Roll. No. .....

O.M.R. Serial No. | | | | | | | |

Question Booklet Number

PGDCA (SEM.-II) (NEP) EXAMINATION, 2025-26

DATABASE MANAGEMENT SYSTEM (DBMS)

[CODE : PGDCA-201]

Paper Code							
A	9	0	1	0	0	2	T

Question Booklet Series

D

Time : 1 : 30 Hours **Max. Marks : 75**

Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 100 questions. Examinee is required to answer 75 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.
4. Four alternative answers are mentioned for each question as - A, B, C & D in the booklet. The candidate has to choose the correct / answer and mark the same in the OMR Answer-Sheet as per the direction :

(Remaining instructions on last page)

परीक्षार्थियों के लिए निर्देश :

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को 75 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, उसे तुरन्त बदल लें।
4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर- A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से सही उत्तर छाँटना है। उत्तर को OMR उत्तर-पत्रक में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

(शेष निर्देश अन्तिम पृष्ठ पर)

1. Which of the following is a non-trivial dependency?

(A) $AB \rightarrow A$

(B) $A \rightarrow A$

(C) $A \rightarrow B$

(D) $ABC \rightarrow AB$

2. A functional dependency is trivial if:

(A) $A \subseteq B$

(B) $B \subseteq A$

(C) $A = B$

(D) $A \cap B = \phi$

3. Functional dependency is used in:

(A) Normalization

(B) Networking

(C) Programming

(D) Hardware

4. Functional dependency is denoted by:

(A) $\rightarrow$ (B) $\cup$

(C) $\cap$ (D) $\times$

5. Selection operation reduces:

(A) Number of attributes

(B) Number of keys

(C) Number of tables

(D) Number of tuples

6. INTERSECTION operation gives:

(A) Common tuples

(B) ALL tuples

(C) Unique tuples

(D) Random tuples

7. Which operation is used to combine tuples without condition?

(A) JOIN

(B) SELECT

(C) PRODUCT

(D) INTERSECTION

8. Natural join removes:

(A) All tuples

(B) Keys

(C) Duplicate rows

(D) Duplicate attributes

9. Which operator is used for renaming attributes?

(A) σ

(B) π

(C) ρ

(D) $\cup$

10. Relational algebra is a:

(A) Procedural query language

(B) Non-procedural language

(C) Programming language

(D) Assembly language

11. A key attribute is represented by:

(A) Dashed underline

(B) Double oval

(C) Underline

(D) Rectangle

12. Natural join is a combination of:

(A) SELECT + PROJECT

(B) PRODUCT + SELECT

(C) UNION + SELECT

(D) DIFFERENCE + PROJECT

13. The result of PROJECT operation:

(A) May contain duplicate tuples

(B) Delete relation

(C) Adds duplicate tuples

(D) Removes duplicate tuples

14. Which operation requires union compatibility?

(A) SELECT

(B) PROJECT

(C) RENAME

(D) UNION

15. Which statement is FALSE?

(A) UNION removes duplicates

(B) PROJECT removes duplicates

(C) SELECT removes duplicates

(D) INTERSECTION gives common tuples

16. Entity integrity constraint ensures:

(A) Primary key is not NULL

(B) No duplicate tables

(C) Foreign key exists

(D) Data redundancy

17. Which constraint ensures valid data entry?

(A) CHECK

(B) SELECT

(C) DELETE

(D) DROP

18. A view is:

(A) Physical table

(B) Virtual table

(C) Temporary file

(D) Index

19. ALTER TABLE can be used to:

(A) Add constraints

(B) Remove constraints

(C) Modify constraints

(D) All of these

20. A relation is in 2NF if it is in:

(A) Only 1NF

(B) BCNF

(C) Only 3NF

(D) 1NF and no partial dependency

21. BCNF stands for:

(A) Boyce-Codd Normal Form

(B) Basic Codd Normal Form

(C) Binary Codd Form

(D) Base Code Normal Form

22. Which normal form removes join dependency?

(A) 3NF

(B) 4NF

(C) 5NF

(D) BCNF

23. Which normal form ensures every determinant is a candidate key?

(A) 2NF

(B) 3NF

(C) BCNF

(D) 4NF

24. HAVING is used with:

(A) WHERE

(B) GROUP BY

(C) SELECT

(D) DELETE

25. GROUP BY groups:

(A) Rows

(B) Columns

(C) Tables

(D) Keys

26. DROP deletes:

(A) Row

(B) Data

(C) Column

(D) Table

27. The result of R – S contains:

(A) Tuples in R but not in S

(B) Tuples common in R and S

(C) Tuples in S but not in R

(D) All tuples of R and S

28. Set difference removes:

(A) Duplicate tuples

(B) Unique tuples

(C) All tuples

(D) Common tuples

29. The result of R – S will always be a subset of:

(A) S

(B) R

(C) $R \cup S$

(D) Universal set

30. The degree of $R \times S$ is:

(A) Degree of R

(B) Degree of S

(C) Sum of degrees of R and S

(D) Product of degrees

31. Cartesian product is generally used with:

(A) Selection

(B) Projection

(C) Join condition

(D) Aggregation

32. DBA is responsible for:

(A) Data consistency

(B) Data redundancy

(C) Data duplication

(D) Data deletion only

33. Which statement is TRUE?

(A) DELETE cannot be rolled back

(B) TRUNCATE can be rolled back (generally)

