ITBP PUBLIC SCHOOL, DWARKA SEC-16 B
SESSION- 2021-22
SUBJECT- ENGLISH
CLASS – 12 HUMANITIES
MONTHLY ASSIGNMENT

MONTH:: MAY

GENRE:: CONFESSIONAL POETRY
POEM:: MY MOTHER AT SIXTY SIX – BY KAMALA DAS

1. Read the extract given below and answer the questions that follow. (4M)
I looked again at her wan, pale as a late winter's moon and felt that old familiar ache, my childhood's fear but all I said was, see you soon, Amma, all I did was smile, smile, smile...
i. The parting words of the poet, "see you soon, Amma" suggest .
(a) Passion (b) Ache (c) Happiness (d) Jealous
ii."...all that the poet did was smile and smile and smile..." Her smile is:
(a) Sudden, in responses to her mother's (b) Meaningful and loaded with love
(c) Accompanied with tears of farewell (d) Put on to cheer her mother
iii. Why has the mother been compared to the late winter's moon?
(a) To refer to her pale and wan appearance (b) To emphasize that the mother is inching close to death
(c) To emphasize the mother is old at the age of 66 (d) None of these
iv. What is the poetic device used in the line – "all I did was smile, smile, smile..."?
(a) Simile (b) Metaphor (c) Repetition (d) Personification

2. Read the extract given below and answer the questions that follow. (4M)
Driving from my parent's home to Cochin last Friday morning. I saw my mother, beside me. Doze, open mouthed, her face ashen like that of a corpse…
i. The poem "My Mother at Sixty-six" is written in a lyrical idiom. It means
(a) It captures complex subtleties of human relationships.
(b) It highlights the universal bond between mother and daughter.
(c) It expresses emotions in an imaginative and artistic style.
(d) It captures the fear of losing someone near and dear.
ii. Explain "her face ashen like that of a corpse..."
(a) The ash colour of the face (b) The pale face of the mother
(c) The lost beauty of the mother (d) None of these
iii. The literary device used in the line 'her face ashen like that of a corpse' is:
(a) Personification (b) Simile (c) Imagery (d) Metaphor
iv. The mother beside the poet was:
(a) Eating food (b) Looking outside the young trees and merry children
(c) Sleeping (d) Enjoying ride

3. Read the extract given below and answer the questions that follow. (4M)

...and realised with pain put that thought away, and looked out at Young Trees sprinting, the merry children spilling out of their homes, but after the airport's security check, standing a few yards away,

i. Why does the poet use the image of 'merry children spilling out of their homes'?

(a) Because she likes to see kids play outdoors (b) To put away the thought of losing her mother

(c) Because she remembers her own carefree childhood (d) Because her mother liked when she used to play in the courtyard

ii. What is the kind of pain and ache that the poet feels?

(a) Growing old age of her mother (b) Corpse-like ashen face of her mother

(c) Realisation that the mother may not live long (d) None of these

iii. Why are the young trees described as 'sprinting'?

(a) On looking out from a moving vehicle, stationary objects seeing to be moving in the opposite direction

(b) The poet compared the trees to young children, with boundless energy running past her window

(c) The trees outside the car window rushed past her as the poet drove ahead, signifying distraction of her mind from the painful sight of her mother's ashen like face.

(d) None of these

iv. Identify the figure of speech used in the phrase 'young trees sprinting'.

(a) Repetition (b) Metaphor (c) Personification (d) Simile

MCQ(s) - 1 mark each

1. Name the literary device used in the line 'her face ashen like that of a corpse.

(a) Metaphor (b) Simile (c) Alliteration (d) Personification

2. From where were the children spilling out?

(a)Home (b) School (c) Neighbourhood (d) Car

3. What does the narrative single sentence style of the poem highlight?

(a) Poet's fearful mind (b) Poet's insecurity and fears

(c) Poet's thoughts (d) Conscience where one thought is leading to another

4. Where was the mother sitting?

(a) In front of the poet (b) Beside the poet (c) Behind the poet (d) Beside the driver

5. How is the imagery of "young trees and merry children" a contrast to the mother?

(a) Hope is a way of life (b) Spring and autumn (c) Mother–ageing; trees & children–youthfulness (d) None of these

