PG/AUG23/COMMON/II-A

FACULTY OF ARTS/SCIENCE/COMMERCE/SOCIAL SCIENCES/MANAGEMENT
MA/MSC/MCOM/MBA II SEMESTER (CBCS-OLD) EXAMINATION AUG/SEPT 2023
FUNDAMENTALS OF COMPUTERS AND OFFICE AUTOMATION
FOUNDATION COURSE
(COMMON FOR ALL COURSES)

TIME: 2 HRS] **[MAX. MARKS: 40**

SECTION – A (2 X 5 = 10 Marks)

1 **Write notes on**

a Uses of Computer

b Headers, Footers and Notes

c Creation of formula in Libre office calc

d Describe various 'Compose' options for email

SECTION – B (2 X 15 = 30 Marks)
Answer ALL Questions

2 a) What is Central Processing Unit in computer? Write its features and explain its components

OR

b) Elaborate on various text formatting features available in Libreoffice writer

3 a) Describe (i) Formatting data in Libreoffice Calc
(ii) Data Pilot

OR

b) Describe the steps to create a new presentation and add slide transitions to it?

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FACULTY OF COMMERCE
M. COM (GEN & CA) II SEMESTER (CBCS) EXAMINATION AUG/SEPT 2023
MANAGEMENT ACCOUNTING
PAPER - II

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 X 4 = 20 Marks)

1 **Answer ALL Questions**

A Management Accounting Vs Financial Accounting

B Calculate BEP from the following details: Selling price per unit Rs.15, Variable cost Rs. 6 and Fixed cost Rs. 6,000.

C Write a short note about Master budget

D Cost centre Vs Investment centre

E Cost pool Vs Cost Driver

SECTION – B (5 X 12 = 60 Marks)
Answer ALL Questions

2 A Explain the nature and scope of management accounting.

OR

B Discuss in detail about classification of costs.

3 A The following data are available from the records of a company.
Sales: Rs. 6,00,000 variable Cost Rs. 2,40,000 Fixed Cost: Rs. 1,50,000 You are required to calculate (a) P/V Ratio, BEP and Margin of Safety at this level
(b) Calculate the effect of 5% increase in sale price (c) Calculate the effect of 10% decrease in sale price.

OR

B Discuss in detail about the different managerial decisions which can be made by using marginal costing.

4 A

The following information is obtained from the books of a manufacturing company which uses three types of materials for production. You are required to calculate the material variances.

Material	Standard			Actual		
	Qty. Kgs.	Price Rs.	Total Rs.	Qty. Kgs.	Price Rs.	Total Rs.
P	1500	6.00	9000	2000	6.25	12500
Q	1500	3.85	5775	2000	3.60	7200
R	1000	3.00	3000	1500	2.75	4125
Less: 10%Normal loss	4000 400			5500 1100	(actual loss)	
	3600		17775	4400		23825

OR

(Contd....)

B XYZ Ltd. Company manufactures a single product which is in great demand in the market. The present sales of Rs. 60,000 per month utilises only 60% capacity of the plant. The sales manager anticipates that with a reduction of 10% in the sale price, the sales would go up by 25% to 30%. The following data is available: Selling Price: Rs. 10 per unit, Variable Cost: Rs. 3 per unit, Semi Variable Cost: Rs. 6,000 fixed plus Re.0.50 per unit. Fixed cost: Rs. 20,000 at present level, estimated to be Rs. 24,000 at 80% output. You are required to prepare the statements to show to the board: (a) The operating profits at 60%, 70% and 80% levels at current price and at proposed selling price and (b) the percentage increase in the present output which will be required to maintain the present profit at the proposed selling price.

5 A The following information relates to budgeted operation of Division A of a manufacturing concern:

Sales (50,000 units of Rs. 8)	Rs. 4,00,000
Less: variable cost @ Rs. 6 per unit	Rs. 3,00,000
Less: Fixed cost:	Rs. 75,000
Divisional Profit:	Rs. 25,000

The amount of divisional investment id Rs. 1,50,000 and the minimum desired rate of return on the investment is the cost of capital of 20%.
You are required to (i) Calculate divisional expected ROI (b) Calculate divisional expected RI (c) Comment on the results of (a) and (b) (d) The divisional manager has the opportunity to sell 10,000 units at Rs. 7.50 per unit. Variable cost per unit would be same as budgeted, but fixed costs would increase by Rs. 5,000. Additional investment of Rs. 20,000 would also be required. If the manager accepts the special order, by how much and in what direction would his residual income change?

OR

B What are the essential features of Responsibility accounting? Explain.

6 A Distinguish between ABC system and traditional costing system.

OR

B J Ltd. Produces two products A and Q using the same equipment and similar processes. An extract of the production data for these products in one period is given as under:

Particulars	A	Q
Quantity produced (units)	6000	8000
Direct labour hours per unit	3	4
Machine hours per unit	5	3
Set ups in the period	30	60
Orders handled in the period	25	90

Overhead costs:
Related to machine activity: Rs. 3,00,000
Related handling of orders: Rs. 36,000
Related to run set ups: Rs. 20,000
Total: Rs. 3,56,000
Required: Calculation of production overheads to be absorbed by one unit of each product using the traditional costing method and ABC method.

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FACULTY OF COMMERCE
M.COM (FA). II SEMESTER (CBCS) EXAMINATION AUG/SEPT 2023
ADVANCED COST AND MANAGEMENT ACCOUNTING
PAPER - II

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 X 4 = 20 Marks)

1 **Answer ALL Questions**

A Briefly describe the limitations of management accounting.

B Calculate BEP from the following details: Selling price per unit Rs.10, Variable cost Rs. 5 and Fixed cost Rs. 1,000.

C State the demerits of standard costing.

D What do you mean by Activity Based Costing?

E Cost centre Vs Profit centre

SECTION – B (5 X 12 = 60 Marks) Answer ALL Questions

2 A Critically examine the role of management accountant in the present context.

OR

B Discuss in detail about the significance of strategic cost management.

3 A Explain in detail about the differences between absorption costing and variable costing.

OR

B From the following information related to X Ltd. Calculate the following: (a) P/V Ratio (b) Break Even Point in Units (c) Margin of Safety (d) Profit and (e) Sales to earn a profit of Rs. 60,000.
Total Fixed cost: Rs. 45,000 Total Variable cost: Rs. 75,000 Units sold: 5000
Sales Revenue: Rs. 1,50,000

4 A Explain in detail about the steps involved in establishing standard costing.

OR

B The following information is obtained from the books of a manufacturing company.
Budgeted labour composition for producing 100 units
200 men @ Rs.1.20 per hour for 25 hours
300women @ Rs. 1.10 per hour for 30 hours
Actual labour composition for producing 100 units
250men @ Rs. 1.50 per hour for 24 hours
250 women @ Rs. 1.20 per hour for 25 hours
Calculate (i) Labour Cost Variance (ii) Labour Rate Variance (iii) Labour Efficiency Variance (iv) Labour Mix

5 A Describe the characteristics of ABC and explain the steps to develop ABC system.

OR

B Distinguish between traditional costing and Activity Based Costing.

6 A Division A and B are both considering an outlay on new investment projects.

Particulars	Division A	Division B
Investment outlay	Rs. 10,00,000	Rs.10,00,000
Net Return on the new investment	Rs. 1,60,000	Rs. 1,10,000
Current ROI	18%	11%

The Company's cost of capital is 12%. Should the project be accepted or rejected?

OR

B Explain in detail about various methods of transfer pricing.

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FACULTY OF SCIENCE
M Sc (BOTANY) II SEMESTER (CBCS R-19) EXAMINATIONS, AUG/SEPT 2022
PLANT ANATOMY & PALYNOLOGY
PAPER - II

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Krantz syndrome in C4 plants

b Trichomes

c Ray parenchyma

d Aeropalynology

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Explain the leaf structure with reference to C3 and C4 plants

OR

B Explain the recent views on the organization of shoot apical meristem with suitable diagrams

3 A Discuss on the epidermal complex cells in detail

OR

B Write a detailed account on the structure, ontogeny and functions of transfer cells

4 A Write a detailed account on the significance of dicot wood anatomy

OR

B Discuss on the salient features of *Pongamia pinnata* and *Terminalia tomentosa*

5 A Explain melittopalynology in detail

OR

B Write a detailed account on pollen morphology

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FACULTY OF SCIENCE
M Sc (COMPUTER SCI.) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
ADVANCED JAVA
PAPER - II

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Explain briefly about SWING.

b Explain the Architecture of JDBC.

c What are Web Servers?

d Discuss about the problem with Servlet.

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Explain working with Frame Windows, Control Fundamentals and discuss about Layout Manager.

OR

B a) Explain about Delegation Event Model
b) Discuss about Inner Classes.

3 A a) Explain about DriverManager.
b) What is DatabaseMetadata?

OR

B Explain in detail about ResultsetMetadata and Aggregate Functions.

4 A Explain about Interacting with Clients and Running Servlets.

OR

B What is a HTTP Package? Explain in detail about Handling Http Requests and Responses.

5 A Write a detailed note on designing JSP Application Design with MVC architecture.

OR

B Explain in detail the JSP's compilation and execution and collaborating with Servlets.

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FACULTY OF SCIENCE
M Sc (FOOD SCI & TECH) II SEM (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
TECHNOLOGY OF MILK AND MILK PRODUCTDS
PAPER - II

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Write the difference between recombined reconstituted toned and double toned milk

b What are the defects in dried milk powder?

c List the defects in cheese and explain them.

d List the defects in ice cream.

SECTION – B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Explain in detail procurement, transportation and processing of market milk.

OR

B How would you sanitize the dairy equipment explain in detail.

3 A Describe the method of manufacture condensed milk and skim milk powder.

OR

B Explain the process of neutralization, sterilization and pasteurization of cream.

4 A Discuss in detail theories of churning and evaluation of butter.

OR

B Discuss in detail methods of manufacture of Swiss cheese and processed cheese

5 A Describe the classification of ice creams and methods of manufacture of ice cream.

OR

B Describe the method of manufacture of probiotic milk and burfi.

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526/AUG23/II-B

FACULTY OF SCIENCE
M Sc (ZOOLOGY) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
ENVIRONMENTAL BIOLOGY
PAPER - II

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Explain briefly about energy flow in ecosystem.

b Write about the impacts of global climate change.

c Define LC50 and explain about its applications.

d Explain about sources of solid waste.

SECTION – B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Explain elaborately about biogeochemical cycles with focus on nitrogen and carbon cycles.

OR

B Define population. Explain in detail about population growth curves.

3 A Define biodiversity. Write an essay on biodiversity management approaches.

OR

B Write an essay on renewable and non-renewable natural resources.

4 A Explain in detail about acute and chronic toxicity with suitable examples.

OR

B Define biomagnification. Explain in detail about bioaccumulation of toxicants in ecosystem and organisms.

5 A Write an essay on anaerobic treatment of sewage treatment. Add a note on the importance of sewage and waste water treatment.

OR

B Explain in detail about the *in situ* and *ex situ* methods of bioremediation of contaminated soils.

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FACULTY OF SCIENCE

M Sc (MICROBIOLOGY) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023

ENVIRONMENTAL AND AGRICULTURAL MICROBIOLOGY

PAPER - II

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Oxidation ponds

b Biodegradable plastics

c Nitrate pollution

d Rhizobial inoculants

SECTION - B (4 X 15 = 60 Marks)

Answer ALL questions

2 A Describe the detail account on microbiology of air and its importance.

OR

B Give detailed account on anaerobic sewage treatment.

3 A Describe the methods of enumeration and activity of microbes in environment.

OR

B Explain the microbial degradation of organic pollutants.

4 A Give the detailed account on decomposition and biochemistry of cellulose and hemicellulose.

OR

B Explain the biochemical mechanism of nitrification and nitrifying bacteria.

5 A Explain the biochemistry and genetics of nitrogen fixation.

OR

B Describe the production of biofertilizers using blue green algae.

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FACULTY OF SCIENCE
M.Sc. (CHEMISTRY) II SEMESTER (CBCS) EXAMINATION AUG/SEPT 2023
ORGANIC CHEMISTRY
PAPER - II

Time: 3 Hours] **[Max. Marks: 80**

SECTION - A (4 X 5 = 20 Marks)

1. Write short notes on the following.

a) Stereo electronic factors

b) Wittig reaction

c) Jablonski Diagram

d) Electrocyclic reactions.

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2. a) What are the factors that affect the stability of conformations? Explain.

b) Discuss neighbouring group participation with examples.

(OR)

c) Describe conformations of unsaturated acyclic compounds.

d) Explain Curtin-Hammett Principle and its significance.

3. a) Write the applications of Tebbe reagent.

b) Discuss about Horner-Wadsworth Emmons reaction.

(OR)

c) Illustrate the preparation and applications of Grignard Reagent.

d) Explain the applications of Gilman reagent.

4. a) What is Barton reaction? Give its applications.

b) Explain the Norrish Type-I Cleavage with examples.

(OR)

c) Describe Di-π-methane rearrangement with examples.

d) Explain the terms Sensitization and Quenching.

5. a) "Cope rearrangement is Thermally Allowed reaction" Justify this by FMO method.

b) Draw the Molecular orbital diagram and electronic configuration of 1,3- butadiene molecule.

(OR)

c) Describe the Electrocyclisation of 4n system by OCD method. Predict the allowed conditions.

d) Explain the Cycloadditions of 4n and 4n+2 systems by PMO method.

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FACULTY OF SCIENCE
M. Sc. (PHYSICS/ENGG.PHYSICS) II SEMESTER (CBCS) EXAMINATION AUG/SEPT 2023
QUANTUM MECHANICS - I
PAPER - II

Time: 3 Hours] **[Max. Marks: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer the following**

a) Define Hermitian operator.

b) Position and momentum representation.

c) Write down Pauli spin matrices and show that they anticommute.

d) If T is the time reversal operator, show that $T^2=1$ for integral spin and $T^2 = -1$ for half integral spin particles.

SECTION – B (4 X 15 = 60 Marks)
Answer ALL Questions

2. a) What is principle of superposition?

b) Write down postulates of quantum mechanics.

OR

c) What is complete set of commuting operators?

c) Find the Eigen values and Eigen vectors of $\begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix}$.

3. a) Write down any four properties of Dirac delta function.

b) Derive relation between Poisson bracket and quantum conditions.

OR

c) State and prove Ehrenfest theorem.

d) If $a^\dagger$ and a are creation and annihilation operators of harmonic oscillator then calculate $[a^\dagger, a]$, [N,a], [N, $a^\dagger$] and $a|2\rangle, a^\dagger|2\rangle$.

4. a) Obtain eigen values and eigen functions of L^2, and Lz.

OR

b) Solve the Hydrogen atom problem.

5. a) Show that the energy is constant of motion under time displacement symmetry.

OR

b) Show that the time reversal operator (T) is antilinear.

c) Calculate $[J_+, J_-]$, $[J_Z, J_\mp]$, J_+J_- and $J_z(J_\mp|\alpha, \beta\rangle)$

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FACULTY OF SCIENCE
M. Sc. (STATISTICS) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
PARAMETRIC INFERENCE
PAPER - II

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 =20 Marks)

1 **Answer ALL the questions**

a Define one parameter exponential family of a distribution. Write any three distributions processing that property.

b State the Relation between confidence interval.

c Sequential estimation of a normal population.

d Define admissible and optimal decision functions.

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions.

2 A Explain the concept of Neyaman-Pearson lemma. Write its importance. Let $x_1, x_2, \ldots, x_n$ be a random sample of size n drawn form N(μ, σ^2) where μ is unknown and σ^2 is known. Obtain MP test of size α for testing $H_0 : \mu = \mu_0$ vs $H_1: \mu = \mu_1$ when $\mu > \mu_0$.

OR

B Obtain UMP test testing Ho : $\theta = \theta 0$ VS H 1: $\theta > \theta 0$. Based on a random sample of sizer n from U(0, θ). Assume that the size α, obtain power function of UMP test..

3 A Describe Likelihood Ratio Test (LRT). Obtain the LRT for testing the homogeneity of variance of a Normal population is a specified value.

OR

B Let $x_1, x_2, \ldots x_n$ be a random sample from N (μ , σ^2) , both μ and σ^2 are unknown. Obtain LRT for testing $H_0 : \mu = \mu_0$ Vs $H_1: \mu \# \mu_0$.

4 A DefineOCand ASNfunctionsofSequential Probability Ratio Tests (SPRT). Derive theexpressionsforOCandASN functions of SPRTwithrespecttothe Normal distribution for testing $H_0: \mu = \mu_0$.

OR

B Drive expressions for stopping bonds of SPRT in terms of its strength of θ is mean of Poisson random variable. Obtain the ASN function of the SPRT for testing $H_0 : \theta = \theta_0$.

