

**SRM Institute of Science and Technology**  
**Department of Computer Application**

Delhi – Meerut Road, Sikri Kalan, Ghaziabad, Uttar Pradesh – 201204



**Academic Year: 2023-24 (ODD) SET – B**

Test : Internal Examination II Date & Session : 04.10.23

Course Code & Title : UDS23103T & Role of Mathematics in AI

Year & Sem : I & I

Duration: 1 Hour 30 Mins

Max. Marks: 50

**Part - A**

**Answer all questions**

**Q. No**

**Question**

**(9Q x 2M = 18 Marks)**

Marks	BL	CO	PO
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1	Define Skew-Hermitian Matrix and also give one example.	2	1	1	2
2	Prove that eigen value of the real skew-symmetric matrix $A$ is either 0 or purely imaginary number.	2	2	1	4
3	Define orthogonal Matrix and also give one example.	2	1	1	2
4	By using Cramer's rule, solve for $5x + 3y = 17$ and $3x + 7y = 31$ .	2	2	1	4
5	Find the value of $\frac{dy}{dx}$ at $x = 3$ and $x = -4$ , where $y = \frac{(x-3)(x+4)}{(x+2)}$ .	2	2	2	4
6	Find the stationary points of the function $f(x) = 3x^4 - 4x^3 - 12x^2 + 5$ .	2	2	2	4
7	It is given that at $x = 2$ , the function $2x^3 + 3x^2 - kx$ attains its minimum value. Find the value of $k$ .	2	2	2	4
8	Find the value of $\int \frac{1}{\sin^2 x \cos^2 x} dx$ .	2	2	2	4
9	Find the value of $\int \frac{(\log x)^2}{x} dx$ .	2	2	2	4

**Part B**

**Answer all questions**

**2Q x 16M = 32 Marks**

10.	(A) Evaluate (i) $\int \frac{1}{1+\tan x} dx$ (ii) $\int \sin^3 x \cos^2 x dx$ .	16	2	2	4
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**(OR)**

11.	(B) Solve for $-y - 6z = 16$ , $-x + 7y + 7z = -9$ , $5x - 4y - 6z = 20$ using Cramer's rule.	16	2	2	4
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**(OR)**

11.	(B) 20 is divided into two parts so that product of cube of one quantity and square of the other quantity is maximum. Find the parts.	16	2	2	4
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**Academic Year: 2023-24 (ODD) SET – A**

<b>Test</b>	: Internal Examination II	<b>Date &amp; Session:</b> 04/10/23&AN
<b>Course Code &amp; Title</b>	: UDS23101J/Programming using Java	<b>Duration:</b> 1 Hour 30 Mins
<b>Year &amp; Sem</b>	: 1 <sup>st</sup> /1 <sup>st</sup>	<b>Max. Marks:</b> 50

**Part - A**

**Answer all questions**

**(9Q x 2M = 18 Marks)**

<b>Q. No</b>	<b>Question</b>	<b>Marks</b>	<b>BL</b>	<b>CO</b>	<b>PO</b>
1	Explain the concept of a base class and a derived class.	2	2	2	3
2	What is method overloading, and why is it useful in Java.	2	2	2	2
3	Describe what is method overriding, and in which situations is it used?	2	1	2	3
4	How is the "super" keyword used to call a constructor in a subclass.	2	2	2	2
5	Can a class implement multiple interfaces in Java. If yes, explain in brief.	2	1	2	2
6	What is recursion in programming, and how does it work.	2	1	2	1
7	How does "this" differ from "super" in Java.	2	2	2	3
8	How can you create a thread in Java?	2	2	2	2
9	What is an exception in Java, and why are they important?	2	2	1	3

**Part B**

**Answer all questions**

**2Q x 16M = 32 Marks**

<b>Q. No</b>	<b>Question</b>	<b>Marks</b>	<b>BL</b>	<b>CO</b>	<b>PO</b>
11.	(A) Define polymorphism in object-oriented programming and explain its significance. Provide examples in Java to illustrate compile-time and runtime polymorphism.	16	2	2	3

