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International Islamic University Chittagong
Centre for General Education (CGED)

Mid-Term Examination, Autumn -2022

Course Code: UREM-1101 (URTE-1101 for Civil Eng.)

Course Title: Text of Ethics and Morality

Marks: 30 **Duration: 1.5 hours**

Answer any three (03) of the following questions **3 × 10 = 30**

1. Answer the questions below:

(a) What are the differences between ethics and morality?

(b) Explain the necessity of ethics and morality in human life.

2. Give a detailed introduction to Arabic language including its alphabets and visible elements of pronunciation.

3. Answer any two:

a) What are the different names of Suratul Fatihah? Write the meaning of this surah.

b) How many Surahs are there in the holy Quraan? How many types are there and what are they? What are the differences between them?

c) Define isti'adhah and Basmalah, write its rules

4. a) Write the sun letters and moon letters with their characteristics.
b) Write down the stages of the creation of humankind.

1

(2)

International Islamic University Chittagong

Centre for General Education (CGED)

Mid-term Examination Autumn-2022

Course Title: Advanced English Course Code: UREL-1106

Full Marks: 30 Time: 1 Hour & 30 Minutes

Section-A: Reading Part

Read the following passage carefully and answer the questions.

A. Students working for their first degree at a university are called undergraduates. When they take their degree, we say that they graduate, and then they are called graduates. If they continue studying after they have graduated, they are called post graduates.
Full time university students spend all their time studying. They have no other employment. Their course usually lasts for three or four years. In Britain, full time students have three terms of about ten weeks in each year. During these terms they go to lectures or they study by themselves.
Many students become members of academic societies and take part in their activities. Between the university terms they have vacations.
Some universities, like Oxford and Cambridge in England, are residential. There are some non-residential universities as well. Some of the students at non- residential universities live in hostel. But many live at home and have to travel daily to their lectures.

B. Carnivorous plants use ingenious device to trap insects for their food. The pitcher plant is a common carnivorous plant in tropical forests. This plant has a clever trap shaped like a pitcher or jug. It even has a lid to keep out the rain. The mouth of the pitcher is covered with sweet, sticky substance. When they have eaten all that is round the mouth they crawl into the pitcher to look for more. There is more honey at the bottom and they go down to feed on it. The inner wall of the pitcher is covered with fine hairs. These hairs point downwards, so that the insects cannot climb out of the pitcher. They are trapped in it. They die there, and their bodies are digested by the plant and absorbed as food.

1. Answer the questions as directed. 0.5×16=8

a) Students **working** for their first degree at a university are called undergraduates. The underlined word is (a finite verb/non-finite verb).
b) Some universities are *residential.* Rewrite the sentence showing the meaning of the word in italics, making any changes if necessary.
c) Make a sentence with this phrase **to travel daily**
d) Find synonym from the passage for this phrase **very clever and original**.
e) Frame a sentence with **instead of.**
f) Find antonym for 'upwards.'
g) What do you mean by **ingenious** in the passage B?
h) What provokes the insects to go inside the pitcher?
i) Name the part of speech of the word **employment**.
j) The mouth of the pitcher is covered **with sweet, sticky substance**. (Decide whether it is a clause/ phrase).

(2)

(2)

k) The boy was looking ___ when he was standing before his angry father. Fill in the gap with a word from the passage.

l) The bottom of the pitcher plant can't attract the insects. Is it is true or false? If false, give the correct answer.

m) What is the noun of the word **residential**?

n) Find a synonym for **to obtain** from the passage.

o) Their bodies are digested by the plant and absorbed as food. (Make it active.)

p) Make a sentence in present perfect with the phrase **take part in.** Don't quote any sentence directly from the passage.

Read the following passage carefully and answer the questions.

Five years since the 2017 exodus of Rohingya refugees from Myanmar as a result of its military's horrific persecution, there is no sign of repatriation on the horizon. And as long as the military junta continues to rule, there is hardly any scope for repatriation. This was reflected by a Myanmar's senior general in 2017, when he said in a media interview, "we did not send them to bring them back."