5 A Explain the terms: (i) State space (ii) Decision Space (iii) action space (iv)Bayes measure. Also write Bayesian decision rule and minimax decision rule.

OR

B Explain the Define Conjugate family of distributions. If X is a random variable from Poisson distribution with mean θ, where θ follows Gamma distribution with parameter α and β then show that they possess Conjugate family.

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FACULTY OF SCIENCE
M Sc (NUTRITION & DIETETICS) II SEM (CBCS R-19) EXAMS AUG/SEPT 2023
NUTRITIONAL BIOCHEMISTRY - II
PAPER – II

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION-A (4 X 5 =20 Marks)

1 **Answer ALL the questions**

a Explain the role of lipo tropic factors.

b Write about Gaucher‘s disease.

c List the functions of riboflavin and ascorbic acid.

d List the sources and deficiency symptoms of zinc.

SECTION-B(4 X 15 =60 Marks)

Answer ALL questions

2 A Describe the process of synthesis of fatty acids even and odd number.

OR

B Briefly explain the steps involved in cholesterol metabolism.

3 A Discuss the metabolic changes occurring during starvation.

OR

B Describe the deficiency symptoms of vitamin D and vitamin E.

4 A Discuss the disturbances occurring because of fluid balance.

OR

B Discuss the functions and deficiency symptoms of thiamine vitamin B12and folic acid.

5 A Discuss the interrelationshipbetweenparath hormone and vitaminD in regulation of calcium and phosphorus metabolism.

OR

B Describe the functions and deficiency symptoms of fluorine and iodine.

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CBCS R-22NEW 505/AUG23/II-B(R22)

FACULTY OF SCIENCE

M.Sc. (MATHEMATICS) II SEM (CBCS R-22 NEW) EXAMINATIONS AUG/EP 2023

MATHEMATICAL ANALYSIS-II

PAPER - II

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions.**

a If a power series $\sum a_n x^n$ converges for $x = x_0$ then show that it is convergent for every $x = x_1$, when $|x_1| < |x_0|$.

b Show that $lim_{(x,y)\to(0,0)} \frac{\sqrt{x^2y^2+1}-1}{x^2+y^2} = 0$.

c Examine for the change in the order of derivation at the origin for

$$f(x,y) = e^x(Cos\, y + xSin\, y)$$

d Examine the convergence of $\int_0^1 \frac{dx}{\sqrt{1-x}}$

SECTION - B (4 X 15 = 60 Marks)

Answer ALL the questions.

2 A State and prove Abel's theorem (first form).

OR

B Show that.

(i) $Sin^{-1}x = x + \frac{1}{2}\frac{x^3}{3} + \frac{1\cdot3}{2\cdot4}\frac{x^5}{5} + \frac{1\cdot3\cdot5}{2\cdot4\cdot6}\frac{x^7}{7}\ldots\ldots, -1 \le x < 1$

(ii) $\frac{\pi}{2} = 1 + \frac{1}{2}\cdot\frac{1}{3} + \frac{1\cdot3}{2\cdot4}\frac{1}{5} + \frac{1\cdot3\cdot5}{2\cdot4\cdot6}\frac{1}{7}\ldots..$

3 A Show that the function $|x| + |y|$ is continuous, but not differentiable at the origin.

OR

B Prove the function $f(x,y) = \sqrt{|xy|}$ is not differentiable at the point (0, 0), but that f_x and f_y both exist at the origin and have the value 0. Hence deduce that these two partial derivatives are continuous except at the origin.

4 A If *z* is given as a function of two independent variables *x* and *y*, change the variables so that *x* becomes the function, and *z* and *y* the independent variables, and express the first and second order partial derivatives of *x* with respect to *z* and *y* in terms of the derivatives of *z* with respect to *x* and *y*.

OR

B Prove that $\frac{\partial^2 V}{\partial x^2} + \frac{\partial^2 V}{\partial y^2}$ is invariant for change of rectangular axes.

5 A Find the values of *m* and *n* for which the following integrals converge:

(i) $\int_0^1 e^{-mx}x^n dx$

(ii) $\int_0^1 \left(log\ \left(\frac{1}{x}\right)\right)^m dx$

OR

B Test the convergence of $\int_0^\infty \frac{x\, dx}{1+x^4Cos^2x}$

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FACULTY OF ARTS
M.A. (ENGLISH) II SEMESTER (CBCS) EXAMINATIONS AUG / SEPT 2023
ENGLISH PROSE
PAPER - II

Time: 3 Hours] **[Max. Marks: 80**

SECTION - A (5 X 4 = 20 Marks)

1. Answer ALL the following questions

A. Allegory
B. Discuss John Bunyan's *The Pilgrim's Progress*
C. Joseph Addison's Sir Roger in Church
D. The influence of Ruskin's Christian faith
E. Bertrand Russell's The Ethics of War

SECTION - B (5 X 12 = 60 Marks)
Answer ALL Questions

2. (A) Explain 'Origin and Development of the English Essay'

(OR)

(B) What is Satire? Write satirical works with suitable examples?

3. (A) Write the importance of Francis Bacon's essays "Of Studies" and "Of Revenge"

(OR)

(B) What is the main idea of Sidney in *An Apologie for Poetrie*?

4. (A) Discuss Jonathan Swift's *The Battle of the Books* as a mock epic.

(OR)

(B) According to Samuel Johnson, why comedy is valued over tragedy in 'Preface to Shakespeare?"

5. (A) How does William Hazlitt describe The Indian Jugglers?

(OR)

(B) Write an essay on 'humour' and 'pathos' in Charles Lamb's essays.

6. (A) Does Virginia Woolf think poems are superior to novels. Explain.

(OR)

(B) Write about the importance of politics and language from George Orwell essays.

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FACULTY OF ARTS
M. A (TELUGU) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
సంప్రదాయ కవిత్వం - II

PAPER - II

TIME: 3 HRS] **[MAX.MARKS: 80**

SECTION - A (5 X 4 = 20 మార్కులు)

1 **అన్ని ప్రశ్నలకు జవాబులు వ్రాయండి**

a శృంగార నైషధం పరిచయం

b స్వరోచి పాత్ర చిత్రణ

c తెనాలి రామకృష్ణ కవి పరిచయం

d మొల్ల కవితా శైలి

e చేమకూర వెంకటకవి

SECTION – B (5 X 12 = 60 మార్కులు)

అన్ని ప్రశ్నలకు జవాబులు వ్రాయండి

2 A హంస చేసిన దమయంతి వర్ణనను విశ్లేషించండి

లేదా

B మీ పాఠ్యభాగం ఆధారంగా శ్రీనాథుని అనువాద విధానాన్నివివరించండి

3 A మనోరమ కథ పరమార్థాన్ని వివరించండి

లేదా

B మీ పాఠ్యభాగం ఆధారంగా పెద్దన కవితా శిల్పాన్ని వివరించండి

4 A వికట కవిత్వ లక్షణాన్ని మీ పాఠ్యం ఆధారంగా వివరించండి

లేదా

B నిగమశర్మ పాత్ర చిత్రణ రీతిని వివరించండి

5 A మొల్ల పద్య రచనా శైలిని మీ పాఠ్యభాగం ఆధారంగా వివరించండి

లేదా

B అరణ్య కాండ కథా సారాన్ని వివరించండి

6 A యమకాలంకార చక్రవర్తి చేమకూర వేంకటకవి మీ పాఠ్యభాగం ఆధారంగా నిరూపించండి

లేదా

B మీ పాఠ్యభాగం ఆధారంగా పెళ్లి వేడుకల వర్ణన రీతిని వివరించండి

★★★★★

016/AUG23/II-B

FACULTY OF ARTS

M.A (Urdu) II Semester Examination (CBCS) AUG/SEPT 2023

Paper - II دوسرا پرچہ

(Adabi Tanqeed) ادبی تنقید

[Time : 3 Hours] **Answer ALL the question** **Max Marks : 80**

Section - A

نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے چار نشانات ہیں۔ ہر جواب پندرہ سطروں میں تحریر کیا جائے۔ **(5 x 4 = 20)**

1. تاثراتی تنقید سے کیا مراد ہے۔
2. کلیم الدین احمد کی تنقید نگاری پر مختصر نوٹ لکھیے۔
3. بھرت کے رس کے نظریے کی وضاحت کیجیے۔
4. لان جائی نس کے تصور ارفعیت (Sublimition) کی تشریح کیجیے۔
5. عملی تنقید پر اختصاریہ تحریر کیجیے۔

Section - B

نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے بارہ نشانات مختص ہیں۔ ہر سوال کا جواب چار صفحات سے زیادہ نہ ہو **(5 x 12 = 60)**

6. (A) شبلی کی تنقیدی خدمات پر روشنی ڈالیے۔ یا
   (B) شعر و شاعری کے بارے میں حالی کے تنقیدی تصورات کی وضاحت کیجیے۔
7. (A) سائنٹفک تنقید کے اصول و طریقہ کار پر روشنی ڈالیے۔ یا
   (B) نفسیاتی تنقید کے اساسی تصورات کی صراحت کیجیے۔
8. (A) افلاطون اور ارسطو کے تنقیدی نظریات کا تقابل کیجیے۔ یا
   (B) میتھیو آرنلڈ کے تنقیدی تصورات کا محاکمہ کیجیے۔
9. (A) علم بیان اور اس کی مختلف شاخوں پر روشنی ڈالیے۔ یا
   (B) علم معانی اور علم بدیع کی تعریف کیجیے اور ان علوم کی اہمیت واضح کیجیے۔
10. (A) تنقید کی تعریف میں مختلف علما کے خیالات کا جائزہ لیجیے۔ یا
    (B) ادب میں تنقید کی اہمیت پر اپنے خیالات کا اظہار کیجیے۔

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FACULTY OF SOCIAL SCIENCES
M A (ECONOMICS) II SEMESTER (CBCS R-22) EXAMINATIONS AUG/SEPT 2023
MACROECONOMIC ANALYSIS-II
PAPER - II

Time: 3 Hrs] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. **Answer ALL the questions**
   a) Real balance effect
   b) Crowding out effect
   c) Non acceleratory inflation rate of unemployment (NAIRU)
   d) Acceleration model
   e) Additive expectations

SECTION - B (5 X 12 = 60 Marks)

Answer ALL Questions

2. A) Explain Baumol's theory of transaction demand for money

OR

B) Explain explain Robin approach to speculative demand for money and show graphically the process of risk and return.

3. A) What factors determine the magnitude of the slope of the IS schedule

OR

B) Explain the relationship between the effectiveness of monetary policy and the interest elasticity of money demand.

4. A) What are the traditional measures to control inflation?

OR

B) What is monetarists approach to the phenomena of inflation?

5. A) Discuss the objectives and functions of Mantra policy in India

OR

B) Describe the schumpeters theory of business cycles

6. A) Discuss the implications of new classical approach

OR

B) Briefly discuss the rational expectations theory

★★★★★

317/AUG23/II-B(N)(O)

FACULTY OF SOCIAL SCIENCES

M. A. (SOCIOLOGY) II SEMESTER (CBCS NEW & OLD) EXAMINATIONS AUG/SEPT 2023

SOCIAL STRATIFICATION AND SOCIAL MOBILITY

PAPER – II

Time: 3 Hours] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. Answer the following

a) Define Vertical Mobility.

b) Define Social Stratification.

c) Role of caste in urban politics

d) Define Inter-generational mobility.

e) Define reference group.

SECTION – B (5 X 12 = 60 Marks)
Answer ALL Questions

2. (A) Write about the social inequality in contemporary context.

OR

(B) Discuss the Attributes and Dimensions of Stratification.

3. (A) Discuss the contribution of Karl Marx to the understanding of Social Stratification.

OR

(B) Explain about the Lenski's theory of Stratification.

4. (A) Differentiate between caste and class.

OR

(B) Examine the present situation of caste system in rural areas.

5. (A) Explain the relationship between gender and social mobility.

OR

(B) How the social mobility brings the change in the society?

6. (A) Elaborate the different constraints to mobility in India.

OR

(B) Explain the causes and consequences of Islamization.

★★★★★

FACULTY OF SOCIAL SCIENCES
MSW II SEMESTER (CBCS NEW & OLD) EXAMINATIONS AUG/SEPT 2023
SOCIAL GROUP WORK
PAPER – II

Time: 3 Hours] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. **Write short notes on the following:**

   a. Maintenance functions of group members

   b. Principle of democratic group self determination

   c. Delegate Councils

   d. Pre group phase

   e. Summative recording

SECTION – B (5 X 12 = 60 Marks)
Answer ALL questions

2. a) Examine the historical development of social group work in India.

OR

   b) Analyse how group dynamics can be applied in social group work.

3. a) Illustrate the values related to social group work.

OR

   b) Describe the techniques needed for social group work practice.

4. a) Explain about Treatment groups.

OR

   b) Discuss about Recreational, Developmental and Focus groups.

5. a) Examine the activities undertaken during the middle phase of social group work practice.

OR

   b) Illustrate the problem solving aspects in social group work.

6. a) Explain the practice of social group work in a school setting.

OR

   b) Elaborate on the practice of social group work with rural communities.

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FACULTY OF COMMERCE
M. COM. II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
MARKETING MANAGEMENT
PAPER - III

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 X 4 = 20 Marks)

1 **Answer ALL Questions**

A Penetration pricing

B Public relations

C Channel conflict

D Market research

E Consumer behaviour

SECTION – B (5 X 12 = 60 Marks)
Answer ALL Questions

2 A Explain the role of marketing in economic development of a nation.

OR

B What are the functions and tasks of marketing management.

3 A Define marketing environment? Explain macro and micro factors in marketing environment.

OR

B What is market segmentation? Discuss the bases and process of segmenting markets.

4 A What is a new product? Outline the various stages in new product development.

OR

B Define pricing. What are the factors affecting pricing decisions?

5 A What is direct marketing? Discuss major channels of direct marketing,

OR

B Explain the role of retailers and wholesalers in distribution channel.

6 A Write about objectives and techniques of sales promotion in detail.

OR

B What is promotion mix? List the factors affecting promotion mix and point out the limitations of promotion.

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FACULTY OF SCIENCE
M Sc (BOTANY) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
PLANT BIOCHEMISTRY
PAPER - III

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Isoenzymes

b Simple lipids

c Ramchandran Plot

d Membrane proteins

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Discuss on enzyme kinetics. Add a note on Michaelis – Menton Equation

OR

B Describe conservation of energy, entropy, disorder and Gibbs free energy

3 A Write a detailed note on the different types of polysaccharides

OR

B Describe gluconeogenesis in detail

4 A Describe the different types of DNA

OR

B Discuss the biosynthesis of amino acids with reference to GS and GOGAT

5 A Describe the basic components of plant cell wall

OR

B Write a detailed account on the classification and functions of secondary metabolites

★★★★★

FACULTY OF SCIENCE
M Sc (COMPUTER SCI.) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
PROGRAMMING IN PYTHON
PAPER - III

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Explain about Expressions in Python.

b Write a brief note on Processing Records.

c Explain about Tuples.

d Explain about Working with Instances.

SECTION - B (4 X 15 = 60 Marks)

Answer ALL questions

2 A a) Explain the process of Displaying the Output using Print Function.

b) Explain about Comments and Variables in Python.

OR

B Write a detailed note on Decision Structures in Python with example programs.

3 A a) Discuss about Generating Random Numbers.

b) Explain about the Math Module.

OR

B c) Discuss about Storing Functions in Modules.

d) Explain about Exceptions in Python.

4 A a) Explain about Searching and Manipulating Strings with examples.

b) Explain Problem solving with Recursion.

OR

B c) What is Recursion? List out some Recursive Algorithms.

d) List out List methods and Useful Built-in Functions.

5 A Explain about Object oriented Programming and write a detailed note on Inheritance and Polymorphism.

OR

B a) What is GUI? Explain about Widgets and Info Dialog Boxes.

b) Demonstrate the usage of Radio Buttons and Check Buttons with a python program.

★★★★★

612/AUG23/II-C(N)

FACULTY OF SCIENCE

M Sc (FOOD SCI & TECH) II SEM (CBCS R-19 NEW) EXAMINATIONS AUG/SEPT 20223

FRUIT & VEGETABLE PROCESSING & PRESEVATION TECHNIQUES

PAPER – III

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Write the composition of fruits and vegetables.

b What is the difference between concentrate and sauce.

c Explain briefly methods of preservation.

d Write the principle involved in high pressure processing.

SECTION – B (4 X 15 = 60 Marks)

Answer ALL questions

2 A Discuss the commodity pre-treatment using chemicals and wax coating.

OR

B Describe the quality requirements of raw materials for processing.

3 A Describe the process of preparation of jams and jellies using locally available fruits.

OR

B Discuss the dehydration of fruits and vegetables using solar drying and spray drying.

