	PCET's PIMPRI CHINCHWAD UNIVERSITY, Sate, Maval, Pune-412106	
Academic Year: 2023-24	MID-TERM	TERM – I

Name. Vaishnavi Jakalkar
Student Enrollment number. No.: 53

Printed Pages: 02
(SET-A)

SCHOOL OF ENGINEERING

Mid Term. Semester-: Odd 2023, Month- Oct/Nov

[Program: BSc] [I[st] Sem.] [Batch:2023-24]

Course Title: FUNDAMENTALS OF DATA COMMUNICATION AND NETWORKING
Course Code: BSC102

Max Marks: 50
Time:(2 Hrs.)

Instructions:
1. *All questions are compulsory.*
2. *Assume missing data suitably, if any.*

SECTION-A
(Attempt all question) Max Marks(10 marks)

S.No	QUESTION	BTL	CO	Max Marks
1	Define a Computer Network. Explain its importance in the modern world with examples.	KL1	CO1	2M
2	Explain the criteria for a good data communication network	KL2	CO1	2M
3	Illustrate encapsulation and decapsulation in OSI model.	KL2	CO2	2M
4	Compare between Analog and Digital Signal.	KL5	CO3	2M
5	Define continuous and discrete signal.	KL1	CO3	2M

SECTION-B
(Attempt any 4 questions) (Max Marks : 20)

1	Differentiate between data and information. How does a computer network transform data into meaningful information?	KL4 KL1	CO1	5M
2	Explain how data transmission occurs in Simplex mode. Provide practical applications where Simplex mode is suitable.	KL2	CO1	5M

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Academic Year: 2023-24	**MID-TERM**	**TERM – I**

3	What is a network protocol? Provide examples of common network protocols and their functions.	KL1	CO2	5M
4	Compare and contrast connection-oriented and connectionless communication in the context of the OSI model.	KL4	CO2	5M
5	Define periodic signal. Provide an example of a periodic signal from real-world applications.	KL1	CO3	5M
SECTION-C **Attempt any two questions**				**Marks (20 marks)**
6	Explain the characteristics of the following topologies: Bus, Star, Ring, Mesh, and Hybrid.	KL2	CO1	10M
7	Describe the seven layers of the OSI model with diagram and explain the primary functions of each layer.	KL2	CO2	10M
8	Compare the OSI and TCP/IP models in terms of the number of layers, naming conventions, and functionality. Draw layer architecture for TCP/IP.	KL4	CO2	10M

PCET's PIMPRI CHINCHWAD UNIVERSITY,
Sate, Maval, Pune-412106

Academic Year: 2023-24	MID-TERM	TERM – I

Name: Vaishnavi Takalkar
Student Enrollment number, No.: 33

Printed Pages: 02
(SET-A)

SCHOOL OF ENGINEERING

Mid Term. Semester-: Odd 2023, Month- Oct/Nov

[Program: BCA/ BSc] [1st Sem.] [Batch:2023-24]

Course Title: Fundamentals of Computer Organization

Course Code: BCA113/ BSC113

Max Marks: 50
Time:(2 Hrs.)

Instructions:
1. *All questions are compulsory.*
2. *Assume missing data suitably, if any.*

SECTION-A
(Attempt all question) Max Marks(10 marks)

S.No	QUESTION	BTL	CO	Max Marks
1	Define the term register. Write its types.	KL1	CO1	2M
2	What is integrated circuit? Write it use	KL1	CO1	2M
3	Convert $(10011.101)_2$ into decimal number system	KL2	CO2	2M
4	What are logic gates? Write name of basic gates.	KL1	CO3	2M
5	What should be in place of Question mark? (a) X+X' = ? 1 (b) X.X' = ? 0	KL1	CO3	2M

SECTION-B **(Max Marks : 20)**
(Attempt any 4 questions)

1	Discuss Harvard and Von Neumann architecture in detail.	KL6	CO1	5M
2	Explain difference between Microprocessor and Microcontroller.	KL2	CO1	5M

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3	Discuss computer bus and its types.	KL6	CO2	5M
4	Use a K-map to find an optimum SOP equation for F (x, y, z) = ∑m (0, 1, 2, 4, 6, 7).	KL4	CO3	5M
5	Draw a network to realize the following by using two OR gates and two AND gates F = (V +W + X)(V + X +Y)(V + Z)	KL1	CO3	5M
SECTION-C **Attempt any two questions**				**Marks (20 marks)**
1	Explain types of computer according to no. of bits, architecture used and processor types.	KL2	CO1	10M
2	Convert one number system into another. a) Convert $(19)_{10}$ into Binary number system $(10011)_2$ b) Convert $(37.4)_8$ into decimal number system $(31.5)_8$ c) Convert $(123.4)_{16}$ into decimal number system $(291.25)_{16}$	KL2	CO2	10M
3	Solve using K-Map $f = \sum(0,2,4,6)$ $f = \sum(0,1,4,5)$	KL3	CO3	10M

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Name. _____

Student Enrollment number. No.: _____

Printed Pages: 2

School of Sciences

Mid TermSemester-: Odd/Even 2023, Month- Oct/Nov

[Programme:Name] BCA/ B.Sc---------- [Semester-1] [Batch:2023-2025]

