



ADAMAS UNIVERSITY
SCHOOL OF ENGINEERING AND TECHNOLOGY

END-SEMESTER EXAMINATION: DECEMBER 2019

(Academic Session: 2019 – 20, Semester Term: Aug 2019– Dec 2019)

Semester: III

Name of the Program: BCA

Stream: CSE

PAPER TITLE: Data Communication & Computer Network

Maximum Marks: 40

Total No of questions: 09

PAPER CODE: EEC32101

Time duration: 3 hours

Total No of Pages: 01

DO NOT SCATTER THE ANSWERS FOR DIFFERENT PARTS OF A QUESTION.

Answer all the Groups

Group A

(Answer all the questions)

5 × 1 = 5

1. a) Give one example of guided transmission medium.
- b) What are the full forms of OSI & ISO?
- c) What is public key crypto-system?
- d) What is the propagation time if the distance between the two points is 12,000 km? Assume the propagation speed to be 2.4×10^8 m/s in cable.
- e) Which OSI layer does the hub belong to?

Group B

(Answer any three questions)

3 × 5 = 15

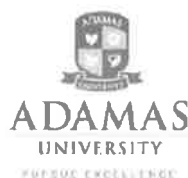
2. What do you mean by Data Communication? Explain the four fundamental characteristics of an effective data communication system. [2+3]
3. What are the different types of random access technique? Explain any one type in brief. [2+3]
4. What are the different components of a crypto-system? Differentiate between symmetric and asymmetric key cryptography. [2+3]
5. What do you mean by transmission media? Classify different types of transmission media along with description. [2+3]
6. Describe briefly the five security services associated with a network. [5]

Group C

(Answer any two questions)

2 × 10 = 20

7. Define framing and explain its need in data link control. Differentiate between byte-stuffing and bit-stuffing. [5+5]
8. Describe pure ALOHA protocol along with detailed flowchart. How does slotted ALOHA help to overcome the limitations of pure ALOHA? [5+5]
9. Write short notes on- (a) Digital Signature (b) RSA algorithm [5+5]



ADAMAS UNIVERSITY
SCHOOL OF ENGINEERING AND TECHNOLOGY
END-SEMESTER EXAMINATION: DECEMBER 2019
(Academic Session: 2019 – 20, Semester: Aug. 2019 – Dec. 2019)

Name of the Program: B.C.A.

Paper Title: (HSS III) ENGLISH COMMUNICATION

Maximum Marks: 40

Total No of questions: 10

Semester: III

Paper Code: HEN42111

Time duration: 3 HOURS

Total No of Pages: 2

Group A

Read the passage carefully and answer the questions given below. Each question carries 2 marks. (2×5)

Although the fight to banish plastics had a sluggish start, it is picking up slowly in some parts of Kolkata. Green activist Subhash Datta says we don't need to worry about Kolkata getting inundated by 2050 because of Climate change because by that time we will be overrun by plastic waste. However the ban on single-use plastic after Durga puja was taken well by both big and small traders.

But inaction or incomplete follow up action has once more dogged markets across the city. The worst form of single use plastics is the ubiquitous multi layered packaging used for sachets in packing and storing tobacco products like Gutkha and eatables like biscuits or chocolates. The solution lies in replacing plastics with materials that can be recycled and are biodegradable.

1. Name the Green activist mentioned in the passage.
2. What does the word "Inundated" mean? Mention the year within which Kolkata is supposed to be inundated.
3. What ban was imposed after the Durga puja?
4. Which is the worst form of single use Plastics?
5. Provide a title to the passage and suggest a solution to reduce the problem of Plastic Waste.

Group B

Answer any 3 questions out of the 5 questions given. Each question carries 5 marks. (3×5)

2. Choose the correct alternative :

(1×5)

- a. Ramisha was unable to _ (walk/ wake) post her knee surgery.
- b. In a big city there _ (is/are) a lot of traffic.
- c. He _ (hated/had hated) early mornings.

