

**Department of Computer Science & Engineering  
University of Asia Pacific (UAP)**

Final Examination Spring 2022 3<sup>rd</sup> Year 1<sup>st</sup> Semester

Course Code: CSE 303

Course Title: Data Communication

Credits: 3

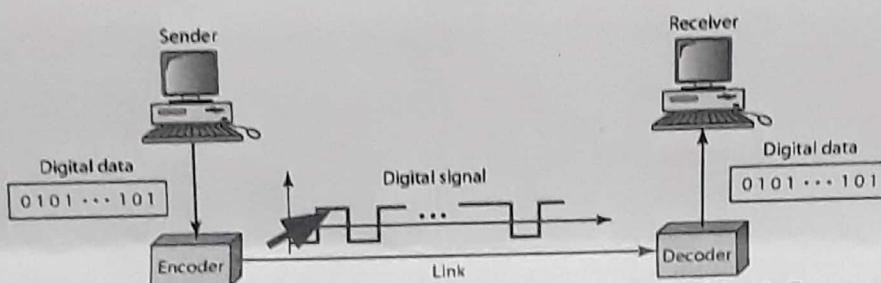
Full Marks: 150

Duration: 3 Hours

**Instructions:**

There are Six (6) Questions. Answer all of them. All questions are of equal value. Part marks are shown in the margins. Non-programmable calculators are allowed.

[25] CO  
4



You want to send a data packet consisting of 11 bits to your friend. Suppose the data is 10110001101.

**Construct** the digital signal diagram that you will send to your friend for the following schemes. You may make your own assumptions if necessary.

- Manchester
- Differential Manchester
- Pseudoternary
- NRZ-L
- NRZ-I

OR

**MLT-3 encoding** (Multi-Level Transmit) is a line coding scheme that uses three voltage levels. An MLT-3 interface emits less electromagnetic interference and requires less bandwidth than most other binary or ternary interfaces that operate at the same bit rate. In a way, it is similar to NRZ-I.

[10+  
5+5+  
5=  
25] CO  
4

Suppose a decimal value of 5862 was sent from sender to receiver. In the communications channel, it is transferred as a 14-bit binary pattern. Now answer the following:

- Draw the digital signal diagram for MLT-3.
- Discuss with an example, how different is MLT-3 to NRZ-I.

- How does the MLT-3 solves the problems of NRZ-I?
- MLT-3 does not support self-synchronization for a long string of zeros ('0') show with an example.

**(Assumptions: Let us assume that, the last level was at 0 voltage and the last non-zero pulse was negative)**

2. a. A data communication channel is designed to send information from one point to another. Data that we send can either be digital or analog. Digital to Digital conversion involves three techniques – Line Coding, Block Coding, and Scrambling. Line Coding is always needed, whereas Scrambling may or may not be needed. Now answer the following:  
You have to send a bit stream 1000000001 to your friend using the B8ZS Scrambling technique. Now solve the following:

- Discuss the circumstances where scrambling is necessary
- Apply the B8ZS scheme to identify the encoded sequence of bits that you will send to your friend.
- Discuss how it solves the synchronization problem of AMI

- b. In digital transmission, the receiver clock is 0.01 percent faster than the sender's clock. How many extra bits per second does the receiver receive if the data rate is 10 kbps? How many if the data rate is 10 Mbps?

[5+1] CO  
0+5= 4  
20]

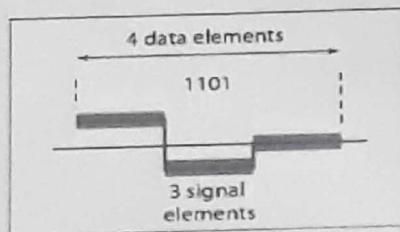
[5] CO  
4

OR

- a. Bipolar with 8-zero substitution (B8ZS) is commonly used in North America. On the other hand, High-density bipolar 3-zero (HDB3) is commonly used outside of North America such as in all levels of the European E-carrier system. Briefly discuss the HDB3 system with a proper example and figure.

[15] CO  
4

b.



[10] CO  
4

A signal is carrying data in which four data elements are encoded as three signal elements. If the bit rate is 1000 kbps, calculate the average value of the baud rate if c is between 0 and 1?

