FACULTY OF ARTS

M.A. (ENGLISH) IV SEMESTER (CBCS-NEW) EXAMINATIONS JULY 2024

ENGLISH LANGUAGE TEACHING: MAJOR DEVELOPMENTS IN L1 AND L2

PAPER - I

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

SECTION-A (5 X 4 = 20 Marks)

1   **Answer ALL the following questions**

A   Learner Disabilities

B   What does L2 mean?

C   Good Language Learner

D   Define Socio-linguistics?

E   Write a short note on English for Occupational Purpose (EOP)?

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

2   A   Write an essay on Language Acquisition and Learning?

OR

B   Write an essay on the stages of First Language Acquisition?

3   A   What are the major findings in L2 Research? Explain.

OR

B   Write an essay on the models of Second Language Acquisition in the linguistic process?

4   A   Define Language Learning Strategies? Write in detail on early research on LLS?

OR

B   Write an essay on Oxford's classification of Language Learning Strategies?

5   A   Write in detail on Brajkachru's model of World English?

OR

B   Discuss on the current trends in the spread of English?

6   A   Write an essay on English for Academic Purposes (EAP)?

OR

B   What are the steps involved in designing Competitive Tests at State and National Levels?

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FACULTY OF ARTS
M. A (TELUGU) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
ఆధునిక తెలుగు సాహిత్య చరిత్ర   - II

పేపర్ - I

సమయం: 3 గంటలు]   [గరిష్ట మార్కులు : 80

సెక్షన్ - ఎ (5 X 4 = 20 మార్కులు)

1   ఈ క్రింది వానిపై లఘు వ్యాఖ్య వ్రాయండి

  ఎ   పిల్లలమర్రి హనుమంతరావు

  బి   జయంతి రామయ్యపంతులు

  సి   నందూరి సుబ్బారావు

  డి   ఉన్నవ లక్ష్మీ నారాయణ

  ఇ   మైనారిటీ వాదం

సెక్షన్ – బి (5 X 12 = 60 మార్కులు)

అన్ని ప్రశ్నలకు సమాధానాలు వ్రాయండి

2   ఎ   ఆధునిక కవిత్వ చరిత్ర రచనలో కె.వి.ఆర్ నరసింహం పద్ధతిని పరిచయం చేయండి.

లేదా

  బి   కడియాల రామమోహనరాయ్ తెలుగు కవితా వికాసాన్ని విశ్లేషించండి

3   ఎ   శేషాద్రి రమణ కవుల పరిశోధనాంశాలను సోదాహరణంగా వివరించండి

లేదా

  బి   చారిత్రక పరిశోధకులుగా మల్లంపల్లి సోమశేఖర శర్మ విశిష్టతను వివరించండి

4   ఎ   భావ కవిగా నాయని సుబ్బారావు మార్గాన్ని ఉదాహరణలతో తెల్పండి

లేదా

  బి   వానమామలై వరదాచార్యుల పోతన చరిత్రము ప్రత్యేకతను వివరించండి

5   ఎ   అడవి బాపిరాజు చారిత్రక నవలలను పరిచయం చేయండి

లేదా

  బి   కథా రచయితగా బందారు అచ్చమాంబను పరిచయం చేయండి

6   ఎ   తెలుగు సాహిత్య పరిణామంలో స్త్రీవాదం ప్రత్యేకతను సోదాహరణంగా తెల్పండి

లేదా

  బి   తెలుగులో గిరిజన సాహిత్య వికాసాన్ని వివరించండి

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FACULTY OF ARTS
M.A (Urdu) IV Semester Examination (CBCS)

Core Paper - I (لازمی) پہلا پرچہ

(Ghair Afsanvi Adab) غیر افسانوی ادب

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

Section - A

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

1. مضمون اور انشائیے کا فرق واضح کیجیے۔

2. مولوی عبدالحق کی خاکہ نگاری پر مختصر نوٹ لکھیے۔

3. شبلی کی سوانح نگاری کی اہم خصوصیات بیان کیجیے۔

4. مکتوبات کی تہذیبی اور تاریخی اہمیت اجاگر کیجیے۔

5. ''دکن سانہیں ٹھارسنسار میں'' کے حوالے سے قرۃ العین حیدر کی رپورتاژ نگاری پر اظہار خیال کیجیے۔

Section - B

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

6. (A) صنف انشائیے کے فن اور تکنیک کی وضاحت کیجیے۔   یا

    (B) اردو میں انشائیے کی روایت کے آغاز اور ابتدائی انشائیہ نگاروں کی خدمات پر روشنی ڈالیے۔

7. (A) فرحت اللہ بیگ کے خاکے ''نذیر احمد کی کہانی کچھ ان کی کچھ میری زبانی'' کی ادبی خوبیوں کا جائزہ لیجیے۔   یا

    (B) فن خاکہ نگاری میں نئے ادبی رجحانات کے حامل خاکہ نگاروں کا تعارف کرائیے۔

8. (A) ''یادگار غالب'' کے حوالے سے حالی کی سوانح نگاری کا تنقیدی محاکمہ کیجیے۔   یا

    (B) اردو کے اولین سوانح نگاروں کی خدمات پر روشنی ڈالیے۔

9. (A) غالب کی مکتوب نگاری کی اہم خصوصیات واضح کیجیے۔   یا

    (B) مکتوب نگاری کے فن، تکنیک اور موضوعات کا احاطہ کیجیے۔

10. (A) اردو میں سفرنامہ نگاری کے آغاز و ارتقا کا خاکہ پیش کیجیے۔   یا

    (B) مجتبیٰ حسین کے سفرنامے ''جاپان چلو جاپان چلو'' کے ادبی محاسن پر روشنی ڈالیے۔

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FACULTY OF SOCIAL SCIENCES
M.A. (ECONOMICS) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024
INDIAN ECONOMY PAPER - I

TIME: 3 HRS] [MAX. MARKS: 80

SECTION-A (5 X 4 = 20 Marks)

1 **Answer ALL the questions**
   a Nature of workforce
   b Regulated markets
   c Exit policy
   d Statuary liquidity ratio
   e Need of foreign capital

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

2 A Explain the process of commercialization of agriculture in India.

OR

B What is meant by HDI? How it is constructed and explain its role in estimate of development - Explain

3 A What are the causes for failures of land reforms in India?-Examine.

OR

B What is regional planning? Explain its objectives and process of implementation.

4 A Explain the merits and demerits of disinvestment policy in India.

OR

B Analyze the need and importance of small scale industries in India.

5 A Critically evaluate the central and state financial relations.

OR

B How monetary policies are regulated the Indian money market? - Discuss

6 A What meant by globalization? Explain its impact on Indian economy in detail.

OR

B Explain the role of FEMA to regulating foreign exchange and its role in improving the external trade.

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FACULTY OF SOCIAL SCIENCES
M.A (SOCIOLOGY) IV SEMESTER (CBCS NEW) EXAMNATIONS JULY 2024
SOCIOLOGY OF ENVIRONMENT AND SUSTAINABLE DEVELOPMENT
PAPER - I

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

SECTION – A (5 X 4 = 20 Marks)

1. **Answer ALL Questions**
    a) Human Ecology
    b) Environmental Law
    c) Chipboard Movement
    d) Bhopal Gas Tragedy
    e) Noise pollution

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

2. A. Discuss the key theoretical approach of Riseley E. Dunlop.

    OR

    B. Explain the concept of Global Environmentalism with its main concerns

3. A. What is Environmental Policy? Explain the interface between nature and technology

    OR

    B. What is Environmental Impact Assessment? How does it contribute to Sustainable Development?

4. A. Write an essay on any one prominent Environment Movement in India.

    OR

    B. What is Eco Feminism? How will it address the gender and Environmental issues?

5. A. Define Sustainable Development from Sociological perspective and discuss how it has evolved over the years.

    OR

    B. Discuss any successful initiative led by an NGO in the Field of Sustainable Development

6. A. Explain the main goals of Sustainable Development.

    OR.

    B. Discuss the existing Environmental laws in India.

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FACULTY OF SOCIAL SCIENCES
MSW IV SEMSETER (CBCS NEW) EXAMINATIONS JULY 2024
SOCIAL WELFARE ADMINISTRATION
PAPER - I

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

SECTION - A (5 X 4 =20 Marks)

1   **Answer ALL the questions**

   a   State Social Welfare Boards

   b   Social costs and social benefits

   c   Institutional programs

   d   Innovation in social welfare organizations

   e   Supervisory roles in social welfare organizations

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

2   A   Trace out the historical development of social welfare administration in ancient India.

OR

   B   Explain the concept of social welfare services with suitable examples.

3   A   Elaborate on various methods of resource mobilization by social welfare organizations.

OR

   B   Illustrate how personal development is undertaken in social welfare organizations.

4   A   Examine the challenges in the administration of institutional programs.

OR

   B   Illustrate the administrative set up of ICDS program at State level.

5   A   Analyse the need for accountability in social welfare organizations.

OR

   B   Discuss the programs for organization development in social welfare organizations.

6   A   Discuss the merits and demerits of field counseling.

OR

   B   Explain about the principles of supervision.

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FACULTY OF SCIENCE
M. Sc (BOTANY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
BIODIVERSITY AND CONSERVATION
PAPER - I

TIME: 3 HRS]   [MAX. MARKS: 80

SECTION-A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

   a   Community diversity

   b   Proximate causes in biodiversity

   c   Species turn over in ecosystem

   d   Biodiversity and ornamentation

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

2   A   Write about the history and ranks recognized in biodiversity studies

OR

   B   Describe the magnitude and distribution of biodiversity

3   A   Write about endemism in biodiversity

OR

   B   Write about the different botanical regions found in India

4   A   How is biodiversity monitored at different biological levels

OR

   B   Describe the application of biotechnology for utilization of biodiversity

5   A   Discuss on the economic value and usage of biodiversity for timber and drugs

OR

   B   Explain the in-situ conservation of biodiversity

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FACULTY OF SCIENCE
M. Sc (COMP SCI) IV SEMESTER (CBCS R-19) EXAMINATIONS JULY 2024
AUTOMATA THEORY
PAPER - I

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

SECTION - A (4 X 5 = 20 Marks)

1   **Answer ALL the questions**

a   Write a short note on Finite State Systems.

b   What are Regular Languages?

c   Write a short note on Context Free Grammars.

d   What is a Turing Machine?

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

2   A   Discuss in detail about Deterministic Finite Automation and Nondeterministic Finite Automation.

OR

    B   Explain in detail about Moore and Meelay Machines.

3   A   Discuss in detail about Conversion of Finite Automata to Regular Expressions with an example.

OR

    B   Write a detailed note on rightmost and leftmost derivations of Strings.

4   A   Explain in detail about Pumping Lemma for context free languages and its applications.

OR

    B   Write a detailed note on Equivalence of PDA's and CFL's.

5   A   Discuss in detail about Linear Bound Automata and Context Sensitive Language.

OR

    B   Distinguish between NP Complete and NP Hard Problems.

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FACULTY OF SCIENCE
M. Sc (FOOD SCIENCE & TECH) IV SEM (CBCS R-19) EXAMS, JULY 2024
ADVANCES IN FOOD PACKAGING
PAPER - I

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

SECTION-A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

   a   Explain functions of packaging.

   b   Write the advantages of non-migratory bioactive polymers in food packaging.

   c   Explain aseptic filling of foods.

   d   Explain shrink packaging.

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

2   A   Discuss selection of packaging materials.

OR

   B   Discuss the system construction of antimicrobial food packaging.

3   A   Discuss the active and intelligent packaging techniques.

OR

   B   Describe polymers with immobilized bioactive compounds.

4   A   Discuss the labelling requirements.

OR

   B   Describe the packaging equipment for metering and filling of different foods.

5   A   Discuss the role of green plastic for food packaging.

OR

   B   Describe the role of modified atmosphere for food packaging.

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FACULTY OF SCIENCE
M. Sc (NUTRITION AND DIETETICS) IV SEM (CBCS R-19) EXAMS, JULY 2024
ADVANCED NUTRITION
PAPER - I

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

SECTION-A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

   a   List the applications of irradiated foods in armed forces.

   b   Explain NPU and biological value.

   c   Write about humoral immunity.

   d   Explain boil in bag package.

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

2   A   Discuss the role of leptin and ghrelin in food intake.

OR

   B   What are designer foods discuss in detail with examples and their applications.

3   A   Give a brief account on (i) in vitro studies (ii) Radio isotopes

OR

   B   Discuss the factors affecting the bioavailability of iron.

4   A   Discuss the role of nutrients on immune function.

OR

   B   Describe the translation mechanism and regulation.

5   A   Give a brief account on (i) plastic shrink package and glass as packaging materials (ii) military food packaging..

OR

   B   Give a brief account on (i) packaging laws SWMA (ii) ovenable paper.

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FACULTY OF SCIENCE
M. Sc. (ZOOLOGY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
CELL BIOLOGY
PAPER - I

TIME: 3 HRS   MAX. MARKS: 80

SECTION-A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

a   Fluid mosaic membrane model

b   Signal peptide hypothesis

c   Intracellular receptors

d   Apoptosis

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

2   A   Explain in detail about cell theory and evolution of Eukaryotic cell.

OR

B   Give an account on types of membrane diffusion and active transport.

3   A   Write an essay on protein synthesis on free and bound ribosomes in detail.

OR

B   Explain about Glycosylation and types of endoplasmic reticulum.

4   A   What are G-proteins? Explain in detailed about cell junctions.

OR

B   Write about micro tubules, microfilaments and their dynamics.

5   A   Explain the phases of cell cycle and their regulations in detail.

OR

B   What are the types of Cancer? Add a note on molecular basis of Cance.

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FACULTY OF SCIENCE
M. Sc (STATISTICS) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
STOCHASTIC PROCESS
PAPER – I

TIME: 3 HRS]   [MAX. MARKS: 80

SECTION-A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

   a   Define the Probability Distribution of a Stochastic Process?

   b   Define Marginal distribution of a Markov Chain?

   c   State the special cases of Birth and Death process?

   d   What is Renewal Process? Explain give two examples?

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

2   A   State and prove the first Entrance theorem and also write its importance?

OR

   B   State and prove Chapman-Kolmogorov equation?

3   A   State and prove the Ergodic theorem of a Markov chain?

OR

   B   Write the canonical form of transition matrices, in standard notations Q and R? show

that (I-Q)$^{-1}$ exists and is equal to $\sum_{r=o}^{\infty} Q^r$.

4   A   Derive Kolmogorov differential difference equations for Pure Death process?

OR

   B   State and prove the properties of a Poisson process?

5   A   Derive mean and variance of size of nthgeneration in a Branching process?

OR

   B   Derive residual life time distribution of a renewal process?

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FACULTY OF SCIENCE
M. Sc. (MATHEMATICS) IV SEM (CBCS R-22 NEW) EXAMINATIONS JULY 2024
ADVANCED COMPLEX ANALYSIS
PAPER – I

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

SECTION-A (4 X 5 =20 Marks)

1   **Answer ALL the questions.**
  a   Show that if $\sum_{n=1}^{\infty} z_n = S$, then $\sum_{n=1}^{\infty} \overline{z_n} = \bar{S}$

  b   Find the residue at $z = 0$ of the functions   (i) $\frac{1}{z+z^2}$ (ii) $z \cos\left(\frac{1}{z}\right)$

  c   Use residues to evaluate the improper integral $\int_0^{\infty} \frac{dx}{(x^2+1)^2}$.

  d   State why the transformation $w = iz$ is a rotation in the z plane through the angle $\pi/2$. Then find the image of the infinite strip $0 < x < 1$.

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

2   A   Give two Laurent series expansions in powers of z for the function $f(z) = \frac{1}{z^2(1-z)}$ and
          specify the regions in which those expansions are valid.

OR

    B   With the aid of series, show that the function f defined by means of the equations
          $f(z) = \begin{cases} \frac{\sin z}{z}, & \text{when } z \neq 0, \\ 1 & \text{when } z = 0 \end{cases}$ is entire. Use that result to establish the limit $\lim_{z \to 0} \frac{\sin z}{z} = 1$

3   A   Show that
          (i). $\text{Res}_{z=-1} \frac{z^{1/4}}{z+1} = \frac{1+i}{\sqrt{2}}$, $(|z| > 0, 0 < \arg z < 2\pi)$;
          (ii). $\text{Res}_{z=i} \frac{Log\ z}{(z^2+1)^2} = \frac{\pi+2i}{8}$
          (iii). $\text{Res}_{z=i} \frac{z^{1/2}}{(z^2+1)^2} = \frac{1-i}{8\sqrt{2}}$, $(|z| > 0, 0 < \arg z < 2\pi)$;

OR

    B   Show that
          (i). $\text{Res}_{z=\pi i} \frac{z-\sinh z}{z^2 \sinh z} = \frac{i}{\pi}$ (ii) $\text{Res}_{z=\pi i} \frac{\exp(zt)}{\sinh z} + \text{Res}_{z=-\pi i} \frac{\exp(zt)}{\sinh z} = -2\cos(\pi t)$.

4   A   Use residues to find the Cauchy principal values of the improper integral $\int_{-\infty}^{\infty} \frac{\sin x}{x^2+4x+5} dx$.

OR

    B   Use residues to evaluate the definite integrals
          (i). $\int_0^{2\pi} \frac{d\theta}{1+a \cos \theta} (-1 < a < 1)$.   (ii) $\int_{-\pi}^{\pi} \frac{d\theta}{1+\sin^2 \theta}$

5   A   (i). Describe geometrically the transformation $w = \frac{1}{z-1}$.
          (ii). Describe geometrically the transformation $w = \frac{i}{z}$. State why it transforms circles and
              lines into circles and lines.

