

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.A./B.B.A./B.C.A./B.Sc. FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023
COMMERCE
Financial Literacy

Duration:2 Hours**Max Marks:60****SECTION – A****Answer any TWO questions:****(15×2= 30)**

- 1) Elaborate on the various products offered by banks.
- 2) Explain the concept of economic wants and means for satisfying the needs.How do you balance between economic wants and resources?
- 3) Evaluate the various policies offered by Post office Life Insurance Schemes.
- 4) Explain the concept of investment approach of self management.

SECTION – B**Answer any FOUR questions :****(5×4= 20)**

- 5) Explain the prerequisites of Financial Literacy.
- 6) State any five importance of Financial Planning.
- 7) Write a note on e-banking.
- 8) Elaborate on National Savings Recurring Deposit Account.
- 9) Explain the Functioning of International Money Transfer Service.
- 10) Elaborate on the working of Digital Savings Account.

SECTION – C**Answer any FIVE questions :****(2×5= 10)**

- 11) What is Financial Literacy?
- 12) What are Investment Banks?
- 13) What is Budget Surplus?
- 14) State the procedure of preparing budget.
- 15) What is meant by Recurring Deposit?
- 16) What is the purpose of Educational Loan?
- 17) What is Life insurance premium?

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.A./B.B.A./B.C.A./B.Sc. FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023

COMMERCE

Global Corporate and Business Law

Duration: 2 Hours

Max Marks: 60

SECTION – A

Answer any TWO questions:

(15×2= 30)

- 1) Describe the role of International Chamber of Commerce (ICC) and International Institute for the Unification of Private Law (UNIDROIT) in the promotion and regulation of international trade.
- 2) Explain the formation of contract and its rule for creating contractual relations under UNCCISG.
- 3) Describe the nature and legal control over Market abuse and Fraudulent and Wrongful trading.
- 4) Explain the operation of Bank Transfer and Bills of Exchange.

SECTION – B

Answer any FOUR questions :

(5×4= 20)

- 5) Describe the role of United Nation (UN) and United Nation Commission on International Trade law (UNCITRAL).
- 6) Explain Main carriage unpaid (F terms) and Arrival (D terms) of International Chamber of Commerce.
- 7) Explain the procedure of Voluntary Liquidation.
- 8) Distinguish between Company and Ordinary Partnership.
- 9) Distinguish between Public and Private Company.
- 10) Write a note on disqualification of a Director.

SECTION – C

Answer any FIVE questions :

(2×5= 10)

- 11) Define Public International Law.

12) What is Transferable Letter of Credit?

13) What is Express Agreement?

14) Who is an Auditor?

15) Define Company.

16) What is called up share capital?

17) Who is an Alternate Director?

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME

B.Com. FIRST SEMESTER DEGREE EXAMINATION NOVEMBER/DECEMBER 2023

COMMERCE

Mercantile Law

Duration:2 Hours

Max Marks:60

Section- A(compulsory)

I . Answer The Following Question :

1×20= 20

1. Answer all questions:

1. Explain the relationship between offer and acceptance in accordance with the statement of Sir William Anson "Acceptance is to offer what a lighted match is to a train of gun powder". **(8 marks)**

2. Explain the principles emphasised in the following case laws:

1. Boulton vs. Jones **(4 marks)**

2. Felthouse vs. Bindley **(4 marks)**

3. Explain any two essential elements of a valid contract 'Not given by Section 10 but are also considered essential'. **(4 marks)**

Section- B

II. Answer any Four of the following :

4×10= 40

2. Explain any five laws relating to Minor's agreement/position of minor as per the Indian Contract Act, 1872.

3. Answer all questions:

1. Briefly explain the process of making a law. **(2 marks)**

2. Explain the types of laws in the Indian Legal System. **(8 marks)**

4. Mr. Shobhan sold 12.5 acres of his agricultural land to Mr. Mohan on 15th September 2022 for Rs. 55 Lakhs. The Property papers mentioned a condition, amongst other details, that whosoever purchases the land is free to use 10 acres as per his choice but the remaining 2.5 acres has to be allowed to be used by Mr. Mannu, son of the seller for carrying out farming or other activity of his choice. On 24th October, 2022, Mr. Shobhan died leaving behind his son and wife. On 31st October, 2022 purchaser started construction of an auditorium on the whole 10 acres of land and denied any land to the son. Now Mr. Mannu wants to file a case

against the purchaser and get a suitable redressal. Explain in light of provisions of Indian Contract Act, 1872 and decide upon Mr. Mannu's plan of action?