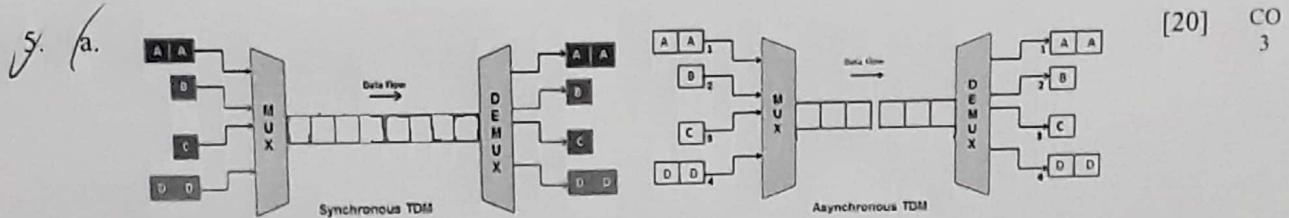
3. a. A receiver received a 7-bit Hamming codeword 1011011. Assuming the even parity state, determine whether the received codeword is correct or wrong. If it is wrong, locate the bit having the error and write the correct code word.

[15] CO  
5

- b. A bitstream 100000001 is received by the receiver side. The generator polynomial is  $x^4+x+1$ . Apply CRC method to identify the actual transmitted bit string. You need to show the full calculation for the sender side only.

[10] CO  
5

- A. a. Suppose you have been assigned to set up an office WiFi. As you know, unlike many other wireless standards, 802.11 runs on "free" portions of the radio spectrum. Based on this concept, discuss "how to choose the right WiFi frequency for your business". [15] CO<sub>3</sub>
- b. "ISPs advertise bandwidth to the customers, because that value is known, and it represents the best-case scenario. But their hype about "game-changing super speeds blazing into town" may be misleading." According to this statement, **explain** the concept of Bandwidth, Latency, and Throughput. (Your answer must have an example) [10] CO<sub>3</sub>



The above schematic figure depicts two types of TDM transmission Synchronous and Asynchronous. According to the figure, **analyze** how data (e.g., AA, B, C, DD) will pass from sender to receiver frame by frame.

- b. Five channels, each with a 200-kHz bandwidth, are to be multiplexed together. **Identify** the minimum bandwidth of the link if there is a need for a guard band of 20 kHz between the channels to prevent interference. [5] CO<sub>3</sub>
- c. IPv4 address exhaustion is the depletion of the pool of unallocated IPv4 addresses. Because the original Internet architecture had fewer than 4.3 billion addresses available, depletion has been anticipated since the late 1980s, when the Internet started experiencing dramatic growth. From your perspective, what proposed solutions were undertaken to deal with the problem? [15] CO<sub>2</sub>
- b. A data communications system has five components. Define them and describe their tasks with the proper figure. [10] CO<sub>2</sub>

**Department of Computer Science & Engineering  
University of Asia Pacific (UAP)**

**Final Examination Spring 2022 3<sup>rd</sup> Year 1<sup>st</sup> Semester**

**Course Code: CSE 311**

**Course Title: Microprocessors and Assembly Language Credits: 3**

**Full Marks: 150**

**Duration: 3 Hours**

**Instructions:**

1. There are Six (6) Questions. Answer all of them. All questions are of equal value. Part marks are shown in the margins.
2. Non-programmable calculators are allowed.

1. a. A microprocessor is called 'brain' of a computer- why? We are habituated with which [5] processor family?
- b. What is pipelining? How does it implemented in 8086 architecture? Is there any [10] drawback of pipelining in 8086? Mention.
- c. Draw the internal diagram of the CPU of 8086. [10]
2. a. Write an assembly code to do the following actions: [10]  
i. Input a character  
ii. Display a prompt message "Have a Good Day!!!"  
iii. Display First letter of your Name  
iv. Find out the 2's complement of AL  
v. Input a digit from keyboard and convert it into decimal
- b. What are the status of flags (CF, SF, AF, ZF, PF, OF) that will be affected for the [10] following instructions:  
i. ADD/SUB  
ii. OR/AND  
iii. SHL/SHR  
iv. MOV/XCHG  
v. INC/DEC
- c. Write an assembly program to find out the area of a square. [5]
3. a. Define Segmentation. What are the benefits of segmentation? If total memory is 1MB, [10] then how many segments possible of 64KB in size?
- b. 8086 has 16-bit data bus (D0- D15) but the memory is organized in byte form (D0-D7) [15] of 1MB. How does 16-bit data bus is utilized using 8-bit memory structure? Explain from memory bank concept with proper diagram.

4. a. Write a program to Input three integer values (Byte form) X, Y, C from user where  
     $0 > X \leq 9$ ,  $0 > Y \leq 9$ , and  $C = 0$  or  $1$ .