Course Title: Applied Technical Communication

Course Code: CENG101

Max Marks: 50

Time:(2 Hrs)

Instructions:

1. *All questions are compulsory.*
2. *Assume missing data suitably, if any.*

SECTION-A

Note: This section consists of multiple-choice questions (Short answer (05 * 1 marks)

(Attempt all question)

S.No	QUESTION	BTL	CO	Max Marks(10 marks)
1	His dreams have been shattered by destiny.(Change the voice) He told that his dreams was shattered by the Dest.	KL2	CO1	1
2	It is too hot to drink. (Remove too) It's hot to Drink	KL2	CO1	1
3	If you fail to plan, you plan to fail. (Use unless) unless	KL3	CO1	1
4	As soon as he indicates, everyone follows him. (Use No- sooner) No sooner	KL3	CO2	1
5	------- he realized the value of the book, he -----have paid the price. (Use proper tense)	KL3	CO2	1
6	Write 2 expression to suggest to someone.	KL3	CO2	1
7	Explain the definition of Acronyms with two examples.	KL3	CO3	1
8	Interpret the definition of communication.	KL3	CO3	1
9	Identify the language from where the word ***communication*** originated.	KL3	CO3	1
10	Write the definition of grapevine communication.	KL3	CO3	1

SECTION-B-(Max Marks : 20)

This section consists of Descriptive questions. **(Attempt any 4 questions)**

1	Illustrate the difference between formal and informal communication.	KL3	CO3	5
2	"Signs and symbols play significant role in transforming information. Express your views with suitable examples	KL2	CO3	5
3	Identify the two models of communication. Carryout the models with a diagram.	KL3	CO3	5
4	Analyze the various characteristics of language.	KL3	CO3	5
5	Illustrate the difference between organizational and intrapersonal levels of communication.	KL3	CO3	5

SECTION-C-Marks (20 marks)

(Attempt any two questions/one Case study)

This section consists of Case Study/Experiential learning based Questions

1	Classify verbal and non-verbal modes of communication with suitable examples.	KL4	CO3	10
2	Analyze the role of 7 Cs in Effective Communication. Cordination, Coporation, Connects	KL4	CO3	10
3	Examine how **objectivity** and **brevity** are the prominent features of technical communication. Give example of each.	KL4	CO4	10

- clarity
- Completness
- Consideration
- Concreteness

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(Established Under Govt. of Maharashtra Act No. V of 2023)

Sate, Maval (PMRDA) Dist: Pune Maharashtra – 412106

Program : B.Tech.
Batch : 2023-24
Semester : I
Course : Applied Technical Communication
Course Code : CENG101
Day :
Date :

Maximum Marks: 60 marks
Time: 2.5 hrs.

Instructions: All Questions are Compulsory

SECTION A (10marks)
This section contains short answers.
(All questions are compulsory)

Question	BTL	CO	Marks
Q.1) Change the following sentences into passive voice: A. Who teaches you English? B. I've instructed them in the class. C. Please call them immediately. D. They can ask these questions. E. What did she answer?	L1	CO1	5
Q.2) Explain the standard abbreviation: WHO, NET, JEE, CUET, FSSAI	L2	CO2	5

SECTION B (20marks)
(Attempt any two questions from three)
(Each question carries 10 marks)

Q.1) How do the process of clipping and compounding help in creating new words? Support your answer with appropriate examples.	L3	CO2	**10**
Q.2) What are the elements involved in communication process? Elucidate with schematic representation.	L4	CO3	**10**
Q.3) Elucidate Upward, Horizontal, and Diagonal flow of communication with suitable examples and schematic representation.	L4	CO3	**10**

SECTION C (30 marks)
(Attempt any two questions from three)
(Each question carries 15 marks)

Q.1) Categorize the different levels of communication along with their importance.	L4	CO4	**15**
Q.2) Explain various psychological barriers to communication. Support your views with appropriate examples.	L5	CO4	**15**
Q.3) Assess the role of a language in the development of human civilization.	L5	CO4	**15**

(P.T.O.)

Enrolment No.	

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Sate, Maval (PMRDA) Dist: Pune Maharashtra – 412106

Program : BBA/ B.Sc.-Nutrition & Dietetics/ B.Sc.-Clinical Psychology
Batch : 2023-26 Session- 2023-24
Semester : I
Course : Indian Family System
Course Code : IFS101
Day :
Date :

5932

Maximum Marks : 60 marks
Time :2.5 hrs.

Instructions: Please read the instructions carefully.

SECTION A (10marks)

This section contains short answers.
(All questions are compulsory)

Question	BTL	CO	Marks
Q.1) Explain the secondary function of a family.	L2	CO1	5
Q.2) Discuss the key responsibilities of parents in shaping the upbringing of their children	L2	CO2	5

SECTION B (20marks)

This section contains Descriptive / Application-based questions
(Attempt any two questions from three)
(Each question carries 10 marks)

Q.1) How do family rituals give you and your children a sense of security, identity and belonging?	L3	CO3	10
Q.2) Write down the types of ancestral property and property distribution method.	L3	CO3	10
Q.3). 'Work-related stress affects the mental well being on individuals.' Analyze the statement.	L4	CO4	10

SECTION C (30 marks)

This section contains Case study / Experiential Learning / Analytics based questions
(Attempt any two questions from three)
(Each question carries 15 marks)

Q.1) Analyze the dynamics of a nuclear family structure along with advantage and disadvantages.	L4	CO4	15
Q.2) 'The effective communication plays an important role in maintaining family cohesion.' Justify the statement	L5	CO5	15
Q.3) Compare the Indian family system with family systems in western cultures	L5	CO5	15

(P.T.O.)