5. Explain the five parties as per Section 40 of the Indian Contract Act, 1872 by whom a contract maybe performed.

6. Explain the classification of 'Goods' as per Sale of Goods Act, 1930.

21ECOC101

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME

B.A./B.Sc. FIRST SEMESTER DEGREE EXAMINATION NOVEMBER/DECEMBER 2023

ECONOMICS

Basic Economics - I

Duration:2 Hours

Max Marks:60

Section - A

I. Answer any TWO of the following :

2×5= 10

1. Write a short note on Economic policy.
2. Write a short note on price elasticity of demand.
3. Describe the penetration pricing strategy.
4. Write a note on the determinants of demand.

Section - B

II. Answer any TWO of the following :

2×10=20

5. Briefly explain the PPC.
6. Explain the concept of change in quantity supplied.
7. Explain the relation between TR, MR and AR.
8. Differentiate between monopoly and monopolistic competition.

Section - C

III. Answer any TWO of the following :

2×15= 30

9. Define Economics. Explain the nature and scope of Economics.
10. Explain the various methods of measuring price elasticity of supply.
11. Define Monopoly. Explain the features of Monopoly.
12. Define Production function. Explain its concepts.

21ECOC102

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME

B.A./B.Sc. FIRST SEMESTER DEGREE EXAMINATION NOVEMBER/DECEMBER 2023

ECONOMICS

Contemporary Indian Economy

Duration:2 Hours

Max Marks:60

Section - A

I. Answer any TWO of the following :

2×5= 10

1. Write a short note on New Economic Policy.
2. Write a short note on National Monetisation Pipeline.
3. Write a short note on NBFC's.
4. Write a short note on causes of urbanisation.

Section - B

II. Answer any TWO of the following :

2×10=20

5. Briefly explain the causes of agrarian crisis.
6. Briefly explain Make in India.
7. Briefly explain the concept of Demonetisation.
8. Briefly explain the Performance of MSME's.

Section - C

III. Answer any TWO of the following :

2×15= 30

9. Examine the MGNREG Scheme.
10. Define Fiscal policy. Explain the objectives of Fiscal policy.
11. Describe the Indian Money market.
12. Explain trends of India's Foreign trade.

21BBAE11

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.A./B.C.A./B.Sc. FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023
BUSINESS ADMINISTRATION
Business Organisation

Duration:2 Hours

Max Marks:60

SECTION A

Answer any TWO of the following:

(2×15= 30)

- 1) Explain the economic objectives of business.
- 2) Define public corporation. Explain its merits and demerits.
- 3) Describe the features and significance of principles of management.

SECTION B

Answer any THREE of the following :

(3×7= 21)

- 4) What are the different aspects of business organisation?
- 5) Describe the various features of sole proprietorship,
- 6) Explain the various characteristics of Departmental undertaking.
- 7) Explain the recent trends in business combination movement in India.

SECTION C

Answer any THREE of the following :

(3×3= 9)

- 8) Describe the public corporations.
- 9) Define sole proprietorship.
- 10) What is meant by organising?
- 11) Define business combination.

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
BA/B.Com./B.B.A./B.C.A FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023
COMPUTER ANIMATION
Basics of Graphic Design

Duration:2 Hours

Max Marks:60

PART A

Answer any FIVE questions:

(5×2= 10)

- 1) List down the names of Primary colors.
- 2) Write the use of paint bucket tool.
- 3) Write any 2 disadvantage of vector graphics.
- 4) What is pixelation?
- 5) What do you mean by foreground?
- 6) Write the Key Elements of One-Point Perspective.

PART B

Answer any FIVE questions :

(5×6= 30)

- 7) What are the benefits of vector graphics?
- 8) Write a note on characteristics of digital imagery.
- 9) Explain any 6 components of the Photoshop workspace.
- 10) Write a note on tertiary colors.
- 11) What are the common uses of vector graphics?
- 12) Name the different color modes used in raster graphics and expand them.