[15]

- i. If  $C=0$  then compute  $X*Y$   
ii. If  $C = 1$  then compute  $X/Y$

- b. Write an assembly program to find out the sum of the odd numbers up to N terms.  
e.g.  $1+3+5+7+\dots$

[10]

OR

- a. Write an assembly program to input an alphabet and convert it into its opposite case.  
Except alphabet if any other key is pressed then it will display the string "INVALID INPUT".

[15]

- b. Write an assembly program to count the numbers of characters in an input line until a carriage return is pressed.

[10]

5. a. If  $AL=FFH$ . Write the logic instructions with appropriate mask bit pattern to do the followings:

[15]

- i. Clear Bit 0, 2, 5 of AL  
ii. Set Bit 1, 3, 7 of AL  
iii. Compliment Bit 2, 4, 6 of AL  
iv. Complement AL  
v. TEST MSB of AL is 0?

- b. What are the differences between SHR and SAR? Explain with appropriate figures. If  $AL=10010100B$ , then find out the final value of AL after execution of the followings

[10]

- i. ROR AL, 1  
ii. SHR AL, 1  
iii. SAL AL, 1

OR

- a. 'STACK operates in LIFO'- How? Explain using diagrams. What will be the value of SP after executing following instructions?

[15]

- i. .STACK 100H  
ii. PUSH AX [Initially SP= 0540H]  
iii. POP AX [Initially SP= 053EH]

- b. What is the importance of Stack Segment while implementing procedure mechanism in 8086? What happens in the Stack segment when main procedure is calling another procedure or returning from a called procedure to main? Explain with examples using necessary diagrams.

[10]

6. a.

What is the difference between following two instructions:

[5]

i. MOV AX, 1234H

ii. MOV AX, [1234H]

Mention the addressing modes of the above instructions.

b.

Find out the addressing modes of the operands present in the following instructions

[20]

(Both Source and Destination) and calculate the physical address of the memory

operands only:

i. CMP AL, [BX]

ii. SUB AX, DX

iii. MOV AX, A[SI]

iv. MOVS B

v. RET

vi. HLT

vii. IN AX, DX

viii. MOV AL, A[BX][SI]

where, SS=0123h, DS=0124h, ES=0987h, CS=0678h, IP=0956h, SI= 0456h

DI= 0378h, BX=0567h, A=09h, RET=0089H.

# Department of Computer Science & Engineering

## University of Asia Pacific (UAP)

Final Examination Spring 2022 2<sup>nd</sup> Year 2<sup>nd</sup> Semester

Course Code: CSE 309

Course Title: Object Oriented Programming II: Visual  
and Web Programming

Credits: 3

Full Marks: 150

Duration: 3 Hours

### Instruction:

1. There are Six (6) Questions. Answer all of them. All questions are of equal value. Part marks are shown in the margins.
2. Non-programmable calculators are allowed.

- ✓ a. Construct a function in python that will take a list as parameters, and will return the index, [15] CO2 which contains the highest value among all odd indexes. Here, the list may contain both positive and negative numbers, consider the absolute value using the *abs()* function.
- ✓ b. Suppose we have a series as follows – [10] CO2

$$S_n = 1 + 3 + 9 + 27 + \dots + n^{\text{th}} \text{ term}$$

Construct a function that will take *n* as a parameter, and return the summation of *n* number of terms from the series.

OR

- a. Construct a function in python that will take two lists as parameters. The first list will contain the names of some fruits and the second list will contain the prices of those fruits in order. The function will return a dictionary containing only the fruits whose price is 100 Taka or more. Here, the fruit names will be the keys of the dictionary and prices will be the values of those keys. [15] CO2
- b. Construct a function in python that will take a filename as a parameter. The function will then read all the words from the file and write the words in separate lines in another file named "*Output.txt*". Note that the "*Output.txt*" file might have some lines already written in it. Your code should not clear those lines; should only add your lines below the existing ones. [10] CO2

- ✓ a. Suppose we have the classes – Animal, Human, Cricketer, Bowler, Batter, and All Rounder. Show how you can use inheritance among the classes. Identify the different types of inheritance among them. [15] CO3
- ✓ b. Apply the concept of method overloading and method overriding in object oriented python programming with code and context. [10] CO3

✓ Suppose, you have the following schema diagram. Here, underline means primary key and italic means foreign keys-

- ✓ 1. User(*id*, username, password, email, first\_name, last\_name, date\_joined, last\_login, is\_superuser, is\_staff, is\_active)
- ✓ 2. UserProfile(*id*, phone\_no, profile\_picture, date\_of\_birth, *User.id*)
- ✓ 3. Student(*student\_id*, cgpa, semester, *UserProfile.id*)

- ✓ 4. VCAward(id, session, *Student.student\_id*)
- ✓ 5. Teacher(id, designation, *UserProfile.id*)
- ✓ 6. Course(id, code, name)
- 7. AssignedCourse(id, *Course.id*, *Teacher.id*, session)

/ Analyze the schema diagram and code the model classes to construct the database tables stated above. For simplicity, you can assume that you are writing all the model classes in same *models.py* file.

