## +3-I-S-CBCS(MS)-Arts(H)-Core-I-Eco-R\&B

## 2023

## Time :As in Programme

Full Marks : 80
The figures in the right-hand margin indicate marks.
Answer all the questions

## PART-I

Answer all questions.

a. The concept of 'invisible hand' was given by $\qquad$ .
 $\qquad$ ศi qlal gq® ।
b. The meeting place of buyers and sellers is known as $\qquad$ .

c. When the price paid by the consumers for a product is less than their willingness to pay is known as $\qquad$ .

 $\qquad$ Q1862 ต๘ा|్పీ| ।
d. If two goods are perfect substitutes of each other, then the shape of the corresponding indifference curve is $\qquad$ .

 $\qquad$ 1
e. The cross elasticity of demand for substitute goods is $\qquad$ .
 $\qquad$ 1
f. Excess supply is a condition when demand is $\qquad$ than supply.
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g. Profit is the difference between average revenue and $\qquad$ .

h. Marginal Cost $=T C_{n}$. $\qquad$ .
ฮเช|ด घถิดчฉ $=\mathrm{TC}_{\mathrm{n}}-$ 1
i. Average revenue curve in a competitive market is parallel to
$\qquad$ axis.
 $\qquad$ ข๙

j. Labourers has to accept $\qquad$ wages if he prefer leisure.


k. In a perfect competitive factor market equilibrium for a profit maximising firm is defined by the condition $\mathrm{VMP}=$ $\qquad$ .

 $\qquad$ 1

1. In the short-run $\qquad$ profit is earned by a competitive firm.
 $\qquad$ ตึด ขธ्षัด Q60 1

## PART-II

2. Answer any eight of the following within two to three sentences each. 2x8

a. What is the role of graphs in economics?

b. What is income elasticity of demand ?

c. What is budget constraint?

d. How can trade make everyone better-off?

e. What is marginal product of labour?

f. What is producer's surplus ?

g. What do you mean by diseconomies of scale.

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h. What is shut-down point of a firm under short run ?

i. Mention two characteristics of labour ?

j. What is labour market?


## PART-III

3. Answer any eight of the following within 75 words each.

a. What is the role of assumptions in economics?

b. How do people make decisions ?

c. Explain cross elasticity of demand.

d. Why does demand curve slope downward?

e. Explain budget space.

f. What are the reasons for economies of scale ?

g. What are the features of perfect competitive market?

h. Explain the trade-off between work and leisure.

i. What are the features of capital ?

j. What are the causes of shift in the labour supply curve ?


PART-IV

4. What do you mean by market equilibrium ? Explain the reasons for changes in the eqilibrium positions.
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## OR/बิฉ|

What is price elasticity of supply? Explain its determinants.

5. What do you mean by optimisation? Explain the consumer's equilibrium using indifference curve technique.



## OR/बิq्य|

'Price effect is a combination of income and substitution effect'.
Discuss.
 पी ।
6. Explain U-shape of the short run average cost curve.
 OR/ติद्व।
Derive supply curve in a completive market in short-run.

7. Explain the linkages among the factors of production.

OR/ลิฉ̨|
Explain the factors that affect demand for and supply of labour.



## +3-I-S-CBCS(MS)-Arts(H)-Core-II-Eco-R\&B

## 2023

## Time :As in Programme

## Full Marks : 80

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## Answer all questions.

## PART-I

## 1. Answer the following questions.

a. $\qquad$ set is a subset of every set.
b. In De-Morgan's Law of set, $(A \cup B)^{\prime}=$ $\qquad$ .
$\qquad$ function is a function of the form $y=a^{x}$.
d. If $\mathrm{a}, \mathrm{b}$ are constants, $\lim _{x \rightarrow k}(a x+b)=$ $\qquad$ .
e. The derivative of $y=5^{x}$ is $=$ $\qquad$ .
f. If the Marginal Revenue (MR) $=0$, then the elasticity of demand is $\qquad$ .
g. If A is a non-singular matrix, then $\left(\mathrm{A}^{-1}\right)^{\mathrm{T}}=$ $\qquad$ .
h. If both the cross partial elasticity of demand for two commodities are positive, then the commodities are $\qquad$ .
i. A is a rectangular array of numbers arranged in rows and columns.
j. If the cost function is $C=\frac{1}{10} Q^{2}+5 Q+200$, where $Q$ is output, the AVC is = $\qquad$ .
k. A diagonal matrix whose diagonal elements are all equal is called a $\qquad$ matrix.