OR

    B   (i). Find the fixed points of the transformation $w = \frac{z-1}{z+1}$

          (ii). Show that there is only one linear fractional transformation which maps three
              given distinct points z_1, z_2 and z_3 in the extended z plane onto three specified distinct
              points w_1, w_2 and w_3 in the extended w plane.

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FACULTY OF SCIENCE
M. Sc (PHYSICS & ENGG.PHYSICS AND INSTR.) IV SEM (CBCS) EXAMS JULY 2024
ELECTROMAGNETIC THEORY AND OPTICS
PAPER - I

Time: 3 Hours]   [Max. Marks: 80

SECTION – A (4 X 5 = 20 Marks)

1. **Answer ALL the following**

    a) What is expression for field within a dielectric?

    b) What is Ohms law in electrodynamics?

    c) Find the average energy, Intensity and pressure associated with $E(z,t) = E \cos(kz - \omega t)\hat{x}$

    d) What is Doppler free two photon spectroscopy?

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

2. a) Field due to dielectric medium or polarized object in terms of bound surface charge and bound volume charge densities.
    b) Write down Poisson's equation and its solutions for scalar and vector potential.
                                                    OR
    c) Show that retarded potential is the solution to inhogeneous wave equation?
    d) Write down expressions for Lienard-Wiechert potentials?

3. a) Write down Maxwell's equations?
    b) State and prove Poynting theorem?
                                                    OR
    c) Write down Maxwell's equations inside matter.
    d) Show that Newton's third law violated in electrodynamics.

4. a) Derive optics laws by considering Reflection and Transmittance of EM waves at oblique incidence and then show that T + R = 1.
                                                    OR
    b) Obtain the expression for power radiated by Electric dipole.

5. a) Discuss the phase matching by considering coupled wave equation for sum-frequency generation.
                                                    OR
    b) Show that the intensity dependent refractive index is a third order nonlinear process.
    c) Discuss briefly any two experiments in two photon processes.

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FACULTY OF SCIENCE
M. Sc. (CHEMISTRY) IV SEMESTER (CBCS) EXAMINATIONS JULY 2024
(COMMON FOR ALL SPECIALISATION)
ANALYTICAL TECHNIQUES AND GREEN CHEMISTRY
PAPER - I

Time: 3 Hrs]   [Max. Marks: 80

SECTION – A (4 X 5 = 20 Marks)

1. **Answer ALL questions**

    a) Describe basic principles and instrumentation of Differential Thermal Analysis (DTA)

    b) Describe the Principle and applications of Gel exclusion chromatography

    c) Write in detail about the Magnetic and electronic properties of nanoparticles.

    d) Discuss the basic principles of Green chemistry in detail.

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

2. a) Describe the determination of glass transition of Polymer blends.

    b) What is Thermo mechanical analysis. Write in detail about it with suitable examples?

(OR)

    c) Discuss in detail the Methodology of   i) TGA   ii) DSC

    d) Write any four applications of thermogravimetric analysis.

3. a) Discuss the principle and instrumentation of Super critical fluid chromatography.

    b) Write about Column efficiency and column performance.

(OR)

    c) Explain Van Deemter equation in detail and describe various terms involved in it.

    d) Write in detail about   i) Retention Parameters   ii) Resolution   iii) Asymmetric Factor

4. a) Describe various methods of Preparation of nanoparticles in nanotechnology.

    b) Describe the basic Principle involved in microscope and discuss it applications for analysis of nanomaterial.

(OR)

    c) Discuss in detail the principle of Operation and application of band gap measurement.

    d) Write in brief about SEM and TEM

5. a) What is an atom economy? Write a note on atom economic and atom uneconomic reactions with examples.

    b) Write a note on the reactions with Green analytical techniques.

(OR)

    c) Explain in detail about Microwave assisted reactions.

    d) Emphasize the use of Supercritical CO_2 in green chemistry

★★★★★

FACULTY OF SCIENCE
M.Sc. (CHEMISTRY) IV SEMESTER (CBCS OLD) EXAMINATIONS, JULY 2024
DRUG DESIGN AND DRUG DISCOVERY
(ORGANIC CHEMISTRY)
PAPER - I

Time: 3 Hrs]   [Max. Marks: 80

SECTION - A (4 X 5 = 20 Marks)

1. **Answer ALL Questions**
   a) Explain the principles of design of agonists with example.

   b) Write a note on chain homologation and branching.

   c) Explain about Hansch analysis

   d) Discuss the Molecular Docking approaches

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

2. a) Elaborate the methods involved in the discovery of lead
   b) Explain the principles of prodrug design
   OR
   c) Describe the drug receptor interactions in detail
   d) Write about the pharmacokinetic studies

3. a) Explain the discovery of captopril and oxaminiquine
   b) Discuss the SAR studies of benzodiazapines analogs
   OR
   c) Write a note on rigidification of lead and simplification of lead
   d) Predict the SAR studies of sulfa drug analogs.

4. a) Explain the linear & nonlinear relationship between lipophilicity constant and biological activity
   b) Describe the cluster significant analysis and Lipinski's rule of Five.
   OR
   c) Write about Electronic effects and hammett constants (σ)
   d) Explain the Craig's Plot and free Wilson approach

5. a) Write a note on Coordinate systems
   b) Predict the applications of Molecular Modeling applications
   OR
   c) What are the Modeling ligands for known and unknown receptors? Explain
   d) Outline the energy calculations in Molecular Docking studies

★★★★★

FACULTY OF COMMERCE
M. COM IV SEMESTER (CBCS NEW & OLD) EXAMINATIONS JULY 2024
STRATEGIC MANAGEMENT
(COMMON FOR ALL)
PAPER - I

TIME: 3 HRS]   [MAX. MARKS: 80

SECTION - A (5 X 4 = 20 Marks)

1   **Answer ALL Questions**

A   What is the concept of strategic management?

B   What is Environmental Scanning?

C   What is strategy formulation?

D   What is Project implementation?

E   What is Strategy evaluation?

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

2   A   What are the objectives of Strategic Management? Describe the benefits of Strategic Management.

OR

B   Explain in detail elements in strategic management process.

3   A   Explain the concept and characteristics of environment.

OR

B   Describe the methods and techniques used for organizational appraisal.

4   A   What is Corporate level strategy? Explain the Stability and Expansion Strategy

OR

B   .Describe the need of pursuing retrenchment strategy to a company. What options under retrenchment strategy are available to the company? Discuss

5   A   What do you understand by Structural Implementation? Describe the different types of Structures.

OR

B   What is Leadership implementation? Explain the role of leader at present context.

6   A   Explain in detail participants of strategic evaluation.

OR

B   Explain the evaluation techniques for Strategic and Operational Control.

★★★★★

FACULTY OF ARTS
M.A. (ENGLISH) IV SEMESTER (CBCS-NEW) EXAMINATIONS JULY 2024
AMERICAN LITERATURE - II
PAPER - II

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

SECTION-A (5 X 4 = 20 Marks)

1   **Answer ALL the following questions**

A   Define the concept of Ethnicity?

B   Comment on the historical significance of Walt Whiteman's *When Lilacs last in the Dooryard Bloom'd*?

C   What kind of hero is Welhelm?

D   Why does Mama by a house in an all white neighbourhood in *A Raisin in the Sun?*

E   What is Womanism according to Alice Walker?

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

2   A   How does the concept of the American Dream influence literature?

OR

B   Define Multiculturalism? What are the salient features of Multiculturalism?

3   A   Comment on the images of nature in Whitman's poetry prescribed for your study?

OR

B   Write an essay on the main idea of the poem *After Apple Picking* by Robert Frost?

4   A   *The Great Gatsby* is a highly symbolic meditation on 1920s America? Discuss.

OR

B   Critically evaluate the themes in Hemingway's *The Old Man and the Sea?*

5   A   *A Raisin in the Sun* emphasizes on the relationship between race and property? Discuss.

OR

B   Explain the significance of the title *Who's Afraid of Virginia Woolf* by Edward Albee?

6   A   Discuss on the artistic talent inherent within the black woman's apparent unawareness in *Alice Walkers's In Search of Our Mother's Garden?*

OR

B   Write an essay on the use of symbolism in Bernad Malamud's *The Magic Barrell?*

★★★★★

FACULTY OF ARTS
M.A (TELUGU) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
ఆధునిక తెలుగు కవిత్వం - II

పేపర్ - II

సమయం: 3 గంటలు]   [గరిష్ట మార్కులు : 80

సెక్షన్ - ఎ (5 X 4 = 20 మార్కులు)

1   ఈ క్రింది వానిపై లఘు వ్యాఖ్య వ్రాయండి

    ఎ   భక్తి కవిత్వము

    బి   డి రామలింగం

    సి   సౌభద్రుని ప్రణయ యాత్ర

    డి   గేయకావ్యం

    ఇ   బోయి భీమన్న

సెక్షన్ – బి (5 X 12 = 60 మార్కులు)

అన్ని ప్రశ్నలకు సమాధానాలు వ్రాయండి

2   ఎ   నవ్య కవిత్వ లక్షణాలను గురించి సినారె అభిప్రాయాలను పరిచయం చేయండి.

                           లేదా

    బి   సంఘ కవిత్వ లక్షణాలను సోదాహరణంగా విశ్లేషించండి

3   ఎ   ఆదునికతను గురించి ఆర్. ఎస్. సుదర్శనం అభిప్రాయాలను చర్చించండి

                           లేదా

    బి   అధిక్షేప కవితా లక్షణాలను వివరించండి

4   ఎ   భావ కవితా మార్గంలో గిరికుమారుని ప్రేమ గీతాల ప్రత్యేకతలను వివరించండి

                           లేదా

    బి   ప్రణయ కావ్యాలలో సౌభద్రుని ప్రణయ యాత్ర ప్రత్యేకతను వివరించండి

5   ఎ   కర్పూర వసంత రాయలులోని లకుమ పాత్రను పరిచయం చేయండి

                           లేదా

    బి   నాదేశం నాప్రజలు ఆధారంగా శేషేంద్ర కవితా తత్త్వాన్ని విశ్లేషించండి

6   ఎ   గుడిసెలు కాలిపోతున్నాయ్ లోని దళితవాదాన్ని వివరించండి

                           లేదా

    బి   శతాంకురలోని తాత్వికతను విశ్లేషించండి

                           ★★★★★

FACULTY OF ARTS

M.A (Urdu) IV Semester Examination (CBCS)

Core Paper - II دوسرا پرچہ (لازمی)

(Urdu Adab Ki Tahreeken) اردو ادب کی تحریکیں

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

Section - A

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

1. اصلاحِ زبان سے کیا مراد ہے؟ اس تحریک میں کن شعرا نے اہم حصہ لیا۔

2. رومانی تحریک کس تحریک کا ردِعمل تھی۔ اس کے اہم شعرا کون تھے۔

3. ترقی پسند تحریک کے سیاسی و سماجی پس منظر پر روشنی ڈالیے۔

4. حلقہ اربابِ ذوق کے مقاصد پر مختصر نوٹ لکھیے۔

5. مابعد جدیدیت کے خدوخال کی وضاحت کیجیے۔

Section - B

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

6. (A) رجحان، تحریک اور دبستان کے فرق کو مثالوں سے واضح کیجیے۔   یا

   (B) اردو شاعری میں ایہام گوئی کے آغاز و ارتقا کا جائزہ لیجیے۔

7. (A) انجمن پنجاب اور اس کے مشاعروں پر ایک جامع نوٹ تحریر کیجیے۔   یا

   (B) علی گڑھ تحریک کو ہمہ گیر تحریک کیوں کہا جاتا ہے؟ واضح کیجیے۔

8. (A) اردو افسانے اور ناول پر ترقی پسند تحریک کے اثرات کا محاکمہ کیجیے۔   یا

   (B) ترقی پسند تحریک کے مینی فیسٹو اور نظریہ ادب کا تنقیدی جائزہ لیجیے۔

9. (A) اردو کے ادبی سرمائے پر جدیدیت کے اثرات کی نشاندہی کیجیے۔   یا

   (B) حلقہ اربابِ ذوق سے وابستہ اہم شعرا کا تعارف کرائیے۔

10. (A) واضح کیجیے کہ مابعد جدیدیت تحریک ہے، رجحان ہے، یا صورت حال ہے؟   یا

    (B) اردو میں مابعد جدیدیت کے آغاز و ارتقا پر روشنی ڈالیے۔

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FACULTY OF SOCIAL SCIENCES
M. A (ECONOMICS) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024
ENVIRONMENTAL ECONOMICS
PAPER - II

TIME: 3 HRS]   [MAX. MARKS: 80

SECTION - A (5 X 4 = 20 Marks)

1   **Answer ALL the questions**

a   Why do externalities lead to market failure?

b   State Brundtland's definition of sustainable development

c   Write a note on Polluter pays principle

d   Define Environmental Audit.

e   What is Urbanization?

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

2   A   How is Daly's depiction of the environmental sector in his input-output model superior to the earlier models? - Explain

OR

B   Discuss the environmental significance of biotic and abiotic communities of ecosystem.

3   A   What are the salient features of Hotelling theory of the optimum level of depletion of an exhaustible resource?-Discuss

OR

B   How does exhaustion of a renewable resource take place in the case of open access resources?- Examine

4   A   Give a critical account of the theory of optimum pollution.

OR

B   Briefly explain the concept of Pollution permits. How does it work and what are its limitations.

5   A   Discuss the method and limitations of the travel cost method of valuation.

OR

B   Discuss the contingent valuation method with reference to its applications, method and limitations.

6   A   Explain the functions of ministry of environment and forest.

OR

B   Describe the important environmental Laws in India.

★★★★★

FACULTY OF SOCIAL SCIENCES
M.A. (SOCIOLOGY) IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS JULY 2024
SOCIAL ANTHROPOLOGY
PAPER – II

Time: 3 Hours]   [Max. Marks: 80

SECTION – A (5 X 4 = 20 Marks)

1. **Write Short notes on the following**

   a) Anthropology and Sociology

   b) Acculturation

   c) Tribal Marriage

   d) Animism

   e) Land Alienation

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

2. A) Define Social Anthropology and describe its scope .

   OR

   B) Write in detail about the racial and linguistic distribution of tribes in India .

3. A) Define family and marriage discuss its characteristics in the context of Tribes.

   OR

   B) Examine the concept of Clan , Moity and descent.

4. A) Describe Kinship and discuss its characteristics

   OR

   B) Give a detail account of Lineage and Descent in Tribal Society.

5. A) What is market Exchange? Discuss about the formalistic approach.

   OR

   B) Discuss about the James Frazer perspective on religion and magic.

6. A) Explain the main issues related to Health and Nutrition among tribes in India.

   .   **OR**

   B) Elaborate on the constitutional provisions for Scheduled Tribes in India.

★★★★★

FACULTY OF SOCIAL SCIENCES
M.S.W IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS JULY 2024
COUNSELING THEORY AND PRACTICE
PAPER - II

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

SECTION - A (5 X 4 = 20 Marks)

1   **Answer ALL the questions**

a   Empathy

b   Skilled Helper model of counselling

c   Ulterior transactions

d   Geriatric counselling

e   Steps in counselling

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

2   A   Elaborate on the skills needed for an effective counsellor.

OR

B   Discuss the merits and demerits of supervision in counselling.

3   A   Elaborate on the important features of micro skill model of counselling.

OR

B   Discuss in detail about Gestalt therapy.

4   A   Explain in detail about cognitive therapy.

OR

B   Discuss about the important features of Rational Emotive therapy.

5   A   Explain the imperative need for marital counselling in today's society.

OR

B   Discuss the importance of counselling in CGC's.

6   A   Elaborate on the features of Humanistic -Existential therapy.

OR

B   Explain the importance of family counselling and its advantages.

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FACULTY OF SOCIAL SCIENCES
M. S. W   IV SEMESTER (CBCS R-16 OLD) EXAMINATIONS JULY 2024
SOCIAL STATISTICS
PAPER - II

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

SECTION-A (5 X 4 =20 Marks)

1   **Answer ALL the questions**
   a   How do Social Statistics help in understanding a social phenomenon?
   b   Statistical Package for Social Sciences (SPSS)
   c   Multivariate Analysis
   d   Standard Deviation
   e   Inferential Statistics

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

2   A   Discuss the functions and limitations of statistics in social work research. How can these limitations be addressed?

OR

   B   Levels of measurement. Discuss the differences and applications of nominal, ordinal, interval, and ratio scales in social research.

3   A   Describe the evolution of computers from analog to digital, and the significance of each generation in the context of social work research.

OR

   B   Explain the different categories of software and their roles in social work research. Provide examples of system and application.

4   A   Explain the process of Coding of Data and Master Sheet

OR

   B   Discuss the methods and challenges of recategorization and tabulation in data analysis. How can these challenges be overcome?

5   A   Discuss the importance of measures of central tendency and dispersion in summarizing and interpreting data?

OR

   B   A social work researcher collected data on the number of delinquency incidents reported in ten different schools over a month. The data are as follows: 3, 5, 8, 4, 7, 6, 5, 9, 2, 4.
Calculate the following:
a) Quartile Deviation   b) Mean Deviation   c) Standard Deviation

6   A   Explain the concept and different types of correlation and their applications.

OR

(Contd....)