[15] CO5

/ From model classes in Q3. a, analyze following requirements and write corresponding code to print the desired information-

[5+5 =10] CO5

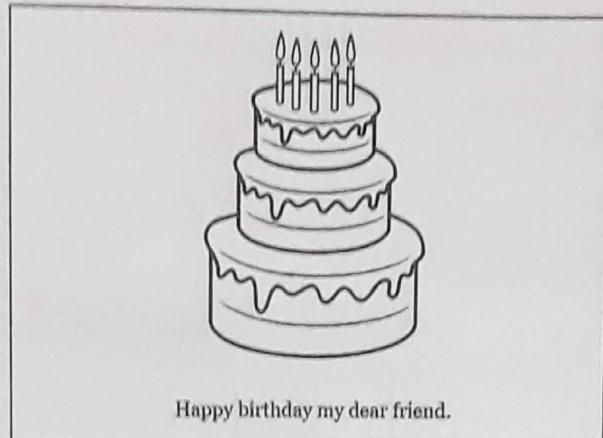
- i. List of Student IDs of the students who are in "3-1" semester, and have cgpa higher than 3.50
- ii. Identify emails of all students who have received VCAward in "Spring\_2021" session

/ Suppose, you are planning to develop a simple webpage as a birthday wish for your friend. The following code is written in a file named "*index.html*". There is a picture of a birthday cake in a file named "*cake.jpg*". For simplicity, consider that they are in the same folder.

```
<!DOCTYPE html>
<html>
  <head>
    <style type="text/css">
      p {
        font-family: georgia, serif;
        font-size: x-large;
        color:#ff9900;
      }
    </style>
  </head>
  <body>
    <p>*****</p>
  </body>
</html>
```

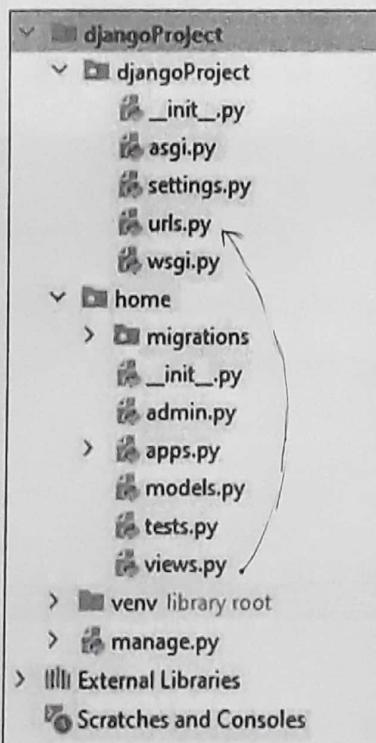
/ Change the above html code to design the webpage with the picture of the cake and a birthday wish under the picture of the cake in a paragraph tag. Your website should at least look like this-

[15] CO4



NB: Here the cake and the birthday wish appears at the center of the page.

- b/ In the given template, assume you want to set an appropriate title, remove all styles to *a.css* file and javascripts to *a.js* file and link those local files with the html. For simplicity, consider that they are in the same folder. Identify the process and edit your code from question no 4 a. [10] CO4
5. Suppose, you have created a django project named "*djangoProject*", and created an app called "*home*" app. The following file structure is created automatically.



- a/ Assume you want to add a url, which will render an html file from a view function of home app. Explain the process how you will do it. Add additional folders or files to the structure if necessary. [15] CO5
- b/ Illustrate how python interpreter works differently than a compiler while executing a code. [10] CO1

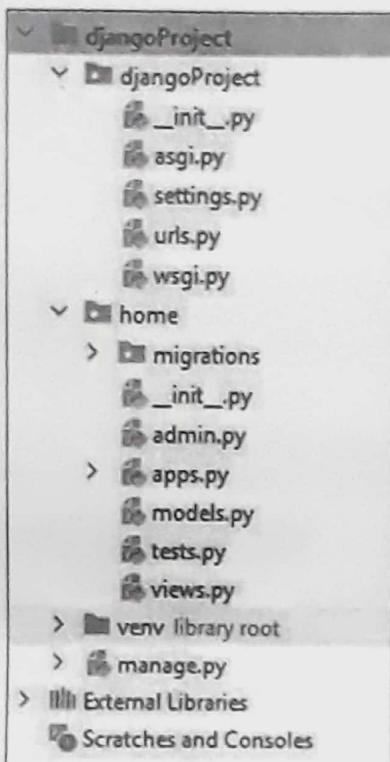
OR

- a. Explain the concept of *MVC* pattern and how it is followed in a django project. [15] CO5

- b. Compare and detect one advantage and one disadvantage of using an interpreter instead of a compiler. [10] CO1

6.

