

KHWOPA ENGINEERING COLLEGE

First Assessment - 2019

LEVEL:- B. E Computer /Eighth Semester

SUBJECT:- BEG459CI, Engineering Professional Practice

TIME:- 01:00 hr.

2076/03/03

FULL MARKS:- 25

PASS MARKS:- 10

Candidates are required to give their answers in their own words as far as practicable.

Attempt all questions.

- Q.1. Explain Profession and Professionalism giving suitable examples and describe feature of Profession/ Professionals. [6]
- Q.2. Describe moral and ethics and explain various laws of ethics giving suitable examples. [6]
- Q.3. Describe key roles of engineers in development activities. [6]
- Q.4. Discuss Contract, describe elements and types of contract with suitable examples. [7]

The End

KHWOPA ENGINEERING COLLEGE

Second Assessment - 2019

LEVEL:- B. E Computer /Eighth Semester

SUBJECT:- BEG459CI, Engineering Professional Practice

FULL MARKS:- 25

TIME:- 01:00 hr.

2076/04/28

PASS MARKS:- 10

Candidates are required to give their answers in their own words as far as practicable.

Attempt all questions.

- Q.1. Describe Tort liability, elements of Tort liability and explain types of negligence and liability giving suitable examples. Also discuss general job description of engineers in Public and private sectors. [5]
- Q.2. Explain history of engineering practices in eastern and western societies in detail. Also discuss Individual freedom and societal goals. [5]
- Q.3. Discuss Intellectual property rights and explain Patent, Copy right and Trademarks with suitable examples. Also describe Tender and Tender process in detail. [5]
- Q.4. A road project was completed and handed over in the last month. Though there was still six months liability period, but there occur an accident because of the heap of debris at the road side. The victim sued the road department for their negligence in clearing for the damages occurred. Discuss the situation, identify the liability and find the exact wrong doer. [10]

The End

PURBANCHAL UNIVERSITY
2019

B.E. (Computer)/Eighth Semester/Final

Time: 01:30 hrs.

Full Marks: 40 /Pass Marks: 16

BEG459CI: Engineering Professional Practice (New Course)

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks. Assume any suitable data wherever necessary.

Answer FOUR questions. Question No. (4) is compulsory. $4 \times 10 = 40$

- 1(a) Define Profession/Professionalism and describe feature of professionals with Suitable examples. 5
- (b) Describe general job description of engineers in public and private sectors. 5
- 2(a) Discuss Tort liability, its elements, types of negligence and liability in detail. 5
- (b) Discuss Moral and ethics and describe code of ethics for engineers developed by Nepal Engineering Council (NEC). 5
- 3(a) Describe Intellectual Property right, explain Patent, Copy right and Trade mark in detail. 5
- (b) Describe tender process in detail. 5
4. Because of population from different sources, the transport service in Kathmandu has become very tedious. Passengers have to wait for long. But as the government allowed running microbus on different routs because of road widths, people's participation and People's facilities, people find some kind of support, but because of numbers of microbus increases, the roads, the environment and the thieves spread like a plague. The government could provide public buses that can carry a lot more number of people at a time in single shift loss bus runs and thereby lessening bus fumes. Discuss where the increase of microbus was right decision of the government instead of Public buses? 10

KHWOPA ENGINEERING COLLEGE

First Assessment - 2019

LEVEL:- B. E. (Computer) VIII

SUBJECT:- BEG476CO Data Mining and Data Warehousing

TIME:- 02:00 hrs.

2076/03/01

FULL MARKS:- 50

PASS MARKS:- 20

Candidates are required to give their answers in their own words as far as practicable.

Attempt All Questions.

