of scope  b) problems of understanding c) problems of volatility d) all the above

64.Which builds a bridge to design and construction?          [ ]

a) requirements engineering   b) elaboration          c) elicitation          d)none of the above

65.The information obtained from the customer during inception and elicitation is refined _[ ]

a) during elicitation                  b) during elaboration

c) during inception and elicitation     d) all of the above

66.The requirements engineering activity focuses on developing a technical model of  __[ ]

a) software engineering   b) software features    c) software constraints    d) all of the above

67.Problems of understanding the customers are not completely sure of _____        [ ]

a) what is needed       b) poor understanding of capabilities and limitations

c) both a and b         d)none of the above

68.Software engineers ask a set of context free questions discussed in _____         [ ]

a) elicitation          b) elaboration         c) inception         d) all the above

69.Software engineering action that begins during                        [ ]

a) communication activity     b) modeling activity   c) both a and b      d) all of the above

70.Requirements engineering like all other software engineering must be adapted to the needs of _____                      [ ]

a) the process        b) the project   c) the people doing the work      d) all of the above

71. Designing and building computer software is                 [ ]

a) challenging        b)creative          c) either a or b          d) both a and b

72.Which is an analysis modeling action?                      [ ]

a) elaboration        b) specification      c) validation       d) negotiation

73.The work products produced as a consequence of requirements engineering are assessed for

   quality                                     [ ]

a)during specification b) during validation    c) both a and b      d) none of the above

74.Requirements validation examines the specification to ensure that all software requirements

   have been stated as _____                         [ ]

a)unambiguously      b) inconsistencies     c) omissions    d) all of the above

75. The validates requirements includes _____              [ ]

a) software engineers       b) customers         c) users             d) all of the above

76. The term specification means _____ [ ]

a) different things to different people        b) set of graphical models

c) omissions        d) all of the above

77. Each requirement is assigned a _____ [ ]

a) behavior      b) unique identifier    c) both a and b      d) none of the above

78. Requirement management is a set of activities _____ [ ]

a) helps the project team identify        b) control and track requirements

c) both a and b        d) none of the above

79. SCM means _____ [ ]

a) software configuration management     b) scientific configuration management

c) system configuration management      d) none of the above

80. Possible traceability tables of requirements management _____ [ ]

a) features traceability table        b) subsystem traceability table

c) interface traceability table       d) all the above

81. Which identifies the source of each requirement? [ ]

a) source traceability table        b) subsystem traceability table

c) features traceability table        d) all the above

82. Which table indicates how requirements are related to one another? [ ]

a) source traceability table        b) subsystem traceability table

c) dependency traceability table     d) interface traceability table

83. Which traceability table shows how requirements relate to both internal external system

    interfaces? [ ]

a) source traceability table        b) subsystem traceability table

c) dependency traceability table     d) interface traceability table

84. In software engineering which defines a function of a system or its component __ [ ]

a) non functional requirements       b) functional requirements

c) specific functional requirements    d) all the above

85. In system engineering what specifies criteria that can be used to judge the operation of the system rather than specific behaviour                                                    [ ]

a)non functional  requirements                    b) functional requirements

c) specific functional requirements               d) none of the above

86.Non functional  requirements of software engineering are categorized into _____       [ ]

a) 1            b) 2            c) 3            d) 4

87.Two categories of non functional requirements _____                             [ ]

a) execution qualities      b) functional qualities      c) evolution qualities     d) both a and c

88.Execution qualities are _____                                               [ ]

a) security              b)usability              c) maintainability              d) Both a and b

89.Evolution qualities are _____                                                 [ ]

a) testability           b) maintainability            c) extensibility        d) all the above

90.URD stands for _____                                                          [ ]

a) user revolution document                       b) user requested document

c)user requirement document                       d) all of the above

91.The URD can be used as a guide for _____                                        [ ]

a) planning              b) timetables            c) testing              d) all the above