4 A Discuss in detail preservation of foods by fermentation.

OR

B Give a brief account on (i) microwave heating (ii) pasteurization.

5 A Briefly explain the various non- thermal methods of preservation.

OR

B Briefly explain the preservation of foods using low temperatures.

★★★★★

612/AUG23/II-C(O)

FACULTY OF SCIENCE
M. Sc (FOOD SCI. & TECH.) II SEMESTER (CBCS OLD) EXAMS AUG/SEPT 2023
TECHNOLOGY OF FRUITS AND VEGETABLES PROCESSING
PAPER - III

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a What is chilling injury how it affects fruits and vegetables.

b Explain the process of blanching and its importance.

c What are the differences between jam and jellies?

d What are the differences between chutneys andpickles?

SECTION – B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Describe the maturity indices and standards for selection of fruits and vegetables.

OR

B Discuss the physiological post-harvest disorders of fruits and vegetables.

3 A Discuss briefly the following primary processing that is grading and washing.

OR

B . Describe the packaging house operations

4 A Discuss the process of preparation of puree and concentrate

OR

B Discuss the process of preparation of frozen fruits and peas.

5 A Describe the different drying technologies and their applications.

OR

B Describe the technology for preparation of chutneys.

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526/AUG23/II-C

FACULTY OF SCIENCE
M SC (ZOOLOGY) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
BIOCHEMISTRY
PAPER - III

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Structure of Proteins

b Michael-Menton equation

c High energy phosphates

d Gluconeogenesis

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Explain the classification of Carbohydrates with examples.

OR

B Write the classification and functions of Lipids

3 A Describe the Mechanism of enzyme action and regulation of enzyme activity.

OR

B Write the Nomenclature and classification of enzymes.

4 A Explain in detail about basic principles of thermodynamics.

OR

B Give an account on coupled reactions in detailed.

5 A What is Glycolsis? Add note on pentose phosphate pathway.

OR

B Write about fatty acid oxidation and biosynthesis.

★★★★★

518/AUG23/II-C

FACULTY OF SCIENCE
M.SC. (MICROBIOLOGY) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
IMMUNOLOGY
PAPER - III

Time: 3 Hours] **[Max. Marks: 80**

SECTION - A (4 X 5 = 20 Marks)

1. Write short notes on the following

a) Macrophage
b) B cells
c) MHC
d) Flow Cytometry

SECTION - B (4 X 15 = 60 Marks)
Answer ALL Questions

2. (a) Write an essay on organs of immune system

OR

(b) Describe the structure of immunoglobulin

3. (a) Write an essay on types of transplantation methods

OR

(b) Describe the congenital and acquired immune deficiencies

4. (a) Write an essay on agglutination reactions

OR

(b) Describe the complement system

5. (a) Write an essay on Immunosuppression

OR

(b) Describe the immunity to the tumour cells

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FACULTY OF SCIENCE
M. Sc. (CHEMISTRY) II SEMESTER (CBCS) EXAMINATION AUG/SEPT 2023
PHYSICAL CHEMISTRY
PAPER - III

Time: 3 hours] **[Max. Marks: 80**

SECTION – A (4 X 5 = 20 Marks)

1. Answer ALL questions

a) Explain variation of chemical potential with temperature.

b) Define Actinometry. Discuss uranyl oxalate actinometer.

c) Write Z(Ø) equation and discuss its solution.

d) Define Super conductivity. What is Meissner effect? Explain.

SECTION - B (4 X 15 = 60 Marks)
Answer ALL Questions

2. a) What are partial molar properties of a solution? Mention their significance.
b) Derive Gibbs-Duhem equation and explain its importance.

(OR)

c) Define the terms fugacity and fugacity coefficient. Explain any one method for the determination of fugacity of a gas.
d) How do you determine activity coefficient of non volatile solute using Gibbs-Duhem equation.

3. a) Derive fluorescence quantum yield expression.
b) Explain various photo physical processes using Jablonski's diagram.

(OR)

c) Define the term Quenching. Derive Stern-Volmer equation.
d) Write short notes on (i) Photo sensitization. (ii) Franck Condon principle.

4. a) Set up the Schrodinger wave equation for the Hydrogen atom in terms of spherical polar coordinator and separate the variables.
b) Explain Variation theorem and prove it.

(OR)

c) What are secular equations and secular determinant. Explain by considering the trial wave function $\Psi = a_1Ø_1 + a_2Ø_2$.
d) Discuss the Molecular Orbital Theory of H_2^+ ion.

5. a) Explain the band structure of metals, insulators and semi- conductors.
b) Discuss BCS theory of super conductors.

(OR)

c) Describe the crystal structure of $YBa_2Cu_3O_{7-x}$
d) Write short notes on (i) Quantum dots and (ii) Carbon nano tubes.

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FACULTY OF SCIENCE

M.Sc. (ENGG. PHY.AND INSTR. & PHYSICS) II SEM (CBCS) EXAMINATIONS AUG/SEPT 2023

C - PROGRAMMING AND NUMERICAL METHODS

PAPER - III

Time: 3 hours] **[Max. Marks: 80**

SECTION – A (4 X 5 = 20 Marks)

1) Answer ALL the following

a) Mention about different operators in 'c'?

b) Define a pointer and write its syntax?

c) Describe the Newton - Raphson Method?

d) Write an algorithm for Euler's Method?

SECTION – B (4 X 15 = 60 Marks)

Answer ALL the Questions

2. (a) Explain in detail about different Data types and declarations in 'c'
(b) Write a 'c' program to print even numbers from 1 to 100?

(OR)

(c) Explain in detail about all the looping statements along with their syntaxes?
(d) Write a 'c' program to find the factorial of a number?

3. (a) Define an Array. Explain types of Arrays with syntaxes
(b) Write 'c' program to multiply any two matrices?

(OR)

(c) Explain briefly the differences and similarity between Structures and Unions
(d) Write a 'c' program to factorial of a number using recursion?

4. (a) Describe the method used find root of a transdental equation by using Bisection method?
(b) Find the root of the equation $f(x) = x^3 - 5x + 3$ if the initial value is 3 using Newton – Raphson Method upto 4 decimal places?

(OR)

(c) Compute the integral $\int_0^4 x^2\,dx$ with h = 0.5 accuracy to five decimals by applying Simpson's ⅓rd and Simpson's $\frac{3}{8}$ rules and comment on the solution.

5. (a) Write a procedure to solve the system of equations for Gauss - Jacobi method?
(b) Use the Gauss – Siedel Method to solve the system $10x - 5y - 2z = 3, 4x - 10y + 3z = -3,\ x + 6y + 10z = -3.$

(OR)

(c) Given the equation $\frac{dy}{dx} = x^2 + y^2, y(1) = 0$, Estimate $y(1.2)$, taking $h = 0.05$ using Euler's Method?

(d) Given $\frac{dy}{dx} = 1 + y^2, y = 0\ when\ x = 0, find\ y(0.2)$ using Runge – Kutta IV order formula?

★★★★★

506/AUG23/II-C

FACULTY OF SCIENCE
M. Sc. (STATISTICS) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
LINEAR MODELS & DESIGN OF EXPERIMENTS
PAPER - III

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 =20 Marks)

1 **Answer ALL the questions**

a Explain the concept of Multi-colllinearity.

b Explain time sequence plots.

c Explain Duncan Multiple Range test.

d Define Resolution III & IV of a design.

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions.

2 A Explain the BLUE for a linear function

OR

B Explain Gauss Markov linear model.

3 A Obtain the formulae for Multiple and Partial correlation coefficients.

OR

B Explain the procedure for estimation and testing regression coefficients.

4 A Stating the model and assumptions, carryout the analysis of covariance for two – way classification.

OR

B Write the analysis of 2^3 factorial experiment.

5 A Design and Explain the analysis of 2^4 confounded design in three replicates with ACD is confounded.

OR

B Explain 3^2 factorial design. Describe the analysis of a 3^2 factorial design.

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FACULTY OF SCIENCE
M Sc (NUTRITION & DIETETICS) II SEM (CBCS R-19) EXAMS AUG/SEPT 2023
RESEARCH METHODOLOGY
PAPER – III

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION-A (4 X 5 =20 Marks)

1 **Answer ALL the questions**

a Write about types of hypothesis.

b What are the benefits of sampling?

c Give a brief account on diagrammatic representation of data.

d Write the application of different types of t-tests.

SECTION-B(4 X 15 =60 Marks)
Answer ALL questions

2 A Discuss in detail the research strategies in the field of food and nutrition.

OR

B Explain in detail the reporting methods.

3 A Discuss in detail the non-random sampling methods.

OR

B Describe in detail the steps in sampling along with a note on sample size.

4 A Briefly and its types. the classification of data

OR

B Discuss he sources of secondary data and the precautions to be taken for use of secondary data.

5 A Discuss the different types of correlation and their applications.

OR

B Give a brief account on (i)Chi square test (ii) F test

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CBCS R-22NEW **505/AUG23/II-C(R22)**

FACULTY OF SCIENCE

M.Sc. (MATHEMATICS) II SEM (CBCS R-22 NEW) EXAMINATIONS AUG/SEP 2023

TOPOLOGY

PAPER – III

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION-A (4 X 5 =20 Marks)

1 **Answer ALL the questions.**

a Show that if a topological space is metrizable, then it is metrizable in an infinite number of different ways.

b Prove the converse of the Heine-Borel theorem: every compact sub space of the real line is closed and bounded.

c Show that any finite T_1- space is discrete.

d Show that the spaces R^n and C^n are connected.

SECTION-B (4 X 15 = 60 Marks)

Answer ALL the questions.

2 A Let $f: X \to Y$ be a mapping of one topological space into another. Show that f *is continuous* $\Leftrightarrow f^{-1}(F)$ is closed in X whenever F is closed in $Y \Leftrightarrow f(\bar{A}) \subseteq \overline{f(A)}$ for every subset A of X.

OR

B Let A be an algebra of real or complex functions defined on a non-empty set X, and assume that for each point x in X there is a function f in A such that $f(x) \neq 0$. Show that if A contains an identity element 1, then $1(x)=1$ for all x.

3 A A metric space is sequentially compact $\Leftrightarrow$ it has the Bolzano-Weierstrass property.

OR

B Let A be a subspace of a metric space X and show that A is totally bounded $\Leftrightarrow \bar{A}$ is totally bounded.

4 A State and prove a generalization of Tietze's theorem which relates to functions whose values lie in R^n.

OR

B If X is a completely regular, show that every bounded continuous complex function defined on X has a unique extension to a bounded continuous complex function defined on $\beta(X)$.

5 A Prove that a subspace of a topological space X is disconnected $\Leftrightarrow$ it can be represented as the function of two non-empty sets each of which is disjoint from the closure (in X) of the other.

OR

B Show that the image of a locally connected space under a mapping which is both continuous and open is locally connected.

★★★★★

009/AUG23/II-C(N)

FACULTY OF ARTS
M.A. (ENGLISH) II SEM (CBCS NEW) EXAMINATIONS AUG/SEP 2023
ENGLISH FICTION
PAPER - III

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Naturalism

b How is gender stereotypes illustrated in *Emma?*

c Discuss the role of Sissy Jupe in *Hard Times?*

d Who is *Lord of the Flies*? Explain.

e Write a short note on *Lamb to the Slaughter* by Ronald Dahl?

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Write an essay on the Rise of Novel?

OR

B Define Magic Realism? What are the characteristics of magic realism?

3 A Write an essay on the allegorical significance in Daniel Dafoe's *Robinson Crusoe*?

OR

B How does Bronte incorporate gothic elements in *Jane Eyre*? Explain.

4 A Write an essay on the theme of fate in Jane Austen's *Tess of d'Urbervilles?*

OR

B Write a note on Marlow's experience in the Dark Continent in Conrad's *Heart of Darkness?*

5 A Justify the title of the novel *Sons and Lovers* by D. H. Lawrence?

OR

B Sketch the character analyses of Alfred Archibald Jones in *White Teeth* by Zadie Smith?

6 A Write a critical analysis of Rudyard Kipling's short stories prescribed for your study?

OR

B H. G. Wells The *Man Who Could Work Miracles* successfully navigates distinctions between fantasy and reality to produce exceptional science fiction writing? Discuss.

★★★★★

FACULTY OF ARTS
M.A. (ENGLISH) II SEMESTR (CBCS-OLD) EXAMINATIONS, AUG/SEPT 2023
TWENTIETH CENTURY BRITISH LITERATURE
PAPER - III

Time: 3 Hours] **[Max. Marks: 80**

SECTION – A (5 X 4=20) Marks:

1. Answer ALL the following questions

A. Modernism in British Literature.

B. Write a short note on Ted Hughes' "Thought Fox"

C. Sketch the character of Estragon

D. Write about the importance of title 'Sons and Lovers.'

E. Sketch the character of Piggy.

SECTION - B (5 X 12 = 60 Marks)
Answer ALL Questions

2. A). Write an essay on 'Oedipus Complex' and 'Theatre of the Absurd.'

(OR)

B). What are the major elements of Psychological novel? Discuss with suitable examples.

3. A). Attempt a critical appreciation of T.S. Eliot's *The Waste Land.*

(OR)

B). How is W.B. Yeats' "The Second Coming" a prophetic poem? Discuss.

4. A). What is the significance of the title of the play *Waiting for Godot*? Explain.

(OR)

B). Compare and contrast the relationship in Samuel Beckett's *Waiting for Godot* between Pozzo and Lucky.

5. A). What are major themes of D.H. Lawrence's Sons and Lovers? Explain.

(OR)

B). What makes *Mrs. Dalloway* a Modernist novel? Discuss.

6. A). Discuss William Golding's *Lord of the Flies* as a political allegory.

(OR)

B). Explain the Reflection of the Second World War on "Lord of the Flies"?

★★★★★

FACULTY OF ARTS
M. A (TELUGU) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
వ్యాకరణం భాషాచరిత్ర - II

PAPER - III

TIME: 3 HRS] **[MAX.MARKS: 80**

SECTION - A (5 X 4 = 20 మార్కులు)

1 **అన్ని ప్రశ్నలకు జవాబులు వ్రాయండి**

a సమాసం నిర్వచనం

b ఆటకత్తియ రూప సాధన

c ఓరిమి రూప సాధన

d మధ్య ద్రావిడ భాషలు

e గిడుగు రామమూర్తి

SECTION – B (5 X 12 = 60 మార్కులు)

అన్ని ప్రశ్నలకు జవాబులు వ్రాయండి

2 A షడ్విధ కారకాలను వివరించండి

లేదా

B సమాసాన్ని నిర్వచించి సాంస్కృతిక, ఆచ్చిక, మిశ్ర సమాసాలను సోదాహరణంగా వివరించండి

3 A తద్ధిత పరిచ్ఛేదం ఆధారంగా స్వార్థ ప్రత్యయాలను వివరించండి

లేదా

B క్రియా పరిచ్ఛేదం ఆధారంగా అసమాపక క్రియలను వివరించండి

4 A ఇక వర్ణకంబలుగ్వాదులకగు , గడ చేర్వాదుకగు సూత్రాలను సోదాహరణంగా వివరించండి

లేదా

B ప్రకీర్ణక పరిచ్ఛేదం విశేషాలనువివరించండి

5 A భాషోత్పత్తి వాదాలను వివరించండి

లేదా

B ద్రావిడ భాషలలో తెలుగు స్థానాన్ని వివరించండి

6 A మాండలికాన్ని నిర్వచించి తెలంగాణ మాండలిక ప్రత్యేకతను వివరించండి

లేదా

B భాషా ప్రామాణికతకు గల కారణాలను సోదాహరణంగా వివరించండి

★★★★★

016/AUG23/II-C

FACULTY OF ARTS

M.A (Urdu) II Semester Examination (CBCS) AUG/SEPT 2023

Paper - III تیسرا پرچہ

(Qaseeda Va Marsia) قصیدہ و مرثیہ

[Time : 3 Hours] **Answer ALL the question** **Max Marks : 80**

Section - A

نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے چار نشانات ہیں۔ ہر جواب پندرہ سطروں میں تحریر کیا جائے۔ **(5 x 4 = 20)**

1. قصیدے کے زوال کے اسباب بیان کیجیے۔
2. نصرتی کی قصیدہ گوئی پر اظہار خیال کیجیے۔
3. مرثیے کی اہمیت واضح کیجیے۔
4. جوش کی مرثیہ نگاری کی اہم خصوصیات واضح کیجیے۔
5. حالؔی کے مرثیہ غالب کی خوبیوں پر روشنی ڈالیے۔

Section - B

نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے بارہ نشانات مختص ہیں۔ ہر سوال کا جواب چار صفحات سے زیادہ نہ ہو **(5 x 12 = 60)**

6. (A) قصیدے کی ہیئت اور اجزائے ترکیبی کی وضاحت کیجیے۔ یا

   (B) صنف قصیدہ کے لوازمات، اقسام اور اہمیت پر روشنی ڈالیے۔

7. (A) شمالی ہند میں قصیدہ گوئی کے آغاز و ارتقا کا جائزہ لیجیے۔ یا

   (B) دکنی میں قصیدے کے ارتقا پر جامع نوٹ تحریر کیجیے۔

8. (A) مرثیے کے اجزائے ترکیبی کی صراحت کیجیے۔ یا

   (B) مرثیے کی تعریف کیجیے اور اس کے رزمیہ اور المیہ عناصر پر روشنی ڈالیے۔

9. (A) دکن میں مرثیے کی روایت کا جائزہ لیجیے۔ یا

   (B) شمالی ہند میں مرثیہ گوئی پر ایک نوٹ تحریر کیجیے۔

10. (A) سوداؔ کی قصیدہ نگاری کا تنقیدی محاکمہ کیجیے۔ یا

    (B) دبیر کی مرثیہ نگاری کے فنی اور ادبی محاسن پر روشنی ڈالیے۔

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313/AUG23/II-C

FACULTY OF SOCIAL SCIENCES
M A (ECONOMICS) II SEMESTER (CBCS R-22) EXAMINATIONS AUG/SEPT 2023
QUANTITATIVE METHODS - II
PAPER - III

Time: 3 Hrs] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. **Answer ALL the questions**
   a) Rank of matrix
   b) Optimal solution
   c) Sampling
   d) Multiplication theorem of Probability
   e) Seasonal fluctuations in time series

SECTION - B (5 X 12 = 60 Marks)

Answer ALL Questions

2. A) Explain the concept of vector and properties in briefly

OR

B) Discuss the input output analysis suitable example

3. A) Explain linear programming models

OR

B) Explain the difference between maximization of utility and maximization profits.