Q.1. What do you mean by data mining? Write on applications of data mining. Also explain KDD process in details with neat diagram.
[2+2+6]

Q.2. What do you mean by data warehousing? Why do we need data warehouse? Differentiate between OLTP and data warehouse.
[3+3+4]

Q.3. Describe fact constellation schemas of multidimensional data models with appropriate example in detail. Also differentiate between star and snowflake schemas.
[7+3]

Q.4. Why do we need to clean data before storing to data warehouse? Explain ETL process in detail with neat diagrams and appropriate examples.
[3+7]

Q.5. What is the multidimensional data model? How is it used in data warehousing? Also explain fact tables and dimensional tables with examples.
[2.5+2.5+5]

The End

KHWOPA ENGINEERING COLLEGE
Second Assessment - 2019

LEVEL:- B. E. (Computer)/ VIII

SUBJECT:- BEG476CO Data Mining and Data Warehousing

FULL MARKS:- 50

TIME:- 02:00 hrs.

2076/04/27

PASS MARKS:- 20

Candidates are required to give their answers in their own words as far as practicable.

Attempt All Questions.

Q.1. a) Explain different OLAP operations with appropriate examples. [6]

b) Discuss the concept of confidence and support with appropriate examples. [4]

Q.2. a) Explain the data warehouse architecture with neat diagram in detail. [6]

b) Explain briefly on multimedia data mining. [4]

Q.3. a) List different types of OLAP servers and explain any one in detail with neat diagram. [1+4]

b) Perform agglomerative algorithm on the following data and plot the dendrogram using single link technique. Use Euclidean distance to calculate the distance between elements for given data below: [5]

Element	X	Y
P1	0.40	0.53
P2	0.22	0.38
P3	0.35	0.32
P4	0.26	0.19
P5	0.08	0.41
P6	0.45	0.30

Q.4. Write down K-means algorithm for clustering. Using this algorithm, create clusters for the given data. (Take K = 2)

Instance	X	Y
1	2.0	2.5
2	2.0	4.5
3	1.0	1.5
4	1.0	3.5
5	3.0	5.0

Q.5. Define Association Rule. Find frequent item set and using Apriori Algorithm, generate the rules for the following given transaction dataset. (Assume minimum support = 22.22% and minimum confidence = 70%) [2+8]

TId	List of Items
1	Butter, Bread, Egg
2	Bread, Peanut
3	Bread, Coke
4	Butter, Peanut, Bread
5	Butter, Coke
6	Peanut, Coke
7	Butter, Peanut
8	Butter, Coke, Bread, Egg
9	Butter, Coke, Bread

The End

Date: _____

PURBANCHAL UNIVERSITY
2019

B.E. (Computer)/Eighth Semester/Final

Time: 03:00 hrs.

Full Marks: 80 /Pass Marks: 32

BEG476CO: Data Mining & Data Warehousing (New Course)

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer EIGHT questions.

$8 \times 10 = 80$

- 1(a) Why data cleaning and data transformation is required in KDD?
Explain. 5
- (b) Discuss data enrichment with a proper illustration. 5
- 2(a) Explain need of data warehouse. 4
- (b) Mention characteristics and application of data warehousing. 3+3
- 3(a) Differentiate between logical and physical design. 3
- (b) Why multidimensional data model is used in data warehouse?
Describe fact table. 3+4
- 4(a) Explain how transformation, loading, and refreshing are executed
in data warehouse. 10
5. Differentiate between OLTP and OLAP systems. Describe OLAP
architecture. 3+7
6. What is clustering? Explain K-means method with an example. 3+7
7. Describe web usage mining and web structure mining. 5+5
8. Discuss different aspects of security and privacy in data mining. 10
9. Write short note any TWO: 5+5
- (a) Genetic algorithm
- (b) Linear and nonlinear regression.
- (c) Parallelism in data warehousing.

KHWOPA ENGINEERING COLLEGE

First Assessment - 2019

LEVEL:- B. E. Computer/**Eighth Semester**
SUBJECT:- BEG477CO, Cryptography

TIME:- 02:00 hrs. 2076/03/02

FULL MARKS:- 50
PASS MARKS:- 20

Candidates are required to give their answers in their own words as far as practicable.