PART C

Answer any TWO questions :

(2×10= 20)

- 13) Explain - Monochromatic, analogous, complimentary,split complimentary, triadic colors
- 14) Name any 5 file formats and explain them.
- 15) Write the steps to Import and Export files in Photoshop.

22ANMC101

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
BA/B.Sc. FIRST SEMESTER DEGREE EXAMINATION NOVEMBER/DECEMBER 2023
COMPUTER ANIMATION

Fundamentals of Arts and Animation

Duration:2 Hours

Max Marks:60

PART A

Answer any FIVE questions:

(5×2= 10)

- 1) What is horizontal line?
- 2) How is animation helpful in marketing?
- 3) What is story reel?
- 4) Define anticipation.
- 5) List down the various elements used for collage animation.
- 6) What is geometric shapes?

PART B

Answer any FIVE questions :

(5×6= 30)

- 7) Differentiate between reflected light and core shadow.
- 8) Differentiate emphasis and contrast.
- 9) How does Storyboard help business?
- 10) Write a note on phenakisticope.
11. Define gestalt unity and conceptual unity.
12. What are the benefits of animatic? Explain.

PART C

Answer any TWO questions :

(2×10= 20)

13. Write a note on color through ages.
14. How to create balance in art?
15. Explain any 5 primary components of multimedia.

21ZOOE11

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.A./B.B.A./B.Com./B.C.A. FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023

ZOOLOGY

Economic zoology

Duration:2 Hours

Max Marks:60

SECTION - A

Answer the following strictly observing the internal choice provided:

4×5=20

UNIT 1

- 1) Write a short note on the symptoms and management of Flacherie.

OR

- 2) Write a short note on mulberry cultivation.

UNIT 2

- 3) What is foot and mouth disease? Mention its symptoms and treatment.

OR

- 4) Write a brief note on the housing system in poultry.

UNIT 3

- 5) Explain the process of farming of marine shrimps.

OR

- 6) Explain the pond management of marine shrimp.

UNIT 4

- 7) Write a short note on *Perionyx excavatus*.

OR

- 8) Comment on lac production in India.

SECTION - B

Answer the following strictly observing the internal choice provided:

4×10=40

UNIT 1

- 9) Explain indigenous methods of bee keeping. Describe the steps involved in honey extraction and its processing.

OR

- 10) Define apiculture. Explain the present status of apiculture in India.

UNIT 2

11) Give a detailed account of the various diseases of poultry.

OR

12) What is dairy management. What are the advantages and disadvantages of dairy farming.

UNIT 3

13) Explain the spawning techniques in Clarius.

OR

14) Describe river rafts. Add a note on Mechanised rafts.

UNIT 4

15) Give a detailed account of all the materials required for vermicomposting.

OR

16) Explain lac cultivation? Describe composition and processing of lac.

21OPME11

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
BBA/BCA/B Com/BSc FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023

Entrepreneurship Development Programme

Duration: 2 Hours

Max Marks: 60

Section-A

Answer any TWO of the following :

2×5= 10

1. What is Entrepreneurship? Explain any five functions of Entrepreneur.
2. What does SIDBI Stands for? Explain its functions.
3. Differentiate between primary research and secondary research.

Section-B

Answer any TWO of the following :

2×10= 20

4. Mention the different types of Entrepreneurs and explain any five of them.
5. Write a note on MSME. Explain its classification.
6. Explain the various limitations of market survey.

Section-C

Answer any TWO of the following :

2×15= 30

7. Define Entrepreneurship. Explain the factors influencing Entrepreneurship.
8. "MSME's contribute significantly to a country for building a strong economy". Justify your answer.
9. What is SWOT analysis with reference to entrepreneurship? Briefly Explain its elements.

21ECOE14

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.Sc./B.B.A./B.Com./B.C.A. FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023
ECONOMICS
Business Economics

Duration:2 Hours

Max Marks:60

Section - A

I. Answer any TWO of the following : **2×5= 10**

1. Describe the factors determining demand.
2. Briefly describe Monopolistic competition.
3. Write a short note on capital budgeting.
4. Describe the factors determining supply.