Even after the military coup in February 2021, when the junta was under tremendous pressure from inside and outside, the general reiterated in May 2021, in an interview with an international media outlet, that there is "no option of bringing back the Rohingyas". Whatever discussions on repatriation we hear and see are part of diplomatic rhetoric; no serious analyst would take it at face value. However, it is always better to have engagement with the present Myanmar government on this issue rather than a complete disengagement.

Lately, Myanmar has started speaking about repatriation after almost three years. It is with some purpose, since their silence was creating frustration in diplomatic circles in Dhaka. Now, in exchange for this mere engagement, Bangladesh is likely to be cautious and avoid activities and casual comments against Myanmar. As the International Court of Justice (ICJ) case against Myanmar is moving forward, International Criminal Court (ICC) cases are round the corner and their economy is struggling, along with external pressure and internal troubles, the military junta is likely to undertake efforts that release some of the pressure on them. Myanmar would like to tie Dhaka into a "token" repatriation deal, with the terms and conditions dictated by Naypyidaw. Being at a position of disadvantage, Bangladesh is also not in a situation to dictate terms. However, we should be cautious about Myanmar exploiting this token deal in its favour among the international community, including at the ICJ, where it could be argued that accepting repatriation shows Myanmar has no intention of wiping out the Rohingya. In addition, they could also argue that this is a bilateral issue between Bangladesh and Myanmar which these two neighbors are amicably in the process of resolving. Making this an international legal issue could only complicate and delay repatriation.

The military junta will not remain in power forever. The cracks are already visible. Corruption and desertion are taking their toll, and there are ambitious generals awaiting the consequences of the Myanmar military's self-defeating brutality. It must be remembered that a brutal military is no good as a fighting machine. They shall crumble in the face of a dedicated and organized foe. The inability of Bangladesh and of Rohingya organizations of meaningfully engaging the National Unity Government, and the United League of Arakan (ULA) may prove to be expensive in future.

(2)

2

2. Answer the questions as directed. 0.5×14=7

a. Both parties should _____themselves sincerely to solve the pending issues. (Find a word in the passage to complete the sentence)
b. What is the view of the author about Rohingya repatriation?
c. Myanmar government is serious about taking Rohingya back. (Is this statement true/false)
d. They shall crumble in the face of **a dedicated and organized foe**. (Write if the underlined part is a phrase or clause?)
e. Make a sentence of your own with the expression, **on the horizon.**
f. Make a sentence of your own with the expression, **likely to be cautious.**
g. Find a synonym of **evacuation** from the passage.
h. It must be **remembered** that a brutal military is no good as a fighting machine. Here the underlined word is (present participle/past participle/ perfect participle.)
i. Choose a word from the passage that can be made into **negative** by adding prefix **in.**
j. Write the noun form of **horrific.**
k. Make a sentence according to this structure: **sub+verb+obj+lest+ sub+verb.**
l. Meanwhile, we have to remember that this window of opportunity will not remain open forever. Underline the **dependent clause** in the sentence.
m. Do you think that Myanmar is facing international pressure about Rohingyan repatriation?
n. We did not send them to repatriate.(Make it passive)

Section B: Grammar Part

3. Answer the questions according to the directions. 1x5=5

a. United Nations should be more serious about *Ukraine- Russia conflict*. (Make it a WH question asking about italic portion)
b. Make an optative sentence wishing success for someone.
c. The man was poor but honest. (Make it a complex sentence)
d. It was found that the boy is not attentive to his study. (Correct it if necessary)
e. We _____ (were waking up/ were woken up/are woken up) by a loud noise during the night.

Section-C: Writing part

4. Answer any one of the following 05

Write a paragraph on the **topic sentence** given below:

Sitting for IELTS exam is a good start to explore higher education abroad.

