

CUET UG 2023 Computer Science & Informative Practices Question Paper PDF (May 29, 2023) (Shift 1)

- Which of the following is not the correct example of web browser?  
(a) Mozilla Firefox (b) Google Chrome  
(c) Wikipedia (d) Apple Safari
- Which of the following function returns the position of the first occurrence of the substring in the given string?  
(a) TRIM() (b) LTRIM()  
(c) INSTR() (d) SUBSTR()
- Given a table having columns as:  
Admno, Name, Marks, Grade.  
Identify the correct datatype used to store grades (A, B, C, D) in the table:  
(a) CHAR(1) (b) INT(1)  
(c) FLOT(1) (d) INT()
- Which of the following method is not a correct to open a file?  
(a) fileObject = open("data.txt")  
(b) fileObject = open("data.txt", "rb")  
(c) fileObject = open("data.txt", "W")  
(d) fileObject = open("data.txt", "rw")
- The number of tuples in a relation is called \_\_\_\_\_ of the relation.  
(a) Degree (b) Tuple  
(c) Cardinality (d) Domain
- In a table with 'n' columns, the relationship the 'n' related values in a row can be described as \_\_\_\_\_.  
(a) Attribute (b) Cardinality  
(c) Degree (d) Tuple
- The column which refers to value of an attribute defined as primary key in another table is known as:  
(a) Candidate key (b) Alternate key  
(c) Primary key (d) Foreign key
- Match List I with List II

| List I |             | List II |                                                                               |
|--------|-------------|---------|-------------------------------------------------------------------------------|
| A.     | SyntaxError | I.      | It is raised when local or global variable name is not defined.               |
| B.     | Type Error  | II.     | It is raised when there is an error in the syntax of the python code.         |
| C.     | IndexError  | III.    | It is raised when an operator is supplied with a value of incorrect data type |
| D.     | NameError   | IV.     | It is raised when the index or subscript in a sequence is out of range.       |

Choose the correct answer from the options given below:  
(a) A-II, B-IV, C-III, D-I (b) A-I, B-III, C-IV, D-II

- In Python which of the following function can be used to access data in a random fashion?  
(a) seek() (b) split()  
(c) splitlines() (d) read()
- A \_\_\_\_\_ is a device that can transmit \_\_\_\_\_ from one network to other network.  
A Data  
B Router  
C Network  
Choose the **correct** answer from the options given below:  
(a) B, C, A (b) C, B, A  
(c) A, B, C (d) B, A, C
- Consider the following statements relating to Python programming:  
A: ZeroDivisionError is raised when the denominator in a division operation is zero.  
B: ValueError is raised when the file specified in a program statement can not be opened.  
Choose the correct answer from the option given below:  
(a) A is true, B is false. (b) Both A and B are false.  
(c) Both A and B are true. (d) A is false and B is true.
- In a condition, where same data maintained in different places do not match, is called:  
(a) Data Isolation  
(b) Data Redundancy  
(c) Data dependence  
(d) Data inconsistency
- Identify the correct type of topology in which each node is connected with central switching through independent cables.  
(a) Bus Topology (b) Star Topology  
(c) Ring Topology (d) Mesh Topology
- Identify the incorrect statement in relation to primary keys in a database management system.  
(a) Primary keys contain unique values.  
(b) Primary keys can be applied to a single column.  
(c) Primary keys contain NULL values.  
(d) Primary keys uniquely identify each record.
- Write the output of the given SQL Query.  
SELECT LEFT ("Information Security", 5);  
(a) Secur (b) Infor  
(c) mation (d) urity
- Identify the correct statement(s)  
A. Insertion in a queue happens at the rear end. Deletion happens at the front.  
B. Deque is a version of Queue, which allows insertion at both ends but deletion from only one end.

- C. A deque can support stack or queue operation.  
 D. Insertion operation is known as enqueue and deletion operation is known as dequeue.  
 E. In stack insertion and deletion of items can be performed from either end.

Choose the correct answer from the options given below:

- (a) A and B only (b) A, B, C and D  
 (c) A, C and D only (d) A, B and D only
17. Which of the following statement(s) is/are correct?  
 A. The number of attributes in a relation is called the cardinality of the relation.  
 B. The column of a relation are known as fields.  
 C. Primary key is the subset of candidate key.  
 D. A foreign key is used to represent the relationship between two relations.  
 E. The number of tuples in a relation is called the Degree of a relation.

Choose the correct answer from the options given below:

- (a) C and A only (b) E and D only  
 (c) A and E only (d) B only
18. Identify the correct statement(s):  
 A. Two fundamental operations performed on stack are PUSH and POP.  
 B. In stack insertion and deletion of items can be performed from either end.  
 C. Stack is used to insert and delete elements in FIFO order.  
 D. Queue data structure can be used to convert an expression from infix to postfix notation.  
 E. Deque is a version of Queue, which allows insertion at both ends but deletion from only one end.

Choose the correct answer from the given below:

- (a) A only (b) B only  
 (c) C only (d) D only
19. Bubble sort is applied to a list containing 5 elements: 9, 4, 17, 24, 6.

