



- (d) What do you understand by Cardinality Ratio?
- (e) What is the use of Conflict Serializability?
- (f) Give an example of data control language.
- (g) Define the term total participation in E-R model.
- (h) Differentiate between group by and order by Clause.

**SECTION – B**

2. Attempt any two parts of the following :  $2 \times 6 = 12$
- (a) Outline the ANSI-SPARC 3 level DBMS architecture. Distinguish clearly between the levels.
  - (b) Describe and distinguish clearly the integrated file approach and the database management system approach to data processing system.
  - (c) What is the use of Normalization? Explain 3NF with example.

- (d) Check given schedule is view serializable or not. Justify your answer.

$T_1$	$T_2$
Read (A) $A := A - 50$ Write (A)	
	Read (B) $B := B - 10$ Write (B)
Read (B) $B := B + 50$ Write (B)	
	Read (A) $A := A - 10$ Write (A)

### SECTION – C

**Note :-** Attempt all questions.  $4 \times 10 = 40$

3. Attempt any two parts of the following :  $5 \times 2 = 10$

- Draw an E-R diagram from online book store.
- Why joins are required in DBMS? Explain all types of joins with example.
- What are the anomalies in DBMS? Explain.

*[ P. T. O. ]*

(c) What are recoverable schedule? Is given schedule is recoverable or not? Justify your answer :

T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>
Read (A) Read (B) Write (A) C		
	Read (A)	
		Write (A)
	Write (A)	
	C	Read (B) Write (B)
		C

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