Or

Rabya, my grandmother, who was worried at the uncertain fate of thousands of Rohingya refugees and gave shelter to some of them out of sympathy about three years ago, now finds herself displaced and uncertain from the homestead. She thinks... (Expand these sentences into a complete story)

5. Speaking test. (It will be taken by the concerned teacher in a convenient time) 05

2

(3)

International Islamic University Chittagong

Morality Development Program (MDP)

Mid-Term Examination, Autumn - 2022

1st semester (for Muslim students only; other than Shari'ah faculty)

Course Title: Tajweedul Qur'an-I Course code: MDP-1101

Time: 1.5 hour Full Marks: 30

Answer any three of the following questions:

Questions No-1 **(10)**

a. Describe elaborately about Tajweed.
b. Write the manners (Adab) pertaining to the recitation of the holy Quran.
c. What is importance of learning the correct recitation of the Quran?

Questions No-2 **(10)**

a. Write the Arabic letters.
b. Write the definition of Tarteel and Tadabbur.

Question No- 3 **(10)**

a. Write the meaning of Suratul Ikhlas.
b. Write the meaning of Suratun Naas.

Questions No-4 **(10)**

a. Write the definition of Madd.
b. Write the meaning of Surah Fathiha.

(3)

(4)

International Islamic University Chittagong

Department of Computer Science and Engineering

B.Sc. in CSE

Mid-Term Examination, Autumn-2022

Course Code: **PHY-1101**

Time: **1 hour 30 minutes**

Course Title: **Physics-I**

Full Marks: **30**

(i) Answer all the questions. The figures in the right-hand margin indicate full marks.

(ii) Course Outcomes (CLOs) and Bloom's Levels are mentioned in additional Columns.

Course Outcomes (CLOs) of the Questions

CLO1	Understand the concepts of Mechanics, Wave, Oscillation and Optics: and about their Basic Laws.
CLO2	Use various laws to analysis the various Mechanics, Wave, Oscillation and Optics problems.

Bloom's Levels of the Questions

Letter Symbols		R	U	Ap	An	E	C
Meaning		Remember	Understand	Apply	Analyze	Evaluate	Create

1	a.	Distinguish the differences between inertia and moment of inertia	CLO1	R	2
1	b.	State and explain the law of conservation of angular momentum, with proper example.	CLO2	An	5
1	b.	What is Routh's Rule, Using Routh's Rule how to calculate the kinetic energy of a body rolling on a horizontal plane?	CLO2	An	5
1	c.	For a rod of length 13cm, and mass 700gm calculate moment of inertia and radius of gyration. If the rotation axis is passing through 5cm away from one end	CLO2	E	3
2	a.	State the Kepler's laws of motion	CLO1	R	2
Or,					
2	a	Define gravitational field and potential, and mention their relation	CLO1	R	2
2	b.	What is acceleration due to gravity (g). Explain the variation of g, for altitude and depth	CLO2	An	5
2	c	A satellite goes round the earth in 90 minutes in a circular orbit. Calculate the height of the satellite above the earth taking the earth to be a sphere of radius 6370 km. The value of g at the orbit of satellite is 9.8 ms^{-2}	CLO2	E	3
3	a.	What are the differences between the classical physics and modern physics?	CLO1	R	2
3	b.	With proper background discussion independent wave equation	CLO2	An	5
Or,					
3	b.	With proper illustration, explain the uncertainty principle	CLO2	An	5
3	c.	What are the physical significances of Ψ	CLO1	U	3

(4)

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International Islamic University Chittagong (IIUC)

Department of Computer Science and Engineering (CSE)

Mid Term Examination

Program: B. Sc. in CSE
Course Code: MATH-1107
Time: 1:30 hours

Semester: Autumn-2022
Course Title: Mathematics-I
Total Marks: 30

(i) Answer all the questions. The figures in the right-hand margin indicate full marks.
(ii) Please answer the several parts of a question sequentially.
(iii) Course Learning Outcomes (CLOs) and Bloom's Levels are mentioned in additional Columns.

Course Learning Outcomes (CLOs) of the Questions

CLO1:	Compute the functions, limit and continuity of a function, derivatives, integrals and extrema of single-variable and/or multivariable functions.
CLO2:	Understand the techniques of differentiation and integration.

