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CLUSTER UNIVERSITY - KURNOOL
UG FIRST YEAR I SEMESTER END EXAMINATIONS,
FEBRUARY-2026

PROGRAMME : B.A.,/B.Com/B.Sc **SUBJECT : General Telugu**

COURSE TITLE : Saahithi Vasantam (సాహితీ వసంతం)

Time : 3 Hrs **Max Marks :70**

అ-విభాగం

I. ఈక్రిందివానిలో ఐదింటికి సమాధానాలు రాయండి. 5X4=20 మా

1. ఈక్రింది వానిలో ఒకపద్యాన్ని పాదభంగం లేకుండా పూరించండి.

అ). భూషలుగావు మర్త్యులకు .....నన్నియున్.

ఆ). విద్య నిగూఢ గుప్తమగువిత్తము.....మర్త్యుడే ?

2. ఈక్రింది వానిలో ఒక పద్యానికి భావం రాయండి.

అ) సమరము నిష్కారణ వై
రమునం బాటిల్లె నెల్ల రాజులు భారతో
త్తములును మడిసిరి విడు కో
పము; దీర్ఘ క్రోధుడైన పాటి కీడొందున్

ఆ) నిక్కమైన మంచి నీలమొక్కటి చాలు
తళుకు బెళుకురాళ్ళు తళ్ళెడేల?
చదువు పద్యమరయ చాలదా యొక్కటి?
విశ్వదాభిరామ వినురవేమ !

3. ఈక్రింది వానిలో ఒక కవిని పరిచయం చేయండి.

అ) తిక్కన ఆ) గుఱ్ఱం జాషువా

4. "అమ్మ లోకంగుర్తించని విద్యావేత్త " వ్యాఖ్యానించండి.

5. 'కెమిస్ట్రీ అఫ్ టియర్స్" కవిత శీర్షికలోని ఔచిత్యాన్ని తెల్పండి.

6. గ్రామీణ ప్రాంతాలలో గతంలో ఉన్న వినోద కార్యక్రమాలేమిటి ?

7. క్రింది వానిలో నాల్గింటికి సంధికార్యాలు రాయండి.

అ) విశ్వదాభిరామ ఆ) ఫలంబేమి ఇ) అభ్యుదయం
ఈ) మేదినీశ్వర ఉ) జోన్నన్నముల్ ఊ) ధర్మైక

8. క్రింది వానిలో నాల్గింటికి విగ్రహవాక్యాలు రాసి, సమాసం పేర్లు రాయండి.

అ) సుగంధ జలాలు ఆ) నీటకలిసే ఇ) భరతవంశం
ఈ) వేయి రేఖలు ఉ) సాహితీ గంగ ఊ) పరద్రవ్యం

ఆ-విభాగం

II ఈక్రింది వానికి వ్యాసరూప సమాధానాలు రాయండి. **5X10=50 మా**

9. ఈక్రింది వానిలో <u>ఒకపద్యానికి</u> ప్రతిపదార్థ తాత్పర్యాలు రాయండి.

అ). అమరనదీ తనూభవుడు నస్తగురుండును కర్ణుడుం బరా
క్రమ మహనీయు లావహధురంధరు లట్టిర తక్కు గల్గు భూ
రమణులు బంధుమిత్రులు దురంబున నందఱు బాండునందనుల్
సమయగ జేసిరట్లు భుజశక్తియు దైవబలంబు నెక్కుడై.

లేదా

ఆ). ఆడిన మాట తప్పను, మహాత్ముని చెప్పులజూడలోస కొ
లాడ చరించెదన్, ప్రజల కన్నము బెట్టెద, వర్ణ భేదపుం
జీడ నణంచెదన్ గటికిచీకటి వాపెద వెల్లి నమ్మకా
లూడని బాడహస్తమున నూనెద శాతకళాకుఠారమున్

10. 'హితోపదేశం' పాఠ్యాంశం ద్వారా నేటి సమాజానికి అందుతున్న సందేశం ఏమిటి?

లేదా

జాషువా చూసిన కొత్తలోకం విశేషాలేమిటి?

11. శతక లక్షణాలను తెల్పి, 'ఆణిముత్యాల' లోని కవులను పరిచయం చేయండి.