Attempt All Questions

- Q.1. What do you mean by cryptography? Briefly explain the generic model of secure communication and OSI security architecture. [2+4+4]
- Q.2. Briefly explain any ten terminologies used in cryptography. [10]
- Q.3. Discuss with examples how do the classical substitution cipher like Caesar cipher and Hill cipher work. [5+5]
- Q.4. a) What do you mean by modular arithmetics ? Briefly explain the Euclidean algorithm with example. [2+3]
b) Discuss Group and Integral Domain with suitable examples. [5]
- Q.5. What is Shannon's theory of diffusion and confusion? Explain a single round of DES with suitable diagrams. [3+7]

The End

KHWOPA ENGINEERING COLLEGE

Second Assessment - 2019

LEVEL:- B. E. Computer/**Eighth Semester**
SUBJECT:- BEG477CO, Cryptography

TIME:- 02:00 hrs. 2076-04-29

FULL MARKS:- 50
PASS MARKS:- 20

Students are expected to explain elaborately with relevant examples and draw sketches where necessary.

Attempt All Questions.

- Q.1. What do you mean by cryptography? Briefly explain the security service classification and security mechanisms. [2+3+3]
- Q.2. Discuss with examples how do the classical substitution cipher like Caesar cipher and Hill cipher work. [8]
- Q.3. Find the gcd of 126 and 63. What is Shannon's theory of diffusion and confusion? [4+2+2]
- Q.4. Explain a single round of DES with suitable diagrams. [10]
OR
Explain a single round of AES with suitable illustrations.
- Q.5. Perform Encryption & Description Using RSA algorithm using $p=3, q=11, e=5$ or $7, M= 5$. Discuss which value of e you chose and why? [8]
- Q.6. What is Message Authentication Code? Explain the steps for authentication mechanism in Kerberos. [2+6]
OR
Briefly explain IPSec and SET. [4+4]

The End

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer EIGHT questions.

$8 \times 10 = 80$

1. Explain cryptography with its conventional encryption model. Also discuss OSI security architecture in brief. 5+5
2. Describe working mechanism of mono-alphabetic cipher. Explain integral Domain and field with proper example. 5+5
3. Differentiate between stream cipher and block cipher. How does binary block substitution work? Discuss importance of modular arithmetic. 3+4+3
4. Differentiate between asymmetric and symmetric cryptographic system. Using RSA algorithm, encrypt the word "retaliate" and then decrypt it. 3+7
5. What is Shannon's theory of diffusion and confusion? Explain working mechanism of Fistel cipher. 3+7
6. Mention drawbacks of DES. Describe how IDEA works. 2+8
7. What do you mean by data confidentiality? Explain MAC. Write down applications of hash functions. 2+5+3
8. What are the types of authentication services? Explain centralized authentication schemes in detail. 2+8
9. Write short notes on any TWO:
 - (a) Security Model
 - (b) Secure Electronic Transaction (SET)
 - (c) Staganography5+5

KHWOPA ENGINEERING COLLEGE

First Assessment - 2019

LEVEL:- BE Computer/**Eighth Semester**

SUBJECT:- BEG478CO, Advance Computer Architecture

TIME:- 02:00 hr.

2076-03-06

FULL MARKS:- 50
PASS MARKS:- 20

Candidates are required to give their answers in their own words as far as practicable.

Attempt All Questions.