6. What was the poet's childhood fear?

(a) Flying in a plane (b) Unable to join merry children

(c) Separation from her mother (d) Driving in a car

7. What thought did the poet try to put away?

(a) Mother would not live for too long (b) Mother would continue sleeping

(c) Mother would wake up (d) None of these

8. Why does the poet look out of the window?

(a) To look out at the trees

(b) To distract herself from the painful thought of losing her mother

(c) To look at the children

(d) As she was bored

9. How does the poet distract herself from her unpleasant thoughts?

(a) Looks out of the car window (b) Looks at her mother's face

(c) Looks at the driver's face (d) Closes her eyes

10. Why has the mother's face been compared like that of a corpse?

(a) She is alert (b) She is active (c) She is merry (d) She is passive

11. What does the image of "merry children spilling out" symbolize?

(a) Sincerity (b) Responsibility and duty (c) Carefree attitude (d) Passive acceptance

VERY SHORT QUESTION ANSWERS (2M)

1. Explain "wan, pale as a late winter's moon".
2. What 'familiar ache' did the poet feel?
3. Why has the poet brought in the image of the merry children 'spilling out of their homes'?
4. Why has the mother been compared to the "late winter's moon"?
5. What do the parting words of the poet and her smile signify?

SHORT ANSWER QUESTIONS (3M)

1. How does the poet describe the old age of her mother?
2. How does Kamala Das try to put away the thoughts of her ageing mother?
3. What was the poet's childhood fear?
4. What were Kamala Das, fears as a child?
5. Why do they surface when she is going to the airport?
6. What do the parting words of Kamala Das and her smile signify?
7. Why has the poet's mother been compared to the "late winter's moon"?
8. Why are the young trees described as 'sprinting'?

LONG ANSWER QUESTIONS (5M)

1. Bring out the poetic devices used in the poem.
2. Analyse the concept of losing our dear ones on account of old age in the context of the poem.
3. In today's fast life, children neglect their ageing parents. What do you think children can do to have an involved and inclusive relationship with their elderly parents?

FILL UPS (Brainstorming)

1. The poet was travelling to the airport at…… .
2. The mother's face looked ashen like that of a…… .
3. The poet looked out at young trees sprinting and……..
4. The poet's parting words were……. .
5. The mother's face was wan, pale as a…….
6. The poetic device used in the line' wan, pale as a late winter's moon' is…….. .
7. The trees and merry children in the poem signify…….
8. The central idea of the poem 'My Mother at Sixty-six' is……. .
9. In order to distract herself from the painful thoughts the poet looked out of ……...
10. The trees were sprinting and merry children…… .
11. The poet smiles and smiles in the end to hide…… .
12. The mother's old age in the poem makes the poet……..
13. The parting words of the poet and her smile show that……. .
14. The thought that she will not see her mother again makes her……..
15. In order to show her dullness and ill health the mother is compared to……

ECONOMICS ASSIGNMENT

CHAPTER 1 - NATIONAL INCOME ACCOUNTING

The following questions(MCQ) are for 1 mark each:

1. General Price Level is studied in:

(a) Micro Economics (b) Macro Economics (c) Both (a) and (b) (d) None of these

2. Employment Theory is related to :
(a) Static Economics (b) Micro Economics (c) Macro Economics (d) None of these
3. Increase in Stock of Capital is known as:
(a) Capital Loss (b) Capital Profit (c) Capital Formation (d) None of these
4. Which of the following is stock ?
(a) Wealth (b) Saving (c) Export (d) Profit
5. Which one of the following is included in circular flow?
(a) Real Flow (b) Money Flow (c) Both (a) and (b) (d) None of these

The following questions are for 1 mark each:

1. What is meant by the household sector?
2. Give 2 examples of residents of 'International Territory'.
3. State one reason for firms retaining a part of their profits.
4. What is meant by an economic activity?

The following questions are for 3-4 mark each:

1. Why does Government of India grant subsidies to producing enterprises?
2. Differentiate between:
(i) Factor income and transfer income
(ii) Production for self- consumption and production for exchange

The following questions are for 6 mark each:

1. Giving reasons explain how the following are treated in estimating national income:
a. Wheat grown by a farmer but used for family's consumption.
b. Earnings of the shareholders from sale of shares.