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Sate, Maval (PMRDA) Dist: Pune Maharashtra – 412106

Program	: All (Open Elective)
Batch	:2023-27
Semester	: Sem1
Course	: **Materials and Processes for Beginners**
Course Code	: **OED101**
Day	: Wednesday
Date	: 10/01/2024

Maximum Marks : 60 marks

Time : 2.5 hrs.

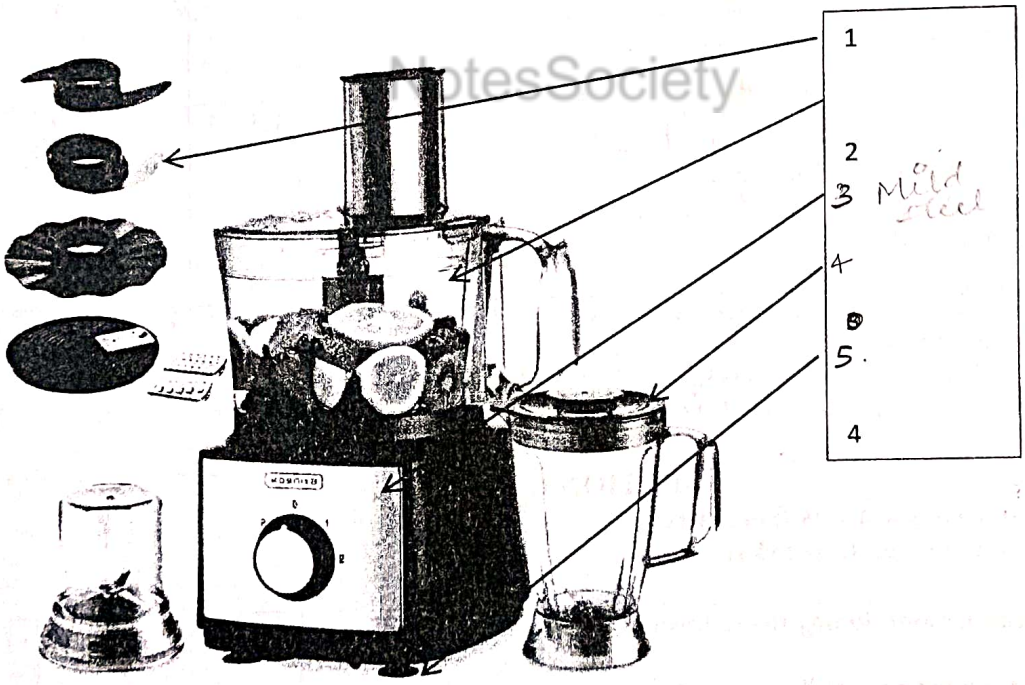
Instructions :

- Assume missing data suitably, if any.

SECTION A (10 marks)

(All questions are compulsory)

Choose from the answer options given below and write the appropriate material for the parts that are usually used to manufacture the following product



Material Options : ABS, Polypropylene, Mild Steel, Stainless steel, Polycarbonate/Acrylic, Aluminum/Copper, PVC Coated wires, Rubber Bushes, Glass, Gold, Nylon, LDPE, HDPE.

(P.T.O.)

	BTL	CO	Marks
Answer as per diagram labelling 1.	L1/L2	CO1/CO2	2
2. Glass	L1/L2	CO1/CO2	2
3. Mild steel	L1/L2	CO1/CO2	2
4.	L1/L2	CO1/CO2	2
5.	L1/L2	CO1/CO2	2

SECTION B (20 marks)

(Attempt any two questions from three)
(Each question carries 10 marks)

Suggest Suitable material from the answer options for the following product applications.

Answer Options : Stainless steel, Reinforced cement concrete, Latex rubber, Vulcanised rubber, Acrylic Emulsion, Polypropylene, Leather, Galvanised Iron, Glass, Wood, Brass, Expanded Polystyrene (Thermocol), Terracota, Gold, Brass, Multi Layer Paper, PET, Laminated Plywood. polycarb

Q1. Footwear....Expanded Polystyrene (Thermocol) Household Bucket..... Surgical Hand Gloves..... Roofing sheets - metal..... Earthenware.....	L3/L4	CO3/CO4	10
Q2. ICE Box.....Poly propylene Multi-storey Building Slab/Flooring....RCC See-through windows....Glass Car Tyres....Vulc.. Rubber Kitchen knife....Brass	L3/L4	CO3/CO4	10
Q3. Wall paint...Reinforced cement concrete Mineral Water Bottle....stainless steel Door Handles, Taps, Faucets....Galvanised Iron Modular Kitchen Cabinet....laminated Plywood Notebook....Wood	L3/L4	CO3/CO4	10