4. A) Describe the advantages of sampling over complete enumeration

OR

B) Briefly explain the type I and type II errors

5. A) Find the mean and standard deviation of the binomial distribution with parameters (n,p).

OR

B) Explain the concept of conditional probability.

6. A) Describe the method of moving average and the method of least square for determination of trend in a time series analysis.

OR

B) What are the important components of time series analysis?

★★★★★

317/AUG23/II-C(N)

FACULTY OF SOCIAL SCIENCES

M.A. (SOCIOLOGY) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023

QUALITATIVE RESEARCH AND PARTICIPATORY LEARNING & ACTION (PLA) TECHNIQUES

PAPER – III

Time: 3 Hours] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. Write Short notes on the following

a) In-depth Interview

b) Rapid Rural Appraisal

c) Social Map

d) People's Participation in Research

e) Research Plan

SECTION – B (5 X 12 = 60 Marks)
Answer ALL questions

2 A) How is Qualitative Research different from Quantitative Research? Explain

OR

B) Explain any two methods of qualitative Research in detail.

3 A) Explain the advantages and obstacles for peoples participation in Social Science Research.

OR

B) Explain the origin and sources of Participatory Techniques.

4 A) Explain any two methods of Participatory Learning and Action.

OR

B) Explain the Principles of Participatory Learning and Action.

5 A) What kind of attitude and behavior a researcher should possess for successful completion of Research? Discuss

OR

B) Highlight the coping mechanisms of NGOs in conducting PLA.

6 A) Write a note on developing Research Plan and Presentation of Report.

OR

B) Write a note on Data Processing and Data Analysis.

★★★★★

310/AUG23/II-D(A)(O)

FACULTY OF SOCIAL SCIENCES
MSW II SEMESTER (CBCS OLD) EXAMINATIONS AUG/SEPT 2023
DYNAMICS OF HUMAN BEHAVIOUR
PAPER – III

Time: 3 Hours] **[Max. Marks: 80**

SECTION – A (4 X 5 = 20 Marks)

1. Write short notes on the following:

a. Early childhood

b. Extrinsic and Intrinsic motivation

c. Repression

d. Emotional Intelligence test

SECTION – B (4X 15 = 60 Marks)

Answer ALL questions

2. a) Discuss about the principles of human growth.

OR

b) Examine the influence of environmental factors on human development.

3. a) Illustrate about various learning styles.

OR

b) Discuss about Herzberg's two factor theory of motivation .

4. a) Illustrate about various defense mechanisms.

OR

b) Explain the factors which affect perception.

5. a) Illustrate different types of projective tests.

OR

b) Discuss about Freud's psycho analytictheory.

★★★★★

FACULTY OF SOCIAL SCIENCES
MSW II SEMESTER (CBCS NEW) EXAMINATIONS AUG/SEPT 2023
DYNAMICS OF HUMAN BEHAVIOUR
PAPER – III

Time: 3 Hours] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. Write short notes on the following:

a. Early childhood

b. Extrinsic and Intrinsic motivation

c. Repression

d. Emotional Intelligence test

e. Personality

SECTION – B (5 X 12 = 60 Marks)
Answer ALL questions

2. a) Discuss about the principles of human growth.

OR

b) Examine the influence of environmental factors on human development.

3. a) Illustrate about various learning styles.

OR

b) Discuss about Herzberg's two factor theory of motivation .

4. a) Illustrate about various defense mechanisms.

OR

b) Explain the factors which affect perception.

5. a) Illustrate different types of projective tests.

OR

b) Discuss about Freud's psycho analytictheory.

6. a) Explain the types and traits of personality

OR

b) Explain the forms and nature of Social Prejudices

★★★★★

FACULTY OF COMMERCE
M.COM (GEN) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
HUMAN RESOURCE MANAGEMENT
PAPER - IV

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 X 4 = 20 Marks)

1 **Answer ALL Questions**

A Career planning

B Panel interview

C Talent management

D Off the job training

E Objectives of recruitment

SECTION – B (5 X 12 = 60 Marks)
Answer ALL Questions

2 A What do you mean by human resource management? Explain its nature and scope.

OR

B Explain the role of a HR manager in an organization.

3 A What are the various sources of recruitment? Explain the process of recruitment.

OR

B Discuss the importance of human resource planning in an organisation.

4 A Explain the various kinds of test used in selection process.

OR

B Discuss the factors affecting the selection process in organisation.

5 A Define training. What are the factors influencing training and development.

OR

B Discuss various methods of evaluating the effectiveness of training and development.

6 A Describe in detail the process of Performance Appraisal.

OR

B Discuss various career development methods.

★★★★★

410/AUG23/II-D

FACULTY OF COMMERCE
M.COM (CA) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
ADVANCED PROGRAMMING WITH C
PAPER -IV

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 X 4 = 20 Marks)

1 **Answer ALL Questions**

A Define Algorithm. How to write an algorithm?

B How to Compile an Execute a C Program?

C What is Bottom to Top Approach of Programming?

D What are Pointers? How to declare them?

E Differentiate between Secondary Storage and Primary Storage of Data.

SECTION – B (5 X 12 = 60 Marks)
Answer ALL Questions

2 A Write the History of C Language. Describe the Structure of C program.

OR

B Describe the Data types used in C.

3 A Describe the Conditional Statements used in C.

OR

B What is Sorting? Write a C Program for Bubble Sort.

4 A Define Recursion. Write a C Program to find the factorial of a number using Recursion.

OR

B Explain the concept of Call by Reference using an example program.

5 A Define Strings. Describe some String Functions and their output using an example C program.

OR

B What are Structures? Write the Syntax of Structure. How to pass Structures to Functions.

6 A What are Files? How to Create and Process a Random File? Explain with Example.

OR

B Write a C Program to read and copy the content of one file into another file.

★★★★★

425/AUG23/II-D

FACULTY OF COMMERCE
M.COM (FA) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
ACCOUNTING STANDARDS AND FINANCIAL REPORTING
PAPER - IV

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 X 4 = 20 Marks)

1 **Answer ALL Questions**

A What do you understand by Financial Accounting Standards?

B Discuss the need of Indian Accounting Standards.

C What are the International Accounting Standards?

D What is the meaning Financial Reporting?

E What are the objectives of Corporate Reporting?

SECTION – B (5 X 12 = 60 Marks)
Answer ALL Questions

2 A Explain in detail the Financial Accounting Standards setting bodies in different countries.

OR

B Describe benefits and limitations Accounting Standards.

3 A Explain the need and developments in Accounting Standards in India.

OR

B Describe the Functions and objectives ASB

4 A Explain in detail about Standards settings organizations in US and UK.

OR

B Describe the meaning, objectives, uses and importance of IFRS.

5 A What are objectives of Financial Reporting? Explain the challenges in financial reporting under present situations.

OR

B Explain the different types of reports.

6 A Describe the need, significance and latest trends in corporate reporting.

OR

B Discuss the limitations in corporate reporting systems in India.

★★★★★

FACULTY OF SCIENCE
M Sc (BOTANY) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
ECOLOGY AND PHYTOGEOGRAPHY
PAPER - IV

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Biotic and abiotic interactions

b Natality and Mortality

c Polyclimax theory

d Biogeographical zones in India

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Discuss on allopatric and sympatric character displacement

OR

B Explain carbon and nitrogen cycles

3 A Discuss on the positive interactions of species

OR

B Write a detailed account on the r and K selection of strategies

4 A Describe the major hot spots in India

OR

B Explain any four different characteristics of a community

5 A Write about the salient features of vegetation aspects of Telangana

OR

B Explain the Koppens and Thronthwaites classification of climate

★★★★★

504/AUG23/II-D

FACULTY OF SCIENCE

M Sc (COMPUTER SCI.) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023

COMPUTER NETWORKS

PAPER - IV

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Write a short note on Modems.

b Explain briefly about Single-bit Error.

c Write a brief note on Future of ISDN.

d Discuss about End-to-End Delivery.

SECTION - B (4 X 15 = 60 Marks)

Answer ALL questions

2 A Explain in detail different Layers in OSI Model with a neat diagram.

OR

B a) Discuss in detail about TDM.
b) Write a short note on DSL.

3 A Write a detailed note on Data Link Control Mechanism.

OR

B a) Explain about FDDI.
b) Compare Circuit-Switched Connection versus Virtual Circuit Connection.

4 A Write a detailed note on ISDN Layers.

OR

B Explain in detail various Routing Algorithms.

5 A a) Explain in detail about Message Handling System.
b) Discuss about CMIP.

OR

B Explain in detail different Transport Layer Protocols.

★★★★★

612/AUG23/II-D

FACULTY OF SCIENCE

M Sc (FOOD SCI & TECH) II SEM (CBCS R-19) EXAMINATIONS AUG/SEPT 2023

TECHNOLOGY OF MEAT FISH POULTRY AND THEIR PRODUCTS

PAPER – IV

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Write about grading of meat.

b Explain curing of meat.

c Write the composition and nutritive value of egg.

d Explain the post mortem changes in fish.

SECTION - B (4 X 15 = 60 Marks)

Answer ALL questions

2 A Describe the effect of feed, breed and management on meat product and quality.

OR

B Give a brief account on (i) stunning types (ii) lair age (iii) medical examination of animals

3 A Discuss the factors affecting post mortem changes of meat and meat quality.

OR

B Describe the meat plant sanitation and safety.

4 A Describe the different methods forpreservation of eggs.

OR

B Give a brief account on (i) factors affecting egg quality (ii) packaging of eggs.

5 A Describe the processing and preservation of by-products of poultry.

OR

B Describe the processing and preservation of shrimps.

★★★★★

526/AUG23/II-D

FACULTY OF SCIENCE

M Sc (ZOOLOGY) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023

ZOOLOGY

BIOSTATISTICS AND COMPUTER APPLICATIONS

PAPER - IV

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Explain briefly about the positional averages.

b Write about the important input devices of computer.

c Explain briefly about internet and its applications in biological studies.

d Write a short note on various DNA databases.

SECTION – B (4 X 15 = 60 Marks)

Answer ALL questions

2 A Explain in detail about the Student's t-Test and its application.

OR

B Explain about Analysis of Variance and its applications.

3 A Write an essay on tools in MS Excel used for graphicalrepresentation of data.

OR

B Write an essay on MS Power Point and its applications.

4 A Explain in detail about world wide web and its importance. Add a note on how it is different from internet.

OR

B Write an essay on online safety with emphasis on spywares and viruses.

5 A Write an essay on scope and application of bioinformatics.

OR

B Define computational biology. Explain in detail about the phylogenetic alignment.

★★★★★

FACULTY OF SCIENCE
M Sc. (MICROBIOLOGY) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
PHARMACEUTICAL MICROBIOLOGY
PAPER – IV

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Antimicrobial agents as preservatives

b Cosmetics microbiology

c Cell wall inhibitors

d Drug resistance

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Write an essay on the Microbiological spoilage & Prevention of Pharmaceutical products.

OR

B Explain the Good manufacturing practices in Pharmaceutical industry.

3 A Write an essay on history of Chemotherapy, development of Synthetic drugs.

OR

B Write brief account on Antimicrobial preservation efficacy and microbial content testing.

4 A Write detailed notes on (i) Clinical and lab diagnosis & (ii) Combined/ mixed drug therapy.

OR

B Explain the mode of action of Macromolecular synthetic inhibitors (Streptomycin) & Antifungal antibiotics (Nystatin).

5 A What is Drug resistance? Explain this phenomenon from clinical basis to genetic basis.

OR

B Give an account on Pharmacokinetics & Pharmagcogenomics.

★★★★★

FACULTY OF SCIENCE
M.Sc. (CHEMISTRY) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
ANALYTICAL TECHNIQUES & SPECTROSCOPY - II
PAPER - IV

Time: 3hours] **[Max. Marks: 80**

SECTION – A (4 X 5 = 20 Marks)

1. Write short notes on the following.

a) Quin hydrone electrode

b) γ-Gauche effect

c) Isotopic peaks

d) Zero field splitting

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2. a) How do you determine the stability constants of complexes? Explain.

b) What are the different types of amperometric titrations? Give its applications.

(OR)

c) Explain the principle involved in Cyclic Voltammetry. Write a note on reversible and irreversible cyclic voltammograms.

d) Describe (i) Square-Wave polarography (ii) Pulse polarography.

3. a) Discuss the various types of ^{13}C NMR spectra.

b) Explain the principle involved in DEPT Spectra. Give its applications.

(OR)

c) Describe the ^{19}F NMR of SF_4 and PF_5 molecules.

d) Illustrate the applications of ^{31}P NMR Spectra.

4. a) What is Mc. Lafferty rearrangement? Explain with examples.

b) Explain the principle involved in Gas Chromatography and its applications.

(OR)

c) Describe the salient features of retro Diels-Alder fragmentation and Ortho effect.

d) Discuss the fragmentation pattern of the aldehydes and ketones.

5. a) Give the principle involved in ESR spectroscopy. Write a note on Hyperfine and Super Hyperfine coupling.

b) Explain the ESR spectra of 1,4-benzosemiquinone molecule.

(OR)

c) What is 'g' value? What are the factors which affect the g value.

d) Explain the ESR spectra of d^3 and d^8 Transition metal complexes with examples.

★★★★★

775/AUG23/II-D

FACULTY OF SCIENCE
M. Sc (ENGG. PHY AND INSTR. & PHYSICS) II SEM (CBCS) EXAMINATIONS AUG/SEPT 2023
DIGITAL PRINCIPLES AND INTEGRATED CIRCUITS
PAPER – IV

Time: 3 Hrs] **[Max. Marks: 80**

SECTION –A (4 X 5 = 20 Marks)

1. **Answer the following questions**
   (a) What is Encoder? Explain.
   (b) Write a short note on voltage follower.
   (c) What are the differences between Inverting and Non-inverting Amplifiers?
   (d) Write a note on Frequency components in AM Signal.

SECTION - B (4 X 15 = 60 Marks)

Answer ALL the questions

2. (a) Discuss the Logic simplification using Boolean algebra and Karnaughmap methods.

OR

(b) Explain in detail about Asynchronous Ring Counter with neat circuit diagram.

3. (a) Draw the circuit diagrams of Differentiator and Integrator. Obtain an expression for the output.

OR

(b) Draw the circuit diagram of sine wave and Square wave generators. Describe necessary theory.

4. (a) Discuss the first order and second order low pass and high pass filters. Compare the results.

OR

(b) Explain about IC-555 with neat circuit diagram .Describe How the IC-555 using for Astable Operations.

5. (a) Describe the Envelope and Square law detector for AM detection.

OR

(b) Describe the construction and working FM Discriminator.

★★★★★

506/AUG23/II-D

FACULTY OF SCIENCE
M. Sc. (STATISTICS) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
MULTIVARIATE ANALYSIS
PAPER - IV

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 =20 Marks)

1 **Answer ALL the questions**

a State the physical conditions for the occurrence of Multinomial distributions.

b Show that the Wishart distribution satisfies the additive property.

c Establish the relationship between Mahalanobis D^2 statistic and Discriminant function.

d Describe the orthogonal factor model.