Bloom's Taxonomy Domain Levels of the Questions

Letter Symbols	R	U	Ap	An	E	C
Meaning	Remember	Understand	Apply	Analyze	Evaluate	Create

			Marks	CLO	DL
1.	a)	Define Function, Domain and Range of a function.	2	CLO1	R
	b)	Find the domain and range of the following function $f(x) = 3; \quad -3 \le x < -1$ $= -6x - 3; \quad -1 \le x \le 0$ $= 3x - 3; \quad 0 < x \le 1$	2	CLO1	U
	c)	Test the continuity of the function, $f(x) = \lvert x \rvert + \lvert x - 1 \rvert$ at $x = 1$	3	CLO1	U
	Or.	Test the differentiability of the following function at $x = 0$ $f(x) = 3 + 2x; \quad -\frac{3}{2} \le x < 0$ $= 3 - 2x; 0 \le x \le \frac{3}{2}$ $= 3 + 2x; x \ge \frac{3}{2}$			
	d)	Define limit of a function. Using L'Hospitals rules evaluate the limit: $\lim_{x \to \infty} x\{(a+1)^{1/x} - 1\}$	3	CLO1	R&U

5

5

2.	a)	Find the differential co-efficient of $\log_a x$ by the first principle method.	3	CLO2	U
	b)	Differentiate the following functions,	4	CLO2	U
		i). $y = \sin(2\tan^{-1}\sqrt{\frac{1-x}{1+x}})$ ii). $y = \sin^{-1}(\frac{x+\sqrt{1-x^2}}{\sqrt{2}})$			
	Or.	Differentiate $\tan^{-1}\frac{\sqrt{1+x^2}-1}{x}$ with respect to $\tan^{-1}\frac{x}{\sqrt{1-x^2}}$			
	c)	If $y = \sqrt{\cos x + \sqrt{\cos x + \sqrt{\cos x + \ldots\ldots\ldots\ldots\infty}}}$ then find $\frac{dy}{dx}$	3	CLO2	U
3.	a)	State Leibnitz theorem. If $y = e^{m\sin^{-1}x}$ then using the theorem show that, $(1-x^2)y_{n+2} - (2n+1)xy_{n+1} = (n^2 - m^2)y_n$	4	CLO2	R&U
	b)	State Rolle's theorem. Verify the Roll's theorem for the function $f(x) = x^2 - 3x + 2$ in the interval (1,2)	3	CLO2	R&U
	c)	State Maclaurin's theorem. Obtain the Maclaurin's series generated by the function $f(x) = e^{mx}$	3	CLO2	R&U
	Or.	State Taylor's theorem. Using the theorem expand $2x^3 + 7x^2 + x - 1$ in the power of (x-2)			

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International Islamic University Chittagong
Department of Computer Science and Engineering
B.Sc. in CSE Midterm Examination, Autumn 2022

Course Title: Basic Electrical Engineering | Course Code: EEE-1121
Total Marks: 30 | Time: 1 hours 30 minutes

[Answer all the questions]

1(a) Explain the following terms: 04

(i) Ohm's law
(ii) Kirchhoff's voltage law
(iii) Kirchhoff's current law

1(b) Find Req for the circuit shown in figure 1(b) 03

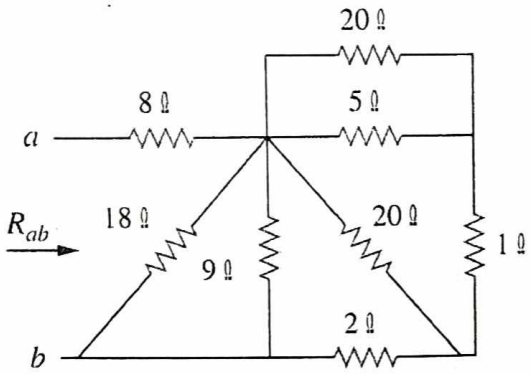

Fig. 1(b)