SECTION C (30 marks)

(Attempt any two questions from three)
(Each question carries 15 marks)

Q1. Design product mentioning the following stages in design process 1. Book shelf for blind or visually impaired Stages to be shown : • Brief or Title of the project, • Information collection, • Suitable conclusion or analysis of the information,	L4/L5	CO5	15

• Sketching of concept and its options, • Final sketch and its features, • Final explaination of the concept in 5 sentences.			
Q2. Design the following product mentioning the following stages in design process Compact cooking kit for camping Stages to be shown : • Brief or Title of the project, • Information collection, • Suitable conclusion or analysis of the information, • Sketching of concept and its options, • Final sketch and its features, • Final explaination of the concept in 5 sentences.	L4/L5	CO5	15
Q3. Make a task flow diagram for any one of the following (15 marks) 1. Ordering food online from app OR 2. Make a vegetable sandwich at home Example of a task flow diagram of a typical morning routine  	L4/L5	CO5	15

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Sate, Maval (PMRDA) Dist: Pune Maharashtra – 412106

Program : School of Sciences – B.Sc. (Nutrition /Clinical Psychology) /

Engineering- B Tech 2nd year/BCA

Batch : 2023-26

Semester : I

Course : Environment and Sustainable Studies

Course Code : EVS 101

Day : Tuesday

Date :09/01/24

Maximum Marks : 70 marks

Time : 2.5 hrs.

Instructions :

- All questions are compulsory

-Draw a neat labeled diagram where it is necessary.

SECTION A (10 marks)

This section contains short answers.

(All questions are compulsory)P

Question	BTL	CO	Marks
Q.1) Define EVS and explain its multidisciplinary nature	L1/L2	CO1/CO2	**5**
Q.2) Define an ecosystem and illustrate its basic components	L1/L2	CO1/CO2	**5**

SECTION B (30 marks)

This section contains Descriptive / Application-based questions

(Attempt any three questions from four)

(Each question carries 10 marks)

Q.1) Explain the reasons behind marine pollution and its consequences?	L3/L4	CO3/CO4	**10**
Q.2) Describe the factors responsible for acid rain and the resulting impacts?	L3/L4	CO3/CO4	**10**
Q.3) Identify the origins of Solid waste and categorize the various types of solid waste?	L3/L4	CO3/CO4	**10**
Q.3) Describe the origins/causes of air pollution and categorize the different sources of air pollution.	L3/L4	CO3/CO4	**10**

(P.T.O.)

```
x = x - y;
printf("X : %d\n", x);
```

(P.T.O.)

SECTION C (30 marks)
This section contains Case study / Experiential Learning / Analytics based questions
(Attempt any two questions from three)
(Each question carries 15 marks)

Q.1) Analyze the environmental, social, and economic implications of the Sardar Sarovar Dam, considering both its positive and negative impacts.	L4/L5	CO5	**15**
Q.2) Analyze the contributions of prominent Indian environmentalists, examining the key aspects of their work and the impact it has had on environmental conservation and sustainability.	L4/L5	CO5	**15**
Q.3) Examine the environmental, social, and economic implications of Overexploitation of forest resourses	L4/L5	CO5	**15**

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Sate, Maval (PMRDA) Dist: Pune Maharashtra – 412106

Program	:	Bachelor of Computer Application
Batch	:	2023-24
Semester	:	1st
Course	:	Programming Concept using C language
Course Code	:	BCA111
Day	:	Saturday
Date	:	06/01/2024

Maximum Marks: 60 marks

Time: 2.5 hrs.

Instructions: 1) Use of any digital device is not allowed.
2) Draw neat Diagrams where necessary.

SECTION A (10 marks)

This section contains short answers.
(All questions are compulsory)

Question	BTL	CO	Mark
Q.1) Compare the difference between abs () and fabs () functions with suitable example.	L2	CO1	5
Q.2) What do you mean by C tokens? Explain briefly.	L1	CO1	5

SECTION B (20 marks)

This section contains Descriptive / Application-based questions
(Attempt any two questions from three)
(Each question carries 10 marks)

Q.1) Identify the output of the code snippet with proper Justification.
`#include<stdio.h>`
`int find (int x, int y)`
`{`
`return (x*5+y*86);`
`}`
`int main(void)`
`{`
`int a=44, b=32;`
`int res;`
`res=find(a);`
`printf ("%d", res);`
`return 0;`
`}`
	L3	CO3	10

Q2) Identify the output of the code snippet with proper Justification.
`#include<stdio.h>`
`int main()`
`{`
`int x = 10;`
`int y = 70;`
`x = x + y;`
`y = x - y;`
`x = x - y;`
`printf("X : %d\n", x);`
	L4	CO4	10

(P.T.O.)

(P.T.O.)