92.SRS stands for _____                                                            [ ]

a) software requirements specification            b) system requirements specification

c) status requirements specification              d) none of the above

93.SRS establishes basis for an agreement between _____                        [ ]

a) customer and contractors           b) customer and marketing

c) suppliers and marketing            d)none of the above

94. SRS is a communication tool between _____                                         [ ]

a) customer and contractors                       b) suppliers and marketing

c) stakeholders and designers                     d) customers and marketing

95.Specific goals of SRS _____ [ ]

a) facilitating reviews  b) describing scope of work

c) providing a reference to software designers  d)Any one of the above

96.IRS stands for _____ [ ]

a) interrupt requirement specification  b)interface requirement specification

c) internal resource service  d) interface requirement system

97.Feasibility study focused on_____ [ ]

a) goal of the organization  b)objectives of organization

c) terms and conditions of organization  d) maintenance of organization

98. Features of SRS  [ ]

a) user requirements are expressed in natural language

b) design description should be written in pseudo code

c) both a and b  d) none of the above

99.A software is widely accepted if it is----------- [ ]

a) easy to operate  b) quick in response

c) effectively handling operational errors  d) all the above

100.A well performing software system must also be equipped with _____ [ ]

a) attractive, clear  b) consistence  c) both a and b  d)none of the above

101.The Unified Modeling Language (UML) has become an effective standard for software

modeling. How many different notations does it have?  [ ]

   a)  Three  b) Four  c) Six  d) Nine

102.Which model in system modelling depicts the dynamic behaviour of the system?  [ ]

a) Context Model  b) Behavioural Model  c) Data Model  d) Object Model

103.Which model in system modelling depicts the static nature of the system?  [ ]

a) Behavioural Model  b) Context Model  c) Data Model  d) Structural Model

104.Which of the following diagram is not supported by UML considering Data-driven

modelling?  [ ]

   a)  Activity  b) Data Flow Diagram (DFD)  c) State Chart  d) Component

105_____ allows us to infer that different members of classes have some common

characteristics.                                                                                    [ ]

a) Realization    b) Aggregation        c) Generalization      d) Dependency

106_____ Classes are used to create the interface that the user sees and interacts with as

the software is used.                                                                               [ ]

a)  Controller              b) Entity                c) Boundary              d) Business

107.The UML was designed for describing _____.                                                  [ ]

a) object-oriented systems    b) architectural design        c) SRS          d) Both a & b

108.Which of the following view shows that the system is composed of interacting processes at

run time?                                                                                           [ ]

a)  physical                b) Development              c) Logical                d)Process

109.The state transition diagram _____                                                      [ ]

a) depicts relationships between data objects      b)depicts functions that transform the data flow

c) indicates how data are transformed by the system

d )indicates system reactions to external events

110.Control flow diagrams are _____                                                       [ ]

a) needed to model event driven systems            b)required for all systems

c) used in place of data flow diagrams             d) useful for modelling user interfaces

111.A change becomes _____ because of close presence of data and functions    [ ]

a) Localized                b) Private                c) Global                d) Accessible

112.Interaction Diagrams depict the _____ Behaviour of the system                [ ]

a) Static                b) Dynamic                c) Active        d)None of the above

113.In Sequence Diagrams the time required by the receiver object to process the message is

denoted by an _____                                                                           [ ]

a) Activation Box            b) Simple Box                c) Arrow        d) None of the above

114.Most software continues to be custom built because                    [ ]

a) Software is easier to build without using someone else's components

b) Off the shelf software components are not commonly available

c) Component reuse is common in the software world

d) Reusable components are too expensive to use

115.An state transition can only occur when triggered by a(n)_____                    [ ]

a) actor            b) collaboration attempt            c) event        d)none of the given

116.An object or class may further be classified on the basis of                    [ ]

a) Behaviour Driven attributes            b) Data Driven attributes

c) Responsibility Driven attributes            d) All of the above

117.A public Interface provides a way for with other Classes                    [ ]

a) Communication            b)Accessibility            c) Reaching            d)All of the above

118.DFD Notation contains _____                    [ ]

a) Data Store            b)External Agents        c) Processes            d) All of the above

119.Requirement engineering mainly deals with the _____ of the system            [ ]

a) definition phase            b) development phase            c)maintenance d) none of the given


120.Given below are some statements associated with data flow diagrams. Identify the correct

   statement from among them                    [ ]

   a) Data flow is made use of to model what systems do
   b) Flows of data can take place from a process to a sink
   c) All processes have to be levelled or decomposed
   d) Context diagram shows the major system processes

121.A better Design has an objective achieve _____                    [ ]

a) High Cohesion   b) Low Cohesion  c) Low Coupling        d)High cohesion and Low coupling