Section - B

II. Answer any TWO of the following : **2×10=20**

5. Briefly explain economic laws.
6. Briefly explain laws of returns to scale.
7. Explain the criteria of a good forecasting method.
8. Briefly explain the phases of business cycle.

Section - C

III. Answer any TWO of the following : **2×15= 30**

9. Define Business Economics. Explain the subject matter of Business Economics.
10. Define perfect competition. Explain the features of perfect competition.
11. Define Risk analysis. Explain the techniques of strategic management.
12. Critically examine the Law of Diminishing Marginal utility.

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.Sc./B.Com./BBA/BCA FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023

PSYCHOLOGY

Psychology of Health and Wellbeing

Duration:2 Hours

Max Marks:60

Answer any THREE of the following :

(3×2= 06)

1. Write the Definition of Health given by WHO.
2. What do you mean by Psychological Wellbeing?
3. Mention any two Physical Effects of Stress on Health.
4. What is Coping?
5. Mention any 2 factors influencing Health Habits.

Answer any FOUR of the following in not more than a page each :

(4×6= 24)

6. Write a note on the determinants of Subjective Wellbeing.
7. Write a note on management of Illness.
8. Write a note on the Sources of Stress.
9. Explain the types of Stress.
10. With suitable examples explain the Obstacles in Modifying Health Behaviours.
11. Briefly explain the Health Enhancing Behaviours.

Answer any THREE of the following in not more than two page each :

(3×10= 30)

12. Explain the Medical Model of Health and its characteristics.
13. Explain the Psychological Interventions used in Chronic Illness.
14. What is General Adaptation Syndrome? Explain its stages.
15. Explain the Biofeedback Method, Exercise and Relaxation training as methods of Stress Management .
16. Explain with examples the Psychological and physical effects of Health Compromising Behaviour on Health.

21JMCE11

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.Sc./B.Com./BBA/BCA FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023

JOURNALISM
Writing for Media

Duration:2 Hours

Max Marks:60

Section- A

Answer any FIVE of the following:

5×10= 50

1. What are the roles and responsibilities of a journalist?
2. How to design a Radio Script for a program?
3. "Blogging is the new trend in content marketing", Justify.
4. Write the tips to write TV Script.
5. "Writing for online is equal to writing for the global audience", Justify.
6. What is Editorial page? Comment on the importance of the editorial page in a newspaper.

Section- B

Answer any TWO of the following:

2×5= 10

7. Aesthetic and Language in TV Script.
8. Compare Journalistic writing with other forms of writing.
9. Online Content analysis.
10. LinkedIn.

21PHYE11

Reg No :

**CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.A/B.Com/BBA FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023**

PHYSICS

Astronomy and space mission

Duration:2 Hours

Max Marks:60

PART A

Answer any 5 questions. Each question Carries 3 marks:

5×3= 15

- 1 Write a note on Elliptical galaxy. Draw a diagram for the same.
- 2 What is astronomy? Give the evidences of the big bang theory.
- 3 Describe about the planet Mercury.
- 4 What are meteors? Write a short note on them.
- 5 What are artificial satellites? Explain.
- 6 How Does a Rocket Engine Work?

PART - B

Answer any 5 questions. Each question Carries 9 marks:

5×9= 45

- 7 Explain in detail the steady state theory. What is the reason for the decline of the steady state theory?
- 8 Explain in detail about the Oscillating Universe theory.
- 9 Explain in detail about the various features of the planet Uranus.
- 10 Explain in detail the facts relating to Earth and moon.
- 11 What are geostationary, polar and asynchronous orbits? Explain. What are the features of predicting satellite orbits?
- 12 Explain in detail about ISRO.

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
BA/B.Com./BBA/BCA FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023

CHEMISTRY

Chemistry in daily life

Duration:2 Hours

Max Marks:60

PART A

I. Answer any FIVE of the following:

5×2= 10

- 1 How do propionates help in preserving food?
- 2 How is the adulterant lead chromate detected?
- 3 Name the two main types of soaps. Give examples.
- 4 Name the source and deficiency disease of vitamin A.
- 5 What is the primary battery?
- 6 What are thermosetting polymers?