After the first pass, which of the following is bubbled up.

- (a) 24 (b) 17  
 (c) 4 (d) 9
20. Match List I with List II

| LIST I |      | LIST II |                                                                               |
|--------|------|---------|-------------------------------------------------------------------------------|
| A.     | RING | I.      | Wiring complex, cabling cost is high                                          |
| B.     | BUS  | II.     | Data can be received by any node connected in the network.                    |
| C.     | MESH | III.    | Each node connected to two others, link is unidirectional                     |
| D.     | STAR | IV.     | Failure in central networking device may lead to failure of complete network. |

Choose the correct answer from the options given below:

- (a) A-II, B-III, C-IV, D-I (b) A-III, B-II, C-IV, D-I  
 (c) A-III, B-II, C-I, D-IV (d) A-I, B-III, C-II, D-IV

21. Which of the following selects the minimum element in a given list, in the  $i^{\text{th}}$  iteration and places it at  $i^{\text{th}}$  position.  
 (a) Bubble  
 (b) Insertion sort  
 (c) Selection sort  
 (d) Both bubble and selection ion

22. Trying to delete an item from an empty stack leads to which condition?

- (a) Underflow (b) Overflow  
 (c) Noflow (d) Excessflow

23. Which of the following are measures of central tendency?

- A. Mean B. Median  
 C. Mode D. Range  
 E. Standard Deviation

Choose the correct answer from the options given below:

- (a) A, B and C only (b) A, B and D only  
 (c) B, C and D only (d) C, D and E only

24. Which of the following statement is not true?

- (a) Columns of a relation are also referred as fields.  
 (b) Tuple is not a relationship between the  $n$  related values.  
 (c) Domain is set of values from which an attribute can take a value in each row.  
 (d) Number of attributes in a relation is called the Degree of the relation.

25. Which data structure may be applied to implement the Do and Undo operation in a text editor?

- (a) Stack (b) Queue  
 (c) Deque (d) Array

26. Which of the following is allowed to have multiple NULL values?

- (a) PRIMARY KEY (b) FOREIGN KEY  
 (c) CANDIDATE KEY (d) COMPOSITE KEY

27. When two elements map to the same slot in Hashing, then this problem is known as \_\_\_\_\_.

- (a) MATCHING (b) UNKNOWN ITEM  
 (c) DATA MISSING (d) COLLISION

28. If the List  $L = [5, 7, 11, 15, 20, 28, 35, 39, 40, 42, 51, 60]$ , to be searched used binary search, then what would be the mid value (or, middle position) at first iteration?

- (a) 6 (b) 7  
 (c) 5 (d) 1

29. Choose the device name which is not part of computer network.

- (a) Switch (b) Hub  
 (c) Assembler (d) Router

30. Which of the following is postfix notation of the expression  $(a + b) / (c * 9)$ ?

- (a)  $ab + c9 * /$  (b)  $a + bc9 / *$   
 (c)  $ab + c * 9 /$  (d)  $a + b / * c9$

31. Arrange the following steps, in data based problem statements, in sequence.

- A. Preprocessing  
 B. Inputs against which data are collected.  
 C. Problem statement

D. Output

E. Processing

Choose the correct answer from the options given below:

- (a) C, B, A, D, E (b) A, C, B, E, D  
(c) C, B, A, E, D (d) C, A, B, E, D

32. Which of the following is more reliable in the sense that even if a node gets down it does not cause any break-in the transmission of data between other nodes?

- (a) Ring (b) Mesh  
(c) Bus (d) Tree

33. Is Empty function is used to check if the queue has an element or not? This function takes a parameter the name of the queue say 'my Queue'. Choose the correct sequence for doing this:

- A. if len (myQueue) == 0 :  
B. return True  
C. def isEmpty (myQueue):  
D. return false

Choose the correct answer from the options given below:

- (a) A, B, C, D, E (b) C, A, B, D, E  
(c) E, B, C, A, D (d) D, B, C, A, E

34. A sorting algorithm has a nested loop. It will have a time complexity of:

- (a) Quadratic (b) Linear  
(c) Cubic (d) Constant

35. Which of the following example of unstructured data?

- A. Website that contains text, images and videos.  
B. Business reports  
C. Table in a database.  
D. Social media messages  
E. CSV file

Choose the correct answer from the options given below:

- (a) A, B and D only (b) A, B and C only  
(c) B, C and D only (d) C, D and E only

36. Shashwat is learning Binary files. His teacher has given him an incomplete python code to create a binary file, open, read & display contents in the form as given below then answer the question.

```
#line1
li = list()
for k in range (10):
    li.append (k* k)
    fout = _____ # line 2
    _____ # line 3
    fout.close()
    fin = _____ # line 4
    _____ # line 5
    fin.close()
    print {"Data from file", mylist}
```

Identify correct code statement to fill in line1 so that the required python library becomes available to the program.