B   A study is conducted to determine the correlation between the number of therapy sessions attended and the improvement scores of clients in a psychiatric setting. The data for ten patients is provided below:

Client	Therapy Sessions (X)	Improvement Score (Y)
1	5	15
2	8	20
3	7	18
4	10	25
5	6	17
6	9	22
7	4	13
8	11	27
9	3	10
10	12	30

Calculate the following:

a) Correlation Coefficient (Pearson's r)

★★★★★

FACULTY OF SCIENCE
M. Sc. (BOTANY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
PLANT MOLECULAR BIOLOGY
PAPER - II

TIME: 3 HRS]   [MAX. MARKS: 80

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

  a   Synthetic seeds

  b   RFLPs

  c   Hairy root cultures

  d   Marker – assisted selection

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

2   A   Explain the different steps involved in plant tissue culture with suitable diagrams

OR

  B   Discuss on the *in - vitro* production of secondary metabolites

3   A   Explain Northern Blotting with suitable diagrams

OR

  B   Describe recombinant DNA Technology

4   A   Describe Agrobacterium mediated gene transfer

OR

  B   Explain Human Genome Project in detail

5   A   Give a brief account of different molecular markers studied by you

OR

  B   Write about the applications of biofertilizers and biopesticides

★★★★★

FACULTY OF SCIENCE
M. Sc (COMP SCI) IV SEMESTER (CBCS R-19) EXAMINATIONS JULY 2024
OBJECT ORIENTED ANALYSIS AND DESIGN
PAPER - II

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

SECTION - A (4 X 5 = 20 Marks)

1   **Answer ALL the questions**

    a   Explain briefly the structure of complex systems.

    b   Explain the Nature of an Object.

    c   Write a short note on Activity Diagrams.

    d   Explain briefly about Inception of Satellite-based Navigation.

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

2   A   Explain in detail about the Inherent Complexity of Software.

OR

    B   Discuss in detail the Evolution of Object Model.

3   A   What is a Class? Explain relationship among Classes and the interplay of Classes and Objects.

OR

    B   Explain in detail about Component and Deployment Diagrams with an example.

4   A   Discuss about First Principles of Processes and explain about the Macro Process.

OR

    B   Write a detailed note on Management and Planning and risks of Object-Oriented Development.

5   A   Write a detailed note on Control System – Traffic Management.

OR

    B   Discuss in detail about Construction, Transition and Post-Transition in Vacation Tracking System.

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FACULTY OF SCIENCE
M. Sc (FOOD SCIENCE & TECH) IV SEM (CBCS R-19) EXAMS, JULY 2024
FOOD PRODUCT DEVELOPMENT AND ENTERPRENUERSHIP
PAPER - II

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

SECTION-A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

   a   Explain the factors for success.

   b   Explain product strategy.

   c   Write the functions of entrepreneur.

   d   Explain the meaning of marketing.

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

2   A   Discuss the product development programme.

OR

   B   Describe the legal aspect of new product launch.

3   A   Describe product commercialization.

OR

   B   Describe the knowledge required for conversion product concept to new product.

4   A   Discuss the characteristics of successful entrepreneur.

OR

   B   Give a brief account on sources of finance.

5   A   Discuss in detail product life cycle.

OR

   B   Describe the concepts of marketing mix.

★★★★★

FACULTY OF SCIENCE
M. Sc (NUTRITION AND DIETETICS) IV SEM (CBCS R-19) EXAMS, JULY 2024
PEDIATRIC NUTRITION
PAPER - II

TIME: 3 HRS]   [MAX. MARKS: 80

SECTION-A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

a   Write about anthropometric measurements.

b   Explain irritablable bowel syndrome.

c   Explain somogy and dawn effect.

d   Write about glycogen storage disease.

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

2   A   Discuss the identification criteria and causes of SAM.

OR

B   Discuss the factors affecting normal growth in children along with the milestones.

3   A   Give a brief account on ORT and fluid and electrolyte therapy.

OR

B   Discuss dietary management for patients   suffering from acute renal failure

4   A   Discuss paediatric dyslipidaemia and its dietary management.

OR

B   Give a brief account on feeding of HIV exposed child and a note on breast feeding.

5   A   Describe the diagnostic criteria and dietary management for patient suffering from PKU.

OR

B   Discuss neutropenic diet for children who have undergone marrow transplant.

★★★★★

FACULTY OF SCIENCE
M.Sc. (MICROBIOLOGY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
MEDICAL VIROLOGY AND PARASITOLOGY
PAPER - II

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

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

a   Mumps virus

b   HAV

c   HSV

d   Amoebiasis

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

2   A   Explain the detail account on approaches in cultivation of viruses.

OR

    B   Give a detail account on structure, pathogenicity and lab diagnosis of influenza virus.

3   A   Write a detailed account on pathogenicity and prevention of polio myelitis.

OR

    B   Describe the detailed account on structure and pathogenicity of rabies.

4   A   Explain the structure and diagnosis of small poxalong with its prevention through vaccination.

OR

    B   Give a detail account on pathogenicity and control of acquired immunodeficiency syndrome.

5   A   Explain the concept of helminthic infections.

OR

    B   Describe the detailed account on medical mycology and types of mycosis.

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FACULTY OF SCIENCE
M. Sc (ZOOLOGY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
DEVELOPMENTAL BIOLOGY
PAPER - II

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

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

     a   Embryonic homologies

     b   Acrosomal reaction in development

     c   Concept of stem cells.

     d   Hox genes

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

2   A   Write the affects of Malformations and Teratogenesis in animal development..

OR

    B   Illustrate the developmental Mechanics of Cell Specification.

3   A   Discuss the various steps involved in development of snails.

OR

    B   Write an essay on different axis developments in Mammals.

4   A   Write the sex determination mechanism with suitable examples in animals

OR

    B   Explain the Regeneration of limb and tail in reptiles.

5   A   Explain in detail about environmental regulation of animal development.

OR

    B   Give an account of homologous pathways of development

★★★★★

FACULTY OF SCIENCE
M. Sc (STATISTICS) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
TIME SERIES ANALYSIS
PAPER – II

TIME: 3 HRS]   [MAX. MARKS: 80

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

a   Define auto covariance and auto correlation functions?

b   Write the relationship between sample spectrum and auto covariance?

c   Define Auto Regressive Integrated Moving Averagemodel (p,d,q)?

d   Explain the major steps involved in model checking?

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

2   A   Define power spectrum. Explain the estimation of power spectrum

OR

B   Derive estimators of Auto-covariance and Auto-correlation functions and standarderror of estimator of Auto-correlation.

3   A   Obtain the estimated parameters values of auto regression model of order p using Maximum likelihood method?

OR

B   Derive the Spectral density function for moving average (q) model. Hence write the conditions for MA(2) models?

4   A   How does a time series model identified using Auto correlation function and Partial auto correlation function?

OR

B   Write the behaviour of auto correlation function for d^{th} difference of an ARIMA(p,d,q)?

5   A   Derive the mean square error of aforecast and state its properties?

OR

B   Derive probability limit for forecasts of any lead time?

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FACULTY OF SCIENCE
M. Sc. (MATHEMATICS) IV SEM (CBCS R-22 NEW) EXAMINATIONS JULY 2024
LEBESGUE MEASURE AND INTEGRATION
PAPER – II

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

SECTION - A (4 X 5 = 20 Marks)

1   **Answer ALL the questions.**

a   Prove that if there is a set A in the collection $\mathcal{A}$ for which $m(A) < \infty$, then $m(\emptyset) = 0$.

b   Suppose f is a real-valued function on R such that $f^{-1}(c)$ is measurable for each number c. Is f necessarily measurable?

c   Let f be a bounded measurable function on a set of finite measure E. Suppose A and B are disjoint measurable subsets of E. Then $\int_{A \cup B} f = \int_A f + \int_B f$.

d   Let f be a monotone function on a subset E of R. Show that f is continuous except possibly at a countable number of points in E.

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

2   A   (i). By using properties of outer measure, prove that the interval [0, 1] is not countable.
          (ii). Let A be the set of irrational numbers in the interval [0, 1]. Prove that $m*(A) = 1$.

OR

     B   Show that
          (i).   the translate of an F_σ set is also F_σ
          (ii).   the translate of a G_δ set is also G_δ, and
          (iii). the translate of a set of measure zero also has measure zero.

3   A   Let f be a bounded measurable function on E. Show that there are sequences of simple functions on E, $\{\varphi_n\}$ and $\{\psi_n\}$, such that $\{\varphi_n\}$ is increasing and $\{\psi_n\}$ is decreasing and each of these sequences converges to f uniformly on E.

OR

     B   (i). Show that Egoroff's Theorem continues to hold if the convergence is pointwise $a.e.$ and f is finite $a.e.$
          (ii). Prove the extension of Lusin's Theorem to the case that E has infinite measure.

4   A   (i). Let f be a bounded function on $[a,b]$. suppose there is a sequence $\{P_n\}$ of partitions of $[a, b]$ for which $\lim_{n \to \infty}[U(f, P_n) - L(f, P_n)] = 0$. Show that f is Riemann integrable over $[a, b]$.
          (ii). Does the Bounded Convergence Theorem hold if $m(E) < \infty$ but we drop the assumption that the sequence $\{|f_n|\}$ is uniformly bounded on E?

OR

     B   (i). Show that the integral of a bounded measurable function of finite support is properly defined.
          (ii). Let f be integrable over E and C a measurable subset of E. Show that
               $\int_C f = \int_E f \cdot \chi_C.$

5   A   (i). Show that the Vitali Covering Lemma does not extend to the case in which the covering collection has degenerate closed intervals.
          (ii). Show that a continuous function f on $[a, b]$ is Lipschitz if its upper and lower derivatives are bounded on (a, b).

OR

     B   (i). Let f be the Dirichlet function, the characteristic function of the rationals in [0, 1]. Is f of bounded variation on [0, 1]?
          (ii). Let f be Lipschitz on R and g be absolutely continuous on $[a, b]$. Show that the composition $f \circ g$ is absolutely continuous on $[a, b]$.

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FACULTY OF SCIENCE
M.SC. (ENGG. PHYSICS AND INSTR. & PHYSICS) IV SEM (CBCS) EXAMS, JULY 2024
MOLECULAR AND RESONANCE SPECTROSCOPY
PAPER - II

Time: 3 Hours]   [Max. Marks: 80

SECTION – A (4 X 5 = 20 Marks)

1) **Write a short note on :**

   (a) Rotational Energy levels of a molecule

   (b) Classical theory of Raman Scattering

   (c) Relaxation process in NMR

   (d) Isomer shift in Mossbauer Spectra

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

2) (a) Discuss the rotational spectra of rigid rotar. Explain the isotopic effect on rotational spectra.

   (OR)

   (b) What is Born-Oppenheimer approximation? Discuss the spectra of vibrating rigid rotor in detail.

3) (a) Explain Frank - Condon principle. Discuss the Intensity of vibrational electronic spectra

   (OR)

   (b) Explain Raman Effect. Discuss in detail the rotational fine structure of vibrational Raman spectra

4) (a) Explain principle and resonance condition of NMR. Describe the instrumentation and working of NMR spectrometer.

   (OR)

   (b) Explain the hyperfine structure of ESR. Discuss the ESR spectrum of Hydrogen atom with energy level diagram.

5) (a) Explain Recoilless emission and absorption of gamma rays. Describe the experimental setup and working of Mossbauer spectrometer

   (OR)

   (b) Explain the principle of NQR. Discuss transitions for axially symmetric system for half integral and integral spin systems.

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FACULTY OF SCIENCE
M. Sc. (CHEMISTRY) IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS, JULY 2024
(INORGANIC CHEMISTRY SPECIAL)
INORGANIC BIO-CHEMISTRY
PAPER - II

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

SECTION – A (4 X 5 = 20 Marks)

1. **Answer ALL questions**

    a) Write in detail about the covalent structure of Polynucleotides.

    b) What are high potential Iron-Sulphur Proteins, mention their structural and spectral features.

    c) Discuss the structural and mechanistic aspects of Carbonic Anhydrase.

    d) Explain the biological and mechanistic aspects of sulfite Oxidase.

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

2. a) Write in detail about Potential Binding sites of Nucleic acids and explain the Influence of metal ions on stability of nucleic acids.

    b) Discuss the pKa values in Nucleic acid base nucleotides

(OR)

    c) What are nucleosides and Nucleotides? Write in detail about the Proton Binding sites of purines and pyrimidine bases.

    d) Write about B, A and Z forms of DNA and Discuss its Secondary Structure.

3. a) Explain about Iron transport by transferrin and Siderophores.

    b) Explain about structural features of Ferritine and its role in Iron Storage.

(OR)

    c) Discuss in detail the geometric, electric and magnetic aspects of dioxygen binding in hemerythrin and hemocyanin.

    d) Write about the electron transport by cytochromes Azurin and Plastocyanin

4. a) Discuss about the catalytic mechanism of Alcohol dehydrogenase and the role of Zinc in it.

    b) Describe the structural and mechanistic aspects of catalase and peroxidase.

(OR)

    c) Discuss about the reactions catalyzed and mechanistic aspects of Urease and Hydrogenase.

    d) Explain in detail about the Cytochrome P_{450} structural and mechanical aspects and Discuss the role of metal ion in it.

5. a) Explain about the reactions catalyzed by   i) Methyl Cobalamine   ii) Deoxyadenosylcobalamin

    b) Write in detail about the types of copper in Biological system.

(OR)

    c) Write a short note on   i) Aginase   ii) Water Oxidase.

    d) Discuss about the mechanism of methyl malonyl CoA conversion to Succinyl CoA.

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FACULTY OF SCIENCE
M. Sc (CHEMISTRY) IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS, JULY 2024
(PHYSICAL CHEMISTRY SPECIAL)
THERMODYNAMICS, APPLIED KINETICS AND APPLIED ELECTROCHEMISTRY
PAPER - II

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

SECTION – A (4 X 5 = 20 Marks)

1. **Answer ALL the questions.**

   a) Write Einstein equation for specific heats of solids and explain terms in it.

   b) Explain the working of Sodium Potassium pump.

   c) Write the parameters affecting performance of reactors.

   d) What are primary and secondary batteries. Give examples.

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

2. A) Derive the Boltzmann distribution law and explain terms in it.

   (OR)

   B) Derive the Sackur-Tetrode equation for entropy of monoatomic ideal gases.

3. A) Explain the irreversible thermodynamics in biological processes with examples.

   (OR)

   B) Explain the entropy production in heat flow and material flow.

4. A) Explain the general features and design equation for Batch Reactors.

   (OR)

   B) Explain the general features of plug-flow reactors , design equation and material energy balance.

5. A) Write a note on i) Lithium batteries ii) Ni/Cd batteries iii) H_2/O_2 cell

   (OR)

   B) Explain the following reactions in electro organic synthesis.
   i) Reduction of Nitro compounds   ii) Reduction of Carboxylic acids
   iii) Polymerization of acrylonitrile to poly adiponitrile.

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FACULTY OF SCIENCE
M. Sc (CHEMISTRY) IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS, JULY 2024
(ORGANIC CHEMISTRY SPECIAL)
DRUG DESIGN AND DRUG DISCOVERY
PAPER - II

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

SECTION – A (4 X 5 = 20 Marks)

1. **Answer ALL Questions.**

   a) Define prodrug and discuss its principles.

   b) Write a note on lead modification with alkyl substitution variation

   c) Explain Lipinski rule of five

   d) Give an account on high throughput screening

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

2. A) (i) What is meant by "serendipitious discovery"? Give a suitable example.

   (ii) Explain antagonist designing by taking suitable example.

OR

   B) (i) How is the structure pruning technique useful in lead modification of Morphine?

   (ii) Write a note on Bioassay, Explain Occupancy Theory and Induced fit theory.

3. A) Discuss about the SAR studies of sulfa drugs, Benzodiazepines and Taxol
OR
   B) Explain the lead modification strategies by chain homologation, branching, Variation of aromatic substituents, Extension of structure and ring expansion.

4. A) Give a detailed account on Hansch analysis in QSAR and Craig's plot.
OR
   B) Discuss the Topliss scheme, Free Wilson approach and Hansch analysis in QSAR.

5. A) Give a detailed account types of Resins, Linkers and reactants used for solid phase synthesis
OR
   B) Discuss in detail about the spider like scaffolds with examples and Haughton's tea bag procedure.

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FACULTY OF SCIENCE
M. Sc (CHEMISTRY) IV SEMESTER (CBCS R-16 OLD) EXAMINATIONS JULY 2024
COMPUTATIONAL CHEMISTRY, MATERIAL SCIENCE AND LASER IN CHEMISTRY
(PHYSICAL CHEMISTRY SPECIAL)
PAPER - II

Time: 3 Hrs]   [Max. Marks: 80

SECTION - A (4 X 5 = 20 Marks)

1. **Answer all questions**

   a) Explain the anti symmetry principle and the slater determination.

   b) Discuss the potential energy diagram for protein structure.

   c) What are the different types of NLO materials?

   d) What is stimulated emission?

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

2. a) Explain the Hartree-Fock calculations on Ammonia and water molecules.
   b) Discuss Hohenberg-Kohn method for DFT.

   (OR)

   c) Explain Density Functional theory.
   d) What is coulomb operator and exchange operator? Explain.

3. a) Discuss various types of biopolymer interactions.
   b) What is the underlying principle of molecular mechanics

   (OR)

   c) Discuss random linear structure of biopolymers.
   d) State Corey-Pauling rules and explain.

4. a) What is the criteria for determining the crystal structure of ceramic materials?
   b) Discuss various methods of preparation of solid materials.

   (OR)

   c) Discuss the different methods of single-crystal growth for minerals.
   d) Explain the particle reinforced and fiber reinforced composites.

5. a) Write the principles of laser actions and characteristics of laser pulses.
   b) Write a note on i) Time-Resolved Spectroscopy and ii) Femto Chemistry.

   (OR)

   c) Discuss the applications of lasers in fluorescence spectroscopy and Raman spectroscopy.
   d) Explain the reaction between hydrogen atoms and vibrationally excited HDO molecules.

