

B.C.A. SEM-IV (2014 Course) CBCS : SUMMER - 2019

SUBJECT : COMPUTER NETWORKS - I

Day : Tuesday
Date : 16/04/2019

S-2019-2071

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 **SAME** answer book.

SECTION - I

- Q. 1** Define Network Topology. Explain different types of network topologies in detail. (15)
- Q. 2** What are different classes of transmission media? Explain unguided media in detail. (15)
- Q. 3** Differentiate between the following: (15)
- a) Half Duplex Vs. Full Duplex
 - b) Bridge Vs. Gateway
- Q. 4** Explain the frame format and frame types of wireless LAN (IEEE 802.11). (15)
- Q. 5** Explain the role of connecting devices in communication. Explain Hub and switches in detail. (15)
- Q. 6** What is Local Area Network (LAN)? Explain LAN components in detail with appropriate diagram. (15)
- Q. 7** Write short notes on **ANY THREE** of the following: (15)
- a) E – mail
 - b) Radio – waves
 - c) Internet Information Server (IIS)
 - d) Gateways

SECTION - II

- Q. 8** Explain Bluetooth architecture and its types in detail. (20)
- Q. 9** Explain various switching techniques with their advantages and disadvantages. (20)
- Q.10** What is importance of layered architecture? Explain OSI reference model in detail. (20)

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B.C.A. SEM-IV (2014 Course) CBCS : SUMMER - 2019

SUBJECT: SOFTWARE TESTING

Day : **Saturday**
Date : **20/04/2019**

S-2019-2072

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 **SAME** answer books.

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- Q.1** a) What is software? Give the various categories of software. (08)
b) Discuss role of each member involved in software development. (07)
- Q.2** a) What is testing? Explain various goals and characteristics of it. (08)
b) Why testing is necessary during coding stage? Explain in brief. (07)
- Q.3** a) Explain software testing life cycle. (08)
b) What are the principles of verification and validation? (07)
- Q.4** a) Distinguish between testing and debugging. (08)
b) What is unit testing? Why is it necessary? (07)
- Q.5** What is Risk? Describe different types of it. (15)
- Q.6** a) Give the debugging strategies in detail. (08)
b) What is client server architecture? Give the need of it. (07)
- Q.7** Write short notes on any **TWO** of the following: (15)
a) Testing patterns
b) Testing process
c) Software development life cycle

SECTION-II

- Q.8** Describe the integration testing in detail. (20)
- Q.9** Explain black box testing methods with their merits and demerits. (20)
- Q.10** Describe the validation testing in detail. (20)

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B.C.A. SEM-IV (2014 Course) CBCS : SUMMER - 2019

SUBJECT : JAVA PROGRAMMING

Day : Thursday
Date : 02/05/2019

S-2019-2073

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 the **SAME** answer book.

SECTION - I

- Q.1** What do you know about Java Virtual Machine (JVM)? Explain its working. **(15)**
- Q.2** What is applet? Explain life cycle of it with example. **(15)**
- Q.3** Briefly describe arithmetic and logical operates in Java. **(15)**
- Q.4** What is need of loops? Explain various loops in Java with suitable example. **(15)**
- Q.5** Explain method overloading and overriding with example. **(15)**
- Q.6** What is constructor? Describe its use and its types with example. **(15)**
- Q.7** Write short notes on **ANY THREE** of the following : **(15)**
- a) Final class
 - b) Multiple catch blocks
 - c) Package
 - d) Garbage collection

SECTION - II

- Q.8** Write a Java program to read 10 integer numbers divisible by 5 and print sum of them. Also write a code to throw and catch exception if an entered number is not divisible by five. Make Sure that all 10 numbers are accepted even if exception is fired. **(20)**
- Q.9** Develop an interface Shape with method area() returning double. Implement it in classes Rectangle and Circle. Also write a code to use these classes. **(20)**
- Q.10 a)** Write a Java program to read a number and print all its divisors. **(10)**
- b)** Write a Java program to read a single digit number using command line and print its word equivalent. **(10)**
e.g. Input: 7
output: Seven

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B.C.A. SEM-IV (2014 Course) CBCS : SUMMER - 2019
SUBJECT : STATISTICS

Day : Thursday
Date : 25/04/2019

S-2019-2074

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 SAME answer book.
- 3) Use of non-programmable calculator is allowed.
- 4) Figures to the right indicate **FULL** marks.

SECTION – I

Q.1 Explain the term Statistics. Discuss its scope in Business. (15)

Q.2 What is Scatter Diagram? How does it help in studying the correlation between two variables in respect of both of its direction and degree? (15)

Q.3 Represent the following data by a pie-diagram: (15)

Item	Expenditure in Rs.
Food	84
Clothing	27
Recreation	10
Education	15
Rent	23
Miscellaneous	21

Q.4 Calculate mean, median and mode for the following data: (15)

Class	10–20	20–30	30–40	40–50	50–60	60–70	70–80
Frequency	10	20	35	50	45	30	15

Q.5 Calculate mean deviation about median and its coefficient from the following data: (15)

Age (in years)	25–30	30–35	35–40	40–45	45–50	50–55
No. of Workers	30	47	51	38	28	19

Q.6 Calculate Karl-Pearson's coefficient of correlation from the following data: (15)

X	80	90	95	69	60	80	68	62
Y	125	135	160	110	120	136	123	108

Q.7 Write short notes on **ANY THREE** of the following: (15)

- a) Absolute and relative measures of dispersion
- b) Frequency distribution
- c) Limitations of Statistics
- d) Good measures of Central Tendency
- e) Properties of Correlation Coefficient

P.T.O.

SECTION – II

Q.8 Define Primary Data. Explain any four primary data collection methods in brief. (20)

Q.9 a) Draw Histogram and frequency polygon for the following data: (10)

Marks	10–20	20–30	30–40	40–50	50–60	60–70
No. of Students	20	30	55	45	20	18

b) Draw Ogive curves for the following data. (10)

Marks	10–20	20–30	30–40	40–50	50–60	60–70
No. of Students	8	14	20	25	15	10

Q.10 You are given the data relating to purchases and sales. Obtain the two regression equations and estimate the likely sales when the purchases equal to 125 (20)

Purchases	63	75	100	75	80	56	75	93	90	50
Sales	110	120	131	120	132	96	120	138	95	87

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