1. At ___ point of average cost (AC), the slope is zero.

## PART-II

2. Answer any eight within two to three sentences. $2 \times 8$
a. If $f(x)=8-4 x+x^{2}$, find $f(0)$ and $f(-2)$.
b. What is monotonic function? State whether the function $x y=\frac{2}{x}$ is monotonically increasing or decreasing function.
c. Distinguish between a null set and a singleton set.
d. Define proper subsets.
e. What is an undefined function?
f. Find the derivative of the function $y=e^{x^{2}}+3 x+9$.
g. Prove that the elasticity of demand is the ratio of the marginal function and the average function.
h. Find the adjoint of matrix $A$ from these system of equations: $2 x+4 y=8$ and $2 x+5 y=7$.
i. Taking two different matrices of your own, show that $(A+B)^{\prime}=A^{\prime}+B^{\prime}$.
j. Evaluate $\lim _{x \rightarrow-1}\left(\frac{2 x+1}{x^{2}-3 x+4}\right)$.

## PART-III

3. Answer any eight of the following (in maximum 75 words.) $3 \times 8$
a. Explain the algebraic and non-algebraic function with examples.
b. Evaluate the limit: $\lim _{x \rightarrow 0} \frac{a^{x}-b^{x}}{x}$.
c. Find the derivative of the function : $y=\log _{\mathrm{a}} \mathrm{x}$
d. Check the continuity or discontinuity of function $f(x)=x^{2}+2 x+1$ at $x=2$
e. If a demand function is $p=20+4 x+6 x^{2}, p$ is the price and $x$ is the quantity sold, then show that

$$
M R=p+\times \frac{d p}{d x}
$$

f. Find $\frac{d y}{d x}$ of $y=\log \left[(x+3)\left(x^{2}-x\right)\right]$
g. A monopolist's demand curve is given by $p=200-4 q$, find the MR when $q=5$
h. The total cost function of firm is given as $C=120-24 q+4 q^{2}$ show that the slope of $A C$ curve is $=$ $\frac{1}{Q}(M C-A C)$.
i. Define transpoe of a Matrix. Write its properties.
j. Write a note on minors of determinant.

## PART-IV

Answer within 500 words each. $7 \times 4$
4. Define complement of a set. State and prove the properties of complement of set.

## OR

In an Arts college, 36 students opted Economics, 46 opted History and 24 students opted both Economics and History, find.
a. How many students are there in the class?
b. How many offered Economics but not History ?
c. How many offered History but not Economics.
5. The demand function of a firm is $x=200-10 \mathrm{P}$ and its cost function is $C=5 x+\frac{x^{2}}{50}$, find the output at which the profits of the firm are maximum. Also find the price and the maximum profit.

## OR

Show that $E d=\frac{A R}{A R-M R}$. Show the degree of elasticity of demand if price $(\mathrm{p})=10$ and $\mathrm{MR}=8$.
6. Show that the Cobb-Douglas production function $\mathrm{Q}=\mathrm{AL}^{\mathrm{a}} \mathrm{K}^{1-a}$ is homogenous of degree one. Also verify Euler's Theorem.
OR

A demand function is given by $q=6 y+4 y^{2}-6 p^{2}-10 p^{-4}, y>0$, Where q is the quantity demanded, p is price and y is the income.
a. Find the slope of demand curve.
b. Is the commodity a normal or inferior ?
c. Is the reaction of demand to price is independent of level of income?
7. If $A=\left[\begin{array}{ccc}3 & 4 & 6 \\ 1 & 2 & 3 \\ 8 & 5 & 10\end{array}\right]$, Find the inverse of A. Also, verify that A. $A^{-1}=A^{-1} \cdot A=1$.

> OR

State and explain (with examples) the properties of determinants.

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## +3-l-S-CBCS(MS)-Arts(H)-GE-A1-Odia-R\&B

## 2023

Time :As in Programme
Full Marks : 80
The figures in the right-hand margin indicate marks.

## Answer all the questions

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## +3-I-S-CBCS(MS)-Arts/Sc/Com(H\&P)-AECC-1-EVS\&DMR\&B

## 2023

Time :As in Programme
Full Marks : 80
The figures in the right-hand margin indicate marks.
Answer all questions.