PART B

II. Answer any FIVE of the following choosing at least one question from each Unit.

5×10= 50

UNIT I

- 7 a) Write a short note on milk products.
b) What are the types of different forms of milk? (6+4)
- 8 a) What is food adulteration? Explain its harmful effects.
b) How are the adulterants in milk namely vanaspati and formalin detected? (5+5)

UNIT II

- 9 a) What are oils and fats?
b) Explain the solubility test and translucent spot test to identify the presence of oils and fats. (5+5)
- 10 a) Write the differences between soaps and detergents.
b) Explain the classification of synthetic detergents. (4+6)

UNIT III

- 11 a) What are the strategies for the development of environment friendly polymers?
b) What are the problems of plastic waste management ? (7+3)
- 12 a) What are the key features of solar energy?
b) Write a note on energy storer. (4+6)

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.Sc. FIRST SEMESTER DEGREE EXAMINATION NOV/DEC 2023
MATHEMATICS - 1

Duration: 2 hours

Max Marks: 60

PART A

Answer any 8 questions. Each question carries 2 marks:

2×8=16

- 1) Prove that the square of an odd integer is of the form $8k+1$.
- 2) If $a|bc$ with $\gcd(a, b)=1$ then prove that $a|c$.
- 3) Without performing the division determine whether $N=1571724$ is divisible by 9 or 11.
- 4) Check whether the Diophantine equation $33x+14y=15$ can be solved?
- 5) Give an example of a skew symmetric matrix of order 3.
- 6) Show that $A = \begin{bmatrix} \cos\alpha & \sin\alpha \\ -\sin\alpha & \cos\alpha \end{bmatrix}$ is an orthogonal matrix.
- 7) Under what condition, a system $AX=B$ of m linear equations in n unknowns
 - a) has unique solution
 - b) has infinitely many solutions
- 8) Using the definition, find the rank of the matrix $\begin{bmatrix} 1 & 2 & 3 \\ 2 & 4 & 7 \\ 3 & 6 & 10 \end{bmatrix}$.
- 9) State Lagrange's mean value theorem.
- 10) Verify Rolle's theorem for $f(x) = \sin x e^{-x}$, $x \in [0, \pi]$.
- 11) Write Maclaurin's series for e^x .
- 12) Evaluate: $\lim_{x \rightarrow 0} \left[\frac{\sqrt{1+x}-1}{x} \right]$.

PART - B

Answer any 11 questions by selecting at least 3 questions from each unit. Each question carries 4 marks:

4×11=44

UNIT-I

- 13) Show that $\frac{a(a^2+2)}{3}$ is an integer for all $a \geq 1$.
- 14) Find all solutions in the integers for the following Diophantine equation:
 $172x + 20y = 40$.
- 15) A customer brought a dozen pieces of fruit, apples and oranges for \$1.32. If an apple costs 3 cents more than an orange and more apples than oranges were purchased, calculate how many pieces of each kind were bought?

- 16) Let $N = a_m 10^m + a_{m-1} 10^{m-1} + \dots + a_2 10^2 + a_1 \cdot 10 + a_0$ be a decimal expansion of a positive integer $0 \leq a_k < 10$. Let $s = a_0 + a_1 + \dots + a_m$. Then prove that $9|N$ if and only if $9|s$.
- 17) Solve the linear congruence: $18x \equiv 30 \pmod{42}$.

UNIT-II

- 18) Express the following matrix as the sum of symmetric and skew symmetric matrices. $\begin{bmatrix} 1 & 1 & 1 \\ 2 & 2 & 3 \\ 1 & 4 & 9 \end{bmatrix}$.
- 19) Using elementary operations find the rank of the matrix $\begin{bmatrix} 1 & 2 & 1 \\ 2 & 4 & 4 \\ -1 & -2 & 1 \end{bmatrix}$.
- 20) Compute the inverse of the following matrix by elementary transformation:
 $\begin{bmatrix} 1 & 2 & -2 \\ -1 & 3 & 0 \\ 0 & -2 & 1 \end{bmatrix}$
- 21) Find the solution of the system $x_1 - x_2 + x_3 = 0$, $x_1 + 2x_2 + x_3 = 0$ and $2x_1 + x_2 + 3x_3 = 0$.
- 22) Using the characteristic equation, find the inverse of the following matrix.
 $A = \begin{bmatrix} 1 & 0 & 1 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