122.The output of this design process is a description of the _____                    [ ]

a) Software Architecture        b) Software Code        c) Software    d) None of the above

123.Flow charts represents the _____                    [ ]

a) Sequence            b)Random            c) Parallel            d) Non of above

124. Asynchronous massages are denoted                                          [ ]

a) Half Arrow          b) Simple Line          c) Full Arrow          d) Non of above

125. In sequence Diagram events are organized in a_____time line          [ ]

   a) vertical          b) horizontal          c) Vertical and Horizontal      d)None of above


**Signature of the Faculty**                                          **Signature of HOD**

# Malla Reddy Engineering College (Autonomous)

Maisammaguda, Dhulapally (Post via Kompally), Secunderabad – 500 100.
**II B.TECH – II  Semester (MR18) I MID EXAMNATIONS**

Subject: **Web Technology**                                                    Branch**: CSE**
**Subject code:**

**Faculty: Mr. A. Lakshman, Dr. R. P. Ram Kumar**

## MODULE-I

| S No | Question | Blooms Taxonomy Level | CO |
|------|----------|----------------------|-----|
| **1** | Explain the various functions used in PHP with examples. | Understanding | **1** |
| | *OR* | | |
| **2** | Demonstrate with an example for the PHP script to add and remove users from a MySQL table. | Understanding | **1** |
| | | | |
| **3** | Summarize the various operators supported by PHP? | Understanding | **1** |
| | **OR** | | |
| **4** | Illustrate the control structures in PHP with examples. | Understanding | **1** |
| | | | |
| **5** | Categorize various file operations on text files in PHP. | Analyzing | **1** |
| | **OR** | | |
| **6** | List and explain the database connectivity steps in PHP with reference to MySQL. | Analyzing | **1** |
| | | | |
| **7** | Illustrate with an example, how to execute a SELECT query in PHP? | Understanding | **1** |
| | OR | | |
| **8** | Demonstrate a PHP program for a simple calculator. | Understanding | **1** |

## MODULE-II

| S No | Question | Blooms Taxonomy Level | CO |
|------|----------|----------------------|-----|
| **1** | Explain document structure description with example code in XML. | Understanding | **2** |
| | *OR* | | |
| **2** | Extend the features of XML namespaces and explain how are they declared? | Understanding | **2** |
| | | | |
| **3** | Summarize the various types of XML parsers. | Understanding | **2** |
| | **OR** | | |
| **4** | Compare and contrast DOM parser with SAX Parser. | Understanding | **2** |
| | | | |
| **5** | Illustrate with a program to Collect the student's details such as, register | Understanding | **2** |

| | number, name, subject and marks using forms and generate a DTD for this XML document. | | |
|---|---|---|---|
| **OR** |
| 6 | Outline the features of XML Schema. State its purpose and list its advantages over DTD. | Understanding | 2 |
| | | | |
| 7 | Identify the need for 'XML Parser'. Explain with an example. | Applying | 2 |
| OR |
| 8 | Develop a XSLT program to display the employee details in a table format. | Applying | 2 |

## MODULE - III

| S No | Question | Blooms Taxonomy Level | co |
|---|---|---|---|
| 1 | Explian the potential advantages do servlets have over CGI programs. | Understanding | 3 |
| **OR** |
| 2 | Summarize the life cycle of a java servlet with a neat diagram. | Understanding | 3 |
| 3 | Develop a simple servlet that reads three parameters from the form data. | Creating | 3 |
| **OR** |
| 4 | Elaborate the differences between Generic Servlet and HttpServlet. | Creating | 3 |
| | | | |

# Malla Reddy Engineering College (Autonomous)

Maisammaguda, Dhulapally (Post via Kompally), Secunderabad – 500 100.