CHAPTER 1 - INDIAN ECONOMY AT THE EVE OF INDEPENDENCE

The following questions(MCQ) are for 1 mark each:

1. In how many sectors is the occupational structure of India is divided?
(A) One (B) Two (C) Three (D) Four
2. What is another name for the service sector?
(A) Tertiary (B) Primary (C) Secondary (D) Agriculture
3. What was the nature of the Indian economy on the eve of independence?
(A) Stagnant (B) Backward (C) Underdeveloped (D) All of these
4. What was the life expectancy at birth in India on the eve of Independence?
(A) 44 years (B) 50 years (C) 60 years (D) All of these
5. What was the growth rate of per capita income in India on the eve of Independence?
(A) 0.9% (B) 0.5% (C) 1.2% (D) 3%

The following questions are for 1 mark each:

1. What percent of India's population lived in villages during the British rule?
2. When was Tata Iron and Steel Company incorporated in India?
3. How did the revenue settlement system aggravate the plight of farmers?
4. What is a capital goods industry?

3 / 4 mark Questions

1. What were the main causes of India's low level of economic development during the colonial period?
2. Explain how despite an export surplus there was a drain of Indian wealth during the colonial period.

6 mark Questions

1. Discuss the demographic condition of British India.
2. Discuss the state of the industrial sector during the British rule. State three drawbacks of the new industrial sector that developed at that time.

CHAPTER 2 - INDIAN ECONOMY (1950-1990)

The following questions(MCQ) are for 1 mark each:

1. In which of the following type of economy are resources owned privately and the main objective behind economic activities is profit-making?
(A) Capitalist (B) Socialist (C) Mixed (D) Global

2. Which of the following is the main objective of carrying out various economic activities?
(A) Profit (B) Public welfare (C) Competition (D) Equality
3. When was the National Development Council (NDC) set up as an adjunct to the Planning Commission?
(A) 1950 (B) 1969 (C) 1952 (D) 1979
4. Which of the following had been responsible for the heavy burden of the deal and its interest?
(A) BOP deficit (B) BOP surplus (C) Equilibrium (D) None of these
5. Agriculture sector contributed _____ percent to the GDP in 1990-91.
(A) 24.6 (B) 34.9 (C) 40.5 (D) 59.0

The following questions are for 1 mark each:

1. What do you mean by consolidation of land holdings?
2. What was the idea behind abolition of intermediaries?
3. What is meant by self reliance?
4. What are land reforms?

3 /4 mark Questions

1. Explain the need and types of land reforms implemented in the agricultural sector. Have these reforms been successful in their implementation?
2. "Policy of import substitution can protect domestic industry from foreign competition." Explain with examples. What are the main features of Indian agriculture?
4. What were the main shortcomings of the green revolution?

6 mark Questions

1. While subsidies encourage farmers to use new technology, they are a huge burden on government finances. Discuss the of subsidies in the light of this fact.
2. Why was green revolution implemented in India? Did it benefit the farmers?

CLASS XII (MATHEMATICS)

Q.1 If A= $\begin{bmatrix} i & 0 \\ 0 & i \end{bmatrix}$, $write\ A^2$.

Q.2 If A=diag(1,-1,2) and B =diag(2,3,-1), find A+B, 3A+4B.

Q.3 If A is square matrix such that $A^2=A$. Show that $(I+A)^3=7A+I$

Q.4 If A is a square matrix such that $A^2=I$ then find the value of $(A-I)^3+(A+I)^3-7A$

Q.5 Write a 3X3 skew symmetric matrix.

Q.6 Write the element a_{12} of the matrix A=$[a_{ij}]_{2\times2}$, whose elements a_{ij} are given by $a_{ij}=e^{2ix}\sin jx$

Q.7 Construct a 2X3matrix *A*, 3X2matrix *B* , whose elements are given by $a_{ij}=\frac{(i-2j)^2}{2}$.

Q.8 If A= $\begin{bmatrix} 2 & 2 \\ -3 & 1 \\ 4 & 0 \end{bmatrix}$ $B=\begin{bmatrix} 6 & 2 \\ 1 & 3 \\ 0 & 4 \end{bmatrix}$, find the matrix C such that A+B+C is a zero matrix.