UNIT-III

- 23) Verify Lagrange's mean value theorem for $f(x) = x^2 + x - 2$ over $[-1, 1]$.
- 24) Verify Cauchy's mean value theorem for $f(x) = x^2$ and $g(x) = x^4$ in the interval $[1, 3]$.
- 25) Using Maclaurin's series show that for all x in \mathbb{R}

$$\sin x = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \dots + (-1)^{n-1} \frac{x^{2n-1}}{(2n-1)!} + \dots$$
- 26) Evaluate: $\lim_{x \rightarrow 0} \frac{e^x - e^{-x} - 2 \log(1+x)}{x \sin x}$.
- 27) Evaluate: $\lim_{x \rightarrow \frac{\pi}{2}} \frac{\tan 3x}{\tan x}$.

21MATE12

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME

B.A./B.B.A./B.Com./B.C.A. FIRST SEMESTER DEGREE EXAMINATION

NOVEMBER/DECEMBER 2023

MATHEMATICS

Business Mathematics- I

Duration:2 Hours

Max Marks:60

PART - A

I. Answer any 8 questions . Each question carries 3 marks: (3×8= 24 Marks)

a. Define a diagonal matrix with an example.

b. If $A = \begin{bmatrix} 2 & 1 & 3 \\ 4 & -1 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} -1 & 2 & 0 \\ 1 & 5 & 2 \end{bmatrix}$. Then find $A + B$ and $B + A$.

c. If $A = \begin{bmatrix} 6 & 5 \\ 3 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & -1 \\ -1 & 1 \end{bmatrix}$ then find $|A|$ and $|B|$.

d. If $A = \begin{bmatrix} 1 & 2 & 3 \\ 1 & 2 & 3 \\ -1 & -2 & -3 \end{bmatrix}$, then show that $A^2 = 0$.

e Find the slope of the line joining the points $A(3, 7)$ and $B(2, -3)$.

f. Show that the following pair of lines are parallel :

$$4x + 2y + 1 = 0 \text{ and } 4x + 2y - 7 = 0 .$$

g. Find the equation of the circle , if the centre is $(1, -2)$ radius $\sqrt{3}$ units .

h. Find the equation of the parabola if the vertex is $(0, 0)$ and the focus is $(2, 0)$.

i. If $y = x^{\frac{2}{3}}$, then find $\frac{dy}{dx}$

j. Find the second ordered derivative of $y = 4x^6 + 3x^2 - 9x + 100$ at $x = 1$.

k. Define supply function.

l. Prove that $f(x) = 4 - x^2 - 2x + 3$ has a maximum value at $x = -1$.

PART - B

2. Answer any 2 questions. Each question carries 6 marks:

(6×2= 12 Marks)

a. Solve the system of equations by using Matrix method :

$$x + 2y + 3z = 14$$

$$3x + y + 2z = 11$$

$$2x + 3y + z = 11$$

b. Solve the system of equations by using Cramer's Rule :

$$x + y + z = 9$$

$$2x + 5y + 7z = 52$$

$$2x + y - z = 0$$

c. Compute the inverse of the matrix $A = \begin{bmatrix} 1 & 2 & -1 \\ -1 & 1 & 2 \\ 2 & -1 & 1 \end{bmatrix}$.

d. The following matrix gives the number of units of three products (P, Q and R) that can be processed per hour on three machines (A, B and C):

	A	B	C
P	10	12	15
Q	13	11	20
R	16	18	14

Determine by using matrix algebra, how many units of each product can be produced, if the hours available on machines A, B and C are 54, 46, and 48 respectively.

PART - C

3. Answer any 2 questions. Each question carries 6 marks:

(6×2= 12 Marks)

a. Find the equation of the straight line passing through (2, 4) and

(i) Parallel to $5x - 7y = 100$.

(ii) Perpendicular to $5x - 7y = 100$.

b. For the following parabola, find the vertex, length of latus rectum, focus, equation of the latus rectum.