1(c) For the bridge network of figure 1(c) find R_{ab} and i 03

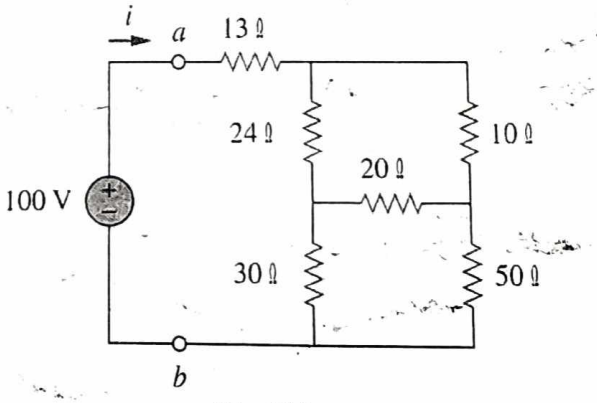

Fig. 1(c)

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2(a) Using KVL find V_1 and V_2 in of the circuit shown in figure 2(a)

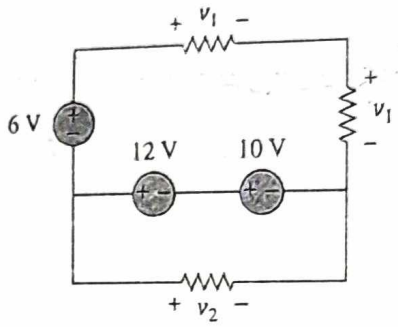

Figure 2(a)

2(b) Applying KCL find the current I_1, I_2 and I_3 of the circuit shown in figure 2(b) 03

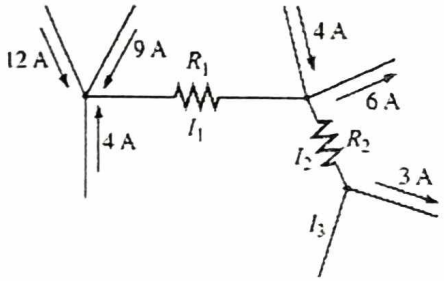

Figure 2(b)

2(c) Find the current I_1 and I_2 shown in figure 2(c). 04

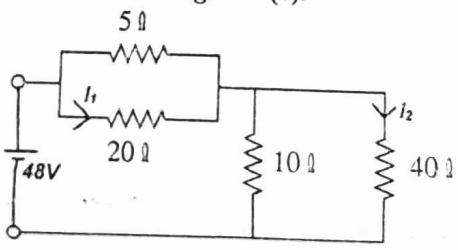

Figure 2(c)

P.T.O

6

(6)

2(a) Using KVL find V_1 and V_2 in of the circuit shown in figure 2(a)

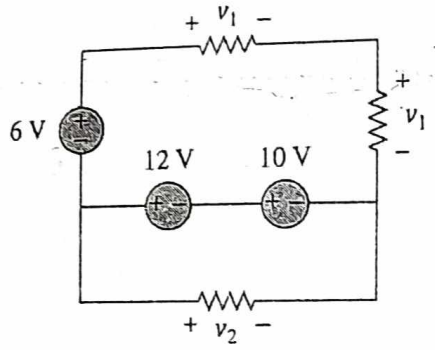

Figure 2(a)

2(b) Applying KCL find the current I_1, I_2 and I_3 of the circuit shown in figure 2(b) 03

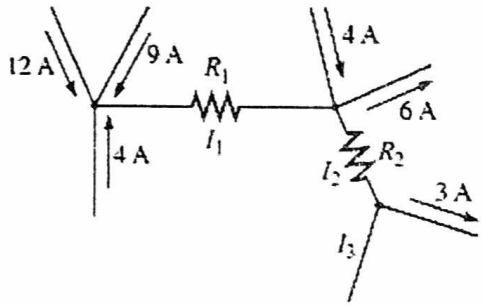

Figure 2(b)

2(c) Find the current I_1 and I_2 shown in figure 2(c). 04

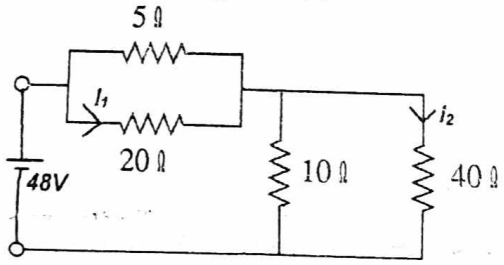

Figure 2(c)