**II B.TECH – II Semester (MR18) I MID EXAMNATIONS**

Subject: **Web Technology**                                                                 Branch**: CSE**

**Subject code:**

**Faculty: Mr. A. Lakshman, Dr. R. P. Ram Kumar**

1.   PHP Stands for                                                                                         [     ]
A) Php Hypertext Processor                          B) Php Hypertext Preprocessor
C) Php Hypermarkup Preprocessor                  D) Php Hypermarkup Processor

2.   PHP is _____ scripting language.                                                         [     ]
A) Server-side          B) Clint-side          C) Middle-side          D) Out-side

3.   PHP scripts are executed on _____                                              [     ]
A) ISP Computer      B) Client Computer   C) Server Computer   D) It depends on PHP scripts

4.   PHP Scripts starts with _____                                                         [     ]
A) <php> … </php>   B) <?php …. ?>      C) ?php … ?php      D) <p> … </p>

5.   Which of the following statements prints in PHP?                                  [     ]
A) Out                 B) Write                 C) Echo                 D) Display

6.   In PHP, each statement must be end with _____                               [     ]
A) . (dot)                 B) ; (semicolon)      C) / (slash)            D) : (colon)

7.   In PHP Language variables name starts with _____                            [     ]
A) ! (Exclamation)     B) & (Ampersand)    C) * (Asterisk)        D) $ (Dollar)

8.   In PHP Language variables are case sensitive                                       [     ]
A) True                 B) False                 C) Depends on website       D) Depends on server

9.   In PHP a variable needs to be declare before assign                            [     ]
A) True                 B) False                 C) Depends on website       D) Depends on server

10. Which of the following is not the scope of Variable in PHP?                   [     ]
A) Local                 B) Global                C) Static                 D) Extern

11. What is the use of strlen( ) function in PHP?                                         [     ]
A) It returns the type of a string                  B) It returns the value of a string
C) It returns the length of a string                D) It returns the subset value of a string

12. Which of the following is the Concatenation Operator in PHP?              [     ]
A) + (Plus)               B) . (dot)               C) & (Ampersand)         D) % (Percentage)

13.  Which of the following is not PHP Loops?                                            [     ]

A) while          B) do while          C) for                    D) do for

14. What is the use of strpos( ) function in PHP?                    [    ]
A) Search for a number within a string          B) Search for a Spaces within a string
C) Search for a character/text within a string          D) Search for a Capitalized string/text with in a string

15. Where setcookie( ) function must appear in PHP?                    [    ]
A) Before tag          B) After tag          C) In tag          D) Anywhere


16.  What does the hash (#) sign mean in PHP?                    [    ]
A) It indicates lines that are commented out.          B) It indicates variable declaration.
C) It indicates function declaration.          D) No uses in PHP.

17. How to define a variable in PHP?                    [    ]
A) $variable_name = value          B) $variable_name = value;
C) $variable_name == value;          D) $variable_name as value;

18. The uses of strcmp( ) function in PHP?                    [    ]
A) It compare strings including case          B) It compare strings excluding case
C) It compare strings only Uppercase          D) It compare strings only lowercase

19. What will be the result of combining a string with another data type in PHP?          [    ]
A) int          B) float          C) string          D) double

20. Data for a cookie stored in _____ in PHP?                    [    ]
A) In ISP Computer          B) In User's Computer
C) In Server Computer          D) It depends on PHP Coding

21. PHP is a _____ typed language.                    [    ]
A) User          B) Loosely          C) Server          D) System

22. What does fopen() function do in PHP?                    [    ]
A) It used to open files in PHP          B) It used to open Remote Server
C) It used to open folders in PHP          D) It used to open Remote Computer

23. Where session_start() function must appear in PHP?                    [    ]
A) Anywhere          B) With <html> tag     C) After <html>tag     D) Before <html> tag

24. What does the PHP Interpreter do?                    [    ]
A) Translates user language to System Language B) Creates connection between ISP & Server
C) It processes the HTML and PHP files          D) All of these


25. Which of the following is used to add comments in PHP?                    [    ]
A) //          B) /* … */          C) & … &          D) Only A & B

26. What does sprintf() function do in PHP?                                    [    ]
A) it sends output to a variable                    B) it prints the output of program
C) it sends output to a variable converting into string  D) it prints the output of program converting into string

27. Variables are case-sensitive in PHP?                                       [    ]
A) True                    B) False

28. Which function displays the information about PHP?                          [    ]
A) info()              B) sysinfo()              C) phpinfo()              D) php_info()

29. What does isset() function do in PHP?                                       [    ]
A) There is no such function in PHP           B) It checks whether variable is set or not
C) It checks whether variable is free or not  D) It checks whether variable is string or integer

30. How PHP files can be accessed?                                             [    ]
A) Through Web Browser              B) Through HTML files
C) Through Web Server               D) All of Above

31. The filesize() function returns the file size in _____              [    ]
A) bits                    B) bytes                    C) kilobytes              D) gigabytes