SECTION - B (4 X 15 = 60 Marks)

Answer ALL questions

2 A Derive the Characteristic function of p-variate Normal distribution.

OR

B Show that the sample mean and sample variance are independent.

3 A Derive the null distribution of sample Regression coefficient. Write its applications.

OR

B Derive the null distribution of sample partial & multiple correlation coefficient.

4 A Derive the null distribution of Hotelling T^2 - statistic.

OR

B Obtain the linear discriminant function using maximum likelihood

5 A Derive the Principal components. Write the properties of Principal components.

OR

B Explain the metric and non-metric Multi-dimensional scaling methods.

★★★★★

FACULTY OF SCIENCE
M Sc (NUTRITION & DIETETICS) II SEM (CBCS R-19) EXAMS AUG/SEPT 2023
DIET AND DISEASE
PAPER – IV

-

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION-A (4 X 5 =20 Marks)

1 **Answer ALL the questions**

a Give a brief account on alcoholic liver.

b Give a brief account on types of dialysis.

c Write about food exchange list.

d Explain the metabolic changes occurring in AIDS patients.

SECTION-B(4 X 15 =60 Marks)
Answer ALL questions

2 A Discuss the diagnosis and dietary management ofcholecystitis and cholelithiasis.

OR

B Describe the dietary management of patients suffering from cirrhosis of liver and liver transplant.

3 A Describe the diagnosis and dietary management for acute and chronic renal failure.

OR

B Briefly explain the different types of urinary calculi along with tips for dietary management.

4 A Discuss the treatment and dietary management of patients suffering from Chronic pancreatitis.

OR

B Discuss the treatment and dietary management of patients suffering with Cushing's syndrome..

5 A Explain symptoms and dietary management for suffering from osteoarthritis.

OR

B Explain symptoms and dietary management for gout.

★★★★★

FACULTY OF SCIENCE

M.Sc. (MATHEMATICS) II SEM (CBCS R-22NEW) EXAMINATIONS AUG/SEP 2023

INTEGRAL EQUATIONS

PAPER – IV

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION-A (4 X 5 =20 Marks)

1 **Answer ALL the questions.**

a Prove or disprove that the function $\phi(x) = x e^x$ is a solution of the Volterra integral equation $\phi(x) = e^x \sin x + 2\int_0^x \cos(x-t)\,\phi(t)\,dt$.

b Discuss Volterra integral equation of the first kind.

c State the fundamentals of Fredholm equations of the second kind.

d Define Green's function.Also, special cases of Green'sfunction if exists.

SECTION-B (4 X 15 = 60 Marks)

Answer ALL the questions.

2 A (i) Form the integral equation corresponding to the differential equation $y'' + y = \cos x$ subject to $y(0) = 0,\ y'(0) = 0$.

(ii)Determine the resolvent kernel of the integral equation

$$\phi(x) = f(x) + \int_0^x (2 - x + t)\,\phi(t)\,dt.$$ [6+9=15 Marks]

OR

B (i) Explain the method of successive approximations.

(ii) Using the method of successive approximations, solve the integral equation

$$\phi(x) = 2x^2 + 2 - \int_0^x x\,\phi(t)\,dt,\ \phi_0(x) = 2x$$ [5+10=15 Marks]

3 A (i) What is convolution-type equation? Define it.

(ii) Solve the system of integral equation

$$\phi_1(x) = \sin x + \int_0^x \phi_2(t)\,dt,$$

$$\phi_2(x) = 1 - \cos x - \int_0^x \phi_1(t)\,dt$$ [5+10=15 Marks]

OR

B (i) State systematic procedure of solving integro-differential equation with the aid of the Laplace transformation.

(ii) Solve the system of integral equation

$$\phi''(x) + \int_0^x e^{2(x-t)}\,\phi'(t)\,dt = e^{2x},\ \ \phi(0) = \phi'(0) = 0$$ [7+8=15 Marks]

(Contd.....)

4 A (i) Verify whether the function $\phi(x) = \sin\left(\frac{\pi x}{2}\right)$ is a solution of the Fredholm-type integral equation $\phi(x) - \frac{\pi^2}{2}\int_0^1 K(x, t)\,\phi(t)\,dt = \frac{x}{2}$,

where $K(x, t) = \begin{cases} x(2-t)/2, & 0 \le x \le t \\ t(2-x)/2 & t \le x \le 1 \end{cases}$.

(ii) Show that $\phi(x) - \lambda\int_0^1 (3x-2)\,t\,\phi(t)\,dt = 0$ has no characteristic numbers and eigen functions. [7+8=15 Marks]

OR

B (i) Using Fredholm determinants, evaluate the resolvent kernel of the kernel $K(x, t) = x e^t;\ a = 0,\ b = 1$.

(ii)Find the iterated kernels for the kernel $K(x, t) = x - t;\ a = 0,\ b = 1$.[7+8=15 Marks]

5 A Construct Green's function for the homogenous boundary-value problem

$y^{IV}(x) = 0$

subject to

$y(0) = 0,\ y'(0) = 0,\ y(1) = 0,\ y'(1) = 0.$ [15 Marks]

OR

B Using Green's function, solve the boundary-value problem

$y''(x) - y(x) = x$

subject to

$y(0) = 0,\ y(1) = 0.$ [15 Marks]

★★★★★

FACULTY OF ARTS
M.A. (ENGLISH) II SEMESTER (CBCS) EXAMINATIONS AUG / SEPT 2023
WOMEN'S WRITING
PAPER – IV (A)

Time: 3 Hours] **[Max. Marks: 80**

SECTION-A (4 X 5 = 20 Marks)

1. Answer ALL the following questions

A. Gynocriticism

B. Ameilia Lanyer's portrayal of church in Eve's Apology

C. Significance of *Americanah.*

D. Argument of oppression in Adrienne Rich's essay "When We Dead Awaken: Writing as Re-Vision"

E. Sketch the character of Kofi Ako

SECTION - B (5 X 15 = 60 Marks)
Answer ALL the following questions

2. (A) Write about Women's Liberation Movement with detailed explanation

(OR)

(B) Discuss the representation of women in the canonical literature.

3. (A) Comment on the confessional elements in "Lady Lazarus" and "Daddy"

(OR)

(B) Discuss the important elements in Grace Nichols's poems?

4. (A) Compare and contrast the characters of Antionetter and Richard Mason in *Wide Sargasso Sea*.

(OR)

(B) Describe the major themes in *The Bluest Eye*.

5. (A) How does Mary Wollstonecraft emphasize on virtue over reason and knowledge?

(OR)

(B) Examine the issue of patriarchy in *Feminist Fables*.

6. (A) Write the episode of Ian and Cate from Sarah Kane's *Blasted*.

(OR)

(B) Discuss housing discrimination, racism, and assimilation from Lorraine Hansberry's *A Raisin in the Sun*.

★★★★★

FACULTY OF ARTS
M. A (TELUGU) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
సంస్కృతం - II
PAPER - IV

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 X 4 = 20 మార్కులు)

1 **అన్ని ప్రశ్నలకు జవాబులు వ్రాయండి**

a నాందీ, ప్రస్తావనలు

b పతంజలి

c భర్తృహరి

d మాఘుడు

e యణాదేశ సంధి

SECTION – B (5 X 12 = 60 మార్కులు)

అన్ని ప్రశ్నలకు జవాబులు వ్రాయండి

2 A సంస్కృత నాటక సాహిత్య వికాస రీతిని, కొందరు నాటకకర్తల ఆధారంగా వివరించండి

లేదా

B నాటక లక్షణాలలో పంచ సంధులు, అర్థోపక్షేపకాల పాత్రను చర్చించండి

3 A యాస్కుని నిరుక్తంను పరిచయం చేయండి

లేదా

B సంస్కృత సాహిత్యంలోని శాస్త్ర గ్రంథాలను నాలుగిటిని పరిచయం చేయండి

4 A సంస్కృత సాహిత్యంలోని శతకాలను నాలుగిటిని పరిచయం చేయండి

లేదా

B ఆనంద వర్ధనుని ధ్వన్యాలోక గ్రంథాన్ని పరిచయం చేయండి

5 A సంస్కృత పంచ కావ్యాల విశిష్టతను వివరించండి

లేదా

B సందేశ కావ్యాలలో మేఘ సందేశం కావ్య విశిష్టతను వివరించండి

6 A స్వర సంధులను ససూత్రంగా, సోదాహరణంగా వివరించండి

లేదా

B తత్పురుష, నఞ్ తత్పురుష , కర్మధారయ సమాసాలను నిర్వచించి సోదాహరణంగా వివరించండి

★★★★★

FACULTY OF ARTS

M.A (Urdu) II Semester Examination (CBCS) AUG/SEPT 2023

Paper - IV چوتھا پرچہ

(Lisaniyaat) لسانیات

[Time : 3 Hours] **Answer ALL the question** **Max Marks : 80**

Section - A

نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے چار نشانات ہیں۔ ہر جواب پندرہ سطروں میں تحریر کیا جائے۔ **(5 x 4 = 20)**

1. علم لسانیات کی تعریف کیجیے اور اس کے سروکار پر روشنی ڈالیے۔
2. زبان کے تفاعل کی وضاحت کیجیے۔
3. ویدک اور کلاسیکی سنسکرت سے کیا مراد ہے؟
4. جدید ہند آریائی زبانوں سے کیا مراد ہے؟
5. اردو زبان کی ابتدا کے بارے میں نصیر الدین ہاشمی کا کیا نظریہ تھا؟ واضح کیجیے۔

Section - B

نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے بارہ نشانات مختص ہیں۔ ہر سوال کا جواب چار صفحات سے زیادہ نہ ہو **(5 x 12 = 60)**

6. (A) لسانیت کی اہمیت اور اس کی اقسام پر روشنی ڈالیے۔ یا
   (B) لسانیت سے مختلف علوم کے رشتے پر اظہار خیال کیجیے۔
7. (A) صوتیات، فونیمیات اور معنیات میں کن امور سے بحث کی جاتی ہے؟ واضح کیجیے۔ یا
   (B) زبان کی ابتدا کے بارے میں مختلف ماہرین کی آراء پیش کیجیے۔
8. (A) پراکرتوں اور اپ بھرنشوں کے ارتقا پر نوٹ لکھیے۔ یا
   (B) ہند آریائی کے عہد جدید کی سیاسی و تہذیبی صورت حال کی وضاحت کیجیے۔
9. (A) کھڑی بولی کے ارتقا اس کی لسانی خصوصیات اور جغرافیائی حدود پر روشنی ڈالیے۔ یا
   (B) برج بھاشا پر جامع نوٹ تحریر کیجیے۔
10. (A) اردو اور ہندی کے لسانی رشتوں پر اظہار خیال کیجیے۔ یا
    (B) اردو زبان کے آغازی نظریات کا احاطہ کیجیے۔

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FACULTY OF SOCIAL SCIENCES
M A (ECONOMICS) II SEMESTER (CBCS R-22) EXAMINATIONS AUG/SEPT 2023
COMPUTER APPLCATIONS
PAPER - III

Time: 3 Hrs] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. **Answer all the questions**
   a. What are the Input and Output devices?
   b. Write a short note on Word pad and Note Pad.
   c. How to prepare the tables and graphs in MS-EXCEL?
   d. What are the steps to create a query?
   e. Define the Correlation Model.

SECTION – A (5 X 12 = 60 Marks)
Answer ALL the Questions

2. A) Define Computer. Explain the History of Computers.

OR

B) Discuss structure and uses of Computer.

3. A) What are the functions of Windows operating system?-Explain.

OR

B) Discuss the Creating, Saving and Opening a Word Document.

4. A) How to calculate the growth rates in MS-Excel?-Explain

OR

B) Analyze the Leontiff Input-Output Model.

5 A) How do you Create and work with tables, forms and reports in MS Access?-Illustrate.

OR

B) Explain the creating, opening and saving the slide shows in MS-Power Point.

6. A) How do you describe descriptive statistics in SPSS?-Explain

OR

B) Explain the Distribution Functions and Density Functions in SPSS?

★★★★★

317/AUG23/II-D(N)

FACULTY OF SOCIAL SCIENCES
M A (SOCIOLOGY) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
SOCIOLOGY - IV
SOCIAL DEMOGRAPHY

Time: 3 Hours] **[Max Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. Answer ALL the questions

a) Social Demography

b) Religious composition

c) Infant Mortality

d) Family planning

e) Population Explosion

SECTION – B (5 X 12 = 60 Marks)
Answer ALL the questions

2. a) Describe the demography and population studies

OR

b) Examine the sample survey and population registers.

3. a) Describe the demographic transition theory in detail.

OR

b) Write about the optimum population theory.

4. a) Examine about age and sex ratio and marital composition in India.

OR

b) Discuss about the different trends in population growth in India.

5. a) Explain the concept of mortality and its significance, focussing on mother and child mortality rates in India?.

OR

b) Analyse the role of population education in India.

6. a) What is Population Policy ? Explain its problems in implementing it.

OR

b) Write an essay on Family planning in India with historical background.

★★★★★

310/AUG23/II-E(A)(O)

FACULTY OF SOCIAL SCIENCES
MSW II SEMESTER (CBCS OLD) EXAMINATIONS AUGUST/SEPT 2023
COUNSELLING THEORY & PRACTICE
PAPER – V (A)

Time: 3 hours] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. **Answer the following questions:**
   a) What is counselling
   b) Gestalt therapy
   c) Behavior modification
   d) Marital counselling
   e) Counselling in CGC

SECTION – B (5 X 12 = 60 Marks)

Answer ALL Questions

2. a) Explain the principles of counselling

(OR)

b) Explain the nature and scope of counselling

3. a) Describe the Micro skill model of counselling

(OR)

b) Explain the various phases in models of counselling

4. a) Explain about behavior modification techniques

(OR)

b) Discuss the importance of transactional analysis.

5. a)Write an essay on Bereavement counselling

(OR)

b) Why do HIV/AIDS patients need counselling

6. a) Explain the role of counsellor in Family counselling Centre

(OR)

b) Discuss the skills and techniques needed for effective counselling

★★★★★

310/AUG23/II-E(N)

FACULTY OF SOCIAL SCIENCES
MSW II SEMESTER (CBCS OLD) EXAMINATIONS AUGUST/SEPT 2023
HUMAN RESOURSE MANAGEMENT
PAPER – V

Time: 3 hours] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. **Answer the following questions:**
   a) Explain the trends in HRD
   b) Define the term action research
   c) What do you understand by communication network
   d) Explain the term hardware
   e) e)Effective Leadership

SECTION – B (5 X 12 = 60 Marks)

Answer ALL Questions

2. a) Define the terms human resource Management and HRD and Explain the objectives and principles in HRD

OR

b) Discuss the functions and process of HRD for worker

3. a) What do you mean by organisational development ? Examine various modes of OD

OR

b) Discuss the various steps and types of OD interventions

4. a) Define the term leadership? Discuss the various theories of leadership in HRM

OR

b) Define communication? Discuss the various features and types of effective communication systems

5. a) Write an essay on any two theories of leadership.

OR

b) Elaborate the interpersonal group process .

6. a) Discuss the need and issues involved in MIS

OR

b) Write a detailed note on modern software packages

★★★★★

FACULTY OF COMMERCE
M.COM. II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
COMPUTER APPLICATIONS IN ACCOUNTING
PAPER - V

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 X 4 = 20 Marks)

1 **Answer ALL Questions**

A What is the Need for Computerized Accounting?

B How to create Ledgers with Inventory?

C How to Define Payroll Reports?

D What is Day Book?

E What is Tally Vault?

SECTION – B (5 X 12 = 60 Marks)
Answer ALL Questions

2 A Differentiate between Manual and Computerized Accounting. Specify some Accounting Packages.

OR

B Describe the Features and Gateway of Tally.

3 A Describe Various Voucher Types.

OR

B Describe the Purchase and Sales Order Processing in Tally.

4 A Explore working with Payroll Vouchers.

OR

B How to create a Tax Ledger in Tally.ERP9?

5 A How to Generate Statement of Accounts? Explain.

OR

B What is Balance Sheet? How to Create a Balance Sheet using Tally?

6 A Describe Financial Audit in Tally.

OR

B How to Overcome Security Issues in Tally? Explain.

★★★★★

009/AUG23/II-E(A)(N)

FACULTY OF ARTS

M.A. (ENGLISH) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023

TWENTIETH CENTURY LITERARY CRITICISM AND THEORY

PAPER - V

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 X 4 = 20 Marks)

1 **Answer ALL the following questions**

A New Historicism

B Reader Response Theories

C What does "The Language of Paradox" speak about?