- d. The telephone booth was far off _ (from/to) his hotel.
- e. The man _ (outside/out) the window was grimacing at me shamelessly.
- 3. State two advantages of face to face communication. (5)
- 4. What role does physical environment play in communication? Discuss. (5)
- 5. Evaluate the role of language in Communication. (5)
- 6. Can gender act as an important barrier in communication? Explain. (5)

Section C

**Answer any 3 questions out of the 4 alternatives given. Each question carries 5 marks.
(3×5)**

- 7. Write a paragraph in not more than 300 words on Air Pollution.
- 8. Write a letter to your parents requesting them to join you for a weekend trip that you have arranged with your friends.
- 9. Write a memo informing your colleagues about a new office order that requires employees to work overtime on Saturdays. You must also mention the bonus offered by the company for the extra work hours.
- 10. Provide Arguments in favour/against the statement; " Communication gap has increased because of Communication through social media."



ADAMAS UNIVERSITY
END-SEMESTER EXAMINATION: DECEMBER, 2019)
(Academic Session: 2019 20, Semester Term: Aug. 2019 Dec 2019)

Name of the Program: BCA

Semester: III

Stream: CSE

PAPER TITLE: Probability & Statistics

PAPER CODE: SMA32141

Maximum Marks: 40

Time Duration: 3 Hours

Total No. of Questions: 13

Total No. of Pages: 2

Instructions:

1. Please follow all the instructions given on the cover page of the Answer Booklet Strictly.
 2. Assumptions made if any, should be stated clearly at the beginning of your answer.
 3. No Mobile Phones will be permitted in the Examination Hall.
 4. Non-programmable Calculator is allowed in the Examination Hall.
-

Section A

Answer All The Questions

$5 \times 1 = 5$

1. If X is symmetric binomial variable with $n=36$, then find the variance of X .
2. If $E(X) = 5$, $Var(X) = 11$ then find the value of $E(X^2)$.
3. Define primary data.
4. Write down the range of correlation coefficient.
5. If 2 variables x and y are related as $2x + 3y = 21$ and mode of x is 3, find the mode of y .

Section B

Answer any THREE of the following

$3 \times 5 = 15$

6. An unbiased die is thrown twice. Write down the sample space of this experiment. If X denotes the sum of points obtained in the two throws, obtain the probability distribution of X , $E(X)$, $Var(X)$.
7. In partially destroyed Lab record, only the lines of regression of x on y and y on x are available as $3x + 9y = 46$ and $3x + 12y = 19$ respectively. Calculate \bar{x} , \bar{y} and the coefficient of correlation between x and y .

8. Find the median and mode for the following data:

Class Limit:	31-40	41-50	51-60	61-70	71-80
Frequency :	6	14	20	7	3

9. Find the probability that birthdays of 7 persons will fall on 7 different days of the week, assuming equal probability for each of days.
10. If events A and B are independent, then prove that the events A^c and B^c are also independent.

Section C

Answer any TWO of the following

$2 \times 10 = 20$

11. There are 3 boxes numbered I, II, III that contains 3 red and 1 blue; 3 blue and 1 red; 2 red and 2 blue balls respectively. One box is chosen at random and one ball is drawn at random from it.
- (a) What is the probability that the ball drawn will be a red one?
- (b) If it is given that the ball drawn is red, what is the probability that it came from box III?
12. The p.m.f $f(x)$ of a random variable X is '0', except at the points $x = 0, 1, 2$ and $f(0) = c$, $f(1) = 2c - 3c^2$, $f(2) = 4c - 1$.
- (i) Determine the value of c.
- (ii) Find $P(X > 0 / X < 2)$.
- (iii) Find expectation and variance of X.
13. Heights (X, in inches) and weights (Y, in kg) of 5 persons are given below:

X:	64	60	67	59	69
Y:	57	60	73	62	68

Determine the correlation coefficient between X and Y.



ADAMAS UNIVERSITY
END -TERM EXAMINATIONS (December 2019)
School of Engineering & Technology

Program: BCA

Semester- 3

Paper Name: E-Commerce & Applications

Paper Code: MBA32141

Maximum Marks: 40

Time: 3Hrs

Total No of questions: 9

Total No of Pages: 2

Section A

Very Short answer type questions (any five)

(1x5=5)

1.