P.T.O

(6)

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3(a) Using superposition principle find the current I_3 of the circuit shown in figure 3(a) 05

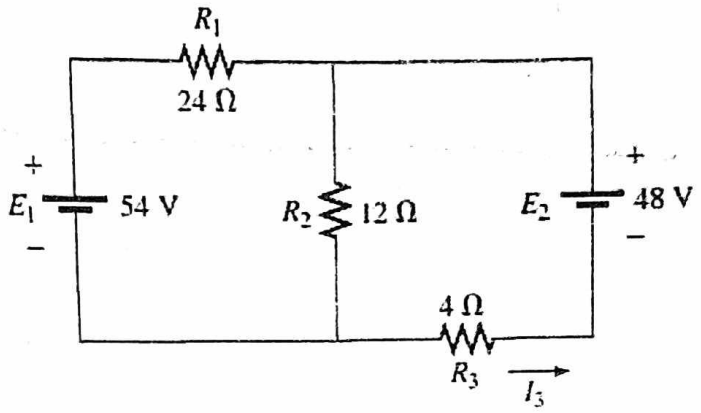

Figure 3(a)

OR

Calculate the mesh currents I_1, I_2 of the circuit shown in figure 3(a-or)

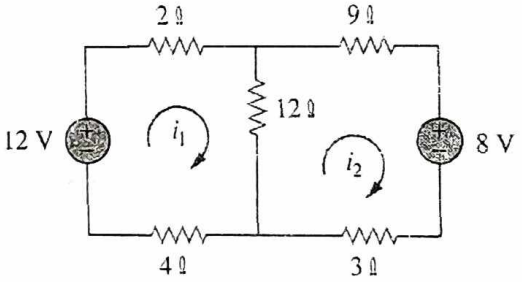

Fig. 3(a-or)

3(b) State and derive the maximum power transfer theorem. 05

OR

Find the node voltages of the network of figure 3(b)

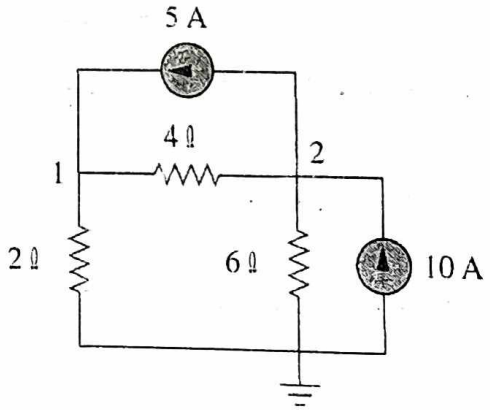

Fig. 3(b)

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Bismillahir Rahmanir Rahim

International Islamic University Chittagong

Department of Computer Science & Engineering

Mid Term Examination, Autumn 2022

CSE 1121 Computer Programming I

Total marks: *30* Time: 90 minutes

[Answer *all* the following questions. Figures in the right-hand margin indicate full marks.]

1. a) Name and describe four *basic data types* in C. 2 CLO1

b)
```
int main()
{
    int p = 100000;
    int q = 100000;
    int result = p * q;
    printf("%d",result);
    return 0;
}
```
1.5 CLO1

Explain what is wrong with the above code and show the correct way to do it.

c)
```
double a = 0.1;
if (a * 3 == 0.3)
{
    printf("Equal\n");
}
else
{
    printf("Not Equal\n");
}
```
1.5 CLO1

What is the output of the above code segment? Explain why does this output come.

d) Consider the following code that takes an integer input `F` which represents temperature in the Fahrenheit scale. It converts the temperature to the Celsius scale. 4 CLO1

```
int F;
double cel;
scanf("%d", &F);
cel = (5 / 9) * (F - 32);
printf("%.2f\n", cel);
```

Is the above code segment showing the correct output? If not, what should be done here?

e) Given the `Basic` of an employee. Write *i) flowchart ii) algorithm/code* to compute an employee's `Gross pay` and `Net pay` using the formulas- 4 CLO2

`Gross = Basic + House Rent + Medical Allowance`

`Net = Gross - Tax`

`Tax` is subtracted from the `Gross` only if an employee earns more than `TK. 10000`. Otherwise, deduct no `Tax`. `Tax` rate is `15%` of `Gross` pay. `House Rent` is `60%` of `Basic` and `Medical Allowance` is `Tk. 700`.