Enrolment No. 50523301020035

printf("Y : %d\n", y); → Error.
return 0;
}

Q.3) Write a program that will initialize a 4-digit number and will interchange its 1st digit and 4th digit. (num = 8247 then o/p = 7248)	L3	CO3	10

SECTION C (30 marks)

This section contains Case study / Experiential Learning / Analytics based questions
(Attempt any two questions from three)
(Each question carries 15 marks)

Q.1) Assume a number from user and display the same by skipping zeros	L4	CO5	15
Q.2) Write an Algorithm, Flowchart and program to convert given number into word. Example if number is 653 then output will be SIX FIVE THREE.	L5	CO5	15
Q.3) Write an Algorithm, Program to display the following Pattern: - 2 3 4 5 6 7 8 9 10 11	L4	CO5	15

Enrolment No. 0322301020035

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Sate, Maval (PMRDA) Dist: Pune Maharashtra – 412106

Program	: BCA/BSc-CS	[SET-C]
Batch	: 2023-24	
Semester	: 1st	
Course	: Fundamental of Computer Organization	
Course Code	: BCA113/ BSC113	
Day	: Friday	Maximum Marks: 60 marks
Date	: 05.01.2024	Time: 2.5 hrs.

Instructions:
- *All the sections are compulsory.*
- *Assume missing data suitably, if any.*

SECTION A (10 marks)

(All questions are compulsory)

Question	BTL	CO	Marks
Q.1) Define De-Morgan's and Distribution theorem. The complement of the products of all the terms = 10	L1	CO3	5 2.5
Q.2) Perform Hexadecimal Addition (A+B) A=9654, B=8A43	L1	CO4	5

SECTION B (20 marks)

(Attempt any two questions from three)
(Each question carries 10 marks)

the sum of compliment of each term. Digital Design Tool Powerful

Q.1) Implement the following logical expression: F= C+BC+AB using logic gates.	L3	CO1	10 10
Q.2) Discuss Harvard and Von Neumann architecture in detail.	L3	CO2	10
Q.3) Write short notes on the following (a) Basic Gates (b) Universal Logic Gates AND and OR & NOT NOR & NAND gate	L3	CO3	10 9a10

SECTION C (30 marks)

(Attempt any two questions from three)
(Each question carries 15 marks)

Q.1) Convert one number system into another. Convert $(29.4)_{10}$ into Binary number system	L5	CO1	15

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Program	: BCA/BSC	[SET-B]
Batch	: 2023-24	
Semester	: 1st	
Course	: Basic Mathematics	
Course Code	: BM-101	
Day	:	Maximum Marks: 60 marks
Date	:	Time: 2.5 hrs.

Instructions:
- *All the sections are compulsory.*
- *Assume missing data suitably, if any.*

SECTION A (10 marks)

(All questions are compulsory)

Question	BTL	CO	Marks
Q.1) Find the $f'(x)$, where $f(x) = 5x^2 + 2\cot x - 3\log x$	L1	CO3	5
Q.2) Find the value of $\int (3-4x)^7 dx$	L1	CO4	5

SECTION B (20 marks)

(Attempt any two questions from three)
(Each question carries 10 marks)

Q.1) Solve the system by using Gauss Jorden Method $x + y + z = 9, x - 2y + 3z = 8, \; 2x + y - z = 3$	L3	CO1	**10**
Q.2) Construct other trigonometric ratios of the angle A and C if i. $\tan A = \frac{4}{5}$ ii. $\sin C = \frac{3}{5}$	L3	CO2	**10**
Q.3) Apply and verify Cauchy's mean value theorem i. $f(x) = x^3$ and $g(x) = x^2$ in $(0, 2)$ ii. $f(x) = x^2$ and $g(x) = x^4$ in $(0, 1)$	L3	CO3	**10**

SECTION C (30 marks)

(Attempt any two questions from three)
(Each question carries 15 marks)

Q.1) Estimate the rank by reducing into the Echelon form $$A = \begin{bmatrix} 1 & 2 & 3 \\ 1 & 4 & 2 \\ 2 & 6 & 5 \end{bmatrix}$$	L5	CO1	**15**
Q.2) Justify Rolle's Mean Value theorem for i. $f(x) = x^2$ in $(2,4)$ ii. $f(x) = x^2 - 4x - 3$ in $(1,4)$ iii. $f(x) = x(x-1)$ in $(1,2)$	L5	CO3	**15**
Q.3) Estimate the integral values of the followings with respect x, i. $\sqrt[3]{x^4}$ ii. $\frac{\tan x}{\cos x}$ iii. $\frac{1}{25+x^2}$	L5	CO4	**15**

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Name. _____

Student Enrollment number. No.: _____

Printed Pages:

School of Sciences

Unit Test/Mid Term(UT/MT), Semester-: Odd 2023, Month- Oct/Nov

[Programme:BSc. Clinical Psychology, Nutririon & Dietitics , MCA/ BCA/ B tech.]