**(OR)**

	(B) Describe the concept of multithreading in Java. Discuss the advantages and challenges of using multithreading in a program. Provide code examples to demonstrate the creation and synchronization of threads.	16	1	2	3
12.	(A) Discuss the concept of access modifiers (public, private, protected, package-private) in Java classes and their impact on inheritance. Provide examples to illustrate how these access modifiers affect the visibility of members in subclasses.	16	2	2	2

**(OR)**

	(B) Explain what an interface is in Java and how it differs from a class. Provide an example of an interface and demonstrate how a class can implement multiple interfaces. Discuss the advantages of using interfaces in Java.	16	2	2	2
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**Academic Year: 2023-24 (ODD) SET - A**

Test	: Internal Examination I	Date & Session : 04/10/2023 ( FN )
Course Code & Title	: Fundamental of Data Science (UDS23102J)	Duration: 1 Hour 30 Mins
Year & Sem	: IYr&I Sem	Max. Marks: 50

**Part - A**

**Answer all questions (9Q x 2M = 18 Marks)**

Q. No	Question	Marks	BL	CO	PO
1	What is positive correlation?	2	1	1	1
2	What is CSV file?	2	1	2	2
3	What is "Overloading" in python?	2	1	3	1
4	What is "Inheritance" in python?	2	2	3	3
5	What is "Aggregation" in Numpy?	2	1	2	2
6	What is String in python? ✓	2	1	1	2
7	List out the name of some common python libraries used in data wrangling✓	2	2	1	1
8	What is len() function.✓	2	2	2	2
9	What methods can be used for handling missing data using pandas.✓	2	1	3	1

**Part B**

**Answer all questions**

**2Q x 16M = 32 Marks**

11.	(A) What do you mean by "List" and "Tuple"? Explain with example.✓	16	2	1	1
(OR)					
	(B) What are "Class" and "Object" in python? Explain with example.✓	16	1	2	1
(OR)					
12.	(A) What is "Numpy"? Describe "Array Slicing" in Numpy with example.✓	16	2	3	2

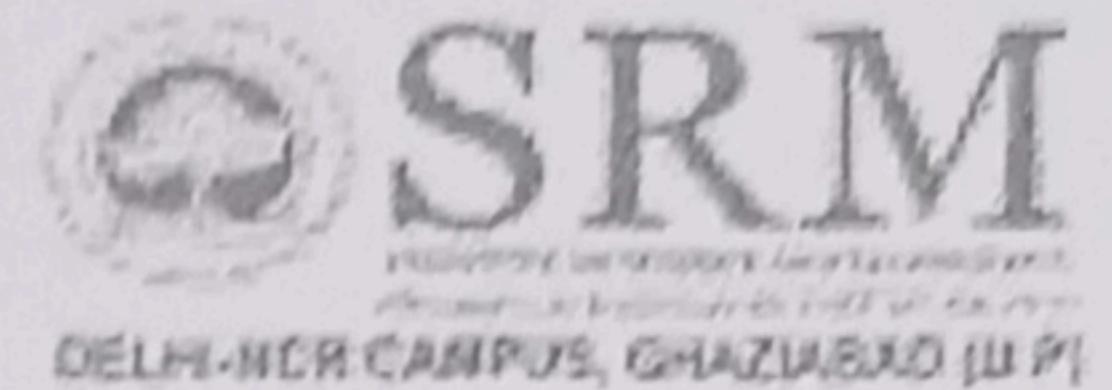
(OR)

(B) Explain the methods of indexing, selection and filtering using pandas. ✓

16 1 2 2

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**Academic Year: 2023-24 (ODD) SET – B**