OR

You are given the height and width of two rectangles H_1, W_1 and H_2, W_2. Write *i) flowchart ii) algorithm/code* to find out which rectangle is larger.
To find out the largest one-use area of rectangle. If area of both rectangles remains same, use the height for finding out the largest one. If both the rectangles are identical, print SAME instead.

2. a) A C program contains the following declarations and initial statements: 2 CL

```
int i = 30, j = 15, k;
float x = 3.5, y = -1.1, z;
```

Determine the value of each of the following assignment expressions. Use the values originally assigned to the variables for each expression. Show the calculations.

i) `k = i % j`
ii) `z = k = x`
iii) `y += (j/2)`
iv) `k = (j == 15) ? --i : j++`

b) What would be the output of the following code segment: (use separate boxes for each digit, blank space and other symbols)? 1.5 CLO1

```
int m = 8123;
float x = 34.567234600;
char str[30] = "Quality";
```

i) `printf("%08d\n",m);`
ii) `printf("%-10.2f\n",x);`
iii) `printf("%7.3s\n", str);`

c) A C program contains the following declarations and initial assignments: 3 CLO1

```
int i = 16, j = 12;
double x = 7.8, y = -2.3;
char c = 'A', s[10] = "Morality";
```

Determine the value of each of the following expressions, which involve the use of library functions.

i) `abs(i - 2 * j)`
ii) `ceil(x + y)`
iii) `floor(x - y)`
iv) `pow(2, i)`
v) `islower(c)`
vi) `strlen(s)`

d) A student will not be allowed to sit in the exam if his/her attendance is less than 70%. 3.5 CLO2
Take two integer input:
i) Number of classes held,
ii) Number of classes he/she attended.
Print the percentage of class attended and whether the student is allowed to sit in the exam or not.

Sample Input	Sample output
100 80	80.00%, Allowed
50 30	60.00%, Not Allowed

OR

You are given coordinates of two points in a 2D space. Determine If they are from the same quadrant.

Sample Input	Sample output
1 1 3 9	Yes
2 3 -3 -5	No

Note that point (2,3) lies in the 1st quadrant whereas point (-3, -5) belongs to the 3rd quadrant.

(7)

```
    2;
if (n > 5)
    if(n == 10)
        x += 2;
else
    y -= 10;
printf("%d %d ", x, y);
```

What will be the values of x and y if n assumes a value of i) 8 and ii) 3. Explain with rough calculations. 2 CLO2

b) Write a switch statement that will examine the value of a char type variable color and print one of the following messages depending on the value assigned to color. 2 CLO2

Red, if color has a value 'R' or 'r'
Green, if color has a value 'G' or 'g'
Blue, if color has a value 'B' or 'b'
Not a Prime Color, if color has any other value

c) Write C code segment to print all the *even* numbers from 1 to 100 inclusive in decreasing order using for loop. Rewrite the same using while loop. 2 CLO2

d) You are given a number X. Print all the odd divisors of X. A number N is a divisor of X if N divides X i.e. if we divide X by N the remainder is zero. 4 CLO2

Sample Input	Sample output
16	1
21	1 3 7
28	1 7

Here in the first example divisors of 16 are: 1, 2, 4, 8 and 16. Here only the value 1 is odd.

OR

The term *evil number* is used to denote nonnegative integers that have an even number of 1s in their binary expansions. For example, 3 is an evil number since its binary expansion 11 has two 1s. The first few evil numbers are 0, 3, 5, 6, 9, 10, 12, 15, 17, 18, 20 ... Numbers that are not evil are then known as *odious numbers*. Write a C program that reads a positive integer N and then determine whether the given positive integer N is an *evil* number or *odious* number.

```
Input: Enter a positive integer: 3
Output: 3 is an Evil number.

Input: Enter a positive integer: 4
Output: 4 is an Odious number.
```