[Semester I] [Batch:2023]

Course Title: Environment and sustainable studies

Course Code: EVS-101

Max Marks: 50

Time:(2 Hrs)

Instructions:

1. *All questions are compulsory.*
2. *Assume missing data suitably, if any.*

SECTION-A

Note: This section consists of Short answer (05 *2 marks)

(Attempt all question)

S.No	QUESTION	BTL	CO	Max Marks(10 marks)
1.	Define environment sustainability. Enlist the name of companies which are contributing the environment sustainability. → Suzlon, M&M, Tata Power, UPS	KL2	CO1	1
2.	Define attainment and non-attainment area with respect to air pollution	KL3	CO2	1
3.	Differentiate renewable and non-renewable sources with examples.			1
4.	Explain the reason behind over exploitation of natural resources	KL1	CO1	1
5.	Define green revolution and how it exploited the environment	KL2	CO2	1

SECTION-B - **(Max Marks : 20)**

This section consists of Descriptive questions. **(Attempt any 4 questions)**

1.	Elaborate the causes and Control of E- waste	KL1/KL2	CO1	5
2.	Identify the most popular technique for water conservation which is used since ancient India to till date. Explain about it with its four objectives	KL2/KL3	CO2	5

3.	What is theory behind Ozone Layer and what are harmful effects of ozone layer depletion	KL3	CO3	5
4.	Explain about AQI. Give your detailed opinion on AQI quantity of polluted air is measured. (2)	KL3	CO3	5
5.	Describe a link between Aerosols and climate change	KL3	CO3	5

SECTION-C **Marks (20 marks)**

(Attempt any two questions)

This section consists of Case Study/Experiential learning based Questions

1	Explain about multidisciplinary nature of Environmental studies.	KL3/KL4	CO3	**10**
2	Prove that development of country has negative effect on poor life of people with the help of Sardar Sarovar Dam case study in brief.	KL3/KL4	CO3	**10**
3	**Explain your specific case study in detail**	KL4	CO3	**10**

Enrolment No.	SOS23302020635 .

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(Established Under Govt. of Maharashtra Act No. V of 2023)
Sate, Maval (PMRDA) Dist: Pune Maharashtra – 412106

[SET-A]

Program : BSC-CYBER SECURITY
Batch : 2023-24
Semester : 1st
Course : Fundamentals of Data Communication and Networking
Course Code : BSC102
Day : Tuesday
Date : 02.01.2024

Maximum Marks: 60 marks
Time: 2.5 hrs.

Instructions:
- *All the sections are compulsory.*
- *Assume missing data suitably, if any.*

SECTION A (10 marks)

(All questions are compulsory)

Question	BTL	CO	Marks
Q.1) Define transmission modes (Simplex, Half-Duplex, and Full-Duplex). Provide examples of devices that use each mode.	L1	CO3	5 2 or 3
Q.2) Compare and contrast Bus and Star topologies.	L1	CO4	5 5

SECTION B (20 marks)

(Attempt any two questions from three)
(Each question carries 10 marks)

Q.1) Define analog signal and provide examples of analog devices that generate such signals.	L3	CO1	10
Q.2) Examine pulse code modulation in data communication.	L4	CO2	10
Q.3). Define a Computer Network. Explain its importance in the modern world with examples.	L3	CO3	10

(P.T.O.)

SECTION C (30 marks) **(Attempt any two questions from three)** **(Each question carries 15 marks)**			
Q.1) Describe the seven layers of the OSI model and explain the primary functions of each layer.	L5	CO1	**15**
Q.2) Provide an overview of the TCP/IP protocol suite. What are the main protocols included in this suite, and what are their functions?	L5	CO3	**15** 8,12. 10
Q.3) What are the various types of modulation? Explain Amplitude, Frequency & Phase modulation.	L6	CO4	**15** 15

Name. _____ Student Enrollment number. No.: _____	**Printed Pages:**
School of Engineering **Unit Test/Mid Term(UT/MT),** **Semester-: Odd/Even 2023, Month- Oct/Nov** **[Programme:Name] BCS & BCA[Semester : 1] [Batch: BSC/BCA]**	
Course Title: C Language **Course Code:BSC101,BCA111**	**Max Marks: 50** **Time:(2 Hrs)**
Instructions:	*1. All questions are compulsory.* *2. Assume missing data suitably, if any.*

SECTION-A

Note: This section consists of multiple-choice questions (10*1 mark) or Short answer (05 *2 marks)

(Attempt all question)

S.No	QUESTION	BTL	CO	Max Marks(10 marks)
1	Define function? Write a function to find the sum of two numbers	KL1	CO1	2
2	What is preprocessor directive? Explain #define and #include preprocessor directives	KL1, KL2	CO2	2
3	Select the father of C language? a) Steve Jobs b) James Gosling c) Dennis Ritchie d) RasmusLerdorf	KL1	CO3	2
4	Trace the correct following declaration which not supported by C language? a) String str; b) char *str; c) float str = 3e2; d) Both "String str;" and "float str = 3e2;"	KL2	CO4	2

5	Select valid C expression?
	a) intmy_num = 100,000;
	b) intmy_num = 100000;
	c) int my num = 1000;
	d) int $my_num = 10000;
		KL1	CO5	2

SECTION-B - (Max Marks : 20) (Attempt any 4 questions)

This section consists of Descriptive questions.