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FACULTY OF SCIENCE
M.Sc. (CHEMISTRY) IV SEMESTER (CBCS R-16 OLD) EXAMINATIONS, JULY 2024
REACTION MECHANISM, NON BENZENOID AROMATICS AND NANOMATERIALS
(ORGANIC CHEMISTRY SPECIAL)
PAPER - II

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

SECTION - A (4 X 5 = 20 Marks)

1. **Answer ALL Questions**

    a) Explain the Mitsunobu reaction

    b) Discuss the Chapmann rearrangement

    c) Define the terms aromatic, non aromatic and antiaromatic molecules

    d) Write a note on Liquid crystals and Molecular wires

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

2. a) Describe the reaction and mechanism of Nazerov cyclisation
    b) Explain the wacker oxidation process

OR

    c) Write a note on Grubb's 1st and 2nd generation catalysts
    d) Discuss the Sharplessazidecycloaddition reactions with mechanism

3. a) Explain the Acylation of amines and acyl esters
    b) Write a note on long living carbocations and Super acids

OR

    c) Write a note on Robinson's annulation
    d) Explain the Darzens condensation

4. a) Discuss the applications and Limitations of Huckel's rule
    b) Predict the synthesis and aromatic nature of cycloheptatrienylcation

OR

    c) Describe the aromatic properties of azulenes and metallocenes
    d) Write the synthesis of cyclopropeniumcation derivatives

5. a) Discuss the growth and chemical synthesis of Fullerenes
    b) Explain about 'bottom-up' approach and Nanomanipulation

OR

    c) Predict the structures of aromatic belts and molecular machines
    d) Explain the basic OLED mechanism of organic solar cells

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FACULTY OF COMMERCE
M.Com. (GEN & CA) IV SEMESTER (CBCS NEW & OLD) EXAMINATIONS JULY 2024
INTERNATIONAL BUSINESS
PAPER - II

Time: 3 Hours]   [Max. Marks: 80

SECTION - A (5 X 4 = 20 Marks)

1.   **Answer ALL the questions**

   a) What is International Business?

   b) Political Environment.

   c) GATT.

   d) MNC.

   e) Global Capital Structure.

SECTION – B (5 X 12 = 60 Marks)

2.   a) Explain how the Domestic company transform into Transnational company as stage wise.

(OR)

   b) What are Theories of International Business?

3.   a) State the impact of Economic Environment on International Business.

(OR)

   b) What are the recent trends in International Business?

4.   a) Briefly discuss the functions and objectives of World Trade Organisation.

(OR)

   b) Critically examine the impact of IMF and World Bank in Developing countries.

5.   a) Discuss the advantages and disadvantages of MNCs to Home country.

(OR)

   b) What is FDI? Give a brief account of recent trends in FDI of India.

6.   a) Explain International HR Strategies that are impact on International business operations.

(OR)

   b) Briefly explain the issues in International Marketing strategies.

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FACULTY OF COMMERCE
M.Com. (FA) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024
FINANCIAL SERVICES MANAGEMENT
PAPER - II

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

SECTION - A (5 X 4 = 20 Marks)

1.   **Answer ALL the questions**

   a) Features of Financial services

   b) SEBI.

   c) Net asset value.

   d) Venture Capital.

   e) Forfeiting.

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

2.   a) What do you mean by financial services? Explain fund and fee based financial services.

(OR)

   b) Explain various problems and prospects of financial services in India?

3.   a) What is Merchant Banking? Explain qualities and services of Merchant Bankers.

(OR)

   b) Write a note on SEBI guidelines on Credit Rating and credit rating agencies in India.

4.   a) What is Mutual fund? Discuss various merits and problems of mutual funds.

(OR)

   b) Critically examine the performance evaluation of mutual funds.

5.   a) Briefly explain growth and importance of Venture capital financing.

(OR)

   b) What is Lease financing? Explain merits and demerits of lease financing.

6.   a) Explain modus operandi and functions of factoring services in India.

(OR)

   b) Discuss the importance, benefits and costs of forfeiting.

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FACULTY OF ARTS
M.A. (ENGLISH) IV SEMESTER (CBCS-NEW) EXAMINATIONS JULY 2024
INDIAN WRITING IN ENGLISH - II
PAPER - III

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

SECTION-A (5 X 4 = 20 Marks)

1   **Answer ALL the following questions**

   A   Write a short note on Nationalism?

   B   What is the central idea of the poem *Philosophy* by Nizzim Ezekiel?

   C   Sketch the character of Niroda in Anita Desai's *Voices in the City?*

   D   How is food used as a tool in *Interpreter of Maladies?*

   E   Write a brief note on Asif Currimbhoy as a playwright*?*

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

2   A   Write an essay on Partition Literature?

OR

   B   Write in detail on Counter Discourse?

3   A   Attempt a critical appreciation of Nissim Ezekiel's *Poet, Lover and Birdwatcher?*

OR

   B   Write an essay on use of imagery in A.K. Ramanujan's poems prescribed for your study?

4   A   Discuss the use of symbolism in Anita Desai's Voices in the City?

OR

   B   Write an essay on the narrative techniques of Salman Rusdie's *The Midnight's Children?*

5   A   Bharati Mukerjee's *The Management of Grief* portrays the struggle of dealing with grief? Discuss.

OR

   B   Write an essay on the main theme of Rohinton Mistry's *Swimming Lessons?*

6   A   Discuss the significance of the title Mahesh Dattani's *Final Solutions?*

OR

   B   Manjula Padmanabhan's *Harvest* portrays the picture of a dystopian world? Discuss .

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FACULTY OF ARTS
M.A (TELUGU) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
ఆధునిక తెలుగు సాహిత్య విమర్శ - II

పేపర్ - III

సమయం: 3 గంటలు]   [గరిష్ట మార్కులు : 80

సెక్షన్ - ఎ (5 X 4 = 20 మార్కులు)

1   ఈ క్రింది వానిపై లఘు వ్యాఖ్య వ్రాయండి

   ఎ   ప్రాగ్రూప విమర్శ

   బి   కె.వి.ఆర్. నరసింహం

   సి   రాళ్లపల్లి అనంతకష్ణశర్మ

   డి   రమ్యాలోకము

   ఇ   ముదిగొండ వీరభద్రయ్య

సెక్షన్ – బి (5 X 12 = 60 మార్కులు)

అన్ని ప్రశ్నలకు సమాధానాలు వ్రాయండి

2   ఎ   ఆధునిక తెలుగు సాహిత్యవిమర్శ స్వరూప స్వభావాలను వివరించండి.

         లేదా

     బి   ఆధునిక తెలుగు సాహిత్యవిమర్శ రీతులు నాలుగిటిని విశ్లేషించండి

3   ఎ   ఆధునిక తెలుగు సాహిత్యవిమర్శ లో కె.వి.రమణారెడ్డి స్థానాన్ని చర్చించండి

         లేదా

     బి   ఆధునిక తెలుగు సాహిత్యవిమర్శ లో సంపత్కుమార అభిప్రాయాలను చర్చించండి

4   ఎ   కవిత్వ తత్వ విచారంలో కట్టమంచి రామలింగారెడ్డి అభిప్రాయాలను చర్చించండి

         లేదా

     బి   దువ్వూరి రామిరెడ్డి రస రామణీయకత భావనను వివరించండి

5   ఎ   నన్నయ కథాకథన శిల్పం పై విశ్వనాథ అభిప్రాయాలను పరిచయం చేయండి

         లేదా

     బి   శ్రీ శ్రీ సాహిత్య విమర్శ తీరును విశ్లేషించండి

6   ఎ   కాల రేఖలు లో గుంటూరు శేషేంద్ర శర్మ చర్చించిన వాటిని వివరించండి

         లేదా

     బి   కళాతత్వశాస్త్ర విమర్శ లక్షణాలను వివరించండి

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FACULTY OF ARTS
M.A (Urdu) IV Semester Examination (CBCS)
Elective Paper - III(A)   تیسرا پرچہ اختیاری

(Mass Media)   ماس میڈیا

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

Section - A

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

1. جدید ذرائع ابلاغ سے کیا مراد ہے؟ مثالوں سے واضح کیجیے۔

2. ریڈیو مذاکرے پر مختصر نوٹ لکھیے۔

3. نیوز ریل سے کیا مراد ہے؟

4. لائیو ٹیلی کاسٹ کے بارے میں اپنی معلومات قلم بند کیجیے۔

Section - B

(4 x 15 = 60)   نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے پندرہ نشانات مختص ہیں۔ ہر سوال کا جواب چار صفحات سے زیادہ نہ ہو۔

5. (A) ماس میڈیا کی تعریف کیجیے اور اس کی اہمیت و افادیت پر روشنی ڈالیے۔   یا

   (B) اردو صحافت کے آغاز و ارتقا کا اجمالی جائزہ لیجیے۔

6. (A) فیچر اور ڈرامے کے فرق کو واضح کرتے ہوئے ریڈیو فیچر اور ریڈیو ڈرامے پر نوٹ لکھیے۔   یا

   (B) ریڈیو کی تاریخ پر روشنی ڈالیے۔

7. (A) فلم کی مختلف اقسام پر مفصل نوٹ لکھیے۔   یا

   (B) ہندوستان میں سنیما کی تاریخ پر روشنی ڈالیے۔

8. (A) ٹیلی ویژن نشریات کا تعارف کرائیے۔   یا

   (B) ٹیلی ویژن کے آغاز اور فروغ پر اظہار خیال کیجیے۔

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FACULTY OF SOCIAL SCIENCES
M.A. (ECONOMICS) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024
ECONOMETRICS - II
PAPER – IV (A)

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

SECTION-A (4 X 5 = 20 Marks)

1   **Answer ALL the questions**

    a   Exactly Identified Model

    b   Features Of Auto Regressive Model

    c   Philips -Perron Test

    d   Consumption Function

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

2   A   Explain the Two-stage least squares method.

OR

    B   Discuss the identification problem with suitable example.

3   A   Describe the koyack approach to distributed lag model.

OR

    B   Discuss with the partial adjustment model with a suitable example.

4   A   Explain the procedure of Error Correction Mechanism model.

OR

    B   Discuss with the procedure of various stationery tests.

5   A   Briefly explain estimation of Engel elasticities.

OR

    B   Describe the Constant Elasticity Substitution production function analysis.

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FACULTY OF SOCIAL SCIENCES

M. A (ECONOMICS) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024

TELANGANA ECONOMY

PAPER – III (B)

Time: 3 Hrs]   [Max. Marks: 80

SECTION – A (4 X 5 = 20 Marks)

1. **Answer all the questions**

   a. Define Development.

   b. Write a short note on Agriculture allied Sectors.

   c. Write a note on Rythwari System.

   d. Define Service Sector.

SECTION – B (4 X 15 = 60 Marks)

Answer ALL the Questions

2. A) Examine the share of agriculture and allied sectors in GSDP.

OR

   B) Explain the Growth and Development in Telangana State.

3. A) Illustrate the Dependence on agriculture in Telangana State.

OR

   B) Discuss the Mission Kakatiya in Telangana State.

4. A) What are the goals of land reforms in Telangana?-Explain

OR

   B) Discuss the Land alienation in scheduled areas in Telangana State.

5   A) Describe the Industrial Development in Telangana State.

OR

   B) Explain the Industrial Policy of Telangana.

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FACULTY OF SOCIAL SCIENCES

M. A (SOCIOLOGY) IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS JULY 2024
SOCIOLOGY OF HEALTH
PAPER - III

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

SECTION-A (5 X 4 =20 Marks)

1   **Answer ALL the questions**

   a   What is meant by Public Health

   b   What are the indicators of Health

   c   Explain the social aspect of Nutrition

   d   Difference between Ayurveda and Homeopathy medicine

   e   Explain about Health insurance scheme

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

2   A   What is Sociology of Health discuss its nature and scope

OR

   B   Discuss the objectives and principles of Health education

3   A   What are the Determinants of health and explain the indicators of health

OR

   B   Explain the Changing concepts of primary health care in India

4   A   Discuss the components of environmental sanitation

OR

   B   What are the universal precautionary measures to prevent HIV and AIDS

5   A   Discuss Health care Management methods andtechniques

OR

   B   Write an essay on National Health policy

6   A   Write an essay on Corporate Hospitals and their impact on common people

   B   Mention any two National Health programmes in India and discuss health care managed methods.

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FACULTY OF SOCIAL SCIENCES
M.S.W IV SEM (CBCS R-22 NEW & R-16 OLD) EXAMINATIONS JULY 2024
URBAN COMMUNITY DEVELOPMENT - II
PAPER – III (A)

TIME: 3 HRS]   [MAX.MARKS: 80

SECTION - A (4 X 5 = 20 Marks)

1   **Answer ALL the questions**

   a   Urban poor

   b   Solid Waste

   c   Functions of UDA

   d   Concept of People Participation

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

2   A   Discuss the problems of urban poverty

OR

   B   Write the concept of unorganized sector and its type

3   A   Explore the urban problems related to environment

OR

   B   Discuss the role of social worker in solving the urban problems related to environment

4   A   Draw the composition and administrative setup of Urban Development Authorities

OR

   B   Discuss the problems of Urban Development Authorities

5   A   Write the scope and levels of people participation

OR

   B   Explain the process and format for Micro planning

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FACULTY OF SOCIAL SCIENCES
MSW IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS JULY 2024
PSYCHIATRIC SOCIAL WORK - II
PAPER - IV (B)

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

SECTION - A (4 X 5 = 20 Marks)

1   **Answer ALL the questions**

   a   Abnormality

   b   Conditioned self

   c   Neurolinguistic Programming

   d   Substance abuse

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

2   A   Historical conceptions of abnormalbehaviour

OR

   B   Role of Social work and social workers in mental health settings

3   A   Explain Anti-social personality disorder and suggest suitable therapies

OR

   B   Explain process of Psycho-social assessment.

4   A   Explain sexual disorders

OR

   B   Explain sleeping disorders

5   A   Explain the role of family in interventions related to learning disorders

OR

   B   Therapies for substance abuse disorders

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FACULTY OF SCIENCE
M. Sc. (BOTANY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
APPLIED PHYCOLOGY
PAPER – III (A)

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

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

   a   Pure culture

   b   *Spirulina*

   c   Algae on environmental health

   d   Agar - Agar

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

2   A   Explain the role of algae as food and feed

OR

   B   Discuss the media used for culture of *Chlorophyceace* and *Cyanophyceae*

3   A   Write about the role of algae in agriculture

OR

   B   Describe the steps involved in mass cultivation of *Laminaria*. Add a note on its economic value

4   A   Describe the causes and consequences of aquatic pollution

OR

   B   Discuss the role of algae in bioremediation

5   A   Write about the cosmetics, pharmaceutical and biofuel usage of algae

OR

   B   Discuss on algal blooms and toxic algae

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FACULTY OF SCIENCE
M. Sc (COMP SCI) IV SEMESTER (CBCS R-19) EXAMINATIONS JULY 2024
DISTRIBUTED SYSTEMS
PAPER – III (A)

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

SECTION - A (4 X 5 = 20 Marks)

1   **Answer ALL the questions**

   a   Define Distributed System.

   b   Write a short note on RPC.

   c   Explain briefly about Security Management.

   d   Write a short note on Fault Tolerance in Distributed Object-based Systems .

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

2   A   Explain in detail about Goals and Types of Distributed Systems.

OR

   B   What are Threads? Explain in detail their Significance.

3   A   Distinguish between Stream-Oriented Communication and multicast Communication.

OR

   B   Write a detailed note on Mutual Exclusion and Election Algorithms.

4   A   Distinguish between data-centric consistency models and client-centric consistency models.

OR

   B   Write a detailed note on Secure Channels and Access Control.

5   A   Explain in detail about Architecture and Processes in Distributed File Systems.

OR

   B   Discuss in detail about Fault Tolerance and Security in Distributed Web-Based Systems.

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FACULTY OF SCIENCE
M. Sc (COMP SCI) IV SEMESTER (CBCS R-19) EXAMINATIONS JULY 2024
CLOUD COMPUTING
PAPER – III (B)

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

SECTION - A (4 X 5 = 20 Marks)

1   **Answer ALL the questions**

a   List out benefits of Virtualization.

b   Write a short note on Challenges with Cloud Data.

c   Explain briefly about Adoption Phases.

d   What is AAA model?

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

2   A   What is Cloud Computing? Explain in detail the types and models of Cloud Computing.

OR

B   What is open Source Virtualization Technology? Explain in detail about Xen Virtualization Architecture.

3   A   Explain in detail about Eucalyptus and Open Stack Cloud Architectures.

OR

B   Explain in detail about Host Security for SaaS, PaaS and IaaS.

4   A   Discuss in detail about Success Factors for CC Adoption process of Public Clouds by Enterprises.

OR

B   Explain in detail about SLA with Cloud Service Providers.

5   A   Discuss in detail about Mobile Cloud Computing.

OR

B   Explain in detail about Application Security in the Cloud.

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FACULTY OF SCIENCE
M. Sc. (MICROBIOLOGY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
MICROBIAL BIOTECHNOLOGY
PAPER - III

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

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

    a   Preparation of wort

    b   Recovery of citric acid

    c   Structure of vitamin B12

    d   Semi-synthetic penicillins

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

2   A   Explain the detail account on raw materials, microorganisms for fermentative production of industrial alcohol.

                                             OR

  B   Give a detail account on fruit selection, crushing and fermentation of wine making.

3   A   Write a detailed account on inoculum preparation, medium preparation for fermentative production of citric acid.

                                             OR

  B   Describe the fermentative production of glutamic acid.

4   A   Explain the commercial production of benzyl penicillin and its uses.

                                             OR

  B   Give a detail account on fermentative production of tetracyclines.

5   A   Explain the concept of production of microbial enzymes.

                                             OR

  B   Describe the microbial products from genetically modified organisms.