Q.9 Find a matrix X such that 2A+B+X=0, where A= $\begin{bmatrix} -1 & 2 \\ 3 & 4 \end{bmatrix}$ B=$\begin{bmatrix} 3 & -2 \\ 1 & 5 \end{bmatrix}$

Q.10 Find the matrix *C* , such that *A*+*B* + *C* is a zero matrix, where A=$\begin{bmatrix} 2 & 0 & 1 \\ 3 & -1 & 0 \end{bmatrix}$
B= $\begin{bmatrix} 2 & 1 & -1 \\ 0 & 2 & 1 \end{bmatrix}$.

Q.11 Find the Matrix X ,If 2*A*+3*X*= 5*B*, where A=$\begin{bmatrix} 2 & -2 \\ 4 & 2 \\ -5 & 1 \end{bmatrix}$, B=$\begin{bmatrix} 8 & 0 \\ 4 & -2 \\ 3 & 6 \end{bmatrix}$

Q.12 Find non-zero values x satisfying the matrix equation:
x$\begin{bmatrix} 2x & 2 \\ 3 & x \end{bmatrix} + 2\begin{bmatrix} 8 & 5x \\ 4 & 4x \end{bmatrix} = 2\begin{bmatrix} x^2+8 & 24 \\ 10 & 6x \end{bmatrix}$

Q.13 If $\begin{bmatrix} \cos 3x & \sin 3y \\ \sin 3y & \cos 3x \end{bmatrix}$ is an identity matrix, find the value of x and y.

Q.14 Simplify $\tan x\begin{bmatrix} \sec x & \tan x \\ \tan x & -\sec x \end{bmatrix} + \sec x\begin{bmatrix} -\tan x & -\sec x \\ -\sec x & \tan x \end{bmatrix}$

Q.15 If A= $\begin{bmatrix}3 & 1\\ 7 & 5\end{bmatrix}$, $find\ x\ and\ y\ suc\square\ t\square at$ $A^2+xI=yA$.

Q.16 From the following equation, find the values of *x* and *y* :

$$\begin{bmatrix}x+10 & y^2+2y\\ 0 & -4\end{bmatrix}=\begin{bmatrix}3x+4 & 3\\ 0 & y^2-5y\end{bmatrix}$$

Q.16 If A=$\begin{bmatrix}0 & -x\\ x & 0\end{bmatrix}, B=\begin{bmatrix}0 & 1\\ 0 & 1\end{bmatrix}$ $and\ x^2=-1\ t\square en\ s\square ow\ t\square at\ (A+B)^2=A^2+B^2$.

Q.17 Find the values of a and b for which the following holds $\begin{bmatrix}a & b\\ -a & 2b\end{bmatrix}\begin{bmatrix}2\\ -1\end{bmatrix}=\begin{bmatrix}5\\ 4\end{bmatrix}$

Q.18 Find the value of x for which the matrix product

$$\begin{bmatrix}2 & 0 & 7\\ 0 & 1 & 0\\ 1 & -2 & 1\end{bmatrix}\begin{bmatrix}-X & 14X & 7X\\ 0 & 1 & 0\\ X & -4X & -2X\end{bmatrix}\ equal\ an\ identity\ matrix.$$

Q.19 On using elementary row operation $R_1 \rightarrow R_1-3R_2$ in the following matrix equation $\begin{bmatrix}4 & 2\\ 3 & 3\end{bmatrix}=\begin{bmatrix}1 & 2\\ 0 & 3\end{bmatrix}\begin{bmatrix}2 & 0\\ 1 & 1\end{bmatrix}$

Q.20 If $[2x \quad 3]\begin{bmatrix}1 & 2\\ -3 & 0\end{bmatrix}\begin{bmatrix}x\\ 8\end{bmatrix}=0$, $find\ t\square e\ value\ of\ x$.

Q.21 If A= $\begin{bmatrix}cosx & sinx\\ -sinx & cosx\end{bmatrix}$ $and\ S\square ow\ t\square at\ A^{-1}=A'$.

Q.22 If A=$\begin{bmatrix}cosx & sinx\\ -sinx & cosx\end{bmatrix}, t\square en\ s\square ow\ t\square at\ A^2=\begin{bmatrix}cos2x & sin2x\\ -sin2x & cos2x\end{bmatrix}$.

Q.23 For what value of x, is the matrix A =$\begin{bmatrix}0 & 1 & -2\\ -1 & 0 & 3\\ x & -3 & 0\end{bmatrix}$ a skew symmetric matrix.