లేదా

ఏనుగులక్ష్మణకవి విద్యార్థులకు అందిచిన వ్యక్తిత్వ వికాససూత్రాలను తెలియ జేయండి.

12. 'రక్తం కన్నా కన్నీళ్ళే గొప్పవని' కవి ఎట్లా నిర్ధారణ చేసాడు.

లేదా

బొగ్గుల పాయ్యిని, అమ్మని కవయిత్రి సమన్వయము చేసిన విధానాన్ని వివరించండి.

13. 'కాశెవ్వ బాగోతం'లో సహానుభూతి చెందిన విధానాన్ని వివరించండి.

లేదా

రావిశాస్త్రి 'మాయ' కథను విశ్లేషించండి.

CLUSTER UNIVERSITY :: KURNOOL

UG **FIRST** YEARI SEMESTER END EXAMINATIONS– **FEBRUARY 2026**

Programme :**B.Sc.** Subject : Statistics

Course Title: **Theory of Probability and Mathematical Expectations**

Time :**3** Hours Max Marks :**70**

SECTION -A

Answer the following any FIVE questions. Each question carrying 5 Marks 5 x 4 M = 20

1. Define Mathematical and Axiomatic approach to probability.
2. State the **Addition Theorem of Probability** for two events A and B, and explain what it simplifies to if A and B are **mutually exclusive.**
3. If A and B are independent events then show that
   (a) A and $\bar{B}$ are also independent events.
   (b) $\bar{A}$ and $\bar{B}$ are also independent events.
4. Define the probability mass function and probability density function of the random variable.
5. Given a discrete random variable X with the following probability mass function (pmf):
   $P(x) = \frac{x}{10}$ for $x = 1, 2, 3, 4$
   Calculate the values of $P(X \leq 2)$ and $P(X > 2)$.
6. Define Joint and marginal distributions.
7. If X and Y are independent random variables, and E(X) = 5 and E(Y) = 3, **calculate** $E(2X + 3Y)^2$.
8. Define the Moment Generating Function (MGF) of a random variable X and state its primary use in probability theory.

Section-B

Answer any **FIVE** questions. Each question carries TEN marks. **5x 10 = 50 Marks**

9. (a) State and prove addition theorem of probability for 'n' events.

   OR

   (b) State and prove Baye's theorem.

10. (a) Define distribution function of the random variable X and also explain its properties.

OR

(b) Let X be a continuous random variable with the following probability density function

$$f(x) = Kx(2-x); \quad 0 \leq x \leq 2$$

$$= 0 \text{ otherwise}$$

Find the constant K. Also compute mean and variance of the random variable X.

11. (a) Two random variables X and Y have the following joint probability density function

$f(x, y) = 2 - x - y;\ 0 < X < 1, 0 < Y < 1$

$= 0$, elsewhere

Find (a) Marginal density functions of X and Y

(b) Conditional density functions of X and Y

OR

(b) Explain the properties of joint probability distribution function

12. (a) State and prove Multiplication theorem on Expcetions.

OR

(b) State and prove Cauchy-Schwartz inequality.

13. (a) Define characteristic function of random variable X and also write its properties

OR

(b) Define convergence in probability and convergence in distribution. Explain the relationship between them with suitable examples.

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UG **FIRST** YEAR **I** SEMESTER END EXAMINATIONS – **FEBRUARY 2026**

Programme : **B.Sc** Subject : **Physics-2**

Course 2 : **Mechanics and Properties of Matter**

Time : 3 Hours Max Marks : **70**

SECTION -A

Answer the following any FIVE questions. Each question carrying 4 Marks **5 x 4 M = 20 M**

1. State Newton's laws of motion. Mention their significance.
2. Define scattering cross-section and impact parameter
3. What is a central force? Give two examples.
4. Define geostationary satellite and mention its applications
5. Define Young's modulus and Poisson's ratio. State their physical meaning.
6. Write a note on Reynolds number
7. State Bernoulli's theorem and mention any two applications.
8. What is time dilation? Write the expression for it.

SECTION -B

Answer the following questions Each question carrying 10 Marks **5 x 10 M = 50 M**

9 **a)** Derive the equation of motion of a rocket using the concept of variable mass system.

OR

b) Explain Rutherford scattering experiment and derive the Rutherford scattering formula.