- (a) import csv (b) import binary  
(c) import pickle (d) import text

37. Complete line2 to open a binary file for writing using the file object fout from the option given below:

- (a) fout = open("myfile.dat", 'wb')  
(b) fout = open("myfile.dat")  
(c) fout = open("myfile.dat", 'rb')  
(d) fout = open("myfile.dat", 'w')

38. Identify the correct statement to fill line3 so that the list created in the code namely li is written in the opened file.

- (a) pickle.load(li, fout) (b) pickle.load(fout, li)  
(c) pickle.dump(fout, li) (d) pickle.dump(li, fout)

39. Which statement can be placed in line 4 to open the same binary file for reading in the file object fin.

- (a) fin = open ("myfile.dat", 'r')  
(b) fin = open("myfile", 'r+')  
(c) fin = open("myfile", 'rb')  
(d) fin = open("myfile", 'w+')

40. Complete line 5 so that the contents of the opened file is to be read by fin in a list namely mylist.

- (a) mylist = pickle.load(fout)  
(b) mylist = pickle.cump(fout)  
(c) mylist = pickle.load(fin)  
(d) mylist = pickle.dump(fin)

41. Consider that there are two tables STUDENT and RESULT in SQL, database which following fields.

STUDENT

| Field   | Type        | Null | Key     |
|---------|-------------|------|---------|
| Roll No | INT         | NO   | Primary |
| SNm     | VARCHAR(20) | YES  |         |
| SDob    | DATE        | YES  |         |
| HTNO    | INT         | NO   |         |

RESULT

| Field   | Type      | Null | Key     |
|---------|-----------|------|---------|
| HTNO    | INT       | NO   | Primary |
| Total   | INT       | YES  |         |
| Average | NUM(5, 2) | YES  |         |
| Grade   | CHAR(1)   | YES  |         |

Both the tables are having rows related to the students enrolled.

Based on the tables STUDENT and RESULT answer the following questions.

The Query to make STUDENT HTNO as foreign key is:

- (a) UPDATE STUDENT ADD HTNO AS FOREIGN KEY;  
(b) ALTER TABLE STUDENT ADD HTNO AS FOREIGN KEY;  
(c) AFTER TABLE STUDENT ADD FOREIGN KEY (HTNO) REFERENCES RESULT (HTNO);  
(d) ALTER STUDENT ADD FOREIGN KEY (HTNO) REFERENCES RESULT (HTNO);

42. Query to add an attribute "Saddr" to STUDENT table of type VARCHAR length no is:
- ALTER STUDENT ADD Saddr TYPE VARCHAR (40);
  - ALTER TABLE STUDENT ADD Saddr VARCHAR (40);
  - ALTER TABLE STUDENT ADD Saddr AS VARCHAR(40);
  - ALTER TABLE STUDENT Saddr ADD AS VARCHAR(40);
43. Query to display records of students born in the month of June is:
- SELECT \* FROM STUDENT WHERE MONTH(SDOB) = 'JUNE';
  - SELECT \* FROM STUDENT WHERE DATE(SNob) = 'JUNE';
  - SELECT \* FROM STUDENT WHERE SDob = 'JUNE';
  - SELECT \* FROM STUDENT WHERE MONTHNAME(SDob) = 'JUNE';
44. Query to display the records of students whose Average is above 10% is:
- SELECT \* FROM STUDENT WHERE AVERAGE > 40 ;
  - SELECT \* FROM RESULT WHERE AVERAGE > 40 ;
  - SELECT \* FROM STUDENT, RESULT WHERE RESULT.AVERAGE > 40;
  - SELECT \* FROM STUDENT, RESULT WHERE AVERAGE ≥ 40;
45. Query to display the records of students whose grade is 'A';
- SELECT \* FROM STUDENT WHERE Grade = 'A';
  - SELECT \* FROM STUDENT, RESULT WHERE RESULT.Grade = 'A';
  - SELECT \* FROM STUDENT, RESULT WHERE Grade = %A%';
  - SELECT \* FROM RESULT WHERE AVERAGE > 50;
46. Which of the following is the prefix notation for the expression  $(P + Q) * (R * S) T$
- \*+PQ\*/RST
  - +\*PQ\*/RST
  - \*+PQ/\*RST
  - \*\*+PQ/RST
47. In binary search, the element to be searched is compared with the \_\_\_\_\_ element in the sorted list.
- Top
  - Bottom
  - Left
  - Middle
48. In a relational database, a set of values from which an attribute can take a value in each row is called?
- Tuple
  - Degree
  - Domain
  - Cardinality
49. A loop within a loop (nested loop) will have the time complexity as:
- $n^2(n - 1)$
  - $n(n^2 - 2)$
  - $n.n$
  - $2n$
50. Match List I with List II
- |    | LIST I               |      | LIST II     |
|----|----------------------|------|-------------|
| A. | Open source software | I.   | Panda       |
| B. | Antivirus            | II.  | UNIX/LINUX  |
| C. | Operating system     | III. | Open Office |
| D. | Browser              | IV.  | Safari      |
- Choose the correct answer from the options given below:
- A-I, B-III, C-IV, D-II
  - A-III, B-I, C-II, D-IV
  - A-IV, B-I, C-III, D-II
  - A-IV, B-I, C-II, D-III