Q.24 Matrix A=$\begin{bmatrix}0 & 2b & -2\\ 3 & 1 & 3\\ 3a & 3 & -1\end{bmatrix}$ is given to be symmetric, find the values of a and b.

Q.25 If the matrix $\begin{bmatrix}-5 & x-y & 6\\ 2 & 0 & 4\\ x+y & 2 & 1\end{bmatrix}$ is symmetric, find 3x+y-5

Q.26 Show that A'A and AA' are both symmetric matrices for any matrix A.

Q.27 Show that all the diagonals elements of the skew symmetric matrix are zero.

Q.28 If A is skew- symmetric matrix, then A^2 is a symmetric matrix.

Q.29 If each of the three matrices of the same order are symmetric, then prove that their sum is also a symmetric matrix.

Q.30 If A and B are symmetric matrices, show that AB is symmetric, if AB=BA.

Q.31 A matrix which is both symmetric as well as skew symmetric is a null matrix.

Q.32 If A=$\begin{bmatrix}1 & 2\\ 1 & 2\end{bmatrix}$, f(x)=$x^2$-2x-3*I* ,Find f(A)

Q.33 Show that $\begin{bmatrix}2 & -1 & 3\\ -5 & 3 & 1\\ -3 & 2 & 3\end{bmatrix}$ is the inverse of the matrix $\begin{bmatrix}-7 & -9 & 10\\ -12 & -15 & 17\\ 1 & 1 & -1\end{bmatrix}$

Q.34 If A=$\begin{bmatrix}3 & -5\\ -4 & 2\end{bmatrix}$, $t\square en\ find\ A^2-5A-14I.\ Hence\ obtain\ A^3$.

Q.35 Let A=$\begin{bmatrix}2 & 3\\ -1 & 2\end{bmatrix}$ then show that A^2-4A+7$I=0$. using this result Calculate A^5 also.

Q.36 If A= $\begin{bmatrix}3 & 1\\ 7 & 5\end{bmatrix}$, $find\ x\ and\ y\ suc\square\ t\square at$ $A^2+xI=yA$. Hence find A^{-1}.

Q.37 If A=$\begin{bmatrix}0 & 2\\ 0 & 0\end{bmatrix}$ and f(x) = I+x+x^2+x^4+x^8+x^{16}, find f(A).

Q.38 If A=$\begin{bmatrix}0 & 1\\ -1 & 1\end{bmatrix}$, find the values of p and q such that (p$I+qA$)^2=A.

Q.39 If A=$\begin{bmatrix}1 & -1 & 1\\ 2 & -1 & 0\\ 1 & 0 & 0\end{bmatrix}$, show that $A^{-1}=A^2$.

Q.40 Find x , y and z if A= $\begin{bmatrix} 0 & 2y & z \\ x & y & -z \\ x & -y & z \end{bmatrix}$ $satisfies$ $A^T=A^{-1}$.

Q.41 If A=$\begin{bmatrix} 3 & -4 \\ -1 & 2 \end{bmatrix}$, $find\ a\ matrix\ B\ suc\square\ t\square at\ AB = I$

Q.42 Show that X=$\begin{bmatrix} 2 & 3 \\ 1 & 2 \end{bmatrix}$ is a root of the equation $x^3-4x^2+x=0$

HISTORY ASSIGNMENT

1. CHOOSE THE CORRECT OPTION

1 Which country is referred as Land of seafarers by Mesopotamians?
a) Meluhha b) Oman c) Dilmun d) India
2 Evidence of ploughed field are found from?
a) Harappa b) Kalibangan c) Lothal d) Mohenjodaro
3 Which site was famous for copper in Indus valley civilization?
a) Harappa b) Kalibangan c) Khetri d) Mohenjodaro
4. Lapis lazuli was a ____
A. Red Stone B Type of grain C. kind of currency D. blue stone
5. The first professional archaeologist to serve in India as director of ASI was
A Cunningham B Marshall C wheeler D Mackenzie
6. Which of the following sites is not situated in India
A Kalibangan B. Rakhigarhi C. Dholavira D. Shortughai