D "The birth of the reader must be at the cost of the death of the author". Explain

E What is the idea of Said's "Orientalism"?

SECTION – B (5 X 12 = 60 Marks)

Answer ALL the following questions

2 A Write a detail note on Aristotle's "Poetics".

OR

B Define Criticism and explain kinds of Criticism.

3 A Archetypal Literary Criticism interprets a text by focusing on recurring *myths* and *archetypes*. It peaked in 1940 and 50s largely due to the work of Northrop's work. Discuss

OR

B What are the dramatic unities that Johnson addresses in "Preface to Shakespeare"?

4 A Brooks in his "The Language of Paradox" establishes the crucial role of paradox by demonstrating that paradox is "the language appropriate and inevitable to poetry". Elaborate

OR

B Bakhtin, in his *Discourse in the Novel*, provides a model for a history of discourse and introduces the concept of heteroglossia. Discuss

5 A For Foucault, a discourse is "an institutionalized way of speaking or writing about reality that defines what can be intelligibly thought and said about…." Explain

OR

B The author is a "scripter" who simply collects pre-existing quotations. He is not able to create or decide the meaning of his work. The task of meaning falls in destination. Explain it with reference to the text by Barthes prescribed for your study.

6 A Said's "Orientalism" is a critical concept that describes The West's commonly contemptuous depiction and portrayal of The East (Orient). Comment

OR

B Showalter tries to study the various aspects of feminist criticism and point out the problems it faces and the reasons for the problems. Discuss

★★★★★

FACULTY OF ARTS

M. A (TELUGU) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023

తెలుగు వారి చరిత్ర సంస్కృతి – II

PAPER - V

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 x 4 = 20 మార్కులు)

అన్ని ప్రశ్నలకు జవాబులు వ్రాయండి

1 A రాజరాజ నరేంద్రుడు

B కృష్ణదేవరాయలు

C ఇబ్రహీం కుతుబ్షా

D ఆర్యసమాజం

E బసవేశ్వరుడు

SECTION - B (5 X 12 = 60 మార్కులు)

అన్ని ప్రశ్నలకు జవాబులు వ్రాయండి

2 A ముదిగొండ చాళుక్యుల పరిపాలనా విశేషాలను రాయండి.

లేదా

B కాకతీయుల కాలం నాటి సాహిత్య కృషిని తెల్పండి.

3 A విజయనగర రాజుల సాహిత్య సేవను వివరించండి.

లేదా

B ఆంధ్ర నాయక రాజుల పరిపాలనా విశేషాలను విశ్లేషించండి.

4 A రామదాసు రచనల ఫలితాంశాలను రాయండి.

లేదా

B సాలార్జంగ్ సంస్కరణలను వివరించండి.

5 A పోలీసు చర్య ద్వారా జరిగిన పరిణామాలు ఏమిటి?

లేదా

B తెలంగాణ విమోచనలో భాగస్వాములైన వారి గాథలు తెల్పండి.

6. A సంస్కృతి అనగానేమి? తెలుగు సంస్కృతిపై పాశ్చాత్య నాగరికతా ప్రభావాన్ని విశ్లేషించండి.

లేదా

B శైవ మత సంస్కరణోద్యమం వల్ల సమాజానికి కలిగిన లాభాలేమిటి?

★★★★★

016/AUG23/II-E

FACULTY OF ARTS

M.A (Urdu) II Semester Examination (CBCS) AUG/SEPT 2023

Paper - V پانچواں پرچہ

(Novel) ناول

[Time : 3 Hours] **Answer ALL the question** **Max Marks : 80**

Section - A

نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے چار نشانات ہیں۔ ہر جواب پندرہ سطروں میں تحریر کیا جائے۔ **(5 x 4 = 20)**

1. ناول کی تعریف کیجیے اور اس کی مختلف قسموں کے نام بتائیے۔
2. عبدالحلیم شرر کی تاریخی ناول نگاری پر مختصر نوٹ تحریر کیجیے۔
3. عصمت چغتائی کی ناول نگاری کی امتیازی خصوصیات بیان کیجیے۔
4. قاضی عبدالستار کے ناولوں کے موضوعات پر روشنی ڈالیے۔
5. بیدی کے ناول ایک چادر میلی سی کی سماجی اور ثقافتی جہتوں کا جائزہ لیجیے۔

Section - B

نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے بارہ نشانات مختص ہیں۔ ہر سوال کا جواب چار صفحات سے زیادہ نہ ہو **(5 x 12 = 60)**

6. (A) ناول کے اجزائے ترکیبی کی وضاحت کیجیے۔ یا
   (B) ناول کی صنفی خصوصیات اور اس کی تکنیک پر اظہار خیال کیجیے۔
7. (A) اردو میں ناول نگاری کے آغاز میں کارفرما مختلف عوامل کا جائزہ لیجیے۔ یا
   (B) بہ حیثیت ناول نگار نذیر احمد کے مقام کا تعین کیجیے۔
8. (A) اردو ناول کی تاریخ میں حقیقت پسندی کے رجحان پر روشنی ڈالیے۔ یا
   (B) ''تقسیم ہند اور اردو ناول'' کے موضوع پر جامع نوٹ لکھیے۔
9. (A) 'پیغام آفاقی' کے ناولوں کی سماجی معنویت واضح کیجیے۔ یا
   (B) مشرف عالم ذوقی کی ناول نگاری پر تبصرہ کیجیے۔
10. (A) ناول امراؤ جان ادا کے فنی اور ادبی محاسن کا تجزیہ کیجیے۔ یا
    (B) ناول ''آگ کا دریا'' کی عظمت کے اسباب اجاگر کیجیے۔

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FACULTY OF SOCIAL SCIENCES
M A (ECONOMICS) II SEMESTER (CBCS R-22) EXAMINATIONS AUG/SEPT 2023
FINANCIAL ECONOMICS
PAPER - V

Time: 3 Hrs] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. **Answer all the questions**
   a. What are the Investment Institutions?
   b. Write a short note on Commercial Paper market.
   c. What is Guilt Edged Securities?
   d. Define Primary Market.
   e. What are the types of Schemes in Mutual Funds?

SECTION – B (5 X 12 = 60 Marks)

Answer ALL the Questions

2. A) Examine the Structure and functions of the Financial System in India.

OR

B) Illustrate the Financial Sector Reforms with reference to Stock Markets.

3. A) Explain the Organized sector of the Money Market and their sub-markets

OR

B) Discuss the Money market mutual funds and their instruments.

4. A) Explain the Structure of Capital market.

OR

B) Analyze the Pre and Post Reform Capital Market in India

5 A) Illustrate National Stock Exchange of India.

OR

B) Explain the Role of Private Insurance in India.

.

6. A) Describe the Growth, Structure and size of Mutual Funds in India.

OR

B) Explain the Challenges for future of financial structure development in India.

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FACULTY OF SOCIAL SCIENCES
M A (SOCIOLOGY) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
SOCIAL ISSUES, POLICIES AND DEVELOPMENT
PAPER - V

Time: 3 Hours] **[Max Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. Answer ALL the questions

a) Untouchability.

b) Discuss the national policies for Aged.

c) Elaborate the Feminism perspective.

d) Explain the concept of Human development.

e) Illiteracy in India

f) Problems of aged.

SECTION – B (5 X 12 = 60 Marks)
Answer ALL the questions

2. a) Define Regionalism and explain the Regional imbalances.

OR

b) Explain in detail the National policies for Other Backward Classes.

3. a) Examine the Approaches and Strategies for Social Development.

OR

b) Elaborate on the welfare schemes of Minorities in India.

4. a) Discuss the National level welfare schemes for Scheduled Tribes.

OR

b) Describe the State level welfare schemes for the Women and Children.

5. a) Explain the concept and measurement of Human Development.

OR

b) Discuss the indicators/components of Sustainable Development?

6. a) What is Population Policy? Examine problems in implementing it?

OR

b) Write an essay on family planning methods in India?

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FACULTY OF SCIENCE
M.Sc. (MATHEMATICS) II SEM (CBCS R-16 OLD) EXAMINATIONS SEPT 2023
OPERATIONS RESEARCH
PAPER – I

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION-A (4 X 5 =20 Marks)

1 **Answer ALL the questions.**

a Find the maximum value of $z = 4x + 6y$ subject to the following constraints.

$$-x + y \leq 11, x + y \leq 27, 2x + 5y \leq 90, x \geq 0, y \geq 0$$

b Minimize $z = 4x + 6y$ subject to $-2x + 3y = 3$, $4x + 5y \geq 10, 4x + 8y \geq 5$ and $x \geq 0, y \geq 0$.

c Write the dual to the following LP problem: Minimize $Z = 3x_1 - 2x_2 + 4x_3$ subject to the constraints $3x_1 + 5x_2 + 4x_3 \geq 7, 6x_1 + x_2 + 3x_3 \geq 4$, $7x_1 - 2x_2 - x_3 \leq 10$, $x_1 - 2x_2 + 5x_3 \geq 3$, $4x_1 + 7x_2 - 2x_3 \geq 2$ and $x_1, x_2, x_3 \geq 0$.

d A company has three production facilities S_1, S_2 and S_3 with production capacity of 7,9 and 18 units (in 100s) per week of a product, respectively. These units are to be shipped to fourwarehouses D_1, D_2, D_3 and D_4 with requirement of 5, 6, 7 and 14 units (in 100s) per week, respectively.The transportation costs (in rupees) per unit between factories to warehouses are given in the table below:

	D_1	D_2	D_3	D_4	*Supply (Availability)*
S_1	19	30	50	10	7
S_2	70	30	40	60	9
S_3	40	8	70	20	18
Demand (Requirement)	*5*	8	7	14	34

Formulate this transportation problem as an LP model to minimize the total transportation cost.

SECTION-B (4 X 15 = 60 Marks)
Answer ALL the questions.

2 A Use the graphical method to solve the following LP problem.
Maximize Z = 2x + ySubject to the constraints $x + 2y \leq 10, x + y \leq 6, x - y \leq 2$, $x - 2y \leq 1$ and $x, y \geq 0$.

OR

B G.J. Breweries Ltd have two bottling plants, one located at 'G' and the other at 'J'. Each plantproduces three drinks, whisky, beer and brandy named A, B and C respectively. The number of the bottlesproduced per day are shown in the table.

Drink	Plant at	
	G	J
Whisky	1,500	**1,500**
Beer	3,000	1,000
Brandy	2,000	5,000

A market survey indicates that during the month of July, there will be a demand of 20,000 bottles of whisky,40,000 bottles of beer and 44,000 bottles of brandy. The operating cost per day for plants at G and J are 600 and400 monetary units. For how many days each plant be run in July so as to minimize the production cost, whilestill meeting the market demand? Formulate this problem as an LP problem and solve that using graphicalmethod.

(Contd.....)

3 A A company makes two kinds of leather belts, belt A and belt B. Belt A is a high quality belt and belt B is of lower quality. The respective profits are Rs 4 and Rs 3 per belt. The production ofeach of type A requires twice as much time as a belt of type B, and if all belts were of type B, the companycould make 1,000 belts per day. The supply of leather is sufficient for only 800 belts per day (both A andB combined). Belt A requires a fancy buckle and only 400 of these are available per day. There are only700 buckles a day available for belt B.

What should be the daily production of each type of belt? Formulate this problem as an LP model andsolve it using the simplex method.

OR

B Maximize $Z = 3x_1 + 9x_2$ subject to $x_1 + 4x_2 \leq 8, x_1 + 2x_2 \leq 4, x_1, x_2 \geq 0.$

4 A Use dual simplex method to solve the following LP problem:
Minimize $Z = x_1 + 2x_2 + 3x_3$ subject to the constraints $x_1 - x_2 + x_3 \geq 4,\ x_1 + x_2 + 2x_3 \leq 8,\ x_2 - x_3 \geq 2$ and $x_1, x_2, x_3 \geq 0$

OR

B Solve the dual of the following problem, and then find its optimal solution from thesolution of the dual. Does the solution of the dual offer computational advantages oversolving the primal directly?
Minimize $Z = 5x_1 + 6x_2 + 3x_3$ subject to $5x_1 + 5x_2 + 3x_3 \geq 50, x_1 + x_2 - x_3 \geq 20, 7x_1 + 6x_2 - 9x_3 \geq 30,\ 5x_1 + 5x_2 + 5x_3 \geq 35,\ 2x_1 + 4x_2 - 15x_3 \geq 10,\ 12x_1 + 10x_2 \geq 90,\ x_2 - 10x_3 \geq 20$ and $x_1, x_2, x_3 \geq 0.$

5 A Determine an initial basic feasible solution to the followingtransportation problem by using VAM.

		Destination				
		D_1	D_2	D_3	D_4	*Supply*
Source	S_1	1	2	1	4	30
	S_2	3	3	2	1	30
	S_3	4	2	5	9	40
	Demand	20	40	30	10	

OR

B A national truck rental service has a surplus of one truck in eachof the cities, 1, 2, 3, 4, 5 and 6; and a deficit of one truck ineach of the cities 7, 8, 9, 10, 11 and 12. The distances (in km)between the cities with a surplus and cities with deficit aredisplayed in the table below:

		To					
		7	8	9	10	11	12
From	1	31	62	29	42	15	41
	2	12	19	39	55	71	40
	3	17	29	50	41	22	22
	4	35	40	38	42	27	33
	5	19	30	29	16	20	23
	6	72	30	30	50	41	20

How should the trucks be displayed so as to minimize the totaldistance travelled?

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FACULTY OF SCIENCE

M.Sc. (MATHEMATICS) II SEM (CBCS R-19 OLD) EXAMINATIONS SEPT 2023

MS2CP1: GALOIS THEORY

PAPER – I

TIME: 3 HRS] **[MAX. MARKS: 100**

SECTION - A (4 X 5 =20 Marks)

1 **Answer ALL the questions.**

a Let $f(x) = a_0 + a_1x + \cdots + a_{n-1}x^{n-1} + x^n \in Z[x]$be a monic polynomial. Iff(x) has a root $a \in Q$, then show that $a \in Z$ and $a|a_0$.

b Construct a splitting field over Q for the polynomial $x^4 + 1$.

c Let F be field of characteristic ≠ 2. Let $x^2 - a \in F[x]$ be an irreducible polynomial over F. Then show that its Galois group is of order 2.

d Show that the polynomial $x^5 - 8x + 6$ is not solvable by radicals over Q.

SECTION - B (4 X 20 = 80 Marks)

Answer any ALL the questions

2 **Answer any TWO of the following**

A Let E be an extension ofF, and let $a, b \in$ E be algebraic over F. Suppose that the extensions F(a) and F(b) ofF are of degrees m and n, respectively, where (m,n) = 1. Show that [F(a,b):F] =mn.

B Let E be an algebraic extension of a field F. and let σ: F → L be an embedding of F into an algebraically closed field L. Then prove that σ can be extended to an embedding η: E → L.

C Find the smallest extension of Q having a root of$x^4 - 2 \in Q[x]$.

D Let K and K' be algebraic closures of a field F. Then prove that K ≃K' under an isomorphism that is an identity on F.

3 **Answer any TWO of the following**

A (a) Let E be a finite extension ofF. Then prove that Eisa normal extension ofF if and only if E is a splitting field of a polynomialf(x) ∈ F[x].
(b) Is R$(\sqrt{-5})$normal over R?

B If f(x) $\in F[x]$ is irreducible over F, then prove that all roots of f(x) have the same multiplicity.

C If the multiplicative group F* of nonzero elements of a field F is cyclic, then show that F is finite.

D Let F ⊂ E ⊂ K be three fields such that E is a finite separable extension ofF, and K is a finite separable extension ofE. Then prove that K isa finite separable extension of F.

4 **Answer any TWO of the following**

A Let F and E be fields, and let $\sigma_1, \sigma_2, \ldots \sigma_n$be distinct embeddings of F into E. Suppose that, for $a_1, a_2, \ldots a_n \in$E, $\sum_{i=1}^{n} a_i\sigma_i(a) = 0$, for all a∈F. Then prove that $a_i = 0$ for all$i = 1, 2, \ldots, n$. (This is alsoexpressed by saying that distinct embeddings of F into E are linearly independent over E.)

B Let E be a finite separable extension of a field F. Then prove that the following are equivalent:
(i)E is a nornal extension of F.
(ii) F is the fixed field of G(E/F).

(Contd.....)

C Show that the Galois group of $x^4 + 1 \in Q[x]$ is the Klein four-group.

D State and prove fundamental theorem of algebra.

5 **Answer any TWO of the following**

A If ω is primitive *n*th root in C, then prove that $\Phi_n(x) = \prod_\omega (x - \omega)$ is an irreducible polynomial of degree $\phi(n)$ in $Z\ [x]$.