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FACULTY OF SCIENCE
M. Sc (ZOOLOGY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
FISHERIES AND AQUACULTURE
PAPER – III (A)

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

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

a   Morphometric methods of fishes

b   Biological properties of waterbodies.

c   Types of Fish seed

d   Fungal diseases of fishes and their control.

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

2   A   Explain the origin and evolution of Teleostei fishes in detail.

OR

B   Give an account of general characters and classification of fishes up to class.

3   A   Write an essay on origin and classification of freshwater bodies.

OR

B   Describe the productivity of water bodies and their importances

4   A   Differentiate between Mono, Poly and Composite fish culture strategies.

OR

B   Explain about Planktons and their significance in aquaculture.

5   A   Write about ectoparasites of fishes and their pathogenicity.

OR

B   Discuss the Protozoan diseases of fishes and their control measures

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FACULTY OF SCIENCE
M. Sc (STATISTICS) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
RELIABILITY THEORY
PAPER – III (A)

TIME: 3 HRS]   [MAX. MARKS: 80

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

   a   Define structure function and dual of structure function?

   b   Define modular decomposition of a coherent system?

   c   Obtain the estimate of reliability function of exponential with parameterθ?

   d   What are replacement policies?

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

2   A   Express the structure function in terms of minimal path sets and minimal cut sets and hence compute the exact system reliability in both the cases.
OR

   B   If ϕ is a coherent structure function, show that
   (i) $\phi(x \vee y) = \phi(x) \vee \phi(y)$
   (ii) $\phi(x \, y) = \phi(x) \, \phi(y)$.

3   A   Derive the system reliability and mean system life of an n-component parallel system with independent exponential life lengths?
OR

   B   Obtain the reliability function of a six out of ten structure of components. Study the nature of the function as component reliability varies in $(0,1)$?

4   A   Show that Weibull distribution can serve as time dependent failure rate model. For what values of the parameters, it includes IFR and DFR models? Justify.
OR

   B   Explain the role of mixture of distributions in reliability analysis

5   A   Obtain the maximum likelihood estimators for the reliability function of two parameter Gamma distribution?
OR

   B   Obtain the maximum likelihood estimators for the reliability function of Log normal Gamma distribution?

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FACULTY OF SCIENCE
M. Sc. (MATHEMATICS) IV SEM (CBCS R-22 NEW) EXAMINATIONS JULY 2024
GRAPH THEORY
PAPER – III (A)

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

SECTION-A (4 X 5 =20 Marks)

1   **Answer ALL the questions.**

a   Draw the digraph of the following relation:

The relation "divides," defined by "a divides b iff there exists a positive integer c such that $a \cdot c = b$", on the integers $\{1, 2, 3, 4, 5, 6, 7, 8\}$".

b   Suppose that G is nondirected graph with 12 edges. Suppose that G has 6 vertices of degree 3 and the rest have degrees less than 3. Determine the minimum number of vertices G can have.

c   Draw 2 polyhedral graphs with 6 vertices and 10 edges.

d   Suppose 3 applicants A_1, A_2, A_3 apply for 4 jobs J_1, J_2, J_3, J_4, where A_1 is qualified for J_1 and J_3; A_2 is qualified for J_2 and J_4; A_3 is qualified for J_1 and J_4; Represent this information in a transport network.

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

2   A   Prove or disprove each of the following:
- (i).   Asymmetry implies antisymmetry.
- (ii).   Symmetry and transitivity together imply reflexivity.
- (iii).   Antisymmetric implies asymmetry.
- (iv).   Asymmetry and symmetry together imply transitivity.

OR

B   (i).   Let R be a symmetric and transitive relation on a set A. show that if for every $a \in A$ there exists $b \in A$ such that $(a, b) \in R$, then R is an equivalence relation. Show that the conclusion is false if symmetric is replaced by reflexive.

(ii).   Prove that if p is a prime and $a^2 \equiv b^2 \bmod p$, then p divides $a + b$ or $a - b$.

3   A   (i).   Prove that if G is a simple nondirected graph with 6 vertices, then G or the complement of G contains 3 mutually adjacent vertices.

(ii).   Determine the number of edges in K_n, $K_{m,n}$, C_n and P_n

OR

B   (i).   Prove that a tree with n vertices has exactly n-1 edges.

(ii).   Prove that a connected graph G is a tree if and only if G has fewer edges than vertices.

4   A   (i).   Prove that a connected graph has a Euler circuit iff it can be decomposed to a set of elementary cycles that have no edges in common.

(ii).   Prove that for positive integers $\delta + 1$ and k there exists a de Bruijin sequence.

OR

B   (i).   Suppose that a classroom has 25 students seated in desks is a square 5×5 array. The teacher wants to alter the seating by having every student move to an adjacent seat (just ahead, just behind, or on the left, or on the right). Show by a parity (even or odd) argument that such a move is impossible.

(ii).   Prove that any $k -$chromatic graph contains a $k -$critical subgraph.

5   A   (i).   Suppose that (G, k) is a transport network with source S and sink D. show that if there is no directed path from S to D, then the value of a maximal flow in G and the capacity of minimal cut in G are both zero.

(ii).   Disprove the following:

" If all the edges of a transport network have the same capacity, the all S-D cuts have the same capacity."

OR

B   State and prove the Max Flow-Min cut theorem.

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FACULTY OF SCIENCE
M.SC. (ENGG.PHYSICS AND INSTRUMENTATION) IV SEM (CBCS) EXAMS, JULY 2024
ELECTRONIC AND PROCESS INSTRUMENTATION
PAPER - III

Time: 3 Hours]   [Max. Marks: 80

SECTION - A (4 X 5 = 20 Marks)

1. **Answer ALL Questions**

    (a) What are active and passive transducers? Explain with examples.

    (b) What are Data loggers? What do you mean by compact data logger.

    (c) Give the classification of Temperature measurement systems.

    (d) Describe the measurement of force by Hydraulic flow meters.

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

2. (a) Distinguish between static characteristics and dynamic characteristics. Discuss the frequency response of second order system.

(OR)

    (b) Discuss the strain gauge principle and working. Draw the diagram of LVDT and explain its principle and its applications.

3. (a) Explain the need of digital instruments and their applications. Explain the working of Frequency meter.

(OR)

    (b) What do you mean by data acquisition systems? What their objectives. Explain signal conditioning of the inputs.

4. (a) What is thermocouple? Explain the measurement of temperature by Bi-metal and Industrial resistance thermometer.

(OR)

    (b) Mention different types of Manometers? Describe Bourdon tube gauge and Mcleod gauge for pressure measurement.

5. (a) Briefly explain the working of the Ultrasonic flow meter and Electromagnetic flow meter.

(OR)

    (b) What are Pneumatic load cells? Explain electric force measurement system in detail.

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FACULTY OF SCIENCE
M. Sc. (PHYSICS) IV SEMESTER (CBCS) EXAMINATIONS JULY 2024
MAGNETISM AND SUPERCONDUCTIVITY
(SOLID STATE PHYSICS SPECIAL)
PAPER - III

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

SECTION – A (4 × 5 = 20 Marks)

1. **Answer ALL the following**

   a. Discuss the magneto caloric effect.
   b. Explainthe following terms briefly
      i) Hesterisis
      ii) Coercivity
      iii) Remanence
   c. Explain the Gibbs free energy of the normal and superconducting state.
   d. Describe the Josephson effect underlaying SQUID. Discuss applications of SQUID.

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

2. a) Obtain an expression for diamagnetism susceptibility using the Langevin's theory. What is the significance of negative susceptibility.

   (OR)

   b) Obtain thermodynamic relations between M, H, T and S and then discuss the magnetocaloric effect of the production of low temperatures.

3. a) Explain the classical molecular field theory of ferromagnetic materials in detail.

   (OR)

   b) State and explain the classical molecular field theory of Anti-ferromagnetism in detail.

4. a) Explain about Energy gap, Isotope effect, Entropy, thermal conductivity and effect of magnetic field of super conductors.

   (OR)

   b) What is the Meissner effect and explain the difference between Type-I and Type-II superconductors using the Meissner effect.

5. a) Explain Josephson tunneling and discuss AC and DC Josephson effect in detail.

   (OR)

   b) What are high temperature superconductors (HTSC)? Compare the main properties of HTSC with those of conventional superconductors. And give some applications of HTSC.

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FACULTY OF SCIENCES
M. Sc (PHYSICS) IV SEMESTER (CBCS R-16) EXAMINATIONS JULY 2024
EMBEDDED SYSTEMS AND ITS APPLICATIONS
(ELECTRONICS SPECIAL)
PAPER - III

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

SECTION - A (4 X 5 = 20 Marks)

1   **Answer ALL Questions**

A   Explain the flag bits and PSW register of **8051.**

B   What are the Jump and Call instructions of **8051?** Explain.

C   Write a short note on I/O ports of **PIC 16F8XX** Flash Micro Controller.

D   Explain in brief about **PID** Controllers

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

2   A   Explain in detail about the Architecture of the **8051 micro controller**,

OR

B   Discuss about the Addressing Modes of the **8051 micro controller.**

3   A   Discuss the arithmetic instructions of **8051** with suitable example

OR

B   Explain in detail about Rotate and Swap instructions of **8051** with Examples

4   A   Describe pin diagram and Registers of **PIC 16C61/C71**

OR

B   Explain the Registers, interrupts and I/O Ports of **PIC 16F8XX Flash Microcontrollers.**

5   A   Discuss the interfacing of ADC and DAC with **89C51**

OR

B   Explain in detail about Stepper Motor

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FACULTY OF SCIENCE
M. Sc (CHEMISTRY) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024
MEDICINAL INORGANIC CHEMISTRY
(INORGANIC CHEMISTRY SPECIAL)
PAPER - III

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

SECTION – A (4 X 5 = 20 Marks)

1. **Answer ALL questions**
   a) Explain in detail about the mode of action of Cisplatin(cisPt$(NH_3)_2Cl_2$).

   b) Write about the metallothionens in detoxification.

   c) Discuss Photo physics and Photochemistry of Ru(II) Polypyridyl complexes.

   d) Write in brief the structural and chemical properties of Streptonigrin and its metal complexes.

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

2. a) Write about the potential binding site on nucleic acids and their bases and proteins.

   b) Discuss briefly binding of organic inter calators and transition metal complexes of DNA as donor and acceptor pairs

(OR)

   c) Write a short note on Non-classical platinum antitumor agents.

   d) Write about DNA binding unwinding shortening and bending of the double helix.

3. a) Write in brief about (i) Antiviral chemotherapy (ii) Metal peptide interactions

   b) Write about gold containing drugs used in the therapy of Rheumatoid arthritis

(OR)

   c) Explain the role of Copper histidine in the treatment of Menkes disease.

   d) Discuss the role of metal ions in the action of antibiotics with suitable examples.

4. a) Write a short note on (i) Foot printing (ii) Chemical probing

   b) Write about the mechanistic aspects of attack on DNA by Ethyl nitrosourea and Phenanthroline metal complexes

(OR)

   c) What is Photochemical probing? Explain the use of Psoralens and acridines as Photochemical Probes.

   d) Write about ligand dissociation and Photo active metal complexes.

5. a) Explain the DNA binding by inter calation with

   (i) Anti trypanosomal drugs (ii) Anti tumour drugs

   b) Write a brief a note on anticancer activity of metallocenes.

(OR)

   c) Discuss the DNA interactions and cleavage by Ru(II) and Rh (II) complexes.

   d) Explain the influence of alcohols and amides in drug binding to DNA.

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FACULTY OF SCIENCE
M. Sc (CHEMISTRY) IV SEM (CBCS R-22 NEW & R-16 OLD) EXAMINATIONS, JULY 2024
DRUG SYNTHESIS AND MECHANISM OF ACTION
(ORGANIC CHEMISTRY SPECIAL)
PAPER – III (A)

Time: 3 Hrs]   [Max. Marks: 80

SECTION – A (4 X 5 = 20 Marks)

1. **Answer ALL Questions.**

   a) What is the significance of H^+/K^+ -ATPase inhibitors? Explain with a suitable example

   b) What are DNA Alkylators? Write the structures of Cyclophosphamide and Busulphan.

   c) Write the synthesis of Chlorpromazine.

   d) Define Eutomer, Distomer and eudesmic ratio

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

2. A) Write the synthesis of (i) Pencillin-G (ii) Sulfamethoxazole (iii) Dapsone

   OR

   B) Discuss about the mechanism of action of (i) β-lactam antibiotics   (ii) sulphonamides

3. A) (i) Explain the mechanism of action of Drugs acting on DNA-Binding and nicking Agents

   (ii) Write the synthesis of Ofloxacin and Acyclovir

   OR

   B) Give the synthesis of any two DNA-intercalating agents and explain their mechanism of action.

4. A) Discuss in detail about β-Adrenergic-receptor - agonists and antagonists and outline the synthesis of Salbutamol, Terbutaline and Propranolol

   OR

   B) What are Ion channels? Formulate the synthesis of Nifedipine and Tetracine and mention the pharmacological activity of Ca^{+2} ion channel inhibitors.

5. A) Explain (i) Distomers with no side effects (ii) Metabolic chirality inversion with suitable example.

   OR

   B) (i) Discuss three point contact model with suitable example

   (ii) Outline the synthesis of (+)Lomefloxacin and S,S.- Captopril

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FACULTY OF SCIENCE
M. Sc (CHEMISTRY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
(PHYSICAL CHEMISTRY SPECIAL)
COMPUTATIONAL CHEMISTRY, MATERIAL SCIENCE AND LASERS IN CHEMISTRY
PAPER - III

Time: 3 Hrs]   [Max. Marks: 80

SECTION – A (4 X 5 = 20 Marks)

1. **Answer ALL the questions.**

   a) State and explain Antisymmetry Principle.

   b) What are bonding potentials? Explain with equations.

   c) Write a note on Glassy state.

   d) Write a note on three-level and four-level laser systems.

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

2. A) Explain the Hartree-Fock equation and explain each term in it detail.

    (OR)

    B) Explain the principle in Density Function Theory and Hohenberg-Kohn Theorem.

3. A) Explain the Corey-Pauling rules for protein stabilization interactions.

    (OR)

    B) Write notes on i) Protein folding problem ii) Non bonding potentials with equations
       iii) Conformational entropy

4. A) Write a note on particle reinforced and fibre reinforced composites.

    (OR)

    B) Write any three methods of preparation of solid state materials.

5. A) Explain the following. i) Solid state lasers ii) Gas lasers iii) Chemical lasers with examples.

    (OR)

    B) Explain the principle underlying multiphoton spectroscopy and Two- photon spectra of diphenyl
       octatetraene molecule.

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FACULTY OF COMMERCE
M.COM (GEN & FA) IV SEM (CBCS NEW & OLD) EXAMINATIONS JULY 2024
FINANCIAL DERIVATIVES
PAPER – III (A)

Time: 3 Hours]   [Max. Marks: 80

SECTION - A (5 X 4 = 20 Marks)

1.   Answer ALL the following questions

a) What do you mean by Risk?

b) Continuous Compounding

c) How to calculate the Time value of an option?

d) What do you mean by commodity swap?

e) Securities Contract (Regulation) Act - 1956

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

2. a) Define the term financial derivative. What are the features? Explain

OR

   b) Discuss about major players in the derivative market.

3. a) What is Forward and Futures Contract and discuss the differences between them?

OR

   b) Determine the futures price from the following data:

Spot price of the commodity	= 1,80,000
Storage cost	=5% p.a. of spot price
Insurance cost	=5% p.a. of spot price
Transportation cost	= 4% fixed
Finance cost	= 12% p.a.
Carry period	= 6 months

   Use cost – of – carry model.

4. a) What is an option in the language of derivatives? Discuss the features of an option.

OR

   b) Find the value of a one year option from the following data:

Type of option	: Call option
Style of option	: European
Current Stock price (Rs.)	: 150
Exercise Price (Rs.)	: 160
Up factor (u)	: 20%
Down factor (d)	: 10%
Option Period	: one Year
Risk free interest rate	: 9%

   Use replacing portfolio strategy of Binomial Model.

5. a) Discuss various advantages and disadvantages of Swap contracts.

OR

   b) What is currency swap? Discuss the types of currency swaps with suitable examples.

6. a) What is Securities Exchange Board of India? Explain its role in derivative market.

OR

   b) Discuss various recommendations of J.R. Varma Committee on derivatives trading in India.

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FACULTY OF COMMERCE
M.Com. (GEN) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024
ADVANCED COST ACCOUNTING & CONTROL
SPECIALIZATION: ACCOUNTING
PAPER – III (B)

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

SECTION - A (5 X 4 = 20 Marks)

1.   **Answer ALL the questions**
   a) Cost drivers and Cost pools.
   b) What is Boiler house costing?
   c) Uniform Costing
   d) What is Cost audit?
   e) Transfer Pricing.

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

2.   a) Explain Characteristics and steps in Activity based costing system.

(OR)

b) A company manufacturing two products furnishes the following data for a year.

Product	Output(units)	Machine hours	Purchase orders	Set-ups
A	5000	20000	160	20
B	60000	120000	384	44

The annual overheads are Volume related activity cost 5,50,000, Set-up related cost 8,20,000 Purchase related costs 6,18000. You are required to calculate the cost per unit of each product A and B based on A) Traditional method B) Activity based costing method

3.   a) What is Hospital Costing? Explain the procedure to record costs in hospital costing.

(OR)

b) Mr.Rahul has started transport business with a fleet of 10 taxis. The various expenses incurred by him are Cost of each Taxi Rs.75,000, Salary of Office staff Rs.1,500. p.m, Salary of garage staff Rs.2,000. p.m, Rent of garage Rs.1,000, Drivers salary (per taxi) Rs.400. p.m, Road Tax and Repairs per taxi Rs.2,160. p.a., Insurance premium @ 4% of cost p.a.

