

Day: Tuesday
Date: 24/04/2018

S-2018-1714

Time: 10.00 AM TO 01.00 PM
Max. Marks: 100

N.B:

- 1) Attempt **ANY FOUR** questions from Section-I and **ANY TWO** from Section-II.
 - 2) Answer to both the Sections should be written in the **SEPARATE** answer book.
 - 3) Figures to the write indicate **FULL** marks.
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SECTION-I

- Q.1** Explain in detail legal, ethical and professional issues in information security. **(15)**
- Q.2** Explain the following: **(15)**
- a) DoS (Denial of service) attack.
 - b) TEMPEST standards.
 - c) Kerberos Authentication.
- Q.3** Describe the applications of Cryptography in various areas in today's scenario. **(15)**
- Q.4** Explain in detail what is physical security including emanations security. **(15)**
- Q.5** What are network topologies? Explain different types of topologies in detail? **(15)**
- Q.6** Describe different security protocols along with its applications in detail. **(15)**
- Q.7** Write short notes on **(ANY THREE)**: **(15)**
- a) Information Flow Model
 - b) Need of Information Security
 - c) Risk Management
 - d) Security levels

SECTION-II

- Q.8** What is ciser cipher? Explain different algorithms like Advanced Encryption Standard (AES) and Data encryption standard (DES) in detail. **(20)**
- Q.9** Rakesh is an information security professional working in ABC InfoTech. He got an assignment to assess the security of this organization. Explain the procedure how Rakesh will assess the security of organization. **(20)**
- Q.10** Explain what mandatory and discretionary controls are at the time of implementation of security in any organization. **(20)**

B.C.A. SEM–VI (2014 COURSE) CBCS : SUMMER - 2018

SUBJECT: BUSINESS INTELLIGENCE

Day : **Saturday**
Date : **28/04/2018**

S-2018-1715

Time : **10.00 AM TO 01.00 PM**
Max. Marks: 100

N.B.

- 1) Attempt any **FOUR** questions from Section – I and attempt any **TWO** questions from Section - II.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Answers to both the sections should be written in **SEPARATE** answer book.
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SECTION – I

- Q.1** What are the needs, objectives and techniques used in data preprocessing? **(15)**
- Q.2** Explain the need and different operations on OLAP. **(15)**
- Q.3** BI is important in decision making process. Justify with suitable example. **(15)**
- Q.4** What is market basket analysis, and why it is needed? **(15)**
- Q.5** State and explain in detail different issues in classification and prediction. **(15)**
- Q.6** Association rule mining is used for knowledge discovery. Explain with suitable example. **(15)**
- Q.7** Draw and explain the architecture of data warehouse. **(15)**

SECTION – II

- Q.8** Explain in detail data warehouse schemes: **(20)**
a) Star schema
b) Snow flake schema
c) Fact constellation schema
- Q.9** What are major clustering methods, explain K-means method in detail? **(20)**
- Q.10** What are reasons for creating data marts? Explain different components of data mart **(20)**

B.C.A. SEM–VI (2014 COURSE) CBCS : SUMMER - 2018
SUBJECT : WEBSITE DEVELOPMENT

Day : **Wednesday**
Date : **02/05/2018**

S-2018-1716

Time : **10.00 AM TO 01.00 PM**
Max. Marks : 100

N.B.:

- 1) Attempt **ANY FOUR** questions from Section – I and **ANY TWO** questions from Section – II.
 - 2) Answers to both the sections should be written in **SEPARATE** answer books.
 - 3) Figures to the right indicate **FULL** marks.
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SECTION – I