Suppose you have a django project structure as follows. For simplicity of project structure, imagine you are working with one app -



You have a django model which is written in *models.py* of *home* app -

*Person(id, first\_name, last\_name, date\_of\_birth, phone\_no)*

- a. Figure out the steps to take mentioned information of a person via forms and save it in the database table. You may add addition files or folders to the project. [15] CO5

- b. Analyze the steps to implement registration process using the django forms. Show necessary codes in the corresponding files. You may add addition files or folders to the project. [10] CO5

**Department of Computer Science & Engineering  
University of Asia Pacific (UAP)**

**Final Examination Spring 2022 3<sup>rd</sup> Year 1<sup>st</sup> Semester**

**Course Code: CSE305**

**Course Title: System Analysis And Design**

**Credits: 3**

**Full Marks: 150**

**Duration: 3 Hours**

**Instructions:**

1. There are Six (6) Questions. Answer all of them. All questions are of equal value. Part marks are shown in the margins.
2. Non-programmable calculators are allowed.

1.  What are the roles of a system analyst? [5] CO1

b. What is SDLC methodology? Give a brief description of at least 3 methodologies that are used in SDLC. [20] CO1

**OR**

a. What are the common errors in drawing DFD? [5] CO1

b. What is notation of DFD we used in our system design? Describe the roles of Drawing DFD with examples. [20] CO1

a. Draw a use case diagram for a library management system. Assume four actors: [15] CO2

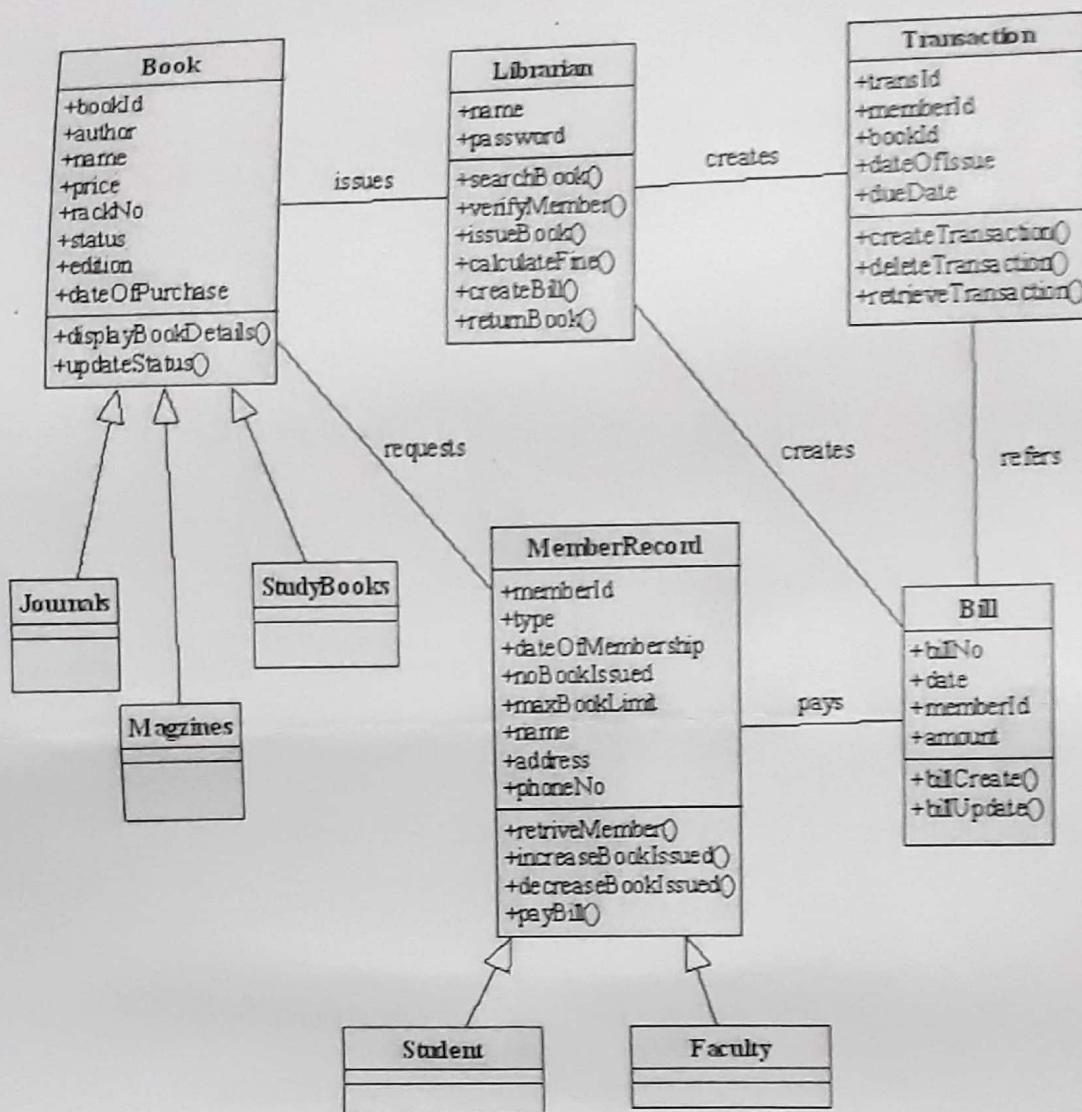
- General Member: does not have access to the original copies of books
- Librarian: tasks like selecting, developing, cataloguing and classifying library resources, answering readers' enquiries, using library systems and specialist computer applications, management of staff, including recruitment, training and/or supervisory duties etc.
- Vendor: supplies books
- Elite Member: has access to the original copies of books.