- Q.1. Define computational model. Explain the concept of Computer Architecture with interpretation and its descriptions. [10]
- Q.2.a) Define parallel computing. Explain why we need parallel computation.
b) Explain the Flynn's classification of parallel architectures. [5]
- Q.3. a) What are the basic parallel techniques used for parallelism? [5]
b) Explain the Von-Neumann computational model in brief. [5]
- Q.4. What is Associative memory processor? Explain the multithreaded architecture principles of multithreading and latency hiding in processor. [10]
- Q.5. Write short notes on **(Any Two)** [2×5]
a) Vector vs Scalar Processor
b) Evolution of parallel processors.
c) Array processors

The End

KHWOPA ENGINEERING COLLEGE

Second Assessment - 2019

LEVEL: BE Computer/**Eighth Semester**
SUBJECT: BEG478CO, Advance Computer Architecture
TIME: 02:00 hr.

2076-04-26

FULL MARKS:- 50
PASS MARKS:- 20

Answers are required to give their answers in their own words as far as practicable.

Attempt All Questions.

Q.1. What do you mean by cluster computing? Explain the architecture of cluster computing along with its type. [10]

Q.2. a) Explain various configuration of OS for parallel processing. [5]
b) Explain the operational modes used in programming multiprocessor system. [5]

Q.3. a) Define hardware and software parallelism? Explain how mismatch between hardware and software parallelism can be matched. [5]

b) What do you mean by latency? Explain the various types of latency occurring in parallel processing. [5]

Q.4. What are the factors affecting performance of network? List and explain different static interconnection structures used in multiprocessors. [4+6]

Q.5. Write short notes on **(Any Two)** [2×5=10]

- a) Message Passing model
- b) Floating supervisor control of OS for parallel processing
- c) Intra cluster communication CM*

The End

**PURBANCHAL UNIVERSITY
2019**

B.E. (Computer) / Eighth Semester / Final

Time: 03:00 hrs.

Full Marks: 80 / Pass Marks: 32
BEG478CO: Advanced Computer Architecture (New Course)

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer EIGHT questions.

1. Define computational model. Explain the concept of Computer Architecture with interpretation and its descriptions. 3+7
2. What do you mean by parallel processing? Explain the types and levels of parallelism in brief. 3+7
- 3(a) Discuss data routing in array processor. 4
- (b) What is vector processing? Describe cray type vector processor. 1+5
4. Explain the principle of multithreading architecture. Explain the latency hiding techniques in processor. 4+6
5. Discuss on loosely coupled and tightly coupled architecture in Distributed memory. Explain the cluster computing as an application of loosely coupled architecture. 4+6
6. What are programmability issues? Characterize the parallelism levels and their implementations issues from the view point of programmer and compiler developer. 5+5
7. What are the conditions of parallelism? How static connections of networks differ from dynamic connection of networks? Explain. 4+6
- 8(a) How do you optimize compilers for parallelism? Explain. 5
- (b) What is iteration space? Describe trace scheduling compilation. 1+4
9. Write short notes on any TWO: 2×5=10
 - (a) Hadoop
 - (b) Dependence analysis
 - (c) Data parallel model

Khwopa Engineering College
CLASS TEST (8 Semester - 2019)

LEVEL: - B. E. Computer / VIII
Subject: - C++ Programming - II AND .NET (2+4)

The margin indicates full marks.
Attempt ALL questions.

1. Define .NET Framework? What are the different features of .NET Technology? Discuss. [1+4]
2. Write short notes on: IDE [2.5]
3. Explain .NET Framework Architecture in detail. [12.5]
4. Discuss compilation & execution process in .NET Framework. [5]
5. Difference between String and String Builder with example. [5]
6. Difference between Boxing and Unboxing with example. [5]
7. Define Class & Object. Explain identity, state and behavior with an example. [2+3]

KHWOPA ENGINEERING COLLEGE

First Assessment - 2019

LEVEL:- B. E. Computer/**Eighth Semester**
SUBJECT:- BEG475VB, Elective-II (VB.NET, C#)

TIME:- 02:00 hrs.

2076/03/04

FULL MARKS:- 50
PASS MARKS:- 20

Candidates are required to give their answers in their own words as far as practicable.

Attempt All Questions.