Test	: Internal Examination II	Date & Session : 03.10.2023/AN
Course Code & Title	: ULE23AE2T / Business English	Duration : 1 Hour 30 Mins
Year & Sem	: I / I	Max. Marks : 50

**Part - A**

**Answer all questions (9Q x 2M = 18 Marks)**

Q. No	Question	Marks	BL	CO	PO
1	What is difference between circular and memorandum?	2	1	3	2
2	What is the purpose of notice?	2	1	3	2
3	What is the format of circular?	2	1	2	3
4	What are the tips used in resignation letter?	2	1	2	3
5	What is the difference between Cc and Bcc in email writing? -	2	1	2	3
6	What are the tips used in the order letter?	2	1	3	2
7	What are the types of circulars?.	2	1	2	2
8	What is the purpose of memorandum?	2	1	2	3
9	What are the steps used in slide preparation?	2	1	3	2

**Part B**

**Answer all questions**

**2Q x 16M = 32 Marks**

10.	(A) The director of H. H. Private LTD wants to send a notice to all managers of the company for a meeting regarding the increment in the salary of employees on 15 October, 2023 at the head office of the company, 55 AA Street, Delhi. Draft a notice properly.	16	3	2	3
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Or

	(B) What are components of report writing? Explain in detail.	16	3	3	2
11.	(A) Write a complaint letter to the branch manager of SBI as your account not running with a proper service of Net Banking..	16	2	3	2

Or

	(B) Write an email to your classmates as your collage is going to participate in the cultural fest in IIT Delhi on 25 November, 2023.	16	3	2	3
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**SRM Institute of Science and Technology**  
**Department of Computer Application**  
**Delhi-NCR Campus, Modinagar, Ghaziabad**  
**Academic Year: 2023-24 (Odd Semester)**

Test : Internal Examination-II  
 Course Code & Title : ULF23G01J/FRENCH  
 Year & Sem. : 1<sup>st</sup> Year 1st Sem.

Date & Session: 03/10/2023 & FN  
 Duration: 1 Hour 30 Min.  
 Max. Marks: 50

**PART-A**

*Toutes les questions sont obligatoires*

Question

Q.No.	Question	(9Q x 2M= 18 Marks)			
		Marks	BL	CO	PO
1.	Écrivez la réponse en toutes lettres: (a) 14+4-8= _____ (b) 34+22-6= _____	2	2	3	3
2.	Mettez les phrases au pluriel : (a) Il est touriste. (b) Elle a une carte de crédit.	2	2	3	3
3.	Répondez aux questions. (a) Vous êtes français ? (b) Il a le passeport ?	2	2	4	3
4.	Écrivez les professions en français : (a) Actor (b) Baker (masculin)	2	2	2	2
5.	Chassez l'intrus : (a) i- livre      ii- journal      iii- cahier      iv- fleur (b) i- la voiture      ii- le vélo      iii- le bus      iv- l'avion	2	2	2	3
6.	Retrouvez les phrases suivantes : (a) Paul / tu / ? / appelles / t' (b) à / habite / Paris / Il	2	2	2	2
7.	Trouvez la question. (a) C'est une chanteuse. (b) C'est un livre.	2	2	4	3
8.	Réécrivez les phrases en utilisant « inversion ». (a) Vous avez des stylos noirs ? (b) tu as dix-neuf ans ?	2	2	4	2
9.	Mettez la forme correcte de l'adjectif : (a) Ils sont _____ de venir ici. (content) (b) Il est _____ (triste)	2	2	3	3

**PART-B**

*Toutes les questions sont obligatoires*

10.	(a) Écrivez l'heure en français: i- 00h00      ii- 17h45      iii- 6h12 a.m.      iv- 11h52 p.m.	(4Q x 8M= 32 Marks)			
		4	2	2	3
	(b) Répondez en utilisant « Si, Oui, ou Non » i- Vous n'êtes pas indiens ? ii- Tu es étudiant(e) ? iii- Est-ce que vous êtes pilote ? iv. Êtes-vous français(e) ?	4	2	4	3