10 **a)** Define central force. Derive Kepler's laws of planetary motion.

OR

b) Derive the equations of motion under a central force and explain motion of satellites.

11 **a)** Explain stress, strain and elastic moduli. Describe the behaviour of a wire under load.

OR

b) Explain torsional pendulum. Derive the expression for rigidity modulus of a wire.

12 **a)** State Bernoulli's theorem. Give a simple derivation and explain its applications to Venturi meter and lift of an airplane.

OR

b) Explain viscosity. State Poiseuille's **law and discuss** surface tension with examples.

13 **a)** Describe Michelson–Morley experiment and explain its negative result.

OR

b) Derive Lorentz transformation equations and explain time dilation and length contraction.

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UG **FIRST** YEAR **I** SEMESTER END EXAMINATIONS – **FEBRUARY 2026**

Programme: **B.Sc.** Subject: **ZOOLOGY** (H) (Major)

COURSE 1: **Animal Diversity-1 Biology of Non Chordates**

Time : 3 Hours Max: 70 M

SECTION -A

Answer the following any FIVE questions. Each question carrying 4 Marks **5 x 4 M = 20 M**

1. Binary fission in Protozoa
2. General characters of Porifera
3. Platyhelmithes
4. Corals and Coral reefs
5. Parasitic adaptations in Nemathelmithes
6. Vermicompost
7. Gastropoda
8. Structure of Balanoglossus

SECTION -B

Answer the following questions. Draw the diagrams where ever necessary
Each question carrying 10 Marks **5 x 10 M – 50 M**

9 a) what is Whittaker's Five kingdom concept in biological classification.

OR

b) Explain various mechanisms of Locomotion in Protozoa

10 a) Describe Different types of canal system in Sponges.

OR

b) Write a essay on polymorphism in Coelenterates

11 a) Write about the general characters of platyhelminthes

OR

b).Describe the Life cycle of Ascaris lumbricoides a common human parasite

12 a) what is Vermiculture. Explain the process of vermicomposting

OR

b).Explain the Affinities of peripatus in the contest of taxonomic placement

13 a) Describe the Pearl formation in Pelecypoda

OR

b) Write an essay on Water vascular system in Star fish

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25OFM101CT

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UG First year I Semester End Examinations- **February 2026**

Programme : B.Sc Subject : Organic Farming-1

Course -1 **Basic concepts of Organic Farming**

Time: 3 Hours Maximum: 70 marks

SECTION - A

Answer any five of the following questions. **5 X 4= 20M**

1. Explain the scope of organic farming.
2. What is sustainable agriculture? Write its importance.
3. Explain the principles of compost production.
4. Define preventive methods in crop protection and mention their role.
5. Explain land preparation in organic crop management.
6. Write short notes on components of organic farming.
7. Explain nutrient cycling in sustainable agriculture.
8. Write briefly about vermicompost quality and marketing.

SECTION – B

Answer ALL of the following questions. **5 X 10 = 50M**

9. (a). Discuss the concepts and principles of organic farming.

OR

(b). Explain SWOT analysis and present status of organic farming in Andhra Pradesh.

10. (a). Define sustainable agriculture and explain its types.

OR

(b). Describe the principles of sustainable agriculture with examples.

11. (a). Explain the types of compost and methods of compost production.

OR

(b). Describe vermicompost production technology and enriched vermicompost.

12. (a). Explain Integrated Pest Management (IPM) and Integrated Disease Management (IDM).

OR

(b). Describe biocontrol methods including bio-pesticides and their types.

13. (a). Explain land preparation and planting techniques in organic crop management.

OR

(b). Discuss nutrient management in organic farming, including nutrient recommendation and balance sheet methods

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25BOT101CT

CLUSTER UNIVERSITY: KURNOOL

UG FIRST YEAR I SEMESTER END EXAMINATIONS – **FEBRUARY 2026**

Programme: **B.Sc** Subject: **Botany-1**

Course 1: **DIVERSITY OF MICROBES**

Time: **3** Hours Max Marks: **70** M

SECTION -A

Answer the following any FIVE questions. Each question carrying 4 Marks 5 x 4 M = 20 M

1. Six kingdom classification of Carl Woese
2. Bio-pesticides
3. Phytoplasma – general characteristics
4. Plasmids
5. Plant Growth Promoting Rhizobacteria (PGPR)
6. factors influencing soil microflora
7. Microorganisms in Phyllosphere
8. probiotics and prebiotics

SECTION -B

Answer the following any FIVE questions. Each question carrying 10 Marks 5 x 10 M = 50 M

9 a) Explain the concept of primary abiogenesis and describe the Miller Urey experiment in the origin of life.