   The life of a taxi is Rs.3,00,000 km. and at the end of which it is estimated to be sold at Rs.15,000. A taxi runs on an average 4,000 km. per litre of petrol costing Rs.6.30 per litre. Oil and other sundry expenses amount to Rs.10 per 100 km. Calculate the effective cost of running a taxi per kilometre. If the hire charge is Rs.1.80 per kilometre, find out the profit Mr. Rahul may expect to make in the first year of operation.

4.   a) Briefly discuss the scope and objectives of uniform costing.

(OR)

b) What is Inter-firm comparison? Explain the procedure of inter-firm comparison.

5.   a) What are the objectives and importance of Cost audit?

(OR)

b) What is Cost control? Explain various tools and techniques of cost control.

6.   a) Discuss the objectives, methods and benefits of transfer pricing.

(OR)

b) What is cost reporting? Explain various forms of cost reporting.

★★★★★

FACULTY OF COMMERCE
M.COM. (GEN) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024
BANKING OPERATIONS AND PROCEDURES
(SPECIALISATION: BANKING & INSURANCE)
PAPER - III

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

SECTION - A (5 X 4 = 20 Marks)

1.   **Answer ALL the questions**

   a) Leasing.

   b) Garnishee order.

   c) Fixed deposit account.

   d) Trustee.

   e) Cheque.

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

2.   a) What is Merchant Banking? Explain qualities and services of Merchant Bankers.

   (OR)

   b) What is Mutual fund? Discuss various merits and problems of mutual funds.

3.   a) Explain the liabilities of banker in case of wrongful dishonour of cheque.

   (OR)

   b) Discuss the baker's rights of general lien, right of set and right of appropriation.

4.   a) What is bank account? Explain various types of bank accounts.

   (OR)

   b) Explain about deposit scheme for Indians abroad and non-residence account scheme.

5.   a) Explain various special types of bank customers..

   (OR)

   b) What are the legal provisions regarding guardianship of a minor?

6.   a) What is Bill of Exchange? Explain various legal provisions in issue of bills.

   (OR)

   b) Give an account of law relating to Negotiable instruments.

★★★★★

FACULTY OF COMMERCE
M.Com (CA) IV SEM (CBCS R-22 NEW & R-16 OLD) EXAMINATIONS JULY 2024
RELATIONAL DATA BASE MANAGEMENT SYSTEMS
PAPER – III

TIME: 3 HRS]   [MAX. MARKS: 80
SECTION - A (5 X 4 = 20 Marks)

1) **Answer ALL the following questions**

    a) Write about Data Vs Information.

    b) What do you understand by Data Modeling?

    c) What is Relational Model?

    d) What do you understand by Relational Database Language?

    e) What is Transaction processing concept?

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

2. a) What is Database? Describe the characteristics of Database Approach.

                                        OR

    b) Explain in detail Data Models, Schemas and Instances.

3. a) What is Entity Relationship Model ? Explain its types and attributes.

                                        OR

    b) Draw E-R Diagram of college system. The college keeps the data of Students, Employees, Books.

4. a) What is Relational Model ? Explain Attributes & Domain.

.   **OR**

    b) Define normalization? What are the steps in normalization? What are the advantages of normalized relation over un normalized relation?

5. a) Write SQL queries to implement aggregate functions by using student database?

                                          OR

    b) Explain the procedure of sorting and grouping in SQL

6. a) Define transaction and explain desirable properties of transactions.

                                        OR

    b) Explain the time stamp based protocol for concurrency control in a DBMS.

★★★★★

FACULTY OF ARTS

M.A. (ENGLISH) IV SEMESTER (CBCS-NEW) EXAMINATIONS JULY 2024

ACADEMIC WRITING AND RESEARCH METHODOLOGY

PAPER - IV (A)

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

SECTION-A (4 X 5 = 20 Marks)

1   **Answer ALL the following questions**

A   Mechanics of Writing

B   Note-Taking

C   Plagiarism

D   Research Article

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

2   A   What are the factors influencing Effective Wring? Explain in detail.

OR

B   Discuss the features of Academic Writing?

3   A   What are Study Skills? What are the different types of Study Skills?

OR

B   Define Essay? What is the difference between descriptive writing and narrative writing?

4   A   What are the criteria of Good Research? Discuss.

OR

B   What is Research Design? What are the different components of Research Design?

5   A   Write an essay on preparing an outline of a thesis?

OR

B   Write an essay on APA Style documentation format?

★★★★★

FACULTY OF ARTS
M.A. (ENGLISH) IV SEM (CBCS-NEW) EXAMINATIONS JULY 2024
FOURTH WORLD LITERATURE
PAPER - IV (B)

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

SECTION-A (4 X 5 = 20 Marks)

1   **Answer ALL the following questions**

  A   What does the title *Upara* mean?

  B   Write a short note on the character Abel in Scott Momaday's *House Made of Dawn?*

  C   What is the significance of the title *Half Breed?*

  D   What is the main idea of the poem *My People?*

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

2 A *Upara* gives an account of the author's struggle in life? Explain.

OR

  B Sivakami's *The Grip of Change* portrays the story of women who suffer at the hands of men? Discuss.

3 A Comment on the use of symbolism in Scott Momaday's *House Made of Dawn?*

OR

  B Discuss the importance of story-telling in *Ceremony?*

4 A Write an essay on the theme of Racism in *Campbell's Half Breed?*

OR

  B *Green Grass, Running Water* is the reflection of distinctive features between native and western realities? Discuss.

5 A Attempt a critical appreciation of Oodgeroo Noonuccal (Kath Walker) *We are Going?*

OR

  B Write an essay on Harley's identity crisis in Kim Scott's *Benang?*

★★★★★

FACULTY OF ARTS
M.A (TELUGU)   IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
ప్రాంతీయ అధ్యయనం - తెలంగాణ తెలుగు సాహిత్యం

పేపర్ - IV (A)

సమయం: 3 గంటలు]   [గరిష్ట మార్కులు : 80

సెక్షన్ - ఎ (4 X 5 = 20 మార్కులు)

1   ఈ క్రింది వానిపై లఘు వ్యాఖ్య వ్రాయండి

  ఎ   తెలంగాణ శబ్ద వ్యుత్పత్తి, మూలాలు

  బి   పరశురామలింగమూర్తి

  సి   మాడపాటి హనుమంతరావు

  డి   మాండలిక పదకోశాలు

సెక్షన్ – బి (4 X 15 = 60 మార్కులు)

అన్ని ప్రశ్నలకు సమాధానాలు వ్రాయండి

2   ఎ   తెలంగాణలో తెలుగు పత్రికల ఆరంభ వికాసాలను పరిచయం చేయండి.

         లేదా

  బి   తెలంగాణలో సాహిత్య పునరుజ్జీవనం జరిగిన రీతిని విశ్లేషించండి

3   ఎ   తెలంగాణలో శైవ భక్తిఉద్యమ ఆరంభ వికాసాలను చర్చించండి

         లేదా

  బి   తెలంగాణలో అచ్చతెలుగు కావ్యవికాసాన్ని వివరించండి

4   ఎ   తెలంగాణలో ఆదునిక తెలుగు సాహిత్యవికాసానికి దేవులపల్లి వేసిన మార్గాన్ని చర్చించండి

         లేదా

  బి   చేతనావర్త కవులను పరిచయం చేయండి

5   ఎ   తెలంగాణలో మాండలికాలపై రవ్వశహరి పరిశోధనలను సమీక్షించండి

         లేదా

  బి   తెలంగాణలో చారిత్రక నాటకాల వికాసాన్ని సమీక్షించండి

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FACULTY OF ARTS

M.A (Urdu) IV Semester Examination (CBCS)

چوتھا پرچہ اختیاری **Elective Paper - IV (A)**

(Khawateen Ka Adab) خواتین کا ادب

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

Section - A

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

١.   خواتین کی فلاح و بہبود کے سلسلے میں راجہ رام موہن رائے کی خدمات پر روشنی ڈالیے۔

٢.   صغرا ہمایوں مرزا کی ادبی خدمات پر مختصر نوٹ لکھیے۔

٣.   جیلانی بانو کے افسانے ''پرایا گھر'' کے مرکزی خیال کی وضاحت کیجیے۔

٤.   مغرب میں نسائی تحریک کی علمبردار سیمون دی بوائر پر اختصار یہ تحریر کیجیے۔

Section - B

(4 x 15 = 60)   نوٹ: تمام سوالات حل کیے جائیں۔ ہر سوال کے پندرہ نشانات مختص ہیں۔ ہر سوال کا جواب چار صفحات سے زیادہ نہ ہو۔

٥.   (A)   قدیم ہندوستان میں عورتوں کی سماجی حیثیت کا جائزہ لیجیے۔   یا

          (B)   خواتین کی بھلائی اور بیداری کے لیے جد و جہد کرنے والے مصلحین کا تذکرہ کیجیے۔

٦.   (A)   لطف النساء امتیاز اور مہ لقا بائی چندا کی ادبی خدمات کا جائزہ لیجیے۔   یا

          (B)   اردو کی اولین ناول نگار خواتین کا تعارف کرائیے۔

٧.   (A)   پروین شاکر کی شاعری میں نسائی حیثیت پر اظہار خیال کیجیے۔   یا

          (B)   خاتون فکشن نگاروں میں قرۃ العین حیدر کے مقام کا تعین کیجیے۔

٨.   (A)   عصمت چغتائی کی تحریروں میں احتجاجی رویے کی شناخت کیجیے۔   یا

          (B)   آزادی کے بعد ابھرنے والی اردو کی اہم احتجاجی شاعرات کا تعارف کرائیے۔

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FACULTY OF SOCIAL SCIENCES
M. A. (ECONOMICS) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024
LABOUR ECONOMICS
PAPER - IV(A)

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

SECTION-A (4 X 5 = 20 Marks)

1   **Answer ALL the questions**

a   Occupational distribution of labour in India.

b   Concept of Unemployment.

c   Fair wage rate.

d   Structure of labour Unions.

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

2   A   What is labour force? Explain its characteristics and limitations with reference to India.

OR

B   Discuss the various problems faced by labour in unorganized sector

3   A   Distinguish between between Growth and Employment.

OR

B   Analyze the Impact of employment generation programs to creating self employment in India.

4   A   Examine the various wage determination theories.

OR

B   Explain the Implementation of minimum wage legislation in India and its challenges.

5   A   State the Causes of industrial disputes India and analyze its settlements.

OR

B   What meant by Collective bargaining? Explain its advantages.

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FACULTY OF SOCIAL SCIENCES
M. A (SOCIOLOGY) IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS JULY 2024
SCIENCE, TECHNOLOGY AND SOCIETY
PAPER – IV (A)

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

SECTION - A (4 X 5 = 20 Marks)

1   **Answer ALL the questions**

A   Social Context of Technological Change

B   Inductivism and Falsification

C   Ben Divid'sInstitutional Perspective

D   Fields of Nanotechnology

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

2   A   Write a comprehensive description of historical and social context of scientific knowledge.

OR

B   Delineate the interface between science, technology and social change.

3   A   Elaborate about sociological perspectiveson scientific practice with examples.

OR

B   Analyse the contribution of Karl Mannheim to the development of sociology of knowledge.

4   A   Delve deeper into the context of paradigm shift with apt illustrations.

OR

B   Highlight Diane Krane's Communication and International Model used in sociology of science.

5   A   How does Information Technology Paradigm form network societies? Discuss

OR

B   "The focus of Biotechnology has been shifted from development and sustainable development" – Substantiate

★★★★★

FACULTY OF SOCIAL SCIENCES
M. A (SOCIOLOGY) IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS, JULY 2024
SOCIAL MOVEMENTS IN INDIA
PAPER - IV(B)

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

SECTION - A (4 X 5 = 20 Marks)

1   **Answer ALL the questions**

a   Reform Movements

b   Arya Samaj

c   Bharatiya Kisan Sammelan

d   Chipko Movement

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

2   A   Define Social Movements and discuss any two prominent Environmental movements in India

OR

    B   What are the primary goals of women's movements in India?

3   A   What is the historical back ground of Sati? Describe the importance of Anti Sati movement

OR

    B   What do you mean by radical movements? How they differ from reform movements?

4   A   Give a brief History of Telangana movement and what were the main causes of the Telangana Armed Struggle?

OR

    B   Explain the primary demands of the peasant movements in India?

5   A   Define Regional Movement and describe the Anti Arrack movement in Andhra Pradesh

OR

    B   Write an essay on Narmada Bachao movement and the influence on making Social policy.

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FACULTY OF SOCIAL SCIENCES
M.A. (SOCIOLOGY) IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS JULY 2024
POLITICAL SOCIOLOGY
PAPER – IV (C)

Time: 3 Hours]   [Max. Marks: 80

SECTION – A (4 X 5 = 20 Marks)

1.   Answer ALL Questions

   a. Scope of Political Sociology

   b. Power and Authrity

   c. Civil Society

   d. Voting behaviour

SECTION – B (4 X 15 = 60 Marks)

Answer ALL Questions

2. a) Define Political Sociology and discuss its meaning and nature in detail.

OR

   b) Discuss the concept of Conflict in Political Sociology.

3. a) What is Welfare State? Examine the role of Welfare State in Modern Nations.

OR

   b) Define Class and how does it influence the Society and voting behaviour.

4. a) Elaborate on political reservations in current Electoral politics and how do they influence the participation of weaker sections in politics?

OR

   b) Discuss the impact of the Panchayat Raj System in India with brief historical background.

5. a) Define civil society and discuss the welfare state in modern nation-states .

OR

   b) What do you understand by State control? Examine the institutional autonomy in detail.

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FACULTY OF SOCIAL SCIENCES
M.S.W IV SEMESTER (CBCS R-21 NEW & R-16 OLD) EXAMINATIONS JULY 2024
RURAL AND TRIBAL COMMUNITY DEVELOPMENT –II
PAPER – IV (A)

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

SECTION – A (4 X 5= 20 MARKS)

1. **Answer ALL the following questions**

    a) Objectives of micro-finance.

    b) Objectives of SHG

    c) Concept of Watershed.

    d) Community Forest management.

SECTION – B (4 X 15 = 60 MARKS)

Answer ALL Questions

2. (a) Briefly explain the history of the SHG movement in India and discuss the present problems faced by the SHG with suitable examples.

OR

    (b) What is the microfinance? Discuss how it helps the empowerment of women through microfinance in the present scenario.

3. (a) Give a detailed description, steps, and components of the process of watershed management with suitable examples.

OR

    (b) Explain the criteria for the selection of watershed and its planning at the community level with community participation.

4. (a) Elucidate constitutional provisions for tribal community development and its importance in five-year plans.

OR

    (b) Explain the concept of VSS and briefly discuss the rights, and duties of VSS members.

5. (a) Discuss the constitutional provisions for a weaker section and explain the role of the professional social worker in weaker section development.

OR

    (b) Discuss the NRM strategy and explain the role and importance of people's participation in NRM.

★★★★★

FACULTY OF SOCIAL SCIENCES
M. S. W IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS JULY 2024
MEDICAL SOCIAL WORK & COMMUNITY HEALTH - II
PAPER - IV (B)

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

SECTION – A (4 X 5 = 20 Marks)

1. **Answer ALL the following questions**

   a) Healthcare Management

   b) Balanced Diet

   c) Rehabilitation

   d) Epidemics

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

2. (a) How do you justify that nutrition is very important for overall health protection and describe the policies and services available in Telangana?

OR

   (b) Give a detailed features and drawbacks account of the National Nutritional Policy 1993.

3. (a) Explain the role of Professional Social Work in the field of Disability Settings.

OR

   (b) Explain the concept of Community-based rehabilitation, its Need, significance, and scope.

4. (a) Define the outbreak of epidemics, mention some of the significant outbreaks of epidemics of India also highlight measures to be taken for prevention.

OR

   (b) Elaborate the role of Professional Social Work in the field of health care management.

5. (a) What measures would be suggested for eradication of social stigma amongthe HIV/AIDS infected?

OR

   (b) Chronolise the risk assessment process in health care management.

★★★★★

FACULTY OF SCIENCE
M. Sc. (BOTANY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
BIOFERTILIZERS AND ORGANIC FARMING
PAPER – IV (A)

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

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

 a   Microbial succession

 b   *Frankia*

 c   Trough – Method Cultivation

 d   AM fungi

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

2   A   Discuss on the importance of plant growth promoting rhizobacteria (PGPR) and fungi in plant nutrition

OR

 B   Describe the role of biofertilizers in reclamation of soils

3   A   Explain the method of isolation and mass cultivation of *Azotobacter*

OR

 B   Write a detailed account on phosphate solubilizing bacteria

4   A   Discuss the role of BGA in nitrogen fixation

OR

 B   Write on the role of *Azolla* and *Anabaena* in rice fields

5   A   Discuss on the production and inoculation of bioinoculants

OR

 B   Write about different plant growth promoting fungi. Add a note on *Trichoderma*

★★★★★

FACULTY OF SCIENCE
M. Sc (COMP SCI) IV SEMESTER (CBCS R-19) EXAMINATIONS JULY 2024
MOBILE COMPUTING
PAPER - IV

TIME: 3 HRS] [MAX. MARKS: 80

SECTION - A (4 X 5 = 20 Marks)

1 **Answer ALL the questions**

a Define Mobile Computing.

b Write a short note on Bluetooth.

c Explain briefly about Wireless Networks.

d Define File Systems.

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

2 A Explain in detail about Wireless Transmission.

OR

B Write a detailed note on Specialized MAC and SDMA.

3 A Discuss in detail about Wireless LAN Infrastructure and Ad-hoc Networks.

OR

B Explain in detail about IEEE 802.11.