32. Which one of the following PHP function is used to determine a file's last access time?
A) fileltime()         B) filectime()         C) fileatime()         D) filetime()         [    ]

33. Which one of the following function is capable of reading a file into an array?      [    ]
A) file()              B) arrfile()           C) arr_file()          D) file_arr()

34. Which one of the following function is capable of reading a file into a string variable?
A) file_contents()     B) file_get_contents() C) file_content()      D) file_get_content() [    ]

35. Which one of the following function is capable of reading a specific number of characters
from a file?                                                                   [    ]
A) fgets()             B) fget()              C) fileget()           D) filegets()

36. Which one of the following function outputs the contents of a string variable to the specified
resource?                                                                      [    ]
A) filewrite()         B) fwrite()            C) filewrites()        D) fwrites()

37. Which two predefined variables are used to retrieve information from forms?    [    ]
A) $GET & $SET              B) $_GET & $_SET
C) $__GET & $__SET          D) GET & SET

38. When you use the $_GET variable to collect data, the data is visible to _____    [    ]
A) none                B) only you            C) everyone            D) selected few

39. When you use the $_POST variable to collect data, the data is visible to _____    [    ]
A) none                B) only you            C) everyone            D) selected few

40. Which variable is used to collect form data sent with both the GET and POST methods?
A) $BOTH          B) $_BOTH          C) $REQUEST          D) $_REQUEST          [    ]

41. Which one of the following should not be used while sending passwords or other sensitive
    information?                                                                 [    ]
A) GET          B) POST          C) REQUEST          D) NEXT

42. How many predefined variables does PHP use to authenticate a user?          [    ]
A) 1          B) 2          C) 3          D) 4

43. Which of the following variables does PHP use to authenticate a user?          [    ]
i) $_SERVER['PHP_AUTH_USER'].          ii) $_SERVER['PHP_AUTH_USERS'].
iii) $_SERVER['PHP_AUTH_PU'].          iv) $_SERVER['PHP_AUTH_PW'].
A) i) and ii)          B) ii) and iv)          C) i) and iv)          D) ii) and iii)

44. Which function is used to verify whether a variable contains a value?          [    ]
A) header()          B) footer()          C) inset()          D) isset()

45. The authenticationFile.txt, the file which stores username and password should be stored ___
    the server document root.                                                   [    ]
A) Inside          B) Outside          C) Within          D) None of the mentioned

46. Which directive determines whether PHP scripts on the server can accept file uploads?
A) file_uploads          B) file_upload          C) file_input          D) file_intake          [    ]

47. Which one of the following is the very first task executed by a session enabled page?
A) Delete the previous session          B) Start a new session          [    ]
C) Check whether a valid session exists          D) Handle the session

48. Which one of the following is the default PHP session name?          [    ]
A) PHPSESSID          B) PHPSESID          C) PHPSESSIONID          D) PHPIDSESS

49. What is the default number of seconds that cached session pages are made available before
    the new pages are created?                                                  [    ]
A) 360          B) 180          C) 3600          D) 1800

50. Which one of the following function is used to start a session?          [    ]
A) start_session()          B) session_start()          C) session_begin()          D) begin_session()

51. What does XML stand for?          [    ]
A) eXtra Modern Link B) eXtensible Markup Language C) Example Markup Language
D) X-Markup Language

52. What is the correct syntax of the declaration which defines the XML version?          [    ]
A) <xml version="A.0" />   B) <?xml version="A.0"?>   C)<?xml version="A.0" />

D) None of the above

53. Which statement is true?                                                    [    ]
A) All the statements are true     B) All XML elements must have a closing tag
C) All XML elements must be lower case   D) All XML documents must have a DTD

54. Is it easier to process XML than HTML?                                       [    ]
A) Yes B) No  C) Sometimes D) Can't say

55. Which of the following programs support XML or XML applications?             [    ]
A) Internet Explorer 5.5  B) Netscape D.7   C) RealPlayer.  D) both A and B

56. Kind of Parsers are                                                          [    ]

A) well-formed B) well-documented C) non-validating and validating D)none of the above

57. Well formed XML document means                                              [    ]
A) it contains a root element    B) it contain an element  C) it contains one or more elements
D) must contain one or more elements and root element must contain all other elements