b. Can we use 'include' relationship in the above scenario? Justify your answer with proper explanation and diagram (if required). [10] CO4

OR

[15] CO2

a.



Describe the Above “Class” diagram for library management system.

- b. Can we use ‘Aggregation’ relationship in the above scenario? Justify your answer with proper explanation and diagram (if required). [10] CO4

3/4.

“Mr. X wants to build a user support system for his company. So he collects all necessary data and user requirements for the system. Then he formed three different teams to find out if the proposed system is safe and sound technically and economically and strategically aligned with the business. After a few weeks these teams responded positively and Mr. X recruited an experienced manager Mr. Y for overall project control and direction.”

- All these steps indicate a particular phase of SDLC. Which one is it? Briefly describe its' steps.

[15] CO2

b. Though Mr. X preferred Waterfall model for the user support system development, Mr. Y said as the system is completely user based it would be wise to follow any RAD technique. Do you agree with Mr. Y? Justify your answer with proper explanation.

Though Mr. X preferred Waterfall model for the user support system development, Mr. Y said as the system is completely user based it would be wise to follow any RAD technique. Do you agree with Mr. Y? Justify your answer with proper explanation.

[10] CO2

4. a. Draw the SDLC and state the outcomes of each phase of SDLC.

[10] CO2

[15] CO1

b. Give brief descriptions of the following fact finding methods.

- ✓ Interview
- ✓ Questionnaire
- ✓ Prototyping
- ✓ JAD
- ✓ Extreme programming

5. a. Following is the list of all costs and benefits of a project undertaken by a multinational company. Compute the cost benefit analysis using discounted cash flow method where rate of return=10% given.

[20] CO4

	Year 0	Year 1	Year 2	Year 3
<b>Costs:</b> Salary	100,000	200,000	200,000	250,000
Transportation	10,000	50,000	25,000	25,000
Machineries	100,000	10,000	5,000	5,000
Utility bills and advertisement	90,000	40,000	45,000	20,000
<b>Benefits:</b> from country branches		60,000	150,000	320,000
From international branches		70,000	170,000	450,000
From home deliveries		70,000	180,000	290,000

b. According to the result obtained in 5(a), can you conclude that the project is economically acceptable at year 3? Justify your answer.