4 A Discuss in detail about Mobile IP.

OR

B Write a detailed note on Traditional TCP.

5 A Discuss in detail about WAP 2.0

OR

B What is WWW? Explain in detail.

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FACULTY OF SCIENCE
M. Sc. (MICROBIOLOGY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
APPLIED MICROBIOLOGY
PAPER - IV

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

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

   a   EMP pathway

   b   Lipases

   c   Charcoal rot

   d   Nanofluidics

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

2   A   Explain the detail account on aerobic and anaerobic respiration.

OR

   B   Give a detail account on strain improvement strategies for fermentation technology.

3   A   Write a detailed account on production of bioemulsifiers.

OR

   B   Describe the immunological based assays.

4   A   Explain the diseases caused by *Sclerotium rolfsii*.

OR

   B   Give a detail account on disease caused by pest: *Helicoverpaarmigera*.

5   A   Explain the concept of nanoparticular carrier systems.

OR

   B   Describe the nanomedicine and cancer diagnostics.

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FACULTY OF SCIENCE
M. Sc (ZOOLOGY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
ENTOMOLOGY
PAPER - IV

TIME: 3 HRS]   [MAX. MARKS: 80

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

a   Insect thorax and its appendages

b   Haemocytes types and functions.

c   Role of arthropods in Forensic.

d   Structure of sound organs and significance.

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

2   A   Explain the characters, origin and evolution of insects.

OR

B   Write the classification of insects up to family with suitable examples.

3   A   Describe the types of tracheal system, and respiration in aquatic, parasitic insects.

OR

B   Illustrate the excretory system and sense organs of insects.

4   A   Give an account on history of sericulture and rearing technology of mulberry silkworm.

OR

B   Write the Taxonomy, distribution and life history of Lac insect.

5   A   Explain insect feeding behaviour, types of feeding and damages.

OR

B   What is bioluminescence? Write the mechanism of light production and its significance

★★★★★

FACULTY OF SCIENCE
M. Sc (STATISTICS) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
ADVANCED OPERATIONS RESEARCH
PAPER – IV (B)

TIME: 3 HRS]   [MAX. MARKS: 80

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions**

a   What is a separable programming problem?

b   Explain the formulation of objective function of a Goal programming problem?

c   Explain the criteria of pessimism in decision analysis?

d   What is a replacement policy? Explain with suitable example.

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

2   A   Derive the necessary and sufficient conditions for the optimality of a non-linear programming problem?

OR

B   Write Wolfs algorithm to find the optimal solution to the given quadratic problem?

3   A   Write the dynamic programming methodto find the optimal solution to the knapsack problem. Illustrate with an example.

OR

B   Explain formulation of linear Goal Programming Problem. How it can be solvedby graphical method?

4   A   Explain in detail the various decision criterion under uncertainty?

OR

B   What is a linear fractional programming problem? Write its applications?

5   A   Explain in detail about perishable inventory models when demand in uniform, withand without shortages, where the units are discrete and continuous

OR

B   Obtain the S-S policy for inventory when the demand is in exponential?

★★★★★

FACULTY OF SCIENCE
M.Sc. (MATHEMATICS) I SEM (CBCS R-22 NEW) EXAMINATIONS JULY 2024
CALCULUS OF VARIATIONS
PAPER – IV (A)

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

SECTION - A (4 X 5 =20 Marks)

1   **Answer ALL the questions.**

a   Write about isoperimetric problem.

b   On what curves can the functional $v[y(x)] = \int_0^{\frac{\pi}{2}}[(y')^2 - y^2]dx; y(0) = 0,\ y\left(\frac{\pi}{2}\right) = 1$ be extremized?

c   Find the extremals of the functional $v[y(x), z(x)] = \int_{x_0}^{x_1} F(y', z')dx.$

d   Write the Legendre Test for Extremum.

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

2   A   Find solution of Euler's equation in all the cases.

OR

B   Prove that the shortest distance between two points in a plane is a straight line.

3   A   State and prove the fundamental lemma of the calculus of variations

OR

B   (i). Test for an extremum of the functional
$v[y(x)] = \int_0^1 (xy + y^2 - 2y^2 y')dx;\quad y(0) = 1, y(1) = 2.$
(ii). Find the extremals of the functional $v[y(x)] = \int_{x_0}^{x_1} y'(1 + x^2 y')dx.$

4   A   Find the extremals of the functional
$v[y(x), z(x)] = \int_0^{\frac{\pi}{2}}\{(y')^2 + (z')^2 + 2yz\}dx;\quad y(0) = 0, y\left(\frac{\pi}{2}\right) = 1, z(0) = 0, z\left(\frac{\pi}{2}\right) = -1.$

OR

B   Determine the extremal of the functional $v[y(x)] = \int_{-l}^{l}\left(\frac{1}{2}\mu y''^2 + \rho y\right)dx;$ that satisfies the boundary conditions $y(-l) = 0, y'(-l) = 0, y(l) = 0, y'(l) = 0.$

5   A   Derive the differential equation of free vibrations of a string.

OR

B   Draw a second spring and mass hanging from the first. If the masses are m_1, m_2 and the spring constants are c_1, c_2, the energy is
$H = K + P = \frac{1}{2m_1}p_1^2 + \frac{1}{2m_2}p_2^2 + \frac{1}{2}c_1 u_1^2 + \frac{1}{2}c_2(u_2 - u_1)^2.$
Then find the four Hamilton's equations$\frac{dH}{dp_i} = \frac{du_i}{dt}, \frac{dH}{du_i} = -\frac{dp_i}{dt}$ and the matrix equation $Mu'' + Ku = 0.$
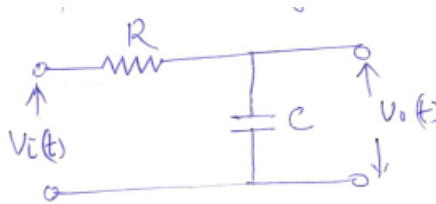
★★★★★

FACULTY OF SCIENCE
M. Sc. (ENGG.PHYSICS & INSTR.) IV SEMESTER (CBCS) EXAMINATIONS, JULY 2024
PROCESS AND FEEDBACK CONTROL SYSTEMS
PAPER – IV (A)

[Max. Marks: 80

Time: 3 Hours]

SECTION –A (4X5=20 Marks)
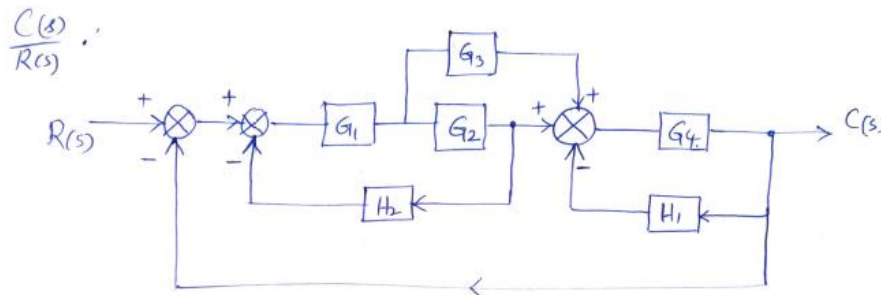
1. **Answer the following**

   a) Distinguish between open loop control system and closed loop control system.

   b) Explain frequency response of Proportional - Integral controller.

   c) Obtain the transfer function of

   d) Describe the procedure for investigating the stability using Nyquit's criterion.

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

2. a) Obtain general equation for the transient response. Discuss proportional control of a two capacity process.
   (OR)
   b) Discuss how the stability depends on (i) on-off control (ii) Derivative control (iii) proportional control

3. a) Discuss the frequency response of proportional derivative controller. Discuss its advantages and disadvantages of proportional- integral and proportional derivative controller.
   (OR)
   b) Discuss the effect of change in set point and change in load on the frequency response of closed loop system.

4. a) Reduce the block diagram to obtain the transfer function of $\frac{C(s)}{R(s)}$.

   (OR)

   b) Sketch the root locus plot for the system whose open loop transfer function is given by

   $$G(S)H(S) = \frac{K}{S(S + 1)(S + 3)(S + 4)}$$

5. a) Give the procedure for constructing polar plot. Sketch the polar plot of the transfer function

   $$G(S) = \frac{6}{(S+1)(S+2)}$$

   (OR)

   b) Explain the pulse transfer function and inverse pulse transfer function. Discuss the response of linear discrete systems.

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FACULTY OF SCIENCE
M.Sc. (PHYSICS) IV SEMESTER (CBCS) EXAMINATIONS JULY 2024
MATERIALS AND CHARACTERISATION TECHNIQUES
(SOLID STATE PHYSICS SPECIAL)
PAPER – IV (A)

Time: 3 Hours]   [Max. Marks: 80

SECTION – A (4 × 5 = 20 Marks)

1. **Answer ALL the following**

    a. Define ferroelectricity and explain its significance.

    b. Explain about the crystallinity of polymers.

    c. What is composite material and what is the reinforcement in a composite?

    d. Distinguish between SEM and TEM.

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

2. a) Discuss the structural classifications of ferroelectric materials.

(OR)

b) Discuss about the ferroelectric domain theory and list out the applications of ferroelectric materials.

3. a) Describe the thermoplastic and thermosetting polymers and explain the mechanical behavior of polymers.

(OR)

b) Discuss the classification of ceramic materials and its applications.

4. a) Describe the LargeParticle composites and Dispersion – strengthened composites.

(OR)

b) Explain the following terms each in detail

        i) Polymer-Matrix Composites ii) Metal-Matrix Composites

        iii) Ceramic-Matrix Composites   and iv) Carbon-Corban composites.

5. a) Discuss about the Atomic Force Microscopy (AFM) and Magnetic Force Microscopy (MFM) techniques in characterizing the material with neat diagram.

(OR)

b) Explain Bragg's law and describe the importance of X-ray powder diffractometry (XRD) and its applications

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FACULTY OF SCIENCES
M. Sc (PHYSICS) IV SEMESTER (CBCS R-16) EXAMINATIONS JULY 2024
OPTICAL, SATELLITE AND MOBILE COMMUNICATION
(ELECTRONICS SPECIAL)
PAPER – IV (B)

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

SECTION - A (4 X 5 = 20 Marks)

1   **Answer ALL Questions**

A   What are the advantages of optical fiber communication.

B   What are Angle of Inclination and period of satellite?

C   Briefly explain about Domestic satellites.

D   Write a short note on Elements of cellular system design.

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

2   A   Discuss about step index, graded index fibre and derive scalar wave function.

OR

B   Explain the single mode and multimode fibers with its optimum profile. Also explain the first order and second generation optical fiber communication systems.

3   A   Discuss the Azimuth and Elevation in satellite communication.

OR

B   Explain in detail about Telemetry, Command and Control systems.

4   A   Describe in detail about the Antenna sub systems and Receiver sub systems.

OR

B   What is GPS? And Discuss about the Space segment of GPS.

5   A   Explain the frequency spectrum allocation and Trunking efficiency of cellular mobile system.

OR

B   Discuss the hand off mechanism of a mobile and explain the various methods in hand off mechanism.

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FACULTY OF SCIENCE
M. Sc (CHEMISTRY) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024
SUPRAMOLECULAR CHEMISTRY, BIO-PHYSICAL METHODS &
MIXED LIGAND COMPLEXES
(INORGANIC CHEMISTRY SPECIAL)
PAPER - IV

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

SECTION – A (4 x 5 = 20 Marks)

1. **Answer ALL questions**

    a) Write about Lariat Ethers and ditopic receptors.

    b) Discuss in detail about the covalent structures of polynucleotides.

    c) Write a note on (i) Flourescence life time (ii) Quantum yield.

    d) Discuss the factors responsible for stabilization of mixed ligand complexes.

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

2. a) What are the general principles involved in molecular recognition.

    b) Describe multi step – Host guest complexation and corresponding thermodynamics

(OR)

    c) Discuss the conformational coupling between binding sites based on co-operativity and allosteric effects.

    d) Write a short note on Macrocyclic effect,Cryptate and chelate effects with suitable examples.

3. a) Discuss in detail about the role and importance of metal ions in genetic regulation.

    b) Describe the determination of primary structures of nucleic acids DNA and RNA.

(OR)

    c) Draw the Structure of B, A and Z forms of DNA and explain in detail about them.

    d) Write a short notes on (i) Recombinant DNA (ii) Denaturation of DNA and iii) Helix coil transition

4. a) Discuss the principle involved in fluorescence spectroscopy?

    b) Discuss the principle and instrumentation of CD and ORD Spectroscopy and explain the use of CD in the conformational analysis of metal complexes.

(OR)

    c) What is fluorescence polarization and polarization spectra of flourophore?

    d) Discuss and differentiate in detail the static dynamic and collisional quenching.

5. a) Write in detail about the non-covalent (hydrophobic) and stacking interactions among mixed ligand complexes.

    b) Discuss the applications of mixed ligand complexes in biological systems and catalysis.

(OR)

    c) What are Ternary and Quaternary mixed ligand complexes? Write a brief note on them.

    d) Explain in detail about the Schiff base information with in the co-ordination Sphere of Mixed ligand complexes.

FACULTY OF SCIENCE
M. Sc (CHEMISTRY) IV SEMESTER (CBCS R-22 N & R-16 O) EXAMINATIONS, JULY 2024
(ORGANIC CHEMISTRY SPECIAL)
ADVANCED NATURAL PRODUCTS
PAPER – IV (A)

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

SECTION – A (4 X 5 = 20 Marks)

1. **Answer ALL Questions.**

   a) Write the Ruzicka Biogenetic rule

   b) Give the evidence as Morphine has phenolic and secondary hydroxyl group in its structure

   c) Discuss the IR, UV, H^1NMR and C^{13}NMR Spectral data of Coumarins.

   d) Outline the Takasago synthesis of Menthol

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

2. A) Explain (i) The difference between the laboratory synthesis and biosynthesis
           (ii) Shikimic acid pathway for biosynthesis of amino acids

   OR

   B) Write the Mevalonic acid pathway for the biosynthesis of terpenes.

3. A) Discuss the Structure elucidation of Reserpine and Quinine

   OR

   B) Outline the structure determination of Abietic acid and Atropine

4. A) Draw the (i) 2D-INADEQUATE of α-picoline (ii) INEPT of Menthol (iii) APT of Apparicine

   OR

   B) Discuss the UV, IR, H^1NMR, C^{13}NMR and mass spectral characteristics of

      (i) flavones (ii) Quinolines (iii) Isoquinolines

5. A) Outline the (i) Synthesis of Reserpine (ii) Hoffmann-LaRoche synthesis of Biotin

   OR

   B) Give the detailed synthesis of (i) Danishefsky's synthesis of Indolizomycin

      (ii) Sharpless synthesis of L-Hexoses

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FACULTY OF SCIENCE
M. Sc (CHEMISTRY) IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
(PHYSICAL CHEMISTRY SPECIAL)
CATALYSIS
PAPER - IV

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

SECTION – A (4 X 5 = 20 Marks)

1. Answer ALL questions.

(a) Explainthe *Waker process of hydrogenation of alkenes*.

(b) What are the factors effecting CMC

(c) Explain cracking and reforming.

(d)Discuss the structure of Montmorillonite` anchored catalysis.

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

2. (a) What are acidity functions,explain the measurement of Hammett acidity function

OR

(b) Discuss the use of Ziegler-Natta catalyst in the polymerization of olefins.

3. (a) Explain electro kinetic phenomina and streaming potential.

OR

(b) What is zeta potential and how it can be determined.

4. (a) Explain the determination of pore volume and pore size distribution by BJH method.

OR

(b) Write the determination of acidity by (i) Indicator method (ii) TPD method

5. (a) Discuss the classification of PTC and explain the role of water in phase transfer catalysed reactions.

OR

(b) What is intercalated clay catalysis? Explain it's application in hydrogenation reactions.

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FACULTY OF COMMERCE
M.COM (GEN & FA) IV SEM (CBCS NEW & OLD) EXAMINATION, JULY 2024
STRATEGIC FINANCIAL MANAGEMENT
PAPER – IV (A)

TIME: 3 HRS] [MAX.MARKS:80

SECTION - A (5 X 4 = 20 Marks)

1   **Answer ALL Questions**

A   What do mean by Strategic Financial Planning?

B   What is Debt Policy?

C   What is Consolidated Balance Sheet

D   What is Economic Value Added Approach?

E   What is Corporate Restructurings?

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

2 A   What do you mean by Strategic Financial Management? Explain the elements of Strategic financial management.

OR

B   Write short note on Rights issue, IPO, Value of Right and Private Placement.

3 A   What is capital structure planning? Describe the estimating financial requirements.

OR

B   ABC Company has currently and ordinary share capital of Rs. 25,00,000 lakhs, consisting of 25,000 shares of 100 each. The management is planning to raise another Rs. 20,00,000 lakhs to finance a major programme for expansion through one of four possible financial plans.

    i.   Entirely through ordinary shares.

    ii.   Rs.10 lakhs through ordinary shares and Rs.10 lakhs through long term borrowings at 80% interest per annum.

    iii.   Rs. Lakhs through ordinary shares and Rs 15 lakhs through long term borrowing at 9 percent interest per annum.

    iv.   Rs. 10 lakhs through ordinary shares and Rs.10 lakhs through preference shares with 5 percent dividend.

The company's expected earnings before interest and taxes (EBIT) will be Rs. 8 lakhs. Assuming a corporate tax rate is 50%, determine the earnings per share in each alternative and comment which alternative is the best and why?.