1	Describe switch statement with syntax and example	KL2	CO1	5
2	Differentiate between post-increment and pre-increment. Demonstrate a program in C to find out the greatest among three numbers using function.	KL2	CO2	5
3	Name different operators in C-Language with examples.	KL1	CO3	5
4	Summarize with syntax ,if, if-else and nested if-else statements in "C" program	KL5	CO3	5
5	List the types of errors exist in C programming	KL1	CO3	5

SECTION-C **Marks (20 marks)**

(Attempt any two questions/one Case study)

This section consists of Case Study/Experiential learning based Questions

1	Solve the output of the followings with explanation
	(i)
	main( )
	{
	inti=5, j=8;
	j= (i> j) && (i<j);
	printf("%d %d", i, j);
	}
	(ii) main( )
	{ inti=5, j;
	j= ++i + i++ ;
	printf("%d %d", i, j);
	}
	
	(iii) main( )
	{
	inti=5, j=8;
	if(i = j) printf("Hello");
	else printf("Hai");
	}
		KL3	CO3	10

2	Write a C program to find the factorial of a number using for loop,where the number n is entered by user	KL6	CO3	10
3	Write a C program to calculate area of circle, rectangle and triangle. Area of circle=π*r*r, Area of rectangle= length*breadth and Area of triangle= 0.5*base*height.	KL6	CO3	10

PIMPRI CHINCHWAD UNIVERSITY

Established Under Govt. of Maharashtra Act No. V of 2023

Sate, Maval (PMRDA). Dist-Pune, Maharashtra-412106 www. pcu.edu.in

Name. _____ | Printed Pages:

Student Enrollment number. No.: _____

School of Sciences

Mid Term(MT), Semester-: Odd 2023, Month- Oct/Nov

[Programme:B.Sc. Ntr/Clinical Psy/ Cyber Security [Semester-I] [Batch:2023-26]

Course Title: Indian Family System | Max Marks: 50

Course Code: IFS101 | Time:(2 Hrs)

Instructions:

1. *All questions are compulsory.*
2. *Assume missing data suitably, if any.*

SECTION-A

Note: This section consists of multiple-choice questions (10*1 mark) or Short answer (05 *2 marks)

(Attempt all question)

S.No	QUESTION	BTL	CO	Max Marks(10 marks)
1	Discuss the structure of family.	KL2	CO1	2
2	Determine the definition of joint family.	KL3	CO2	2
3	Write the features of family.	KL3	CO3	2
4	Illustrate the role of rituals in family.	KL3	CO3	2
5	Exanrine the Concepts of Ancestral Property in Muslim Law	KL3	CO3	2

SECTION-B - (Max Marks : 20) **This section consists of Descriptive questions.** **(Attempt any 4 questions)**

1	Write a short note on the core values and principles in Indian family.	KL3	CO1	5
2	Determine the women's rights in Ancestral Property.	KL3	CO2	5
3	"Family rituals play powerful tool in family therapy" Examine the statement	KL3	CO2	5
4	Examine parameters of variability in joint family.	KL3	CO3	5
5	Examine the nuclear family structure given by Pauline Kolenda.	KL3	CO3	5

SECTION-CMarks (20 marks)

(Attempt any two questions/one Case study)

This section consists of Case Study/Experiential learning based Questions

1	Analyze the steps of family development.	KL4	CO3	10
2	"Most divorces are arising from love marriages, says Supreme Court" Analyze the statement	KL4	CO3	10
3	Analyze the role of children in family.	KL4	CO3	10

PCET's PIMPRI CHINCHWAD UNIVERSITY,
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Academic Year: 2023-24	**MID-TERM**	TERM – I

Name. _____
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(SET-A)

SCHOOL OF ENGINEERING

Mid Term,

Semester-: Odd 2023, Month- Oct/Nov

[Program: BCA/BSC]

[1st Sem.] [Batch:2023-24]

Course Title: BASIC MATHEMATICS
Course Code: BM-101

Max Marks: 50
Time:(2 Hrs.)

Instructions:
1. *All questions are compulsory.*
2. *Assume missing data suitably, if any.*

SECTION-A
(Attempt all question)

Max Marks(10 marks)

S.No	QUESTION	BTL	CO	Max Marks
1	3 radians $540/\pi$ degrees	KL1	CO2	1M
2	15^0 = $\pi/4$ radians.	KL1	CO2	1M
3	The reciprocal ratio of tan θ is $\cot\theta$	KL1	CO2	1M
4	The value of $\sin(270-\theta)$ is $-\cos\theta$	KL1	CO2	1M
5	$\cos(A+B)$ $\sin A \sin B - \cos A \cos B$	KL1	CO2	1M
6	The order of the matrix $A=\begin{bmatrix}3 & 2 & 1\\ 2 & 4 & 6\end{bmatrix}$ is 2×3	KL1	CO1	1M
7	If $A=\begin{bmatrix}-1 & 0\\ 0 & 1\end{bmatrix}$ then its transpose is $\begin{pmatrix}1 & 0\\ 0 & 1\end{pmatrix}$	KL1	CO1	1M
8	Write an example of a symmetric matrix. $A=A^T$	KL1	CO1	1M
9	Define the term "singular matrix". $\|A\|=0$	KL1	CO1	1M
10	If $A=\begin{bmatrix}3 & 4\\ 7 & 8\end{bmatrix}$ and $B=\begin{bmatrix}1 & 2\\ 3 & 4\end{bmatrix}$ then A+B is $\begin{bmatrix}04 & 06\\ 10 & 12\end{bmatrix}$	KL1	CO1	1M

SECTION-B
(Attempt any 4 questions)

(Max Marks : 20)