OR

b) Explain the lytic and lysogenic cycles of T-even bacteriophages.

10 a) Discuss the general characteristics and economic importance of Cyanobacteria

OR

b) Write an essay on Single Cell Protein (SCP) with reference to Spirulina.

11 a) Describe the cell structure of eubacteria with labelled diagram.

OR

b) Explain bacterial genetic recombination—conjugation, transformation and transduction.

12 a) Discuss the distribution of soil microorganisms and their role in soil fertility

OR

b) Explain microbial interactions: symbiosis, commensalism, parasitism and predation.

13 a) Describe viral diseases in plants with special reference to Tungro disease of paddy

OR

b) Explain bacterial and cyanobacterial biofertilizers and their applications

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25IAI101SC

CLUSTER UNIVERSITY :: KURNOOL

UG First Year I Semester End Examinations February 2026

Programme : **BA / BCOM / BSc** Subject : **SEC**

Course : INTRODUCTION TO ARTIFICIAL INTELLIGENCE

Time: 3 Hours Max. Marks: 70

SECTION – A (Short Answer Questions)

Answer any FIVE of the following questions **Marks: 5 × 4 = 20**

1. Define Artificial Intelligence. What are the major AI subfields?
2. What is Artificial General Intelligence (AGI)?
3. List and explain any two challenges in Artificial Intelligence.
4. Explain bias in AI systems.
5. What is fairness in AI systems?
6. Write a short note on Generative AI.
7. What is Prompt Engineering?
8. Mention any two applications of AI in education.

SECTION – B (Essay Answer Questions)

Answer ALL the following questions **Marks: 5 × 10 = 50**

9. a) Discuss the industry applications of Artificial Intelligence.

   OR

   b) Explain Machine Learning, Computer Vision and Robotics.

10. a) Discuss the applications of AI in Healthcare and Agriculture.

    OR

    b) Explain the role of AI in Education and Transportation.

11. a) Explain Bias, Fairness, Transparency and Accountability in AI systems.

    OR

    b) Discuss privacy and security issues in AI systems.

12. a) Describe any two Generative AI tools with examples.

    OR

    b) Explain the role and importance of Prompt Engineering in AI.

13. a) Explain applications of Prompt Engineering in content creation.

    OR

    b) Explain the use of AI in creative design and media.

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UG **First** year **I** Semester End Examinations – **February 2026**

Programme : I B.Sc (Honours) Subject : Computer Science-1

COURSE – 1: **COMPUTER FUNDAMENTALS AND OFFICE AUTOMATION**

Time: 3 Hours Max. Marks: 70

SECTION – A (Short Answer Questions)

Answer any FIVE of the following questions **Marks: 5 × 4 = 20**

1. Write about the evolution of computers.
2. Explain characteristics of different generations of computers.
3. Briefly explain types of number systems.
4. Discuss the memory hierarchy in computer systems.
5. What are input and output devices? Give examples.
6. Explain any five keyboard shortcuts.
7. How do you format text in MS Word?
8. What is conditional formatting in MS Excel?

SECTION – B (Essay Answer Questions)

Answer ALL the following questions **Marks: 5 × 10 = 50**

9. a) Explain conversion between number systems with examples.

   OR

   b) Explain binary, octal, decimal and hexadecimal number systems.

10. a) Draw the block diagram of a computer and explain its components.

    OR

    b) Explain computer organization and functional units.

11. a) Explain different types of networks with diagrams.

    OR

    b) Discuss networking fundamentals and network topologies.

12. a) Explain the use of mail merge with a suitable example.

    OR

    b) Explain word processing features and applications.

13. a) Describe pivot tables and pivot charts with examples.

    OR

    b) Explain data validation and conditional formatting in MS Excel.