58.Comment in XML document is given by                                          [    ]
A) <?-- -->              B) <!-- --!>              C)<!-- -->     D)</-- -- >

59. When processing an output XML, "new line" symbols                           [    ]
A) are copied into output "as is", i.e. "CR+LF" for Windows, CR for Macintosh, LF for Unix
B) are converted to single LF symbol C) are converted to single CR symbol   D)are discarded

60. Which of the following strings is a correct XML name?                        [    ]
A) _myElement   B) my Element  C) #myElement   D) None of the above

61.Which of the following strings are a correct XML name?                        [    ]
A) xmlExtension  B) xslNewElement  C) XMLElement#123   D) All

62. Which of the following XML fragments are well-formed?                        [    ]
A) <?xml?>    B) <?xml version="A.0"?> C) <?xml encoding="JIS"?>D) <?xml encoding="JIS"
version="A.0"?>

63. What are the predefined attributes                                           [    ]
A) xml:lang   B) xml:space   C) both  D) none.

64 For XML document to be valid                                                  [    ]
A) document need to be well formed also          B) document need not to be well formed
C) document need to be well formed & valid        D) document validity has no relationship
with well formedness

65 Valid XML document means (most appropriate)                                   [    ]

A) the document has root element
B) the document contains atleast one or more root element
C) the XML document has DTD associated with it & it complies with that DTD
D) Each element must nest inside any enclosing element property

66 XML uses the features of                                            [    ]
A) HTML            B) XHTML            C) VML            D) SGML

67 XML document can be viewed in                                       [    ]
A) IE C.0          B) IE B.0           C) IE 6.0         D) IE X.0

68 There is a way of describing XML data, how?                         [    ]
A) XML uses a DTD to describe the data        B) XML uses XSL to describe data
C) XML uses a description node to describe data    D) Both A and C

69 What does DTD stand for?                                            [    ]
A) Direct Type Definition                    B) Document Type Definition
C) Do The Dance                              D) Dynamic Type Definition

70 DTD includes the specifications about the markup that can be used within the document, the
specifications consists of all EXCEPT                                  [    ]
A) the browser name                          B) the size of element name
C) entity declarations                       D) element declarations

71 Which of the following XML documents are well-formed?               [    ]
A) <firstElement>some text goes here
<secondElement>another text goes here</secondElement>
</firstElement>
B) <firstElement>some text goes here</firstElement>
<secondElement> another text goes here</secondElement>
C) <firstElement>some text goes here
<secondElement> another text goes here</firstElement>
</secondElement>
D) </firstElement>some text goes here
</secondElement>another text goes here
<firstElement>

72 Which of the following XML fragments are well-formed?              [    ]
A) <myElement myAttribute="someValue"/>
B) <myElement myAttribute=someValue/>
C) <myElement myAttribute='someValue'>
D)

73 How can we make attributes have multiple values:                   [    ]
A) <myElement myAttribute="value1 value2"/>
B) <myElement myAttribute="value1" myAttribute="value2"/>

C) <myElement myAttribute="value1, value2"/>
D) attributes cannot have multiple values

74 Which of the following XML fragments are well-formed?             [    ]
A) <myElement myAttribute="value1 <= value2"/>
B) <myElement myAttribute="value1 & value2"/>
C) <myElement myAttribute="value1 > value2"/>
D) None of the above

75 The use of a DTD in XML development is:             [    ]
A) required when validating XML documents
B) no longer necessary after the XML editor has been customized
C) used to direct conversion using an XSLT processor
D) a good guide to populating a templates to be filled in when generating an XML document automatically

76 Parameter entities can appear in             [    ]
A) xml file
B) xsl file
C) Both 1 and 2
D) dtd file

77 Attribute standalone="no" should be included in XML declaration if a document:   [    ]
A) is linked to an external XSL stylesheet
B) has external general references
C) has processing instructions
D) has an external DTD

78 In XML             [    ]
A) the internal DTD subset is read before the external DTD
B) the external DTD subset is read before the internal DTD
C) there is no external type of DTD
D) there is no internal type of DTD

79 Disadvantages of DTD are             [    ]
A) DTDs are not extensible
B) DTDs are not in to support for namespaces
C) there is no provision for inheritance from one DTDs to another
D) All the Above