(i) $y^2 = 12x$

(ii) $y^2 = -36x$

- c. When price of commodity is Rs 30 per unit, its demand and supply are 600 and 900 units respectively. A price of Rs 20 per unit changes the demand and supply to 1000 and 700 units respectively. Assuming that the demand and supply equations are linear find
- The demand equation
 - The supply equation
 - The equilibrium price and quantity
- d. Indicate the area bounded by the following system of inequality:
- $$2x - y \geq -4$$
- $$x - 2y \leq 4$$
- $$x + y \geq 1$$
- $$x + y \leq 7$$

PART - D

4. Answer any 2 questions. Each question carries 6 marks: (6×2= 12 Marks)

- The sum of two positive numbers is 16. Find them when their product is maximum.
- If $C = x^3 + 6x^2 + 2x + 8$ is the total cost function of a commodity where x is the number of units and the price per unit is Rs. 2. Find the profit function.
- The cost function of a firm is given by $C(x) = 300x - 10x^2 + \frac{1}{3}x^3$ where $C(x)$ stands for the cost function and x for output. Calculate the output at which the marginal cost is minimum.
- (i) The total cost C of making x litres of a product is $C = 10 + 30\sqrt{x}$. Find the marginal cost of 100 litres output.
 (ii) The cost commodity is given by $C = x^2 - 9x + 9$. Find the
 (a) Average cost (b) Find the marginal cost (c) Find the value of x at which the marginal cost is zero.

.....

21MICE11

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.A./B.Com./B.B.A/B.C.A FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023
MICROBIOLOGY
Microorganisms for Human Welfare

Duration:2 Hours

Max Marks:60

SECTION - A

Answer the following strictly observing the internal choice provided:

4×5=20

UNIT 1

1) List the types of Probiotics Supplements.

OR

2) List the health benefits of consuming Synbiotics and Nutraceuticals.

UNIT 2

3) Write briefly about Ectomycorrhiza.

OR

4) List the uses and advantages of biogas.

UNIT 3

5) Write any four characteristics of an ideal antimicrobial agent.

OR

6) Write a note on any two factors related to microorganisms affecting antimicrobial control.

UNIT 4

7) Write briefly on Magic Mushrooms.

OR

8) List different types of Cheese.

SECTION - B

Answer the following strictly observing the internal choice provided:

4×10=40

UNIT 1

9) Write a detailed note on Curd.

OR

10) Describe the signs of a healthy gut.

UNIT 2

11) Explain in detail about Rhizobium biofertilizer.

OR

12) Explain the mode of action of biopesticides.

UNIT 3

13) Describe the functions and characteristics of antibiotics.

OR

14) Describe the mode of action of Penicillin and Polymyxin.

UNIT 4

15) Explain the production of Fermented tea in detail and add a note on its significance.

OR

16) Describe the properties of vaccines in detail.

22NHEE11

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.A./B.B.A./B.Com./B.C.A./B.Sc. FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023
NUTRITION AND HEALTH EDUCATION
Human Nutrition

Duration:2 Hours

Max Marks:60

SECTION - A

Answer the following strictly observing the internal choice provided:

4×5=20

UNIT 1

- 1) What is the need to understand the role of nutrition?

OR

- 2) What are the classification of nutrients?

UNIT 2

- 3) Write a note on excess consumption of dietary fibre.

OR

- 4) Explain on excess consumption of protein.

UNIT 3

- 5) Explain the deficiency of iron.

OR

- 6) Explain the on deficiency of vitamin A.

UNIT 4

- 7) What are some of the key physiological changes that occur in adolescents during puberty?

OR

- 8) Explain the dietary recommendation for a pregnancy.

SECTION - B

Answer the following strictly observing the internal choice provided:

4×10=40

UNIT 1

- 9) Write in detail about a balanced diet. How can a balanced diet help to prevent diseases?

OR

- 10) Describe the physiological functions of food in the human body. Explain how carbohydrates, proteins, and fats contribute to these functions.

UNIT 2

- 11) Explain carbohydrates under following heads :
i) Deficiency ii) Functions

OR

- 12) Explain lipids under following heads :
i) Functions ii) Excellent, Good and poor Sources

UNIT 3

- 13) Explain Vitamin B2 under following heads: i) Functions ii) Deficiency

OR

- 14) Explain Vitamin E under following heads : i) Deficiency ii) Functions and RDA

UNIT 4

- 15) What are the physiological changes seen in infancy? Add a note on their nutritional problems.