(C) DROP removes entire table structure

(D) INSERT is a DDL command

34. Which symbol is used in relational calculus?

(A) σ (B) π

(C) $\{\}$ (D) $\times$

35. Relational calculus is based on:

(A) Set theory

(B) Boolean algebra

(C) Graph theory

(D) Predicate logic

36. ER model is a:

(A) Physical model

(B) Conceptual model

(C) Logical model

(D) Network model

37. Which data model uses tables?

(A) Hierarchical

(B) Network

(C) Relational

(D) Object

38. Which of the following is a type of data model?

(A) Relational

(B) Hierarchical

(C) Network

(D) All of these

39. A data model is:

(A) Collection of rules to describe data

(B) Collection of hardware

(C) Collection of programs

(D) Collection of users

40. In $A \rightarrow B$, A is called:

(A) Dependent

(B) Determinant

(C) Attribute

(D) Key

41. $A \rightarrow A$ is:

(A) Non-trivial

(B) Transitive

(C) Partial

(D) Trivial

42. Full functional dependency means:

(A) Partial dependency exists

(B) No dependency exists

(C) Dependency on entire key

(D) Dependency on part of key

43. Partial dependency occurs when:

(A) Non-key depends on full key

(B) Non-key depends on part of composite key

(C) Key depends on non-key

(D) All attributes independent

44. A relation is in BCNF if:

(A) Every determinant is a super key

(B) It is in 1NF

(C) No partial dependency

(D) No transitive dependency

45. Which of the following is used to uniquely identify a record in a table?

(A) Foreign Key

(B) Super Key

(C) Candidate Key

(D) Primary Key

46. Which of the following is not a function of DBMS?

(A) Data storage

(B) Data retrieval

(C) Data security

(D) Making hardware

47. Data independence means:

(A) Data is independent of user

(B) Data is independent of application programs

(C) Data is independent of hardware

(D) Data is independent of DBMS

48. File system has problem of:

(A) Data independence

(B) Data integrity

(C) Data security

(D) Data redundancy

49. Which problem is common in file system but solved by DBMS?

(A) Data security

(B) Data redundancy

(C) Data integrity

(D) All of these

50. Which level provides user view of data?

(A) Physical

(B) Logical

(C) View

(D) Internal

51. Which operator is used for pattern matching?

(A) IN

(B) LIKE

(C) BETWEEN

(D) EXISTS

52. Which keyword is used to select all columns?

(A) ALL

(B) *

(C) FULL

(D) EVERY

53. Which condition checks range of values?

(A) IN

(B) LIKE

(C) BETWEEN

(D) EXISTS

54. Which query will display unique values?

(A) SELECT ALL

(B) SELECT UNIQUE

(C) SELECT DISTINCT

(D) SELECT DIFFERENT

55. Which of the following is FALSE?

(A) SELECT retrieves data

(B) WHERE filters rows

(C) ORDER BY sort data

(D) HAVING filters rows before grouping

56. Which operator is used for wildcard search?

(A) BETWEEN

(B) LIKE

(C) IN

(D) EXISTS

57. Which keyword is used with subqueries?

(A) EXISTS

(B) WHERE

(C) ORDER BY

(D) GROUP BY

58. Which of the following executes last?

(A) FROM

(B) WHERE

(C) SELECT

(D) ORDER BY

59. Relational calculus is a:

(A) Procedural language

(B) Non-procedural language

(C) Programming language

(D) Assembly language

60. Which normal form deals with multivalued dependencies?

(A) 2NF

(B) 3NF

(C) BCNF

(D) 4NF

61. Which SQL operation removes duplicate tuples?

(A) SELECT

(B) DISTINCT

(C) UNIQUE

(D) GROUP BY

62. In a relation R(A, B, C), if $A \rightarrow B$ and $B \rightarrow C$, then:

(A) R is in 2NF

(B) R is in 3NF

(C) R violates 3NF

(D) R is in BCNF

63. Integrity ensures:

(A) Security

(B) Duplication

(C) Backup

(D) Accuracy of data

64. Foreign key is used for:

(A) Identification

(B) Linking tables

(C) Deleting data

(D) Sorting

65. In ER diagram, identifying relationship is shown by:

(A) Single diamond

(B) Dashed diamond

(C) Double diamond

(D) Oval

66. Total participation is represented by:

(A) Single line

(B) Double line

(C) Dashed line

(D) Arrow line

67. Projection operations :

(A) Select columns

(B) Select rows

(C) Delete rows

(D) Join tables

68. Which command is used to remove all records but keep table structure?

(A) DELETE

(B) DROP

(C) TRUNCATE

(D) REMOVE

69. Which command cannot use WHERE clause?

(A) DELETE

(B) UPDATE

(C) TRUNCATE

(D) SELECT

70. Cardinality defines:

(A) Number of attributes

(B) Number of entities in relationship

(C) Type of key

(D) Table structure

71. Composite attribute means:

(A) Cannot be divided

(B) Has multiple values

(C) Can be divided into sub-parts

(D) Derived value

72. Weak entity is represented by:

(A) Single rectangle

(B) Double rectangle

(C) Oval

(D) Diamond

73. Which of the following can have attributes?

(A) Entity only