80 To use the external DTD we have the syntax             [    ]
A) <?xml version="A.0" standalone="no"?>
<! DOCTYPE DOCUMENT SYSTEM "order.dtd"?>
B) <?xml version="A.0" standalone="yes"?>
<! DOCTYPE DOCUMENT SYSTEM "order.dtd"?>
C) )<?xml version="A.0" standalone="no"?>

<! DOCTYPE DOCUMENT "order.dtd"?>
D) <?xml version="A.0" standalone="yes"?>
<! DOCTYPE DOCUMENT SYSTEM "order.dtd"?>

81 To add the attribute named Type to the <customer> tag the syntax will be          [      ]
A) <customer attribute Type="exelent">
B) <customer Type attribute ="exelent">
C) <customer Type attribute_type="exelent">
D) <customer Type=" exelent" >

82 The syntax for parameter entity is                                              [      ]
A) <! ENTITY % NAME DEFINITION>
B) < ENTITY % NAME DEFINITION>
C) <! ENTITY $ NAME DEFINITION>
D) < ENTITY % NAME DEFINITION>

83 You can name the schema using the name attribute like                           [      ]
A) <schema attribute="schema1">
B) <schema nameattribute="schema1">
C) <schema nameattri="schema1">
D) <schema name="schema1">

84 The default model for complex type, in XML schemas for element is               [      ]
A) textOnly
B) elementOnly
C) no default type
D) both 1 & 2

85 Microsoft XML Schema Data types for Hexadecimal digits representating octates    [      ]
A) UID
B) UXID
C) UUID
D) XXID

86 A schema describes                                                              [      ]
A) grammer
B) vocabulary
C) datatype of XML document and Structure
D) All the above

87 Microsoft XML Schema Data Type " boolean" has values                            [      ]
A) True ,False
B) True ,False or 1,0
C) 1,0
D) any number other then zero and zero

88 Simple type Built into Schema " data' represent a data in                                     [      ]
A) MM-DD-YY                    B) Dd-MM-YY           C) YY-MM-DD          D) YYYY-MM-DD

89 In simple Type Built into XML schema Boolean type holds                                     [      ]
A) True, False          B) 1,0          C) both A. & B          D) True/False and any number
except 0

90 In simple type built into XML schema type flat has single precision of _____ floating
point                                                                                                           [      ]
A) 16 bit          B) 32 bit          C) 8 bit          D) 4 bit

91 The XML DOM object is                                                                              [      ]
A) Entity Reference                B) Entity          C) Comment Reference          D) Comment Data

92 Attribute of the document interface in DOM is/are                                            [      ]
A) doctype                B) implementation          C) documentElement          D) All the above

93 The default model for complex type, in XML schemas for element is                    [      ]
A) textOnly                B) elementOnly          C) no default type          D) both a & b

94 To create a choise in XML schemas, we use the                                               [      ]
A) <xsd:select> element                B) <xsd:multi> element
C) <xsd:choise> element                D) <xsd:single> element

95 The XSL formating object use to hold the contents of the body of a list item is          [      ]
A) list-block                B) list item          C) list-item-body          D) list-item-label

96 To create a data island we use the _____HTML element                         [      ]
A) <XML>                B) <dataisland>          C) <Island>          D) <XMLIsland>

97 To Bind the HTML elements with DSO we use _____ attribute                       [      ]
A) DATASOURCE          B) DATASRC                C) DATAFIELD          D) Both a & b

98 To bind the HTML element <INPUT> Type in text with the datasource " dsoCustomer" we
use                                                                                                             [      ]
A) <INPUT TYPE="TEXT" DATAFIELD="#dsoCustomer">
B) <INPUT TYPE="TEXT" DATASRC=" dsoCustomer">
C) <INPUT TYPE="TEXT" DATASRC=" #dsoCustomer" >
D) <INPUT TYPE="TEXT" DATAFLD=" #dsoCustomer">

99 XML DSOs has the property for the number of pages of data the recordset contains     [      ]
A) count          B) number          C) pageCount                D) pageNumber

100 Whats so great about XML?                                                                        [      ]
A) Easy data exchange   B) High speed on network  C) Only B is correct   D) Both A & B

101 A deployment descriptor describes                                          [     ]
A) web component response settings        B) web component settings
C) web component request objects          D) All of the above

102 Dynamic interception of requests and responses to transform the information is done by [   ]
A) servlet container          B) servlet config
C) servlet context            D) servlet filter