4 A   What do you mean by mergers and acquisitions? Describe the different types of mergers and acquisitions

OR

B   Coke Ltd taking over Pepsi Ltd. The shareholders of Pepsi Ltd would receive 0.8 of Coke Ltd for each share held by them. The relevant data for two companies are as below:

	Coke Ltd	Pepsi Ltd
Net Sales (Rs. in crores)	335	118
Profit after tax (Rs. in crores)	58	12
No. of Shares (crore)	12	3
EPS (Rs.)	4.83	4
Market value per share (Rs.)	30	20
Price Earning Ratio	6.21	5

For the combined company (after merger) your required to calculate (i) EPS (ii) P/E Ratio (iii) market value per share (iv) number of share.

5 A Explain the various Approaches of Corporate Valuation.

OR

  B From the following information of A ltd company balance sheet and income statement:

Particulars	2023 (Million)	2022 (Million)
Depreciation and Amortization	15	10
Current assets	150	100
Fixed assets	250	200
Accounts payable	30	30
Short term debt	40	30
Long term debt	30	20

The company's net income for the year 2023 is Rs. 100 million. Find out the free cash flow to equity of the firm

6 A Explain in detail Spin off, Split off and Leveraged Buyout.

OR

  B What is Financial Restructuring? Describe the various approaches for Financial Restructuring.

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FACULTY OF COMMERCE
M.COM (GEN) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024
CORPORATE TAX MANAGEMENT
(SPECIALIZATION: ACCOUNTING)
PAPER – IV (B)

Time: 3 Hrs]   [Max. Marks: 80

SECTION – A (5 X 4 = 20 Marks)

1. **Answer ALL questions**

   a. Corporate Tax

   b. Minimum Alternate Tax

   c. Tax Management

   d. Demerged Company

   e. Special Economic Zone (SEZ)

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

2. a) What is company under section 2(17) of the income-tax act? Explain different types of companies for Tax purpose.

   OR

   b) Discuss various exempted and Tax free incomes with special reference to corporate Assessee.

3. a) Discuss in detail provisions of Minimum Alternate Tax u/s 115JB.

   OR

   b) Nizam Sugar Company manufactures and sells sugar. The profit and loss A/c of the company for the year ending 31st March 2023 disclosed profit of Rs.5,50,000 only. This was arrived after debiting following expenses:

   i. Expenses incurred on the cultivation of 2000 quintals of cane-the average market price is Rs.40 per quintal Rs. 20,000

   ii. Pension paid to Mr.Ramu, a retired employee living in Kenya with no income-tax deducted at source Rs. 3500

   iii. Expenses incurred on the salaries and wages of staff involved in the installation of new Machinery Rs. 3000

   iv. Debited to profit and loss A/c for legal expenses incurred on income tax appeal Rs. 20,000

   v. Depreciation Rs. 50,000

   vi. Bad debts, previously written-off and allowed as deduction, recovered in the year but not shown as receipt in profit and loss A/c Rs. 30,000

   vii. Allowable depreciation on new machinery acquired and installed in the month of July, 2022 Rs. 30,000

   Compute total income of company for the assessment year 2023-2024

(Contd.....)

4. a) What do you mean by Tax Planning? Explain the Objectives of Tax Planning.

OR

b) Ashoka Ltd., wants to raise capital of Rs. 40,00,000 for a project where earning before tax shall be 35% of the capital employed. The company can raise funds @12 % p. a. Suggest which of the following 3 alternatives should it opt for:

A) Rs. 40,00,000 to be raised by Equity capital
B) Rs. 32,00,000 by equity capital and Rs.8,00,000 by Loans.
C) Rs. 8,00,000 by Equity capital and Rs.32,00,000 by Loans.

Assume the company shall distribute the entire amount of profit as dividend and tax rate is 30% ignore Health and Education cess.

5. a) Discuss various tax issues relating to Amalgamation of Companies.

OR

b) Nizam Company Ltd. wants to purchase a Machinery for its office costing Rs.5 lakhs. There are two alternatives available:-

a. To buy the equipment by taking a loan of Rs.5 lakhs repayable in 5 equal year end instalment together with interest @ 13% p.a.
b. To take it on lease basic for a period of 5 years at annual lease rent of Rs.1,10,000 payable at each year end.

Other information:-

i. Nizam Company Ltd is in 30% tax Bracket.
ii. Rate of depreciation applicable to equipment is 12%.
iii. The company has a policy of evaluating the capital budgeting proposals at 14% discount rate.
iv. Present Value Factor for Rs.1 at 14%

Year	I	II	III	IV	V
	0.877	0.769	0.675	0.592	0.519

v. The life of the asset is 5 years and at the end of life there will be no scrap value realisation. You are asked to suggest that which of the above two options should be exercised?

6. a) Explain the special tax provisions in respect of newly established 100% export oriented Undertakings.

OR

b) Explain, tax planning in respect of export promotion.

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FACULTY OF COMMERCE
M.Com. (GEN) IV SEMESTER (CBCS NEW) EXAMINATIONS JULY 2024
INURANCE FINACE AND ADMINISTRATION
(SPECIALISATION: BANKING & INSURANCE)
PAPER - IV(C)

Time: 3 Hours]   [Max. Marks: 80

SECTION - A (5 X 4 = 20 Marks)

1.   **Answer ALL the questions**

a) Law of Probability.

b) What is premium?

c) Surrender value.

d) GIC.

e) IRDA.

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

2.   a) Explain the procedure for construction of morality tables.

(OR)

b) What is forecast of future events? Give a detail note on forecasting procedures.

3.   a) Explain the elements and basic factors of premium determination.

(OR)

b) Briefly explain Premium calculation for annuities, life and other policies.

4.   a) Explain about the process of retrospective and prospective reserve computation.

(OR)

b) State the investment policy of LIC and GIC in India as specific cases.

5.   a) Write about present administrative setup of GIC and LIC.

(OR)

b) What are the statutory administrative provisions of Insurance companies in India?

6.   a) Briefly discuss the legislation of LIC of India Act, 1956.

(OR)

b) Give a brief study of Indian Insurance Act, 1938.

*****

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

SECTION A- (5X4=20)

1) Answer all the following questions
     a) Write about Menu Bar.
     b) What do you understand by constructing variables?
     c) What is correlation?
     d) What is the procedure of calculating Mann-Whitney test?
     e) What is factor analysis?

SECTION B - (5X12=60)
Answer all questions not more than 5 pages

2. a) Explain various needs of data analytics in today's scenario. Also discuss in brief various Components of data analytics.
OR
   b) Explain in detail the process of creating and editing data file.
3. a) Write about Mean, Median, Mode, Variance and Standard Deviation.
OR
   b) How do you create and edit graphs and charts? Discuss the uses of graphs and charts.

4. a) What is Hypothesis? Explain the procedure of testing hypothesis.
OR
   b) Explain in detail comparing means through Bi-variate analysis with suitable example

5 a) What do you understand by Non parametric tests? Explain the procedure of chi-square test in SPSS
OR
   b) How do you evaluate the output of ANNOVA result in SPSS? Explain the differences in evaluation of ANNOVA single and two factor without replication.

6. a) What is Multivariate Analysis? Discuss the KMO Measure of sampling adequacy and Bartlett's Test of Sphericity.
OR
   b) What is Principle Component Analysis? Describe the Eigen Values, Scree plot and component transformation matrix.

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FACULTY OF ARTS
M.A. (ENGLISH) IV SEMESTER (CBCS-NEW) EXAMINATIONS JULY 2024
SOUTH ASIAN LITERATURE
PAPER - V (B)

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

SECTION-A (4 X 5 = 20 Marks)

1   **Answer ALL the following questions**

A   History and Geography of South Asia

B   Write a short note on the poem *Lunatic?*

C   Sketch the character of Lenny in *Ice Candy Man?*

D   What is the central idea of Hanif Kureishi's *Something Given: Reflections on Writing?*

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

2   A   Write an essay on Migration and Exile?

OR

B   Write in detail on Globalization in South Asia?

3   A   Write an essay on the use of images in Jean Arasanaygam's *Durga Pooja?*

OR

B   Discuss the use of symbolism in Imtiaz Dharker's poems prescribed for your study?

4   A   *Ice Candy Man* deals with victimization and violence during partition? Explain.

OR

B   Write an essay on the main theme of *Anil's Ghost?*

5   A   Write a critical analysis of Romesh Guneseker's *A long, slow descent into hell?*

OR

B   Summarize Manjushree Thapa's *Educating the Influential Foreigner?*

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FACULTY OF ARTS
M.A (TELUGU)   IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
జానపద విజ్ఞానం సాహిత్యం
పేపర్ - V (A)

సమయం: 3 గంటలు]   [గరిష్ట మార్కులు : 80

సెక్షన్ - ఎ (4 X 5 = 20 మార్కులు)

1   ఈ క్రింది వానిపై లఘు వ్యాఖ్య వ్రాయండి

ఎ   జానపద ప్రక్రియలు

బి   వలసవాదం

సి   చిందు బాగోతం

డి   ఉయ్యాల పాటలు

సెక్షన్ – బి (4 X 15 = 60 మార్కులు)
అన్ని ప్రశ్నలకు సమాధానాలు వ్రాయండి

2   ఎ   జానపద విజ్ఞానం లోని వివిధ శాఖలను పరిచయం చేయండి

లేదా

బి   జానపద విజ్ఞాన సేకరణ   పద్ధతిని వివరించండి

3   ఎ   జానపద విజ్ఞానం లో మానవ శాస్త్ర వాద ప్రాధాన్యాన్ని వివరించండి

లేదా

బి   జానపద గేయాలను వర్గీకరించి పరిచయం చేయండి

4   ఎ   జానపద విజ్ఞానం లో పొడుపు కథల ప్రత్యేకతను వివరించండి

లేదా

బి   జానపద కళారూపాల ప్రదర్శన రీతులను పరిచయం చేయండి

5   ఎ   బాణావతి కథను సమీక్షించండి

లేదా

బి   బతుకమ్మ పాటలను పరిచయం చేయండి

★★★★★

FACULTY OF ARTS
M.A (TELUGU)   IV SEMESTER (CBCS R-19) EXAMINATIONS, JULY 2024
తెలుగులో పరిశోధన

పేపర్ - IV (B)

సమయం: 3 గంటలు]   [గరిష్ట మార్కులు : 80

సెక్షన్ - ఎ (4 X 5 = 20 మార్కులు)

1   ఈ క్రింది వానిపై లఘు వ్యాఖ్య వ్రాయండి

ఎ   పరిశోధన ప్రయోజనం

బి   పాదసూచికలు

సి   బియన్ శాస్త్రి

డి   మద్రాసు విశ్వవిద్యాలయం పరిశోధన

సెక్షన్ – బి (4 X 15 = 60 మార్కులు)

అన్ని ప్రశ్నలకు సమాధానాలు వ్రాయండి

2   ఎ   సాహిత్య పరిశోధన చరిత్రను వ్రాయండి.

లేదా

బి   పరిశోధన లో ఆధార గ్రంథ సూచి రచనా పద్ధతిని వివరించండి

3   ఎ   పరిశోధన గ్రంథ స్వరూపాన్ని వివరించండి

బి   పరిశోధన లో విషయసేకరణ ప్రాధాన్యాన్ని వివరించండి

4   ఎ   శాసన పరిశోధకుడిగా మల్లంపల్లి సోమశేఖర శర్మ ప్రత్యేకతను వివరించండి

లేదా

బి   తాళపత్ర పరిశోధనకు వేటూరి ప్రభాకర శాస్త్రి   వేసిన మార్గాన్ని పరిచయం చేయండి

5   ఎ   ఉస్మానియా విశ్వవిద్యాలయంలో జరిగిన తెలుగు పరిశోధనను సమీక్షించండి

లేదా

బి   వేంకటేశ్వర విశ్వవిద్యాలయం తెలుగు పరిశోధనలను పరిచయం చేయండి

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FACULTY OF ARTS

M.A (Urdu) IV Semester Examination (CBCS)

Elective Paper V(B) (Intra Disciplinary)

پانچواں پرچہ اختیاری (B) انٹراڈسپلینری

(Urdu Zaban-o-Adab Ki Tadrees) اردو زبان وادب کی تدریس

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

Section - A

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

1. اردو زبان کی تدریس کے مقاصد بیان کیجیے۔

2. افسانے کی تدریس پر مختصر نوٹ لکھیے۔

3. مرثیے کی تدریس کے اہم نکات واضح کیجیے۔

4. غزل کی ہیئت کی تدریس پر اختصار یہ تحریر کیجیے۔

Section - B

(4 x 15 = 60)   نوٹ : تمام سوالات حل کیے جائیں۔ ہر سوال کے پندرہ نشانات مختص ہیں۔ ہر سوال کا جواب چار صفحات سے زیادہ نہ ہو۔

5. (A)   اردو زبان کی تدریس کی اہمیت وافادیت واضح کیجیے۔   یا

    (B)   اردو وادب کی تدریس کے مقاصد اور افادیت کی وضاحت کیجیے۔

6. (A)   انشائیے کی تدریس کے طریقہ کار کی وضاحت کیجیے۔   یا

    (B)   ڈرامے کی تدریس میں طلبا کو کس طرح شامل کیا جاسکتا ہے؟ واضح کیجیے۔

7. (A)   مثنوی کی تدریس کے اہم اقدامات سبق پر روشنی ڈالیے۔   یا

    (B)   قصیدے کی تدریس کے طریقہ کار کی وضاحت کیجیے۔

8. (A)   نظم کی تدریس میں کن امور کو ملحوظ خاطر رکھنا چاہیے۔ واضح کیجیے۔   یا

    (B)   غزل کی تدریس کے مسائل پر اظہار خیال کیجیے۔

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FACULTY OF SOCIAL SCIENCES
M.A. (SOCIOLOGY) IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS JULY 2024
THEORY AND PRACTICE OF SOCIAL WORK
(INTRA DISCIPLINARY)
PAPER – V (B)

Time: 3 Hours]   [Max. Marks: 80

SECTION – A (4 X 5 = 20 Marks)

1. **Write Short notes on the following**

   a) Social Welfare

   b) Voluntary Organisations

   c) Principles of Professional Work

   d) Rural Community

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

2. A) Explain the objectives and goals of Social Work?

OR

   B) Explain the philosophical base for Social Work?

3. A) Discuss the Development of Social Work profession in India.

OR

   B) Highlight the role of voluntary organization in the process of Development.

4. A) Explain the ethics and functions of Professional Social Work?

OR

   B) Does Sociology and Social Work contribute to social Development? Discuss

5. A) Discuss the nature and scope of Social Work Research.

OR

   B) Does Social Work research help in social reconstruction? Discuss

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FACULTY OF SOCIAL SCIENCES
M. A (SOCIOLOGY) IV SEMESTER (CBCS R-22 NEW) EXAMINATIONS JULY 2024
CRIMINOLOGY
(INTER DISCIPLINARY)
PAPER – V (C)

Time: 3 Hours]   [Max. Marks: 80

SECTION – A (4 X 5 = 20 Marks)

1. **Write Short notes on the following**

    a) Juvenile Delinquency

    b) White Collar Crimes

    c) Cyber Crimes

    d) Open air Prisons

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

2. A) Explain the Sociological causes of Crime?

    OR

    B) Explain the types of Crime?

3. A) Discuss the clinical causes of crime.

    OR

    B) Explain any two perspectives on causes of crime?

4. A) Write an essay on crime against Women.

    OR

    B) Write an essay on changing socio-economic profile of criminals in India.

5. A) Highlight the role of Forensic Science in studying crime.

    OR

    B) Explain the types of punishments?

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FACULTY OF COMMERCE
M.COM (CA) IV SEMESTER (CBCS R-16 OLD) EXAMINATIONS JULY 2024
MANAGEMENT INFORMATION SYSTEM
PAPER - V

TIME: 3 HRS]   [MAX. MARKS: 80

SECTION - A (5 X 4 = 20 Marks)

1) **Answer ALL the following questions**

   a) What are the benefits of Management information system?.

   b) What do you understand by office automation system?

   c) What is information systems planning?

   d) What do you understand by Accounts Payable?

   e) What is information resource Management?

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

2. a) What is Management Information System? Describe its types and functions of MIS.
    OR
   b) Explain in detail Information systems for Managerial Decision Support

3. a) Explain in detail Economic impact on organizations.
    OR
   b) Describe the porter's competitive forces models.

4. a) What are the strategies of ISP? Explain the systems analysis and design.
.
    OR
   b) What is a Systems development life cycle? Explain the security and ethical issues of Information systems.

5 a) what is decision support systems? Describe the components of decision support systems.

    OR
   b) What is inventory control? Describe the sales and order processing system.

6. a) What is Managing Information Technology? Explain about information technology architecture.
    OR
   b) Explain the Global Management of Information and issues in Managing International Data communications.

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FACULTY OF COMMERCE
M.Com. (GEN) IV SEMESTER (CBCS R-16 OLD) EXAMINATIONS JULY 2024
FINANCIAL SERVICES MANAGEMENT
PAPER – V (A)

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

SECTION - A (5 X 4 = 20 Marks)

1.   **Answer ALL the questions**

a) Classification of Financial services.

b) Merchant banking.

c) Mutual Fund.

d) Lease financing.

e) Factoring.

SECTION - B (5 X 12 = 60 Marks)

2.   a)Give a Brief account of the financial services in Indian financial markets.

(OR)

b) Describe the role of fund based financial services in economic development.

3.   a)Explain the origin and growth of merchant banking.

(OR)

b) What is Credit Rating? Explain origin and growth of credit rating.

4.   a) Discuss various types and merits of mutual funds.

(OR)

b) What are the SEBI guidelines on mutual funds in India?

5.   a) Briefly explain features and scope of Venture capital financing.

(OR)

b) Explain differences between Lease v/s Buy and Lease v/s Hire purchase system.

6.   a) Explain various types of factoring services in India.

(OR)

b) Discuss the role and impact of Forfeiting on financial markets in India.

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