5 CO2

6. a. Following is the activity list for a construction company's project. Find ES, EF, LS, LF and critical path of the project.  
 [NOTE: ES= Earliest start time, EF= Earliest Finish time, LS= Latest start time and LF= Latest finish time]

Activity	Immediate Predecessor	Estimated Completion Time
A	None	90
B	A	15
C	B	5
D	G	20
E	D	21
F	A	25
G	C,F	14
H	D	28
I	A	30
J	D,I	45

- b. How will the project schedule be affected if  
 i. A is delayed by 2 weeks  
 ii. C is delayed by 1 week

Explain your answer

---

# **Department of Computer Science & Engineering**

## **Department of Computer Science & Engineering University of Asia Pacific (UAP)**

**Final Examination Spring 2022 3<sup>rd</sup> Year 1<sup>st</sup> Semester**

**Course Code: CSE 307**

**Course Title: Theory of Computation**

**Credits: 3.0**

**Full Marks: 150**

**Duration: 3 Hours**

**Instructions:**

1. There are Six (6) Questions. Answer all of them. All questions are of equal value. Part marks are shown in the margins.
2. Non-programmable calculators are allowed.

**1. a)** Solve a Turing Machine problem for the following expression: 13  
 $L = 0^n 1^{2n}$  where  $n > 0$

**b)** Solve a Turing Machine problem for the following expression: 12  
 $L = a^n$ , here superscript n is 1,3,5,7, ... odd number

**2. a)** Context-Free Grammar (CFG) is more powerful than Regular Expression (RE). Do 5  
you agree with the statement? If yes, provide reasoning.

**b)** Construct a Pushdown Automata (PDA) that recognizes 20  
i)  $\{a^{2n}b^{3n} \mid n \geq 0\}$

ii)  $\{a^i b^j c^k \mid i, j, k \geq 0 \text{ and } j = k \text{ or } i = j\}$

**3. a)** Consider the grammar: 25

$$\begin{aligned} S &\rightarrow ASA \mid aB \\ A &\rightarrow B \mid S \\ B &\rightarrow b \mid \epsilon \end{aligned}$$

By analyzing the grammar:

- i) Eliminate  $\epsilon$ -productions.
- ii) Eliminate any unit productions in the resulting grammar.
- iii) Eliminate any useless symbols in the resulting grammar.
- iv) Put the resulting grammar into Chomsky Normal Form.

**4. a)** Build the CFGs for the following languages: 15

i) All strings in the language  $L = \{a^n b^n c^m \mid m \geq 0, n > 0\}$

ii) All nonempty strings of 'a' and 'b' that start and end with the different symbol.

b) Demonstrate that the following grammar is ambiguous grammar.

$$\begin{aligned} S &\rightarrow AB \mid C \\ A &\rightarrow aAb \mid ab \\ B &\rightarrow cBd \mid cd \\ C &\rightarrow aCd \mid aDd \\ D &\rightarrow bDc \mid bc \end{aligned}$$

5. a) Build a regular expression for a class C IP address. Class C IP address range is [192.0.0.0 to 223.255.255.0] 15

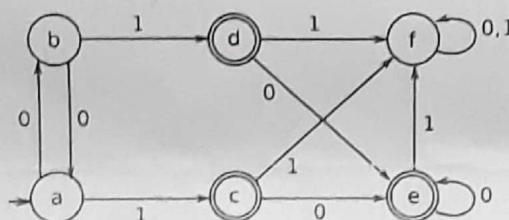
b) Give a formal description of the Pumping Lemma. Use the theory to show that  $\{a^p b^q \mid p, q > 0\}$  is not regular. 10

OR

a) Build a regular expression for a class A IP address. Class A IP address range is [0.0.0.0 to 127.255.255.255] 15

b) Give a formal description of the Pumping Lemma. Use the theory to show that  $\{a^n b^{2n} \mid n > 0\}$  is not regular. 10

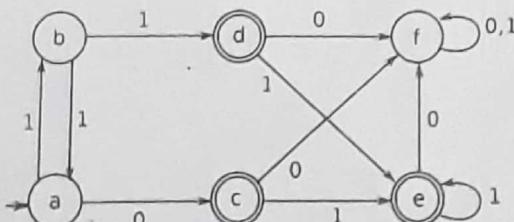
6. a) Solve the DFA minimization task using table construction algorithm. 15



b) Define the formal definition of Finite Automata. 10

OR

c) Solve the DFA minimization task using table construction algorithm. 15



b) Describe the differences between: 10

- i) NFA and  $\epsilon$ -NFA
- ii) NFA and DFA

**University of Asia Pacific**  
**Department of Computer Science & Engineering**  
**Semester Final Examination, Spring - 2022**  
**Program: B.Sc. in Computer Science & Engineering**  
**Year: 3<sup>rd</sup> Semester: 1<sup>st</sup>**

Course Title: English for Communication Course No.: HSS 301  
Time: 3.0 hours

Credit: 2.0  
Full Marks: 50

### The History of Early Cinema

Although French, German, American and British pioneers have all been credited with the invention of cinema, the British and the Germans played a relatively small role in its worldwide exploitation. It was above all the French, followed closely by the Americans, who were the most passionate exporters of the new invention, helping to start cinema in China, Japan, Latin America and Russia. In terms of artistic development it was again the French and the Americans who took the lead, though in the years before the First World War, Italy, Denmark and Russia also played a part.