(B) Relationship only

(C) Both Entity and Relationship

(D) All of the above

74. Degree of relationship refers to:

(A) Number of attributes

(B) Number of tables

(C) Number of keys

(D) Number of participating entities

75. Which of the following ensures that information is not altered by unauthorized users?

(A) Integrity

(B) Confidentiality

(C) Availability

(D) Authentication

76. Which constraint automatically enforces NOT NULL + UNIQUE?

(A) UNIQUE

(B) DEFAULT

(C) CHECK

(D) PRIMARY KEY

77. Which constraint is used to limit values to a specific range?

(A) UNIQUE

(B) CHECK

(C) DEFAULT

(D) PRIMARY KEY

78. Which constraint ensures attribute values belong to a valid domain?

(A) DOMAIN CONSTRAINT

(B) KEY CONSTRAINT

(C) ENTITY INTEGRITY

(D) REFERENTIAL INTEGRITY

79. Which of the following can be done using ALTER TABLE?

(A) Add column

(B) Drop column

(C) Modify column

(D) All of these

80. Which command removes a column?

(A) DROP COLUMN

(B) DELETE COLUMN

(C) REMOVE COLUMN

(D) ERASE COLUMN

81. ALTER TABLE belongs to:

(A) DML

(B) DDL

(C) DCL

(D) TCL

82. Which command is used to modify existing records?

(A) INSERT

(B) ALTER

(C) DELETE

(D) UPDATE

83. Views are mainly used for:

(A) Security and simplicity

(B) Increasing redundancy

(C) Deleting tables

(D) Storing data

84. 1NF removes:

(A) Redundancy

(B) Keys

(C) Functional dependency

(D) Repeating groups

85. 3NF removes:

(A) Partial dependency

(B) Transitive dependency

(C) Keys

(D) Joins

86. Functional dependency means:

(A) Relation between tables

(B) Relation between rows

(C) Relation between keys

(D) Relation between attributes

87. Degree of relation is:

(A) Rows

(B) Columns

(C) Keys

(D) Tables

88. Attribute describes:

(A) Table

(B) Key

(C) Entity

(D) Relationship

89. ER diagram uses:

(A) Rectangles

(B) Diamonds

(C) Ovals

(D) All of the above

90. Which normal form removes transitive dependency?

(A) 1NF

(B) 2NF

(C) 3NF

(D) BCNF

91. Which function returns the total number of rows?

(A) SUM()

(B) COUNT()

(C) AVG()

(D) TOTAL()

92. Which of the following is an example of attribute?

(A) Name

(B) Course

(C) Student

(D) Relationship

93. Composite attribute means:

(A) Cannot be divided

(B) Has multiple values

(C) Can be divided into sub-parts

(D) Derived from other attributes

94. Multivalued attribute is represented by:

(A) Double oval

(B) Single oval

(C) Rectangle

(D) Diamond

95. A relationship in ER model represents:

(A) Property of entity

(B) Key

(C) Attribute of table

(D) Connection between entities

96. Degree of a relationship refers to:

(A) Number of attributes

(B) Number of entities involved

(C) Number of keys

(D) Number of tables

97. Which relationship is also called self-relationship?

(A) Binary

(B) Ternary

(C) Recursive

(D) Weak

98. Cardinality ratio M:N means:

(A) One-to-one

(B) One-to-many

(C) Many-to-many

(D) Many-to-one

99. Which SQL command is used to retrieve data?

(A) INSERT

(B) UPDATE

(C) SELECT

(D) DELETE

100. Which clause is used to sort results?

(A) ORDER BY

(B) GROUP BY

(C) WHERE

(D) HAVING

Rough Work / रफ कार्य

Example :

Question :

Q.1 Ⓐ ● Ⓒ Ⓓ

Q.2 Ⓐ Ⓑ ● Ⓓ

Q.3 Ⓐ ● Ⓒ Ⓓ

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.

6. All answers are to be given on OMR Answer Sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.

7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.

8. After the completion of the examination, candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.

9. There will be no negative marking.

10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.

11. To bring and use of log-book, calculator, pager & cellular phone in examination hall is prohibited.

12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

Impt. On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is any discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

उदाहरण :

प्रश्न :

प्रश्न 1 Ⓐ ● Ⓒ Ⓓ

प्रश्न 2 Ⓐ Ⓑ ● Ⓓ

प्रश्न 3 Ⓐ ● Ⓒ Ⓓ

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।

6. सभी उत्तर केवल ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।

7. ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।

8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।

9. निगेटिव मार्किंग नहीं है।

10. कोई भी रफ कार्य, प्रश्न-पुस्तिका में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।

11. परीक्षा-कक्ष में लॉग-बुक, कैल्कुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।

12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

महत्वपूर्णः प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्नपुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरीज की दूसरी प्रश्नपुस्तिका प्राप्त कर लें।