- Q.1** a) Explain PHP classes with appropriate examples. [08]
b) Explain various operators used in PHP. [07]
- Q.2** Explain date and time functions in PHP. [15]
- Q.3** How items in the array can be reordered? Explain with the example. [15]
- Q.4** Explain working of sessions in reference with: [15]
a) Start and destroy session c) Passing session ID in queries
b) Session variables d) Unsetting variables
- Q.5** Differentiate between following controls of forms: [15]
a) Radio button and checkbox
b) Label and textbox
c) Combo box and list box
- Q.6** Explain steps to connect and disconnect database in MYSQL with PHP. [15]
- Q.7** Write short notes on **ANY TWO** of the following: [15]
a) Cookies
b) Grouping and Aggregate clauses
c) Web database architecture

SECTION – II

- Q.8** Book-master (book_Id, booktitle, author_Id, price) [20]
Author (author_Id, author_name, publication)
Write PHP script:
a) Create database 'Library' having book-master and author tables. Create tables using appropriate constraints.
b) Write a sub query to display all information of book title, author and publication.
- Q.9** Create an application in PHP to design an input form for creating registration form for new e-mail Id. [20]
- Q.10** Write user defined functions for: [20]
a) To print GCD of two numbers.
b) To print factorial of a given number.

Day : Friday
Date : 04/05/2018

S-2018-1717

Time : 10.00 AM TO 01.00 PM
Max. Marks : 100

N. B. ;

- 1) Attempt **ANY FOUR** questions from Section – I and **ANY TWO** questions from Section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPERATE** answer books.
- 4) Use of non – programmable **CALCULATOR** is allowed.

SECTION - I

Q. 1 Explain steps involves in Operation Research. (15)

Q. 2 Solve the following Problem: (15)

$$\text{Maximise } Z = 28x_1 + 30x_2$$

$$\text{Subject to } 6x_1 + 3x_2 \leq 18$$

$$3x_1 + x_2 \leq 8$$

$$4x_1 + 5x_2 \leq 30$$

$$\text{and } x_1, x_2 \geq 0$$

Q. 3 The distribution of commodity from warehouses A, B, C, D is planned to three sources P, Q and R. The level of surpluses and requirements at various sources are given in the following matrix with related cost of transportation as cell of the matrix. (15)

	P	Q	R	Surpluses
A	2	7	4	5
B	3	3	1	8
C	5	4	7	7
D	1	6	2	14
Requirement	7	9	18	

Work out the optimal cost of distribution.

Q. 4 Five men are available to do five different jobs. From past records, the time (in hours) that each man takes to do a job is known and is given in the following matrix: (15)

Men \ Jobs	I	II	III	IV	V
A	2	9	2	7	1
B	6	8	7	6	1
C	4	6	5	3	1
D	4	2	7	3	1
E	5	3	9	5	1

Find the assignment of men to jobs that will minimize the total time taken.

- Q. 5** Using various criteria for decision making, find the optimal strategy for the marketing manager of an automobile company. The conditional pay-off in crores of rupees for the two models of a car the various likely sales figure are as follows: **(15)**

Sales (Units)			
Model	1 lakh	2 Lakh	3 Lakh
X	30	10	10
Y	35	20	3

- Q. 6** Draw the network diagram of activities for the project **(15)**

Activity	A	B	C	D	E	F	G	H
Predecessor Activity	-	A	A	B	B, C	E	D, F	G

- Q. 7** Write short notes on the following: **(15)**

- Optimality check
- Application of LPP
- Queuing Application

SECTION - II

- Q. 8** A departmental store has a single cashier. During the rush hours, customers arrive at the rate of 20 customer per hour. The average number of customers that can be processed by the cashier is 24 per hour. Assume that the conditions for the use of single – channel queuing model apply. What is the **(20)**
- Probability that the cashier is idle.
 - Average number of customers in the queuing system.
 - Average time a customer spends in the system.
 - Average number of customers in the queue.
 - Average time a customer spends in the queue waiting for service.

- Q. 9** Solve the following problems using simplex method: **(20)**

$$\text{Maximize } Z = 3x_1 + 2x_2$$

$$\text{Subject to } x_1 + x_2 \leq 4$$

$$x_1 - x_2 \geq 2$$

$$\text{and } x_1, x_2 \geq 0$$