B Letf(x) be a polynomial over afield F with no multiple roots. Then prove that f(x) is irreducible over F if and only if the Galois group G of f(x) is isomorphic to a transitive permutation group.

C Express the symmetric polynomial $(x_1 + x_2)^3(x_2 + x_3)^3(x_3 + x_1)^3$

as rational functions of the elementary symmetric functions.

D Show that it is impossible to construct a cube with a volume equal to twice the volume of a given cube by using ruler and compass only.

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505/AUG23/II-A(R20)

FACULTY OF SCIENCE

M.Sc. (MATHEMATICS) II SEM (CBCS R-20 NEW) EXAMINATIONS, SEPT 2023

GALOIS THEORY

PAPER – I

TIME: 3 HRS] **[MAX. MARKS: 100**

SECTION-A (8 X 5 =40 Marks)

1 **Answer ALL the questions.**

a Show that $1 + x + \cdots + x^{p-1}$ is irreducible over Q, where p is prime.

b Find the minimal polynomial of $3\sqrt{2} + 5$ over Q.

c Find the splitting field of $x^3 + x^2 + 1 \in F[x]$, where $F = Z/(2)$.

d Show that the field generated by a root of $x^3 - x - 1$ over Q is not normal over Q.

e Let F be field of characteristic $\neq 2$. Let $x^2 - a \in F[x]$ be an irreducible polynomial over F. Then show that its Galois group is of order 2.

f Find the Galois group of $x^4 + 1 \in Q[x]$.

g Express the symmetric polynomial $(x_1 - x_2)^2(x_2 - x_3)^2(x_3 - x_1)^2$ as rational functions of the elementary symmetric functions.

h Show that it is impossible to construct a square equal in area to the area of a circle of radius 1.

SECTION-B (4 X 15 = 60 Marks) Answer ALL the questions.

2 A Let $F \subseteq E \subseteq K$ be fields. If $[K:E] < \infty$ and $[E:F] < \infty$, then prove that (i) $[K:F] < \infty$ and (ii) $[K:F] = [K:E][E:F]$.

OR

B (a)Let E be an algebraic extension of a field F. and let σ: F → L be an embedding of F into an algebraically closed field L. Then prove that σ can be extended to an embedding η: E → L.
(b) Let K and K' be algebraic closures of a field F. Then prove that K ≃K' under an isomorphism that is an identity on F.

3 A (a) Show that the multiplicative group of nonzero elements of a finite field is cyclic.
(b) If the multiplicative group F* of nonzero elements of a field F is cyclic, then show that F is finite.

OR

B Let E be a finite extension of a field F. Then show that the following are equivalent.
(i)E =F(a) for some $a \in$ E.
(ii) There are only a finite number of intermediate fields between F and E.

4 A Let H be a finite subgroup of the group of automorphisms of a field E. Then prove that $[E:E_H] = |H|$.

OR

B State and prove fundamental theorem of algebra.

5 A If ω is primitive nth root in C, then prove that $\Phi_n(x) = \prod_\omega (x - \omega)$ is an irreducible polynomial of degree $\phi(n)$ in $Z[x]$.

OR

B Prove only if part of the following theorem.
$f(x) \in$ F[x]is solvable by radicals over F if and only its splitting field E over F has solvable Galois group G(E/F).

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FACULTY OF COMMERCE
M.COM. II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
ORGANISATION THEORY AND BEHAVIOUR
PAPER - I

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 X 4 = 20 Marks)

1 **Answer ALL Questions**

A Team development

B Learning process

C Managerial grid

D Authority and power

E Decentralisation

SECTION - B (5 X 12 = 60 Marks)
Answer ALL Questions

2 A Narrate the contributing disciplines to the organisational behaviour.

OR

B Discuss the factors influencing organisational behaviour.

3 A Define perception. Explain the factors influencing perception.

OR

B Explain various personality attributes which influences organisational behaviour,

4 A Discuss group formation and different types of groups.

OR

B What is conflict? Explain types of conflicts in an organisation.

5 A Discuss the resistance to change and suggest strategies for overcoming resistance to change.

OR

B Define Span of management. What are the factors determining span of management.

6 A Describe the significance and process of communication.

OR

B Discuss the significance and styles of leadership.

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FACULTY OF SCIENCE
M Sc (BOTANY) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
GYMNOSPERMS AND EMBROYOLOGY
PAPER - I

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Wood anatomy of *Conifers*

b *Taxus*

c Mature embryo sac

d Endosperm

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Write a detailed account on the important features of gymnosperms present in the past era

OR

B Write a detailed account on the economic importance of gymnosperms

3 A Explain the main features of male and female cones of *Conifers*

OR

B Describe the vegetative morphology and anatomy of *Gnetales*

4 A Write a detailed account on the different types of Ovules

OR

B Discuss on microsporogenesis in detail

5 A Discuss on the role of embryology in relation to taxonomy

OR

B Discuss on self-incompatibility and barriers of fertilization

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FACULTY OF SCIENCE
M Sc (COMPUTER SCI.) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
COMPUTER ORGANIZATION
PAPER - I

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Briefly explain about Programmable Logic Devices.

b Explain about Performance Considerations in Processing Unit.

c List out Standard I/O Interfaces.

d Write a short note on Online Storage.

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A a) Explain the synthesis of Logic Functions using AND, OR and NOT Gates.
b) Explain about Field-Programmable Gate Arrays.

OR

B c) Explain about Distributed Computing.
d) Discuss in detail about Subroutines.

3 A a) Explain about Micro Programmed Control.
b) Implement Signed Addition and Subtraction with an example.

OR

B c) Implement Fast Multiplication, Integer Division with examples.
d) Discuss in detail about Floating Point Numbers and Operations.

4 A Write a detailed note on the Intel 80X86 Family.

OR

B Explain in detail about the Alpha AXP Family.

5 A Write a detailed note on Read-Only Memories and Cache Memories.

OR

B a) Discuss about Memory Management Requirements.
b) Explain about Virtual Memory.

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FACULTY OF SCIENCE
M Sc (FOOD SCI & TECH) II SEM (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
PRINCIPLES OF FOOD ENGINEERING
PAPER - I

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Explain the law of conservation of energy.

b Differentiating single effect and multiple effect of evaporates.

c Write the formula for rate of filtration at constant pressure filtration

d Write the principle behind the size reduction

SECTION – B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Orange juice concentrate is made by concentrating single-strength juice to 65% solids followed by dilution of the concentrate to 45% solids using single-strength juice. Draw a diagram for the system and set up mass balances for the whole system and for as many subsystems as possible.

OR

B Derive the equation of rate of heat transfer by conduction through multiple layer of pipe.

3 A Explain in detail about equipment's used for crystallization process.

OR

B Write essay on pasteurization, sterilization, and distillation.

4 A Describe the mechanical separation process in detail.

OR

B Write essay on Ultra filtration and Reverse Osmosis

5 A Discuss the equipment's used for mixing of liquids and solids.

OR

B Explain in detail about types of stress applied in size reduction

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526/AUG23/II-A

FACULTY OF SCIENCE
M SC (ZOOLOGY) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
STRUCTURE AND FUNCTIONS OF VERTEBRATES
PAPER - I

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Characters of Protochordates

b Types of Jaw suspension

c Air sacs in birds

d Receptors of vertebrates.

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Explain about the Origin and Classification of Chordates.

OR

B Describe the integument structure and derivatives of vertebrates

3 A Write the comparative account of girdles and limbs in fishes and amphibian.

OR

B Explain in detail on herbivores, carnivores and omnivores animals feeding habits.

4 A Explain the evolution of aortic and portal system in detail.

OR

B Describe the respiratory organs in fishes and amphibians with illustrations.

5 A Explain about the comparative anatomy of brain in birds and mammals.

OR

B Write the differences of cranial and peripheral nervous system in vertebrates.

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FACULTY OF SCIENCE
M Sc (MICROBIOLOGY) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
MOLECULAR BIOLOGY & MICROBIAL GENETICS
PAPER - I

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Enzymes in DNA replication

b mRNA processing

c Replica plating

d Competency and resistance

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Describe the detail account on mechanism of DNA replication and prove semi-conservative mode with experimental proof.

OR

B What are plasmids? Give details on classification, properties and plasmid replication.

3 A Describe the process of translation in eukaryotes and compare with prokaryotes.

OR

B Explain the Jacob-Monod's model of gene regulation in prokaryotes and add a note on feedback inhibition.

4 A Define mutation? Give the detailed account on different physical mutagens and detection methods of mutation analysis.

OR

B Explain the DNA damage and repair mechanisms.

5 A Explain the bacterial conjugation and add a note on its experimental proof.

OR

B Describe the different forms of bacterial transduction. Write the experiment that prove the transduction.

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FACULTY OF SCIENCE
M.Sc. (CHEMISTRY) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
INORGANIC CHEMISTRY
PAPER - I

Time: Hours] **[Max. Marks: 80**

SECTION - A (4 X 5 = 20 Marks)

1. Answer ALL Questions

a) Describe ligand substitution reactions without breaking metal ligand bond.

b) Write about Racah parameters.

c) Explain Hofffman's isolobal analogy

d) Describe any two basic principles in the biological selection of elements

SECTION – B (4 X 15 = 60 Marks)
Answer ALL Questions

2. a) Define trans effect and explain the theories of trans effect.

b) Explain the factors effecting acid hydrolysis reactions

(OR)

c) Explain one electron transfer by Inner sphere mechanism

d) What are base hydrolysis reactions? Explain SN^1 CB mechanism.

3. a) What is the effect of weak crystal fields on S,P,D and F terms for tetrahedral complexes

b) Explain microstates and calculate the number of microstates for d^2,d^4 and p^3 configuration

(OR)

c) What are orgel diagrams? Draw the orgel diagram of d^3 and d^8 octahedral and tetrahedral complexes

d) What is Hole formalism? Discuss the Hund's rules for energy ordering of terms with suitable example

4. a) Explain about the total electron count with any two examples and explain capping rule with a suitable example

b) Describe the structural features of M_3 and M_4 clusters where (M=CoRh,Ir)

(OR)

c) What are wade's rules? Discuss the structures of $[Rh_6(CO)_{16}$ and $[Rh_7(CO)_{16}]$

d) Write about metal halide clusters with suitable examples

5. a) Write a detailed note on photosystem –I and photosystem-II

b) Explain the structure of Oxy Hemocyanin with geometric and magnetic aspects

(OR)

c) Explain the geometric,electronic and magnetic aspects of oxyhemoglobin and deoxyhemoglobin

d) Describethe forms of vitamin B_6 with structures and the transamination reaction with suitable mechanism.

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FACULTY OF SCIENCE
M. Sc. (PHYSICS/ENGG.PHYSICS) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
STATISTICAL MECHANICS
PAPER - I

Time: 3 Hours] **[Max. Marks: 80**

SECTION – A (4 X 5 = 20 Marks)

1 **Answer the following**

a) Define phase space, μ –space, Γ-space and ensemble.

b) Write down partion functions for i) micro canonical ii) Canonical and iii) grand canonical ensemble?

c) Write a short note on superfluidity

d) Write a short note on Ising model

SECTION – A (4 X 15 = 60 Marks)
Answer ALL Questions

2. a) What is phase space density of distribution?
b) State and Prove Lioville's theorem of phase space?

OR

c) Write down the total number of distributions of the N particles in the system among the k possible groups of Eigen states in a) Maxwell Boltzmann b) Bose-Einstein and in c) Fermi-Dirac statistics and then derive respective distributions.

3. a) Entropy of an ideal Boltzmann gas in micro canonical ensemble.
b) What is Gibbs paradox and how it can be resolved?

OR

c) Derive Fermi-Dirac and Bose-Einstein distribution functions from grand canonical ensemble.

4. a) Apply Bose-Einstein statistics to photon gas and hence derive Plank's law for spectral distribution of energy in black body radiation.

OR

b) Discuss Einstein's model of specific heat of solids for high and low temperatures

5. a) Derive expressions for total number of particles and energy of an ideal Fermi Dirac gas

OR

b) Discuss in detail about electrical and thermal conductivities of an electron gas and derive Wiedmann - Franz law

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FACULTY OF SCIENCE
M. Sc. (STATISTICS) II SEMESTER (CBCS R-19) EXAMINATIONS AUG/SEPT 2023
SAMPLING THEORY AND SURVEYS
PAPER - I

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 =20 Marks)

1 **Answer ALL the questions**

a Write the Yates and Grundy estimator for population mean and their variances.

b Define the regression estimation in SRS with pre – assigned value of regression coefficient

c Explain the intra-cluster correlation.

d Write the Warner's model.

SECTION - B (4 X 15 = 60 Marks)
Answer ALL questions

2 A Write Lahiri's method for selecting PPS sample. Obtain its related estimators of a finite population mean.

OR

B Describe cumulative total method for drawing PPS sampling under without replacement.

3 A Describe separate and combined regression estimators and compare them.

OR

B Derive the bias and variance of the ratio estimator of population mean.

4 A In two-stage sampling with equal first stage units, find the mean and variance of the estimator of the population mean.

OR

B Derive the optimum sizes of second stage units and first stage units in two-stage sampling.

5 A Write in detail on sampling and non-sampling errors and its sources.

OR

B Explain the treatments of non-sampling bias.

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FACULTY OF SCIENCE

M Sc (NUTRITION & DIETETICS) II SEM (CBCS R-19) EXAMS AUG/SEPT 2023

PRINCIPLES OF FOOD

PAPER – I

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION-A (4 X 5 =20 Marks)

1 **Answer ALL the questions**

a Explain the process of gelatinization.

b What are the advantages of white meat.

c Explain the physical properties of fats and oils.

d Lists the steps involved in enzymic browning reactions with structures along with methods of prevention

SECTION-B(4 X 15 =60 Marks)

Answer ALL questions

2 A Discuss the nutrient changes during different treatments for cereal grains.

OR

B Give a brief account on roasting and puffing of legumes.

3 A Describe the post-mortem changes occurring in meat along with changes during cooking of meat.

OR

B Describe the different types of milk along with quality and grading of eggs.

4 A What are fat replacers explain in detail the different types along with their applications.

OR

B Describe the stages of sugar cookery and steps involved in preparation of crystalline and non – crystalline candies.

5 A Discussion detail rating tests.

OR

B Describe the textural changes occurring in fruits and vegetables.

★★★★★

CBCS R-22NEW **505/AUG23/II-A(R22)**

FACULTY OF SCIENCE

M.Sc. (MATHEMATICS) II SEM (CBCS R-22 NEW) EXAMINATIONS AUG/SEP 2023

ABSTRACT ALGEBRA - II

PAPER – I

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions.**

a Prove that a polynomial ring $\mathbb{Q}[X]$ is not a Principal Ideal Domain.

b For any prime p, show that the polynomial $f(x) = x^{p-1} + x^{p-2} + \ldots\ldots + x^2 + x + 1$ is irreducible over $\mathbb{Q}$.

c Find the minimal polynomial of $\sqrt{2} + \sqrt{3}$ over $\mathbb{Q}$.

d Is $\mathbb{Q}(\sqrt{-5})$ normal extension over $\mathbb{Q}$?

SECTION-B (4 X 15 = 60 Marks)

Answer ALL the questions.

2 A Let R be a Unique Factorization Domain. Show that an element in R is Prime element iff it is irreducible element.

OR

B (i) Show that every Euclidean Domain is a UFD.
(ii) Show that $\mathbb{Q}[\sqrt{-6}]$ is not a Euclidean Domain.

3 A Let R be a Unique Factorization Domain. Show that the polynomial ring $R[X]$ over R is also a Unique Factorization Domain.

OR

B State and Prove Gauss Lemma.

4 A Let $F \subseteq E \subseteq K$ be fields such that $[K:E] < \infty$ and $[E:F] < \infty$. Show that (i) $[K:F] < \infty$, and (ii) $[K:F] = [K:E][E:F]$.

OR

B (i) Let E is an extension of F and $u \in E$ is algebraic over F. Show that $F(u)$ is an algebraic extension of F.
(ii) Show that every finite extension is an algebraic extension.

5 A (i) Show that there exists a splitting field for any non-constant polynomial over any field.
(ii) Prove that the polynomial $f(x) = X^p - 1 \in \mathbb{Q}[X]$ has splitting field $\mathbb{Q}(\alpha)$, where $\alpha \neq 1$ and $\alpha^p = 1$ for any prime p. Also, show that $[\mathbb{Q}(\alpha):\mathbb{Q}] = p - 1$.

OR

B Let $F \subseteq E \subseteq K$ be a tower of fields. Show that
(i) If $K|F$ is normal, then $K|E$ is also normal.
(ii) If $K|F$ is normal, Is $E|F$ necessarily normal?
(iii) If $K|E$ and $E|F$ are both normal, then $K|F$ need not be normal.