11. (a) Présentez votre voisin(e) 4 2 3 3  
 (b) Conjuguez les verbes au présent : 4 2 3 3  
 i- lire ✓ ii- aller ✓ iii- faire ✓ iv- avoir ✓
12. (a) Complétez les phrases avec les prépositions. 4 2 4 2  
 avec, entre, sur, chez  
 i- Le bébé est \_\_\_\_\_ les deux chats.  
 ii- Je vais \_\_\_\_\_ Nicolas.  
 iii- Il est très gentil \_\_\_\_\_ moi.  
 iv- Le livre est \_\_\_\_\_ la table.
- (b) Complétez avec l'article contracté. 4 2 3 2  
 au, à la, aux, à l'  
 i- Tu aimes le lait \_\_\_\_\_ chocolat.  
 ii- Elle va \_\_\_\_\_ pharmacie.  
 iii- Il est malade, il va \_\_\_\_\_ hôpital.  
 iv- Je parle \_\_\_\_\_ parents.
13. (a) Écrivez les phrases suivantes à la forme négative : 4 2 3 3  
 i- Les chambres sont occupées.  
 ii- Nous avons des serviettes.  
 iii- Je suis français.  
 iv- Il a un livre de français.
- (b) Transformez les phrases au féminin. 4 2 2 3  
 i- C'est un écrivain japonais.  
 ii- Il est professeur de français.  
 iii- Ils sont indiens.  
 iv- C'est un acteur.
- OU
14. Conjuguez les verbes au présent. 8 2 3 3  
 i- Je \_\_\_\_\_ à la piscine. (aller)  
 ii- Elle \_\_\_\_\_ Valérie. (s'appeler)  
 iii- Il \_\_\_\_\_ beau. (faire)  
 iv- Vous \_\_\_\_\_ très gentils. (être)  
 v- M. Dubois \_\_\_\_\_ à Paris. (habiter)  
 vi- Tu \_\_\_\_\_ quel âge ? (avoir)  
 vii- Elles \_\_\_\_\_ français. (Parler)  
 viii- Mon ami \_\_\_\_\_ à Delhi. (travailler)

\*\*\*\*\*Bonne Chance\*\*\*\*\*

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**Academic Year: 2023-24 (ODD) SET – A**

Test : Internal Examination II  
 Course Code & Title : UCD23V01T/ Universal Human Values  
 Year & Sem : 1<sup>st</sup> & I

Date & Session : 05/10/23 & AN  
 Duration: 60 Minutes  
 Max. Marks: 50

**Part - A**

Q. No	Answer all questions Question	(9Q x 2M = 18 Marks)			
		Marks	BL	CO	PO
1	Why do you think it's important to be compassionate towards others?	2	1	1	1
2	"No legacy is so rich as honesty", justify this statement.	2	2	4	1
3	How would you differentiate between sincerity and veracity?	2	2	3	3
4	Why do people want a relationship?	2	2	1	1
5	How priority creates obstacles on the path of righteousness?	2	3	4	1
6	What is the principle of righteousness? Explain with some examples.	2	1	3	2
7	How empathy is different from compassion?	2	2	3	1
8	Enumerate the concept of internal and external peace.	2	2	4	1
9	Define the concept of pacifism?	2	2	4	2

**Part B**

	Answer all questions	2Q x 16M = 32 Marks			
11.	(A) Do nonviolent movements require charismatic leaders like Gandhi or Martin Luther King, Jr? Explain it with examples.	16	3	3	1
	(OR)				
	(B) Do you think it is important to practice love and compassion? Explain it.	16	2	2	1
12.	(A) "Peace can be best realized when there is freedom, equality, and justice. Do you agree?	16	2	4	1
	(OR)				
	(B) From your perspective, how does a person become righteous or unrighteous? Validate your point by explaining some famous figures who are known for their righteousness.	16	2	1	2