- a. An analysis of competitive advantage is necessary, for deciding on _____.
- b. Continuous internet contact, with the customers can be maintained through _____.
- c. The entire Supplier-to-Customer pipeline of Material-Flow is known as the _____.
- d. NEFT stands for _____.
- e. Backbone of e-payment in e-commerce is _____.

Section B

Short answer type questions (Answer Any three Questions)

(5x3=15)

2. Explain the major-differences between the B2B and B2C Models of E-Commerce with an example.
3. What are the Factors that led to the use of the Internet, as an Enabling Technology for E-Commerce? Explain these factors with suitable example.
4. What are the Major-Differences between Traditional Brick and Mortar Commerce and E-Commerce? Explain these differences with examples.

5. What is E-Bill presentment and payment (EBPP)? What are the types of EBPP? Explain with suitable examples.
6. Discuss about the company policies and procedures.

Section C

Essay Type Questions (Any two out of three Questions) (2x10=20)

7. Describe a comparison, in as much detail as possible, between the 2 major B-to-C E-Commerce companies operating in the Indian Market, called Amazon and Flipkart.
8. Explain the required features of the B-to-B Model of E-Commerce with suitable examples.
9. What are the Technology advancements to empower E-Commerce? Explain these advancements with examples.

ADAMAS UNIVERSITY
SCHOOL OF ENGINEERING AND TECHNOLOGY

END-SEMESTER EXAMINATION: DECEMBER 2019

(Academic Session: 2019 – 20, Semester Term: Aug 2019– Dec 2019)

Name of the Program: BCA

Semester: III

Stream: CSE

PAPER TITLE: Object Oriented Programming

PAPER CODE: ECS32103

Maximum Marks: 40

Time duration: 3 hours

Total No of questions: 9

Total No of Pages: 02

Answer all the Groups

Group A

(Answer all the questions)

5 × 1 = 5

1.
 - a. If super class and subclass have same variable name, which keyword should be used to use super class?
 - b. Which of these data types is used to store command line arguments
 - c. Which component is used to compile, debug and execute java program
 - d. In order to restrict a variable of a class from inheriting to subclass, how variable should be declared?
 - e. Which keyword is used by calling function to handle exception thrown by called function

Group B

(Answer any three questions)

3 × 5 = 15

2. What is the need of a class? Explain different types of access specifiers in Java.
3. Explain the OOP's principle.
4. How to display a string in applet? How to resolve method overriding in run time show with a program?
5. Explain the hierarchy of Exception? Describe the different keys used in Exception
6. What is method overloading? Design a class to overload a function Perimeter() that computes the perimeter of a square, a rectangle and a circle:

Perimeter of a square= 4*s

Perimeter of a Rectangle= 2*(l*b)

Perimeter of a circle= 2* pi*r

Write a main method to create object of a class and call the above methods.

Group C

7.

- a. How does java garbage collector work show with an example?
- b. List of special properties of a constructor?
- c. How to overload a constructor show with an example?
- d. Write the advantages of inheritance?

[2+2+2+3+1]

8.

- a. What is the significance of JVM in java programming?
- b. What is Applet? Write an applet program to add two numbers by passing parameters to an applet?
- c. How to achieve multiple inheritance in java. Explain with a suitable example.
- d. Is it possible to compile and run a java program without writing main (). If yes then show with an example.

[2+1+3+3+1]

9.

- a. What is an Abstraction? In how many ways abstraction can be achieved.
- b. Write an abstract class special with an abstract method process (double p, double r), create a subclass Discount and implement the process () with the following formula. $Net = p - p * r / 100$, return Net values. Create another subclass Tax for special and implements the process () method with the following formula: $total = p + p * r / 100$, return the total value in the main ().
- c. Write the difference between throw and throws keyword in Exception Handling.
- d. Write the difference between instance variables and class variables.

[1+1+4+3+1]