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25HIS101CT

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UG First year **I** Semester End Examinations - **February 2026**

Programme : BA Subject : History -I

Course 1 : Introduction to Indian History

Time: 3 hours Max. Marks: 70

SECTION – A
(Short Notes)

Answer any **FIVE** of the following questions Marks: 5 x 4M = 20

1 Archaeological Sources
2 History and its Relation with Economics
3 Mesolithic tools
4 Indus Script
5 The Great Bath
6 Vedic Religion
7 Varna system
8 Megalithic Burials

SECTION – B
(Essays)

Answer any **FIVE** of the following questions Marks: 5 x 10 M = 50

9 A Examine the relationship between History and other Social Sciences.

OR

B Write an essay on various sources of History.

10 A Describe the Paleolithic culture in India with special reference to tools and life style.

OR

B Examine the Chalcolithic cultures of India and their main characteristics.

11 A Describe the salient features of Indus Valley Civilizaion

OR

B Analyse the reasons for the disappearance of Indus Valley Civilization.

12 A Explain the development of Iron Age technology in India

OR

B Analyze the impact of iron technology on Indian society and economy.

13 A Examine the social, economic, religious, and political conditions during the Vedic Period.

OR

B What are the differences between early Vedic and later Vedic Cultures?

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25SLH101AC

CLUSTER UNIVERSITY :: KURNOOL

UG First Year I Semester End Examinations- February 2026

Programme :**B.A. ,B Com , & B.Sc.**

Subject : **SECOND LANGUAGE HINDI PAPER -I**

Paper : (Prose, Short stories and Grammar) w.e.f. 2025-26

Time - 3 Hrs. Max marks: 70

Section -A

किन्हीं चार प्रश्नों का उत्तर लिखिए।

1-आचार्य रामचंद्र शुक्ल का जीवन परिचय लिखिए।

2-दाउदयाल का चरित्र चित्रण कीजिए।

3-प्रेमचंद का जीवन परिचय लिखिए।

4-अच्छे मित्र के क्या क्या गुण होने चाहिए।

5-निम्नलिखित शब्दों का लिंग बदलिए।

स्त्री, अध्यापिका, गाय बच्चा, लड़की,

6-निम्नलिखित शब्दों का विलोम शब्द लिखिए।

प्रस्थान आकाश रक्षक धर्म शांति

7-निम्नलिखित शब्दों का वचन लिखिए।

स्त्री बकरियां गायें पुस्तक लड़का

8-रिक्त स्थान पर कारक चिह्न लिखिए।

A-राम ---- धनुष तोड़ा।

B-पेड़ ---- पर गिरा ।

C-सुरेश --- पुस्तक है।

D-राजू ---- खाना खा लिया।

E-चिड़िया पेड़ ---- बैठी है।

Section - B

निम्नलिखित सभी प्रश्नों का उत्तर लिखिए।

9-आत्मनिर्भर पाठ का सारांश लिखिए।

या

मित्रता निबंध का सारांश लिखिए।

10-हार की जीत कहानी का उद्देश्य लिखिए।

या

मुक्तिधाम कहानी का उद्देश्य लिखिए।

11-भूख हड़ताल कहानी की समीक्षा लिखिए।

या

भारत में संस्कृति संगम निबंध की समीक्षा लिखिए।

12-दो दिन की छुट्टी मांगते हुए प्रधानाचार्य को पत्र लिखिए।

या

पुस्तक विक्रेता से हिंदी की पुस्तकें मंगाने के लिए एक पत्र लिखिए।

13-निम्नलिखित शब्दों का अंग्रेजी में अनुवाद कीजिए।

कुलपति प्रतिवेदन नीति सेवा निदेशक प्रधानमंत्री, विभाग, सम्मेलन, अध्यक्ष, प्रशासन

या

निम्नलिखित शब्दों का हिंदी में अनुवाद कीजिए।

Policy, letter, Administration, Office, Director, Committee, Application, Order, Duty, Auditor

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CLUSTER UNIVERSITY :: KURNOOL

UG **FIRST** YEAR **I** SEMESTER END EXAMINATIONS – **FEBRUARY 2026**

Programme : **B.Com** Subject : **Commerce**

Course I : **FINANCIAL ACCOUNTING - 1**

Time : **3** Hours Max Marks : **70 M**

SECTION – A *(5 × 4 = 20 Marks)*

Answer any FIVE questions

1. Define accounting. State any four objectives of accounting.

2. What is a ledger? Explain its importance.

3. An asset costing ₹60,000 is depreciated at ₹6,000 per annum. Calculate the rate of depreciation per annum.

4. Define provisions and reserves. State any two objectives of each.

5. What is a Profit and Loss Account? State its purpose.

6. Explain the classification of accounts with suitable examples.

7. An asset costing ₹80,000 has a useful life of 10 years and a scrap value of ₹8,000. Calculate the percentage rate of depreciation per annum.