2. QUESTION ANSWERS

1. What is meant by the term Harappan "culture"? Give examples.
2. What do the terms "Early", "Mature" and "Late" mean with reference to the Harappan culture?
3. What were the distinctive features associated with archaeological cultures prior to the Harappan age?
4. Explain the meaning of the term "subsistence strategy". Examine how historians have provided new insight into the subsistence strategies of the Harappan culture.
5. Perhaps the most unique feature of the Harappan civilisation was the development of urban centers."
6. How have archaeologists identified Harappan goods as being "luxuries" or "utilities"? Can such a study of artifacts indicate that social differentiation existed? Explain your answer.
7. Explain the strategies used by archaeologists to understand socio-economic differences among the Harappans.
8. In which region of India have archaeologists found the Ganeshwar-Jodhpura culture? What are its distinctive features?
9. Describe the bead making industry of the Harappans. Mention the major centers of craft production. How do archaeologists identify centers of craft production?
10. From where did the Harappans procure raw materials? Describe their contacts with internal and foreign sources.

PHYSICAL EDU. ASSIGNMENT

A. Objective Type/Multiple Choice Questions (MCQs)

1. State whether the following statements are True or False.

Q.1 Planning is necessary for success in sports events.

Q.2 Intramural competitions are within an institution.

Q.3 Community walk is a competitive event.

Q.4 Organising Committee is headed by a Chairman.

Q.5 Knockout tournaments do not eliminate the losing team.

2. Fill in the blanks.

Q.6 League tournament is also known as _____.

Q.7 _____ is the process of allowing a team to go to the next level in a tournament without playing.

Q.8 _____ committee handles the budget of a tournament.

Q.9 In single league tournament, each team plays the other team _____.

Q.10 Community bonding occurs in _____ tournaments.

3. Tick (✓) the correct option.

Q.11 A 5-km community walk is a type of :

(i) Intramural competition (ii) Extramural competition

(iii) Specific sports programme (iv) National tournament

Q.12 Round Robin tournaments are of ... types.

(i) Three (ii) Two

(iii) Four (iv) Six

Q.13 Knockout tournament is also known as…….

(i) Elimination tournament (ii) Challenge tournament

(iii) Round robin tournament (iv) Consolation tournament

Q.14 Planning in sports leads to ... .

(i) Increased expenditure (ii) Increased mistakes

(iii) Better coordination (iv) Favouritism

Q.15 Pre-tournament committees include.

(i) Organisation committee (ii) Medical committee

(iii) Awards committee (iv) Transport committee

B. Short Answer Questions carrying 3 marks each (80-90 words)

Q.21 Discuss the pre-games responsibilities of officials of various committees.

Q.22 Explain the staircase method of league tournaments.

Q.23 Explain the seeding method and special seeding in knockout tournaments.

Q.24 Distinguish between intramural and extramural programmes.

Q.25 Discuss the objectives of planning in sports.

Q.26 What is the importance of tournaments? Discuss any three points.

Q.27 List the steps to form various committees for tournaments.

Q.28 Explain the different steps to be followed for organising a health run in your school.

C. Long Answer Questions carrying 5 marks each (150-200 words)..

Q.29 What are knockout tournaments? Draw a fixture of 21 teams on knockout basis.

Q.30 What are specific sports programmes? Explain any three.

Q.31 What is a league tournament? Explain the types, merits and demerits of league tournaments.

Q.32 Describe in detail the difference between intramural and extramural tournament.

ASSIGNMENT: INFORMATICS PRACTICES

CHAPTER: PANDAS

1. Write a Pandas program to multiple and divide two Pandas Series. Sample Series:

[2, 4, 8, 10], [1, 3, 7, 9]

2. Write a Pandas program to convert a dictionary to a Pandas series. Sample dictionary: d1 = {'a': 100, 'b': 200, 'c':300}

3. Write a Pandas program to sort a given Series. 400, 300.12,100, 200.

4. Write a Pandas program to change the order of index of a given series.

Original Data Series:

A 1 B 2 C 3 dtype: int64 Data Series after changing the order of index: B 2 A 1 C 3 dtype: int64

5. Write a Pandas program to get the first 3 rows of a given DataFrame.

6. Write a Pandas program to count the number of rows and columns of a DataFrame.

7. Write a Pandas program to combining two series into a DataFrame.

8. Write a Pandas program to get the specified row value of a given DataFrame.

9. Convert Dictionary into DataFrame.

10. Convert List into Dataframe.

11. Write DataFrame to CSV file.

12. Is series is a one-dimensional array which is labeled and can hold any data type?

13. Are DataFrames container for Series?

14. Write the name of methods used with series with their purpose.

15. Get index and values of a series.

Case study based questions:

16. Consider the following DataFrame df and answer the following questions from (i)-(v)

rollno	Name	UT1	UT2	UT3	UT4
1	Prerna Singh	24	24	20	22
2	Manish Arora	18	17	19	22
3	Tanish Goel	20	22	18	24
4	Falguni Jain	22	20	24	20
5	Kanika Bhatnagar	15	20	18	22
6	Ramandeep Kaur	20	15	22	24

(i)Write down the command that will give the following output.

Rollno	6
Name	Tanish Goel
UT1	24
UT2	24
UT3	24
UT4	24

dtype: Object

a. print(df.max)
b. print(df.max())
c. print(df.max(axis=1))
d. print(df.max, axis=1)

(ii)The teacher needs to know the marks scored by the student with roll number

4. Help her to identify the correct set of statement/s from the given options :

a. df1=df[df['rollno']==4]
print(df1)df1

b. df1=df[rollno==4]
print(df1)

c. df1=df[df.rollno=4]
print(df1)

d. df1=df[df.rollno==4]

print(df1)

(iii)Which of the following statement/s will give the exact number of values in each column of the dataframe?

i. print(df.count())

ii. print(df.count(0))

iii. print(df.count)

iv. print(df.count(axis='index'))

Choose the correct option:

a. both (i) and (ii)

b. only (ii)

c. (i), (ii) and (iii)

e. (i), (ii) and (iv)

(iv) Which of the following command will display the column labels of the DataFrame?

a. print(df.columns())

b. print(df.column())

c. print(df.column)

d. print(df.columns)

(v)Ms. Sharma, the class teacher wants to add a new column, the scores of Grade with the values, ' A', 'B', 'A', 'A', 'B', 'A'

choose the command to do so:

a. df.column=['A','B','A','A','B','A']

b. df ['Grade']=['A','B','A','A','B','A']

c. df.loc['Grade']= ['A','B','A','A','B','A']

d. Both (b) and (c) are correct

7. Consider the following DataFrame df and answer any questions from (i) – (v)

	rollno	Name	UT1	UT2	UT3	UT4
0	1	Pratima Sinha	29	30	19	20
1	2	Manoj Gupta	20	18	18	24
2	3	Tathagata Patra	18	22	20	20
2	4	Firoz Khan	22	23	27	22
4	5	Kirti Rani	15	24	29	21

5	6	Raman Kumar	21	15	23	30
6	7	Bineet Banerjee	28	16	24	33

(i) Select the options from the command that will give the following ouput:

```
Roll No          7
Name             Tathagata Patra
UT1              29
UT2              30
UT3              29
UT4              33
dtype: object
```

(a) print(df.max)
(b) print(df.max())
(c) print(df.max(axis is=1))
(d) print(df.max, axis=1)

(ii) The teacher needs to know the marks scored by the student with roll number 7. Help him/her to identify the correct set of statements from the given options (More than one option may be correct):

(a)
```
df1=df [roll no = =7]
print (df1)
```
(b)
```
df1=df [df ['rollno'] = =7 ]
    print (df1)
```
(c)
```
df1=df [ df.rollno = = 7 ]
    print (df1)
```
(d)
```
df1=df [rollno.df = =7 ]
    print (df1)
```

(iii) Which of the following statement/s will give the exact number of values in each column of the data frame?

(i) print(df.count( ))
(ii) print(df.count(0))
(iii) print(df.count)
(iv) print(df.count(axis = 'index'))

Choose the correct option:

(a) both (i) and (ii)
(b) only (ii)
(c) (i), (ii) and (iii)
(d) (i), (ii) and (iv)

(iv) Which of the following command will display the column labels of the DataFrame?

(a) print(df.columns( ))
(b) print(df.column)
(c) print(df.columns)
(d) print(df.column( ))

(v) A student Neeraj wants to add a new column, the score of Grade with the values 'B1','B2', 'A2', 'B2', 'B1', 'A1' , 'A1' to the DataFrame. Help him choose the command to doso:

(a) df[‘Grade’] = [‘B1’, ‘B2’, ‘A2’, ‘B2’, ‘B1’, ‘A1’ , ‘A1’]
(b) df.column = [‘B1’, ‘B2’, ‘A2’, ‘B2’, ‘B1’, ‘A1’ , ‘A1’]
(c) df.loc[‘Grade’] = [‘B1’, ‘B2’, ‘A2’, ‘B2’, ‘B1’, ‘A1’ , ‘A1’]
(d) both b and c are correct.