OR

- 16) What are the physiological changes seen during adulthood? Add a note on their nutritional problems.

21ENME11

Reg No :

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME
B.A./B.B.A./B.Com./B.C.A./B.Sc. FIRST SEMESTER DEGREE EXAMINATION
NOVEMBER/DECEMBER 2023
Spoken English for Corporate Jobs

Duration:2 Hours

Max Marks:60

SECTION A

I. Read the following questions carefully and answer in one line each: (10×2= 20)

1. What would you say when meeting your ex-colleague who has come to your office on work?
2. Mention two phrases/expressions/sentences that you would use when meeting someone for the first time?
3. Which are the two most important words in etiquette?
4. Provide two expressions that you would use before disconnecting the call.
5. A friend is ill but wants to write her exam. She asks you for advice. Suggest that she take rest instead.
6. You are stressed about an upcoming exam. Consult your teacher for advice.
7. What is a Eulogy?
8. Your professor criticizes you for not paying attention in class. Respond to her criticism.
9. Mention a few expressions you would use to check whether the information provided is adequate.
10. Mention any two strategies for effective Cross-cultural communication.

SECTION B

II. Answer any ONE of the following: (1×5= 5)

- a. Give directions to reach the nearest grocery store from your house.
- b. Give instructions on how to prepare for competitive exams.

III. Answer any ONE of the following: (1×5= 5)

- a. Draft a dialogue for the following situation. The catering company for your wedding, Ideal restaurant has served non-vegetarian food for all the vegetarian guests. Furthermore, they forgot to serve dessert to the guests. Make a complaint to Ideal restaurant about their catering service. Also include the response by the company with regard to your complaint.

- b. Using the work-related idioms below, make appropriate sentences:
- To move the goalposts
 - Get the boot
 - Ahead of the game
 - Do everything by the book
 - Back to square one

IV. Answer any ONE of the following in about 100 to 200 words: (1×5= 5)

- a. You are Jessica, an American working in an MNC in India. What are some things to keep in mind about cross-cultural etiquette?
- b. What is the importance of extending a warm welcome?

V. Answer any ONE of the following in about 100 to 200 words: (1×5=5)

- a. Elaborate on any three principles that you think are crucial for Effective Presentation.
- b. You have been tasked with presenting a new chocolate by Cadbury's. Briefly write the script for your presentation.

SECTION C

VI. Answer any ONE of the following in about 250-300 words: (1×10= 10)

- a. Introduce the chief guest, Indian professional Badminton player, Saina Nehwal for your college Sports Day.
- b. Draft a vote of thanks speech for Traditional Day held at your college.

VII. Answer any ONE of the following in about 250-300 words: (1×10=10)

- a. Give a speech on How to Tackle a Bad Habit
- b. Give a toast on the occasion of your friend's wedding.

CHOICE BASED CREDIT SYSTEM SEMESTER SCHEME

BA/B.Sc. FIRST SEMESTER DEGREE EXAMINATION NOVEMBER/DECEMBER 2023

PSYCHOLOGY

Foundations of Psychology

Duration:2 Hours

Max Marks:60

Answer any THREE of the following :**(3×2= 06)**

1. What are the Root Words of Psychology?
2. Write a note on Mid Brain
3. Give an example for Absolute Threshold.
4. Define Learning.
5. Mention the different types of Memory.

Answer any FOUR of the following in not more than a page each :**(4×6= 24)**

6. Explain the functions of Clinical Psychologist.
7. Describe the functions of a Neuron.
8. Explain Constancy of Perception.
9. Differentiate between Illusion and Hallucination.
10. What are the various phenomena of Classical Conditioning?
11. Define Psychology and explain the Nature of Psychology.

Answer any THREE of the following in not more than two page each :**(3×10= 30)**

12. Discuss the key Issues and Perspectives of Psychology?
13. Explain the process of Neural Transmission.
14. Explain the principles of Perceptual Organization.
15. What is Forgetting? Explain the Techniques to Improve Memory.
16. Explain Introspection, Case Study and Questionnaire Method.