

## UNSOLVED PAPERS

*Dr. Bhim Rao Ambedkar University, AGRA*

*BCA V<sup>th</sup> Sem. Examination, Dec. 2019*

*BCA -501 : Introduction to D.B.M.S.*

**Times : 3 Hours]**

**[Total Marks : 75]**

**[Minimum Marks : 30]**

**Note :** Attempt any five questions. All questions carry equal marks.

1. (a) Discuss and compare different types of data models. 5  
(b) Discuss data independence in context of database. Explain briefly different types of data independence. 5
2. (a) What do you mean by file organization? discuss different techniques of file organization in brief used in database. 5  
(b) What is hashing? Discuss different techniques of hashing in brief. 5
3. (a) What is a relationship? Give examples of different types of relationships in context of database. 5  
(b) Discuss different types of notations used in E-R diagram. Design an E-R diagram for keeping track of information about your institute database. 5
4. (a) What do you mean by anomalies? Discuss methods to reduce anomaly. Also discuss different types of anomalies. 5  
(b) What is normalization? Discuss different types of normalization in brief. 5
5. (a) What is constraint? Discuss different types of constraints in brief. 5  
(b) Explain selection and projection operations in relation algebra with suitable examples. 5
6. (a) Discuss different types of SQL Commands with suitable examples. 5  
(b) What do you mean by transactions? Explain ACID properties of transaction. 5
7. (a) What is time stamp? Explain briefly two methods of generating time stamps. 5  
(b) What is join operation? Explain different types of join with syntax and examples. 5
8. (a) What do you mean by PL/SQL? Explain while....loop statement in PL/SQL with an example. 5  
(b) Explain lock and unlock operations for binary locks. 5

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9. (a) What do you mean by key? Discuss different types of keys used in database. How primary key and candidate keys are different from each other. 5
- (b) Discuss various security issues with database. Also suggest solutions to the threats for security in database. 5
10. (a) Discuss different concurrency control techniques in brief. 5
- (b) What is database recovery? Discuss different techniques of database recovery in brief. 5

**UNSOLVED PAPER**

**Dr. B.R. Ambedkar University, AGRA**  
**BCA VI<sup>th</sup> Sem. Examination, 2017**  
**BCA - 309 : E-Commerce**

**Note :** Attempt any five questions. All questions carry equal marks.

1. (a) Define following : 5  
 (i) Porter's value chain (ii) Inter Organizational system
- (b) What is the scope of E-commerce? Define E-commerce trade cycle by suitable example. 6
- (c) Explain Electronic Data Interchanging. 4
2. (a) Define Software Agents For B2B E-commerce? Write roles of s/w agents. 6
- (b) How websphere commerce provide integration between customer, partner and channels with existing applications.
- (c) What In hand Nut & Bolts of Business-to-business E-commerce. 4
3. (a) How can you handle Intranet and Extranet? Explain some of the application both. 6
- (b) What are advantage of E-marketing? 4
- (c) What are the various models in E-Governance scenario? Compare them with business models. 5
4. (a) Explain History and development of Secure Electronic Transaction of Communication protocol. 5
- (b) What are characteristic of B2B, B2C and B2G E-commerce? 5
- (c) Define attributes of cash payment by Donal O' Mahony. What are security issues of E-Payment System?
5. (a) Define electronic fund transfer System. What are the advantages of EFT? Define/Explain at least three most popular tools for EFT. 2+2+4
- (b) What are the issues and challenges of Electronic Payment System? What are problem and prospect with respect to users, issuers and regulators in electronic payment system? 3+4
6. (a) Define model E-commerce on basis of ethical issues. 2
- (b) Explain following in your words :  
 "Intellectual property can be broken down into four types : Patents, trademarks, copy rights and trade secrets."
- (c) Define internet censorship declared at HongKong? 4
- (d) How you define chatting on web and chat s/w? 4

## **Unsolved Papers, E-Commerce and ERP (BCA : 302) | 89**

7. (a) Define all seven important infrastructure decision that E-commerce business face. 4
- (b) What are tips for safe electronic shopping? 3
- (c) What is internet protocol in internet protocol suit? Define Datagram construction at different OSI layer. 4
- (d) Write short notes on Contract, Gambling. 4

## UNSOLVED PAPERS

Dr. Bhim Rao Ambedkar University, AGRA

BCA III<sup>rd</sup> Sem. Examination, Dec. 2015

BCA 303 : Computer Architecture & Assembly Language

Time : 3 Hours]

[Total Marks : 75

[ Minimum Marks : 30

Note : Attempt any five questions. All questions carry equal marks.

1. What are Microoperation ? Explain the following with examples.
  - (i) Logic Microoperation
  - (ii) Shift Microoperation
2. What is Interrupt ? Explain the different types of Interrupts.
3. What is the purpose of Addressing mode ? Explain the following with example :
  - (i) Relative Addressing mode
  - (ii) Indirect Register mode
4. What is pipelining ? Compare RISC Pipeling with CISC pipelining.
5. Explain Booth's Algorithm with example.
6. What is DMA Transfer ? Explain. What are IOP'S ? Discuss.
7. What is microprocessor ? Give the brief introduction of Intel 8085 $\mu$ p.
8. What is assembler ? Write down an assembly language programme to add two fixed Nos.
9. Write short notes on any two of the following :
  - (a) Super Computer
  - (b) Cache Memory
  - (c) Divisor Algorithms



**UNSOLVED PAPER**

**Dr. Bhim Rao Ambedkar University, AGRA**  
**BCA IV<sup>th</sup> Sem. Examination, May, 2019**  
**BCA -207 : Operating Systems**

**Note :** Attempt any five questions. All questions carry equal marks.

1. (a) What is an Operating System?  
 (b) Why is the Operating System viewed as a resource allocator and control program?  
 (c) What is the Kernel?
2. (a) Define CPU scheduling.  
 (b) What is preemptive and non-preemptive scheduling?  
 (c) What do you mean by a critical section problem?
3. (a) Define deadlock.  
 (b) What are conditions under which a deadlock situation may arise?  
 (c) Define deadlock prevention and deadlock avoidance.
4. Consider the following page reference string :  
 2, 3, 4, 2, 1, 5, 6, 4, 1, 2, 3, 7, 6, 3, 2, 1.  
 Calculate the number of page faults would occur for the following page replacement algorithm with frame size of 4 and 5.
5. Consider the following snapshot of a system. Execute Banker's algorithm answer the following :  
 Allocation Max Available

	A	B	C	D	A	B	C	D	A	B	C	D
P0	0	0	1	1	0	0	1	1	1	5	2	2
P1		1	0	0	1		1	7	5	1		
P2			1	3	5	1		2	3	5	2	
P3				0	0	1	1	5	6	5	1	

- (i) What is the content of a need matrix?  
 (ii) Is the system in a safe state? If the system is safe, show how all the process could complete their execution successfully. If the system is unsafe, show how deadlock might occur. Explain.
6. (a) Define the following :
  - (i) Buffering.
  - (ii) Spooling.
  - (iii) Caching.
7. (a) Explain the various disk scheduling techniques.
- (a) What is demand paging and what is its use?

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**(b)** Discuss the following page replacement algorithms, giving a suitable page reference string :

- (i)** LRU
- (ii)** FIFO
- (iii)** Optimal

**8.** Write short notes on any three of the following :

- (a)** Semaphore.
- (b)** Throughout.
- (c)** Turnaround Time.
- (d)** Seek Time and Latency Time.