18. Given a data frame df as shown below---

	Country	Cases	Deaths	Region
0	United States	1,133,229	65,851	North America
1	Spain	245,567	25,100	Europe
2	Italy	207,428	28,236	Europe
3	United Kingdom	177,454	27,510	Europe
4	France	167,346	24,594	Europe
5	Germany	164,077	6,736	Europe

a. Write command to compute rename the indexes as code of the countries USA, SPA, ITA, UK, FR, GER.
b. Add a column capital =['Washington', 'Madrid', 'Rome', 'Londan', 'Paris', 'Berlin']
c. Write command to compute median of the deaths Column.
d. Write command to print first three rows.
e. Write command to drop column Region

19. Consider the following Dataframe named happy_df created using following command

happy_df=pd.read_csv("Dataset3.csv")

Country	Region	Happiness Rank	Happiness Score	Family
Switzerland	Western Europe	1	7.587	1.34951
Iceland	Western Europe	2	7.561	1.40223
Denmark	Western Europe	3	7.527	1.36058
Norway	Western Europe	4	7.522	1.33095
Canada	North America	5	7.427	1.32261
Finland	Western Europe	6	7.406	1.31826
Netherlands	Western Europe	7	7.378	1.28017
Sweden	Western Europe	8	7.364	1.28907
New Zealand	Australia and New Zealand	9	7.286	1.31967
Australia	Australia and New Zealand	10	7.284	1.30923

(i) Complete the following command to display first five rows of the above Dataframe.
print(happy_df.iloc[_____:_____]
(ii) Write the command to display number of rows and columns of the above Dataframe.

(a) print(happy_df.row,happy_df.columns)
(b) print(happy_df.shape())
(c) print(happy_df.shape)

(iii) Which command(s) of the following would display only Region column of the above Dataframe.

(a) print(happy_df.Region)
(b) print(happy_df.iloc[,'Region']
(c) print(happy_df.iloc[: ,'Region']
(d) print(happy_df.iloc[:,1])

(iv) What will be the output of the following command?
print(happy_df.loc[4:6,'Country'])

(v) Which of the following commands would display maximum value of every column?
(a) print(happy_df.max)
(b) print(happy_df.max())
(c) print(happy_df.max(axis=1))
(d) print(happy_df.max, axis=1)

20. Consider the following DataFrame Gr and answer any four questions from (i)- (v)

	Name	Grade
0	Aamir Khan	A1
1	Nuzut	A2
2	Ishrar	B1
3	Shahid	A1
4	Furkan	B2
5	Fatima	A2
6	Rashid	A1

(i) Write down the command that will give the following output.

	Name	Grade
0	Aamir Khan	A1
1	Nuzut	A2
2	Ishrar	B1
3	Shahid	A1
4	Furkan	B2

a. print(Gr.iloc[0:5])
b. print(Gr[0:5])
c. Both
d. None

(ii) The teacher needs to add a column called Percentage with the following data :[92,89,None,95,68,None,93]. Help her to identify the correct set of statement/s from the given options :
a. Gr.column['Percentage']=[92,89,None, 95,68,None ,93]
b. Gr[' Percentage']=[92,89,None, 95,68,None ,93]
c. Gr.loc['Percentage']= [92,89,None,95,68,None,93]
d. Both (b) and (c) are correct

(iii) Which of the following statement/s will drop the column Grade by name?
a. Gr.drop('Grade')
b. Gr.drop('Grade', axis=1)
c. Both d. None of the above

(iv) Which of the following command will display the column labels of the DataFrame?
a. print(Gr.columns())
b. print(Gr.column())
c. print(Gr.column)
d. print(Gr.columns)

(v) The class teacher wants to delete the first row. Help her choose the command to do so:
a. Gr.drop(0, axis =0)
b. Gr.drop(0,axis="index")
c. Gr. drop([0,1,2], axis=0)
d. Both (a) and (b) are correct