★★★★★

009/AUG23/II-A(N)

FACULTY OF ARTS
M.A. (ENGLISH) II SEM (CBCS) EXAMINATIONS AUG/SEPT 2023
ENGLISH LANGUAGE TEACHING: HISTORY, APPROACHES AND METHODS
PAPER - I

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (5 X 4 = 20 Marks)

1 **Answer ALL the following questions**

A Indian Universities Commission (1902)

B Role of English in India

C Audio-lingual method

D Goals and Objectives of Curriculum

E What are the types of Language Testing

SECTION – B (5 X 12 =60 Marks)
Answer ALL the following questions

2 A Write a critical note on English Language Teaching in India.

OR

B What are the objectives of teaching English as a second Language in India? Explain

3 A Discuss the implications of Behaviourism for English Language Teaching.

OR

B What is Cognitivism? What are its implications for ELT?

4 A Task-based Learning and Teaching focuses on the use of authentic language to complete meaningful tasks in the target language. Discuss

OR

B What is humanistic approach? What is Community Language learning? Explain

5 A Why is LSRW considered the foundation of writing skills and the importance of their sub-skills?

OR

B What are the advantages and disadvantages of different types of syllabi?

6 A What is Language Testing? What are the forms of Language Testing?

OR

B What are the characteristic features of an effective test? How to make sure your test is reliable, valid and feasible?

★★★★★

FACULTY OF ARTS
M. A (TELUGU) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
ప్రాచీన తెలుగు సాహిత్యచరిత్ర అధ్యయనం - II

PAPER - I

TIME: 3 HRS] **[MAX.MARKS: 80**

SECTION - A (5 X 4 = 20 మార్కులు)

1 **అన్ని ప్రశ్నలకు జవాబులు వ్రాయండి**

a ప్రబంధ పరమేశ్వరుడు

b గోన బుద్ధారెడ్డి

c అనంతామాత్యుడు

d కంకంటి పాపరాజు

e రంగాజమ్మ

SECTION - B (5 X 12 = 60 మార్కులు)

అన్ని ప్రశ్నలకు జవాబులు వ్రాయండి

2 A నన్నయ కవితా రీతిని సోదాహరణంగా వివరించండి

లేదా

B దేశి కవితా లక్షణాలను పాల్కురికి రచనల ద్వారా వివరించండి

3 A కథాకావ్యాలలో జక్కన విక్రమార్క చరిత ప్రత్యేకతను వివరించండి

లేదా

B నాచనసోమనాథుడి కవితా లక్షణాలను చర్చించండి

4 A ధూర్జటి మాధురీ మహిమను ఆయన రచనల ఆధారంగా వివరించండి

లేదా

B రామరాజభూషణుని రచనలను పరిచయం చేయండి

5 A పొన్నగంటి తెలగన యయాతిచరిత్ర ను పరిచయం చేయండి

లేదా

B తరిగొండ వెంగమాంబ కృతులను పరిచయం చేయండి

6 A అన్నమయ్య సంకీర్తనలను ప్రత్యేకతను వివరించండి

లేదా

B ముద్దుపళని రాధికాసాంత్వనం ప్రత్యేకతలను వివరించండి

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FACULTY OF ARTS

M.A (Urdu) II Semester Examination (CBCS) AUG/SEPT 2023

Paper - I پہلا پرچہ

(Tareekh-E-Adab Urdu) تاریخ ادب اردو (1857ء تا حال)

[Time : 3 Hours] **Answer ALL the question** **Max Marks : 80**

Section - A

نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے چار نشانات ہیں۔ ہر جواب پندرہ سطروں میں تحریر کیا جائے۔ **(5 x 4 = 20)**

1. محمد حسین آزاد کی ادبی خدمات پر مختصر نوٹ لکھیے۔
2. منٹو کی افسانہ نگاری پر اظہار خیال کیجیے۔
3. مولوی عبدالحق کی خاکہ نگاری پر تبصرہ کیجیے۔
4. محمود شیرانی کی تحقیقی خدمات کا تعارف کرائیے۔
5. کلاسیکی غزل کی روایت کو آگے بڑھانے میں داغؔ کے کردار کا جائزہ لیجیے۔

Section - B

نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے بارہ نشانات مختص ہیں۔ ہر سوال کا جواب چار صفحات سے زیادہ نہ ہو **(5 x 12 = 60)**

6. (A) اردو میں نظم نگاری کے ارتقا پر جامع نوٹ تحریر کیجیے۔ یا
   (B) اردو میں جدید تر غزل کے آغاز و ارتقا پر روشنی ڈالیے۔
7. (A) اردو نثر کے فروغ میں شبلی کی خدمات واضح کیجیے۔ یا
   (B) اردو نثر کا زریں دور سے کیا مراد ہے؟ اس دور کے اہم نثر نگاروں کا تعارف کرائیے۔
8. (A) اردو ناول کے فروغ میں پریم چند کی خدمات کا احاطہ کیجیے۔ یا
   (B) ترقی پسند افسانے کے موضوعات اور فکری و فنی جہتوں پر اظہار خیال کیجیے۔
9. (A) اردو میں صنف انشائیہ کے آغاز و ارتقا پر روشنی ڈالیے۔ یا
   (B) مشتاق احمد یوسفی کی انشائیہ نگاری کا تنقیدی محاکمہ کیجیے۔
10. (A) حالی اور شبلی کے بعد اردو میں تنقید کے سفر کا جائزہ لیجیے۔ یا
    (B) اردو کے اہم محققین اور ان کی خدمات پر روشنی ڈالیے۔

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FACULTY OF SOCIAL SCIENCES
M A (ECONOMICS) II SEMESTER (CBCSR-22) EXAMINATIONS AUG/SEPT 2023
MICRO ECONOMICS – II
PAPER - I

Time: 3 Hrs] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. Answer ALL the questions

a) Profit Maximization

b) Scarcity Rent

c) Price Discrimination

d) Social welfare function

e) Consumer choice under uncertainty

SECTION - B (5 X 12 = 60 Marks)
Answer ALL Questions

2. a. Explain the assumption and importance of marries growth model.

OR

b. Analyze the Modigliani model of firm in competitive market.

3. a. Examine the modern theory of rent and its limitations.

OR

b. Discuss the neo-classical model of rent. How it was superior than classical theory.

4. a. Analyze the uniqueness of walras general equilibrium.

OR

b. Explain the features of market equilibrium.

5. a. Describe the characteristics of pigovian welfare economics.

OR

b. Examine the arrow's impossibility theorem.

6. a. Explain the role of expectations in economic theory.

OR

b. Distinguish between gambling and insurance.

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FACULTY OF SOCIAL SCIENCES
M A (SOCIOLOGY) II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
MODERN SOCIOLOGICAL THEORY
PAPER – I

Time: 3 Hours] **[Max. Marks: 80**

SECTION – A (5 X 4 = 20 Marks)

1. Answer ALL the Questions

a) Define social system.

b) What is social Geometry?

c) What is Materialism?

d) What is Looking Glass Self theory?

e) Explain Phenomenological methods.

SECTION – B (5 X 12 = 60 Marks)
Answer ALL Questions

2. (A) What are the postulates of Functionalism as delineated by RK Merton?

OR

(B) Write about the Theory of Cultural Anomie and Deviance.

3. (A) Explain the contribution of Lewis Coser to the Conflict theory.

OR

(B) Discuss the Conflict theory of Karl Marx.

4. (A) What is political power? Discuss its importance in the state.

OR

(B) Explain the views of Althusser on the power of bourgeoisie.

5. (A) Describe the contribution of Cooley to the Exchange theory.

OR

(B) Discuss the views of Peter Blau on Social Exchange theory.

6. (A) Elaborate the contribution of Harold Garfinkel to Ethnomethodology.

OR

(B) Explain the meaning and features of Structuration theory.

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310/AUG23/II-A(N)(O)

FACULTY OF SOCIAL SCIENCES
MSW II SEMESTER (CBCS) EXAMINATIONS AUG/SEPT 2023
INDIVIDUAL AND SOCIETY
PAPER - I

Time: 3 Hours] **[Max. Marks: 80**

SECTION – A (5 X 4 =20 Marks)

1. **Answer the following questions:**
   a) Characteristics of Society
   b) Resocialization
   c) Role and Status
   d) Maladjustment
   e) Social Change

SECTION – B (5 X 12 = 60 Marks)

Answer ALL Questions

2. a) Explain the scope of Sociology.

(OR)

b) Discuss the components of society.

3. a) Explain the theories of Socialization

(OR)

b) Discuss the components of culture

4. a) Discuss the integrative and disintegrative social process effects on society

(OR)

b) Define social mobility and write its components

5. a) What is disorganization and explain the causes of community disorganization

(OR)

b) Define Social control and explain the agencies of social control

6. a) Write a note on social change and social development

(OR)

b) Discuss the social tensions in Indian

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CBCS R-16 OLD

505/AUG23/II-B(R16)

FACULTY OF SCIENCE

M.Sc. (MATHEMATICS) II SEM (CBCS R-16 OLD) EXAMINATIONS, AUG/SEPT 2023

TOPOLOGY

PAPER - II

TIME: 3 HRS] **[MAX. MARKS: 80**

SECTION - A (4 X 5 =20 Marks)

1 **Answer ALL the questions.**

a Define topological space, homeomorphism, second countable space, separable space and metrizable space.

b Prove that any continuous image of a compact space is compact.

c Show that the closed interval [0, 1] is compact.

d Show that the real line R is connected.

SECTION - B (4 X 15 = 60 Marks)

Answer ALL the questions.

2 A State and prove Lindelof's theorem.

OR

B Prove that every separable metric space is second countable.

3 A State and prove Tychonoff's theorem.

OR

B State and prove Ascoli's theorem.

4 A (a)Prove that the product of any non-empty class of Hausdroff spaces is a Hausdroff space.
(b)Prove that every compact Hausdroff space is a normal space.

OR

B State and prove the Urysohn Imbedding Theorem.

5 A Prove that the product of any non-empty class of connected spaces is connected.

OR

B Let X be a compact Hausdroff space. Then prove that X is totally disconnected if and only if it has an open base whose sets are also closed.

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505/AUG23/II-B(R19)

FACULTY OF SCIENCE

M.Sc. (MATHEMATICS) II SEM (CBCS R-19 OLD) EXAMINATIONS, AUG/SEPT 2023

MATHEMATICAL ANALYSIS-II

PAPER – II

TIME: 3 HRS] **[MAX. MARKS: 100**

SECTION-A (4 X 5 = 20 Marks)

1 **Answer ALL the questions.**

a If the derivative f' exists and is bounded on [a,b], then show that f is of bounded variation on [a,b].

b Define the Riemann-Stieltjes integral of f with respect to α over [a,b].

c Show that the series $\sum \frac{\sin(x^2+n^2x)}{n(n+1)}$ is uniformly convergent for all real *x*.

d Evaluate $\iint_E \sin\left(\frac{x-y}{x+y}\right) dxdy$, where E is the region bounded by the co-ordinate axes and $x + y = 1$ in the first quadrant.

SECTION-B (4 X 20 = 80 Marks)

Answer any ALL the questions

2 **Answer any TWO of the following**

A Prove that the variation function of a function f of bounded variation is continuous if and only if f is a continuous function.

B Compute the positive, negative and the total variation functions of $f(x) = 3x^2 - 2x^3$, for $-2 \leq x \leq 2$.

C Show that $\cos x$ is of bounded variation over a finite interval.

D State and prove the Cauchy-Schwarz inequality in R^n.

3 **Answer any TWO of the following**

A Prove that a function f is integrable with respect to α on [a,b] if and only if for every $\varepsilon > 0$ there exists a partition P of [a,b] such that U(P,f, α) $- L(P, f, \alpha) < \varepsilon$.

B If a function f is continuous on $[a, b]$ and α is monotonic increasing on $[a, b]$, then prove that there exists a number c in $[a, b]$ such that $\int_a^b f\, d\alpha = f(c)\{\alpha(b) - \alpha(a)\}$

C Evaluate $\int_0^3 f(x)\, d([x] + x)$, where $f(x) = \begin{cases} [x], 0 \leq x < 3/2 \\ e^x, 3/2 \leq x \leq 3 \end{cases}$

D Evaluate $\int_0^4 (x - [x])\, d(x^2)$

4 **Answer any TWO of the following**

A Show that the sequence$\{f_n\}$, where $f_n(x) = x^n$ is uniformly convergent on [0,k], k<1 and only pointwise convergent on [0,1].

B Show that the series $\sum \frac{x^{2n}}{n^2+x^{2n}}$ is uniformly convergent in $[-1,1]$.

C State and prove Dini's theorem on uniform convergence.

D State and prove the Weierstrass approximation theorem.

(Contd.....)

5 **Answer any TWO of the following**

A Evaluate $\iint_R f(x,y)dxdy$ over the rectangle $R = [0,1; 0,1]$ where

$$f(x,y) = \begin{cases} x + y, \text{if} x^2 < y < 2x^2 \\ 0, \text{elsewhere} \end{cases}$$

B Show that $\int_0^\infty e^{-x^2} dx = \frac{\sqrt{\pi}}{2}$.

C Evaluate $\iint_S x\, dS$, where S is the entire surface of the solid bounded by the cylinder $x^2 + y^2 = 1$ and the planes $z = 0, z = x + 2$.

D Compute the volume of the solid bounded by the sphere $x^2 + y^2 + z^2 = 4$ and the surface of the paraboloid$x^2 + y^2 = 3z$.

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FACULTY OF SCIENCE

M.Sc. (MATHEMATICS) II SEM (CBCS R-20 OLD) EXAMINATIONS, AUG/SEPT 2023

MATHEMATICAL ANALYSIS - II

PAPER - II

TIME:3 HRS] **[MAX.MARKS:100**

SECTION-A (8 X 5 =40 Marks)

1 **Answer ALL the questions.**

a Find the radius convergence of the power series $\sum \frac{1\cdot 2\cdot 3\cdots n}{1\cdot 3\cdot 5\cdots(2n-1)} x^{2n}$

b Find the Fourier series consisting of cosine terms only, which represents the periodic function $f(x) = x$ in $0 \le x \le \pi$.

c Using the definition of limit, show that $\lim_{(x,y)\to(1,2)} (x^2 + 2y) = 5$.

d Show that the limit exists at the origin but the repeated limits do not, for the following function

$$f(x,y) = \begin{cases} x\sin\left(\frac{1}{y}\right) + y\sin\left(\frac{1}{x}\right), if\ xy \neq 0 \\ 0, if\ xy = 0 \end{cases}$$

e If $u = f(x+at) + g(x-at)$, then show that $4\frac{\partial^2 u}{\partial x^2} = \frac{\partial^2 u}{\partial y^2}$.

f Expand $x^2y + 3y - 2$ in powers of $x-1$ and $y+2$.

g Test the convergence of $\int_0^1 \frac{1}{\sqrt{1-x^3}}\, dx$

h Test for convergence $\int_0^\infty \frac{x\tan^{-1}x}{(1+x^4)^{1/3}}\, dx$.

SECTION-B (4 X 15 = 60 Marks)

Answer ALL the questions.

2 A State and prove Abel's theorem (second form).

OR

B If a function *f* is bounded periodic with period 2π and integrable on $[-\pi, \pi]$, and piecewise monotonic on $[-\pi, \pi]$, then prove that

$$\frac{1}{2}a_0 + \sum_{n=1}^{\infty}(a_n\cos n\xi + b_n \sin n\,\xi) = \begin{cases} \frac{1}{2}\{(\xi -) + f(\xi +)\}, \text{for} -\pi < \xi < \pi \\ \frac{1}{2}\{f(\pi -) + f(-\pi +)\}, \text{for}\ \xi = \pm\pi \end{cases}$$

Where a_n and b_n are Fourier coefficients of *f*.

3 A (a)State and prove mean value theorem.
(b)Show the following function continuous at the origin.

$$f(x,y) = \begin{cases} \frac{xy}{\sqrt{x^2+y^2}}, if\ (x,y) \neq (0,0) \\ 0, if\ (x,y) = (0,0) \end{cases}$$

OR

B (a)State and prove a sufficient condition for differentiability.
(b)Show that the function $f(x,y) = \sqrt{|xy|}$ is not differentiable at the origin.

(Contd.....)

4 A State and prove the Taylor's theorem for two variables.

OR

B Show that $f(x,y,z) = (x+y+z)^3 - 3(x+y+z) - 24xyz - a^3$ has a minimum at (1,1,1) and a maximum at (-1,-1,-1).

5 A Show that $\int_0^1 x^{m-1}(1-x)^{n-1}dx$ exists if and only if m, n are both positive.

OR

B Discuss the convergence of $\int_0^1 \log\Gamma(x)dx$ and hence evaluate it.

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