- Q.1. Define .NET Framework? Draw .NET Framework Architecture & explain CLS, CTS. [1+4]
- Q.2. Discuss compilation & execution process in .NET Framework. [5]
- Q.3. Difference between String and String Builder with example. [5]
- Q.4. Difference between Boxing and Unboxing with example. [5]
- Q.5. WAP using C#.NET showing the example of Multiple Inheritance. [5]
- Q.6. Define Polymorphism. WAP using C#.NET showing the example of Polymorphism. [5]
- Q.7. Write ASP.NET code for the given form. [5]

Username :	<input type="text"/>
Password :	<input type="text"/>
Re - password :	<input type="text"/>
Age :	<input type="text"/>
Email :	<input type="text"/>
<input type="button" value="Sign Up"/>	

- Q.8. What are the different types of client side validation of control supported by ASP.NET? Discuss with example. [10]
- Q.9. Write short notes on **any TWO**: [2 x 2.5]
- a) IDE
 - b) CLR
 - c) Class & Object

KHWOPA ENGINEERING COLLEGE

Second Assessment - 2019

LEVEL:- B. E. Computer/**Eighth Semester**

SUBJECT:- BEG475VB, Elective-II (VB.NET, C#)

TIME:- 02:00 hrs.

2076-04-30

FULL MARKS:- 50

PASS MARKS:- 20

Candidates are required to give their answers in their own words as far as practicable.

Attempt All Questions.

- Q.1. Any character is entered through the keyboard. WAP to determine whether the character entered is capital letter, a small case letter, a digits or special symbols using C#.NET as console application. [5]
- Q.2. Differentiate between **SDI** and **MDI**? [5]
- Q.3. Why **ListBox control** is used? Discuss its **properties** and give **example** of ListBox control. [5]
- Q.4. Why **Timer control** is used? Discuss its **properties** and write a **program** showing the example of Timer. [5]
- Q.5. Differentiate between ADO and ADO.NET? [5]
- Q.6. Different between DataReader and DataAdaptor with example. [5]
- Q.7. Write the .NET code for navigating the data for the following? [10]

ID	
Student Name	
Password	
<input type="button" value="Update"/>	<input type="button" value="Delete"/>
<input type="button" value="SearchById"/>	<input type="button" value="Clear"/>
<input type="button" value="Insert"/>	

Q.8. Write short notes on:

- Exception Handling
- Events
- Dialogue Box
- ContextMenuStrip

[2.5x4=10]

The End

PURBANCHAL UNIVERSITY

2019

(Computer)/Eighth Semester/Final

Time: 03:00 hrs.

G475VB: Visual Basic .Net, C# (Elective-II) (New Course)

Full Marks: 80 / Pass Marks: 32

Candidates are required to give their answers in their own words as far as practicable.

All questions carry equal marks. The marks allotted for each sub-question are specified along its side.

Answer EIGHT questions.

$8 \times 10 = 80$

Difference between VB and VB .Net? What is the role of encapsulation? Explain with example. 5+5

What is CLR? Explain the Exception handling mechanism in C# with an example. 4+6

What is field validation? Explain different types of field validation control with example. 3+7

Explain Dataset, Data Adapter and Data Reader with example. 10

What is event? Explain different types of event with example. 2+8

Describe boxing and unboxing with example. How multi level inheritance is achieved in C#? Explain with suitable example. 5+5

7(a) Explain Data Gridview and Dataview with suitable example. 5

(b) List different features of OOP? Explain polymorphism with example. 2+3

8. Explain Data Access Mechanism in VB. Net. Write sample program to insert, update, delete and search the data from the databox. 3+7

9. What are the different properties of Text Box? Explain any Ten properties of Text Box. Differentiate between SDI and MPI. 2+5+3

10. Write short note on any FOUR: $4 \times 2.5 = 10$

(a) String and string builder

(b) State and Behaviour

(c) Delegate in VB. Net

(d) Byval and ByRef.

(e) Procedure and function

