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FOR KARNATAKA CLASS 12 PREPARATION

Karnataka 2nd PUC Model Question Paper 2027 for Computer Science (Paper 4)

EXAM	YEAR	TYPE	SUBJECT
Karnataka Class 12	2027	Sample Paper	Computer Science

GOVERNEMENT OF KARNATAKA

KARNATAKA SCHOOL EXAMINATION AND ASSEMENT BOARD

6th CROSS, MALLESHWARAM, BENGALURU-560 003

2026-27 II PUC MODEL QUESTION PAPER-4

SUBJECT: COMPUTER SCIENCE **MAXIMUM MARKS: 70**

TIME : 03 HRS **NUMBER OF QUESTIONS: 44**

PART A

Answer ALL the questions. Each question carries ONE mark. **20 x 1=20**

I. Select the correct answer from the choices given.

1. Exceptions defined in the compiler/interpreter are called

a) User-built exception b) User defined exception

c) built-in exception d) Functional exception

2. The method used to position the file object at a particular position in a file is

a) seek b) tell c) load d) dump

3. The +xy is an example for which notation?

a) polish notation b) reverse polish notation c) postfix notation d) infix notation

4. Assertion: A :Queue is a non linear data structure

Reason: R : Insertion and deletion takes place at same end

a) A is true and R is correct reason.

b) A is true and R is not correct reason.

c) A is false and R is correct reason.

d) A is false and R is not correct reason.

5. The smallest element from the unsorted part is swapped with first unsorted element in

a) Bubble sort b) Selection sort c) Insertion sort d) Shell sort

6. Application of binary search is

a) Pile of plates

b) Buying railway ticket

c) Sending print commands from same or different computers.

d) Searching a dictionary.

7. The attribute chosen by the database designer to uniquely identify the tuples in a relation is called

a) Foregin Key b) Compsite Primay key

c) Secondary key d) Primary key

8. The columns of a relation are

a) Attribute b) Domain c) Tuples d) Degree

9. In MYSQL which datatype is used to represent the given format '23-12-2020'?

a) DATE b) CHAR c) INT d) FLOAT

10. Which command is used to view the structure of an already created table?

a) CREATE b) ALTER c) DESC d) UPDATE

11. Who invented world wide web?

a) Roy Timlinson b) Tim Berners Lee

c) Jan Lukasiewicz d) Alan Turing

12. The network device that serves as the entry and exit point of a network is

a) Repeater b) Hub c) RJ45 d) Gateway

13. In which data communication the devices can send and receive data or control signals in both directions but not at the same time?

a) Simplex communication

b) Half Duplex communication

c) Duplex communication

d) Full Duplex communication

14. Expanded form of SMTP is

a) Simple Mail Transfer Protocol

b) Switch Mail Transfer Protocol

c) Serviced Mail Transfer Protocol

d) Secure Mail Transfer Protocol

15. One strategy to avoid the threat of password leaks by keyloggers is to use

a) Qwerty keyboard

b) Ergonomics Keyboard

c) Compact Keyboard

d) Virtual Keyboard

II Fill in the blanks choosing the appropriate word/words from those given in the brackets.

(mod, Where, try, finally, End of line, DBMS)

16. Exceptions are caught in the _____ block and handled in the except block.

17. Each line of a text file is terminated by a special character called the _____.

18. _____ serves as an interface between the database and end users or application programs.

19. The _____ clause is used to retrieve data that meet some specified conditions.

20. The math function which returns the remainder after dividing number A by number B is _____.

PART B

III Answer any FOUR questions. Each question carries TWO marks. 4 x 2 = 8

21. Define PUSH and POP operation.
22. What is Deque? Write its basic structure.
23. Write a note on binary search.
24. List any two data models.
25. What is the use of update command? Give its syntax.
26. Write a note on PAN type of networking.
27. Mention different terms that the capacity of a channel is measured.

PART C

IV Anser any FOUR questions. Each question carries THREE marks. 4 x 3=12

28. Explain the following built-in exceptions
    a. Keyboardinterrupt b. Zerodivision error c. Overflowerror
29. Write three different ways to read the contents of a file.
30. What are the different time complexities? Explain.
31. Write a note on Search by Hashing.
32. Explain any three key concepts in DBMS.
33. Give an example for the following string functions.
    a. Ucase( ) b. length( ) c. ltrim( )
34. Briefly explain about FTP.

PART D

V Anser any FOUR questions. Each question carries FIVE marks. 4 x 5 = 20

35. What is a stack? Write two applications of stack in real life and two applications of stack in programming.
36. Explain different operations performed on Queue.
37. Assume the NumList has seven elements [8, -4, 7, 17, 0, 2, 19]. Find the key element 17 in NumList using linear search algorithm.
38. What are limitations of file system? Explain.
39. Explain different types of Network topologies.
40. Write a note on twisted pair cable.
41. What is a malware? What are the modes of malware distribution?

PART E

VI. Answer any TWO questions. Each question carries FIVE marks. 2 x 5 = 10

42. Using bubble sort algorithm sort the below elements in ascending order by showing various passes , elements are 99, 88, 77, 66, 55, 33

43. Assume the weight of students in a class are as follows [45 , 48, 45, 42, 39].Find mean, median, mode and range. Also write the formula to find standard deviation.

44. Write the appropriate query for the following table.

Table Name : Movie

Mname	Category	Release date	Production cost
G gudi	Forestry	1980-01-01	20,00,000.00
Bahubali	Dramatic	2010-02-02	10,00,00,000.00
Charlie	Comedy	1960-03-03	15,00,000.00

a. Display the record with Mname strats with a letter B.

b. Find the number of movies in a table.

c. Add Rs. 500,000.00 to production cost for Charlie movie

d. Find total production cost.

e. Display all the records in ascending order on release date.

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