## PART-I

1. Fill in the blanks.

a. The study of human population is called $\qquad$ .
 $\qquad$ ตूQ|वाज।
b. The influenza virus chiefly transmited by $\qquad$ .
 $\qquad$

c. The daily atmospheric condition of an area is called as $\qquad$ .
 $\qquad$

d. The $\qquad$ remain at the base of a pyramid of energy.
 $\qquad$

e. The chief contributor gases of acid rain are $\qquad$ and $\qquad$ .
 $\qquad$ $\checkmark Q^{\circ}$ $\qquad$ 1
f. The Water Act was enacted in the year of $\qquad$ .
 $\qquad$

g. Rhizobium remains symbiotic in the roots of $\qquad$ crops.
 $\qquad$
 छाar $\boxed{\text { ® }}$ ।
h. The wildlife protection Act enacted in the year of $\qquad$ .

i. Both fog and smoke form $\qquad$ in the atmosphere.
 $\qquad$
(Turn Over)
j．The KYOTO protocol is about the reduction of
 $\qquad$ ด ฉ｜ฮ จิศઘ6ด ตอิิ

k．The Chernobyl disaster is associated with $\qquad$ pollution．

1．Ban on single use polythene restricts polyethene bags below
$\qquad$ of thickness．



## PART－II

2．Answer any eight of the following within two to three sentences each．

2x8

a．Sanitization
ดิ6ถायด
b．Food chain

c．Soil pollution
Яุลิका घपูबส
d．Earth summit

e．Carbon foot print
ขตけด घルถิฐ
f．IMD
ข｜ธ $ง$ 〇ด
g．Survival skills during lightening

h．Role of Revenue Department in flood management

i．Pandemic disease
ดีธ ศఇ｜ケ｜ด1
j．Sustainable development


## PART－III

3．Answer any eight of the following within 75 words each． $3 \times 8$

a．Ecosysem
घถิઘํ్ู｜
b．Water cycle ${ }^{\text { }}$
ตก6\％
c．Sound pollution

d．Anthropogenic causes of global warming

e．Flood disaster
ถด્శપा ถิઘఁ्व์पઘ
f．Earthquake
囚ิศ⿵冂卄
g．Corporate Social Responsibility

h．Balanced diet

i．Quarantine
ఇ162กุด｜ธก
j．National Health Mission


## PART－IV


4．Describe the components and usefulness of atmosphere．


OR／ลิฉุ

Discuss the causes, effects and control measures of air pollution.

5. Explain, in brief, the effects of population explosion and the methods adopted to control population growth.



## OR/Gิฉ।

Discuss the different steps taken by government for a sustainable development.
 OQ 1
6. Discuss the organization, functions and a few success stories of NDRF or ODRAF.
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## 

Give an account of survival skills adopted during and post-disaster periods of cyclone and fire.
 ఆघ6ด 6ฉ\&゙|a|ß ตर ।
7. Discuss the different approaches of life style management for maintaining a good health.



## OR/क्षิศ्य

Explain three non-communicable diseases with their causes and effects.


## +3-I-S-CBCS(MS)-Arts/Sc/Com(H\&P)-AECC-E\&V-I-R\&B

## 2023

Time :As in Programme
Full Marks : 25
The figures in the right-hand margin indicate marks.
Answer all the questions

## PART-I

1. Answer any five of the following questions in one sentences each.

a. What is gender inequality?

b. Who is the writer of Book "The High Caste Hindu Women"?

c. Give one example of Pink colour job.

d. Give one example of gender Disparity, generally seen in Indian family.


e. Give one example of gender neutral language.

f. Give example of a form of Femicide.

g. What is the amount given by the groom to the bride's side is called under Islamic tradition?
 -'6ा बूलाज ?
h. International Women's Day is observed on which day?

2. Answer any five questions within 50 words.

a. What is invisible work of women ?

b. Write any two features of Dowry system in India.

c. What do you mean by 'Gender equality' ?

d. What is 'body shaming ? Give example.

e. What is Sarada Act?

f. Dowry prohibition Act.

g. What is verbal sanitation?

h. What are the stages of life a women passes through ?
 Q6man Q
3. Answer any two of the following questions within 250 words each.

a. What differences can be brought between work and employment of women? What steps can be taken to recognise women's contribution?


b. Explain the problems faced by women headed households in the society.
 Q6mb ตb I
c. "Gender Equality is a need for social and economic progress of India's : Explain.


d. Explain the different aspects of child marriage \& its social implications.

e. Elaborate different types of violence against women in context of Indian society:


f. Honour Killing as a social stigma is prevelent accross religion \& region in India, Explain.