103 The life cycle of a servlet is managed by                                  [     ]
A) servlet context            B) servlet container
C) the supporting protocol (such as http or https)      D) all of the above

104 The include() method of RequestDispatcher                                  [     ]
A) sends a request to another resource like servlet, jsp or html
B) includes resource of file like servlet, jsp or html
C) appends the request and response objects to the current servlet
D) None of the above

105 The method forward(request,response) will                                  [     ]
A) return back to the same method from where the forward was invoked
B) not return back to the same method from where the forward was invoked and the web pages
navigation continues
C) Both A and B are correct
D) None of the above

106 What is the limit of data to be passed from HTML when doGet() method is used?      [     ]
A) 4K          B) 8K          C) 2K          D) 1K

107 What are the mechanisms available in ServletContextListener interface?      [     ]
A) contextInit(), contextService(), contextDestroyed()
B) contextInitialized((),contextDestroyed()
C) contextInitialized(), contextService(), contextDestroyed()
D) None of the above

108 The getSession() method with 'true' as its parameter [ getSession(true) ] it will return the
appropriate session object when                                                [     ]
A) the session is completed        B) the session object is passed to another method
C) the session does not exists     D) the session is existing

109 Which of the following are the session tracking techniques?                [     ]
A) URL rewriting, using session object, using response object, using hidden fields
B) URL rewriting, using session object, using cookies, using hidden fields
C) URL rewriting, using servlet object, using response object, using cookies
D) URL rewriting, using request object, using response object, using session object

110 What's the difference between servlets and applets? Select all the possible options.    [    ]
1.Servlets executes on Servers, where as Applets executes on Browser
2.Servlets have no GUI, where as an Applet has GUI
3.Servlets creates static web pages, where as Applets creates dynamic web pages
4.Servlets can handle only a single request, where as Applet can handle multiple requests
A) 1,2,3 are correct    B) 1,2 are correct        C) 1,3 are correct        D) 1,2,3,4 are correct

111 In which advantage of servlet, Servlets are managed by JVM so no need to worry about
memory leak, garbage collection etc.?                                                [    ]
A) Better performance          B) Portability              C) Robust        D) Secure

112 When you are send the parameters using get method how do send them?              [    ]
A) By Comma            B) By ampresend        C) By question mark  D) None of the above


113 In HTTP Request Which Asks for the loopback of the request message, for testing?  [    ]
A) put and get          B) options      C) delete        D) trace

114 How to send data in get method?                                                  [    ]
A) We cannot  B) Through url        C) Through Payload   D) None of the above

115 In the HTTP Request method which is non-idempotent?                               [    ]
A) GET        B) POST      C) BOTH A & B        D) None of the above

116 Give the examples of Application Server from the following?                       [    ]
A) Tomcat      B) JBoss        C) Weblogic   D) Both JBoss and Weblogic

117 Abbreviate the term MIME?                                                         [    ]
A) Multilevel internet Mail Extension        B) Multipurpose internet Mail Extension
C) Multiuse information Mail Extension        D) None of the above

118 Which packages represent interfaces and classes for servlet API?                 [    ]
A) javax.servlet          B) javax.servlet.http   C) Both A & B          D) None of the above

119 The web container maintains the life cycle of a servlet instance,give the lifecycle of a
servlet?                                                                             [    ]
A) Servlet class is loaded      B) Servlet instance is created
C) init,Service,destroy method is invoked    D) All mentioned above

120 Which http method sent by browser that asks the server to get the page only      [    ]
A) get            B) post            C) put            D) option

121 In RequestDispacher, which method is used to sends the same request and response objects
to another Servlet?                                                                 [    ]
A) forward()  B) sendRedirect()        C) Both A & B          D) None of the above

122  Which object is created by the web container at time of deploying the project?        [    ]
A) ServletConfig        B) ServletContext      C) Both A & B          D) None of the above

123 An attribute in Servlet is an object that can be set, get from one of the following scopes?
A) session scope        B) request scope        C) application scope   D) All the above        [    ]

124 How many techniques are used in Session Tracking?                                        [    ]
A) 4    B) 3    C) 2    D) 5

125 Which cookie it is valid for single session only; it is removed each time when user closes the
browser?                                                                                     [    ]
A) Persistent cookie   B) Non-persistent cookie      C) Both A & B        D) None of the above