8. From the following particulars, calculate Gross Profit:

Opening Stock ₹25,000; Purchases ₹90,000; Sales ₹1,40,000; Closing Stock ₹35,000.

SECTION – B

Answer ONE question from each pair *(5 × 10 = 50 Marks)*

9. a) Explain accounting concepts and conventions.

OR

b) Classify the following accounts into Real /Nominal and Personal and state whether they generally show debit or credit balance:

ITEM NAME	TYPE OF ACCOUNT	DEBIT / CREDIT BALANCE

Total ten items

Cash, Capital, Purchases, Sales, Furniture, Outstanding Expenses, Debtors, Creditors, Goodwill, Drawings.

10 a) Prepare a Three Column Cash Book (Cash, Bank and Discount) from the following transactions:

Date	**Particulars**	**Amount (₹)**
Jan 1	Cash in hand	40,000
Jan 2	Bank balance	25,000
Jan 5	Paid salaries in cash	6,000
Jan 8	Deposited cash into bank	12,000
Jan 12	Received cheque from Mohan ₹7,800, discount allowed ₹200	7,600

Date	Particulars	Amount (₹)
Jan 18	Issued cheque to Ramesh ₹5,900, discount received ₹100	5,800
Jan 25	Withdrawn cash from bank for office use	4,000

OR

b) Explain rectification of errors. Describe the different types of accounting errors.

11. a) Explain the meaning and causes of depreciation. Describe Straight Line Method and Written Down Value Method.

OR

b) Machinery costing ₹1,00,000 was purchased on 01-04-2021.

Depreciation is charged at 10% per annum.

Prepare Machinery Account for three years under Fixed Instalment Method.

12. a) Explain the types of provisions and reserves with suitable examples.

OR

b) Distinguish between reserves and provisions.

13. a) Explain the meaning of final accounts. State the objectives of preparing Trading Account, Profit and Loss Account and Balance Sheet.

OR

b) From the following Trial Balance, prepare Trading Account, Profit and Loss Account and Balance Sheet as on 31-03-2025:

Debit Balances (₹)	Amount	Credit Balances (₹)	Amount
Purchases	72,000	Capital	60,000
Wages	18,000	Creditors	36,000
Salaries	24,000	Sales	1,34,000
Rent	12,000	Discount Received	4,000
Advertisement	10,000	Bills Payable	20,000
Debtors	48,000		
Furniture	40,000		
Cash at Bank	30,000		
	254,000		2,54,000

Adjustments:

1. Closing Stock ₹60,000
2. Outstanding Salaries ₹6,000

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25CAP101CT

CLUSTER UNIVERSITY :: KURNOOL

UG **FIRST** YEAR **I** SEMESTER END EXAMINATIONS – **FEBRUARY 2026**

Programme : **B.Com (CA)** Subject : **Commerce**

Course I : **FUNDAMENTALS OF INFORMATION TECHNOLOGY & OFFICE AUTOMATION**

Time : **3** Hours Max Marks : **70 M**

SECTION – A

Answer any FIVE questions *(5 × 4 = 20 Marks)*

1. Explain different number systems used in computers.
2. Describe the evolution of computers from mechanical devices to modern systems.
3. Draw and explain the block diagram of a computer.
4. Explain types of computers – micro, mini, mainframe, supercomputers.
5. Define network topologies and explain Bus, Ring, Star, and Mesh.
6. Explain the generations of computers with examples.
7. Describe word processing features – text editing, formatting, tables, and graphics.
8. Explain data modelling in spreadsheets – pivot tables, charts, dashboards.