In the end, it was the United States that was to become, and remain, the largest single market for films. By protecting their own market and pursuing a vigorous export policy, the Americans achieved a dominant position on the world market by the start of the First World War. The centre of film-making had moved westwards, to Hollywood, and it was films from these new Hollywood studios that flooded onto the world's film markets in the years after the First World War, and have done so ever since. Faced with total Hollywood domination, few film industries proved competitive. The Italian industry, which had pioneered the feature film with spectacular films like *Quo vadis?* (1913) and *Cabiria* (1914), almost collapsed. In Scandinavia, the Swedish cinema had a brief period of glory, notably with powerful epic films and comedies. Even the French cinema found itself in a difficult position. In Europe, only Germany proved industrially capable, while in the new Soviet Union and in Japan the development of the cinema took place in conditions of commercial isolation.

Hollywood took the lead artistically as well as industrially. Hollywood films appealed because they had better-constructed narratives, their special effects were more impressive, and the star system added a new dimension to screen acting. If Hollywood did not have enough of its own resources, it had a great deal of money to buy up artists and technical innovations from Europe to ensure its continued dominance over present or future competition.

From early cinema, it was only Americana slapstick comedy that successfully developed in both short and feature format. However, during this 'Silent Film' era, animation, comedy, serials and dramatic features continued to thrive, along with factual films or documentaries, which acquired an increasing distinctiveness as the period progressed. It was also at this time that the avant-garde film first achieved commercial success, this time thanks almost exclusively to the French and the occasional German film.

Of the countries which developed and maintained distinctive national cinemas in the silent period, the most important were France, Germany and the Soviet Union. Of these, the French displayed the most continuity, in spite of the war and post-war economic uncertainties. The German cinema, relatively insignificant in the pre-war years, exploded on to the world scene after 1919. Yet even they were both overshadowed by the Soviets after the 1917 Revolution. They turned their back on the past, leaving the style of the pre-war Russian cinema to the emigres who fled westwards to escape the Revolution.

The other countries whose cinemas changed dramatically are: Britain, which had an interesting but undistinguished history in the silent period; Italy, which had a brief moment of international fame just before the war; the Scandinavian countries, particularly Denmark, which played a role in the development of silent cinema quite out of proportion to their small population; and Japan, where a cinema developed based primarily on traditional theatrical and, to a lesser extent, other art forms and only gradually adapted to western influence.

X. Look at the following statements (i-vii) and the list of countries below. Match each statement with the correct country, A-J. You may use any letter more than once if required.  $1 \times 7 = 7$

List of Countries	
A	France
B	Germany
C	USA
D	Denmark
E	Sweden
F	Japan
G	Russia
H	Italy
I	Britain
J	China

- (i) It helped other countries develop their own film industry.
- (ii) It was the biggest producer of films.
- (iii) It made movies based more on its own culture than outside influences.
- (iv) After the World War I it was industrially capable to produce cinemas in Europe.
- (v) It made movies based more on its own culture than outside influences.
- (vi) Its cinemas changed dramatically after the 1917 Revolution.
- (vii) It made the most money from 'avant-garde' films.

2. Answer the following questions:

$1.5 \times 2 = 3$

- (a) Which type of film did America develop in both short and feature films?  
(b) Which type of film started to become profitable in the 'silent' period?

3. Suppose, you are Pritom Ahmed/Priya Ahmed. You have recently completed your B.Sc. in Computer Science and Engineering from University of Asia Pacific. Now write a **cover letter** and a **complete CV** to apply for the position of an IT Consultant in Smartech IT Solutions Ltd, the advertisement of which was published on October 30, 2022 in the Daily Star. You will apply to the Head of the Human Resource Department of the company.  $10+10=20$

4. Suppose, the Dept. of CSE, University of Asia Pacific, organized a seminar on "Digital Marketing" at UAP auditorium on October 31, 2022. Now write a report on the event.  $10$

5. a) "The internet has made society better by all means"- Do you agree with the statement or disagree? Write an argumentative essay in not more than 300 words.

$10$

Or,

b) "Traditional education system prepares a student for the real world"- Do you agree with the statement or disagree? Write an argumentative essay in not more than 300 words.

$10$