11	Construct the remaining trigonometric ratios of the angle A, if $\tan A=\frac{4}{3}$	KL3	CO2	5M

PCET's PIMPRI CHINCHWAD UNIVERSITY,
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Academic Year: 2023-24	MID-TERM	TERM – I

12	If $\sin A = \frac{3}{5}$, examine the remaining trigonometric ratios of the angle A	KL4	CO2	5M
13	Find the determinant of the matrix $B = \begin{bmatrix} 2 & 2 & 1 \\ 1 & 3 & 1 \\ 1 & 2 & 2 \end{bmatrix}$	KL4	CO1	5M
14	Define is an orthogonal matrix and show that the matrix $A = \begin{bmatrix} -1 & 0 \\ 0 & 1 \end{bmatrix}$ is an orthogonal matrix	KL1	CO1	5M
15	Find (A + B) and (A. B), where $A = \begin{bmatrix} 1 & 1 & 3 \\ -1 & 0 & 2 \\ -2 & 1 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 0 & -1 & 3 \\ 1 & 4 & 1 \\ 2 & 0 & 1 \end{bmatrix}$	KL4	CO1	5M

SECTION-C **Marks (20 marks)**

Attempt any two questions

16	Reduce into the Echelon form and find the rank of a matrix $A = \begin{bmatrix} 0 & 1 & -3 & -1 \\ 1 & 0 & 1 & 1 \\ 3 & 1 & 0 & 2 \\ 1 & 1 & -2 & 0 \end{bmatrix}$	KL4	CO1	10M
17	Solve the system of equations given below by using Gauss Elimination $x + y + z = 9$ $x - 2y + 3z = 8$ $2x + y - z = 3$	KL3	CO1	10M
18	a) Convert the angle measure from radians to degrees $\frac{5\pi}{11}$ and $\frac{15\pi}{8}$ b) Given $\sin 30^0 = \frac{1}{2}$ and $\tan 30^0 = \frac{\sqrt{3}}{3}$, find $\cos 30^0$.	KL2/ KL4	CO2	10M

PCET's PIMPRI CHINCHWAD UNIVERSITY,
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Academic Year: 2023-24	**MID-TERM**	TERM – I

12	If $\sin A = \frac{3}{5}$, examine the remaining trigonometric ratios of the angle A	KL4	CO2	5M
13	Find the determinant of the matrix $B = \begin{bmatrix} 2 & 2 & 1 \\ 1 & 3 & 1 \\ 1 & 2 & 2 \end{bmatrix}$	KL4	CO1	5M
14	Define is an orthogonal matrix and show that the matrix $A = \begin{bmatrix} -1 & 0 \\ 0 & 1 \end{bmatrix}$ is an orthogonal matrix	KL1	CO1	5M
15	Find (A + B) and (A. B), where $A = \begin{bmatrix} 1 & 1 & 3 \\ -1 & 0 & 2 \\ -2 & 1 & 5 \end{bmatrix}$ and $B = \begin{bmatrix} 0 & -1 & 3 \\ 1 & 4 & 1 \\ 2 & 0 & 1 \end{bmatrix}$	KL4	CO1	5M

SECTION-C **Marks (20 marks)**

Attempt any two questions

16	Reduce into the Echelon form and find the rank of a matrix $A = \begin{bmatrix} 0 & 1 & -3 & -1 \\ 1 & 0 & 1 & 1 \\ 3 & 1 & 0 & 2 \\ 1 & 1 & -2 & 0 \end{bmatrix}$	KL4	CO1	10M
17	Solve the system of equations given below by using Gauss Elimination $x + y + z = 9$ $x - 2y + 3z = 8$ $2x + y - z = 3$	KL3	CO1	10M
18	a) Convert the angle measure from radians to degrees $\frac{5\pi}{11}$ and $\frac{15\pi}{8}$ b) Given $\sin 30^0 = \frac{1}{2}$ and $\tan 30^0 = \frac{\sqrt{3}}{3}$, find $\cos 30^0$.	KL2/ KL4	CO2	10M

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Student Enrollment number. No.: _____

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School of Design

Unit Test/Mid Term(UT/MT),

Semester-: Odd 2023, Month- Oct/Nov

B. Des Foundation Semester 1 2023-24

Course Title : Material and processes for beginners

Course Code: OED101

Max Marks: 20
Time:(2 Hrs)

Instructions:

1. *All questions are compulsory.*
2. *Assume missing data suitably, if any.*

SECTION-A

S.No	QUESTION	BTL	CO	Max Marks (5 marks)
1	Arrange the following keywords in the order of the design process Reiteration, Prototype, Brief, Research, Exploration, Analysis, Deliver	KL1	CO1	5

SECTION-B - **(Max Marks : 10)**
(Attempt all question)

1	Match the following A. Plastics — 1. MDF/Plywood B. Metals — 2. Thermosets/Thermoplastics C. Ceramics — 3. Ferrous/Non-ferrous D. Composites — 4. Glass E. Engg. Wood — 5. Glass Fibre Reinforced Plastic	KL2/KL3	CO2	10

SECTION-C **Marks (5marks)**

1	What is Design process according to you ? Answer in atleast 5 keywords.	KL3/KL4	CO3	5