SECTION – B

Answer ONE question from each pair *(5 × 10 = 50 Marks)*

9. A) Explain number system conversions and convert a decimal to binary, octal, and hexadecimal.

OR

B) Explain the evolution of computers with key milestones.

10. A) Explain computer organization – input/output devices, storage, memory hierarchy.

OR

B) Explain network fundamentals – need, types, and Internet basics.

11. A) Explain word processing applications – templates, formatting, tables, graphics.

OR

B) Explain presentation tools – slides, transitions, animations, and design features.

12. A) Explain spreadsheet basics – cells, cell references, functions.

OR

B) Explain spreadsheet data handling – sorting, filtering, conditional formatting, charts.

13. A) Explain data modelling and productivity tips – pivot tables, slicers, dashboards.

OR

B) Create an example interactive dashboard using what-if analysis tools.

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25CMG102CT

CLUSTER UNIVERSITY :: KURNOOL

UG **FIRST** YEAR **I** SEMESTER END EXAMINATIONS – **FEBRUARY 2026**

Programme : **B.Com (G)** Subject : **Commerce**

Course II- BUSINESS ORGANIZATION AND MANAGEMENT

Time : **3** Hours Max Marks : **70 M**

SECTION -A

Answer the following any FIVE questions. Each question carrying 4 Marks **5 x 4 M = 20 M**

1. Define Sole Proprietorship and mention any two of its characteristics.
2. Distinguish between Partnership and Joint Stock Company (any four points).
3. What is Corporate Social Responsibility? Give one example from Andhra Pradesh.
4. Define Management and state any two definitions.
5. Explain SWOT Analysis with a suitable example.
6. Explain Maslow's Need Hierarchy Theory.
7. What is Line and Staff relationship?
8. Explain the meaning of control in management.

SECTION -B

Answer the following questions Each question carrying 10 Marks **5 x 10 M = 50 M**

9 A. Explain the various forms of business organization and their merits and demerits.

OR

B. Differentiate between Private Company and Public Company. Explain One Person Company.

10 A. Explain mergers and acquisitions and business takeovers with suitable examples.

OR

B. Explain the concept of Total Quality Management and Six Sigma.

11 A. Explain Henry Fayol's fourteen principles of management.

OR

B. Explain the functions of management with suitable examples.

12 A. Explain Herzberg's Two-Factor Theory of motivation.

OR

B. Explain leadership and discuss different styles of leadership.

13 A. Explain the process of control and its importance.

OR

B. Explain budgetary control as a technique of control.

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25POL101CT

CLUSTER UNIVERSITY :: KURNOOL

UG **FIRST** YEARI SEMESTER END EXAMINATIONS– **FEBRUARY 2026**

Programme :**B.A.** Subject : **Political Science-I**

Course I: **INTRODUCTION TO POLITICAL SCIENCE**

Time : **3** Hours Max Marks : **70** M

SECTION -A

Answer the following any FIVE questions. Each question carrying 4 Marks. 5 x 4 = 20 M

1 Significance of Political Science

2 Discuss the relationship between History and Political Science

3 Structural and Functional Approach

4 Force theory of origin of State

5 Natural Rights

6 Sovereignty

7 Development Politics

8 Welfare State

SECTION -B

Answer the following questions Each question carrying 10 Marks 5 x 10 M = 50 M

9 a) Define Political Science and explain its scope

OR

b) Discuss the relationship of Political Science with other Social Sciences

10 a) Write an essay on the traditional approaches to the study of Political Science

OR

b) Write an essay on Behavioural Approach to the study of Political Science

11 a) Discuss the essentials elements of the State

OR

b) Explain Divine Origin theory of the State

12 a) Discuss Hobbes theory of Social Contract

OR

b) Critically examine Rousseau's theory of Social Contract

13 a) Discuss the origin and evolution of Modern State

OR

b) Explain the functions of Welfare State

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25ECN101CT

CLUSTER UNIVERSITY: KURNOOL

UG FIRST YEAR - I SEMESTER END EXAMINATIONS - FEBRUARY 2026

Programme: **BA** Subject : **Economics -I**

Course I : **INTRODUCTION TO ECONOMICS**

Time: 3 Hours Max Marks: 70

SECTION -A

Answer the following FIVE questions. Each question carrying 4 marks 5 X 4 = 20

1. Difference between microeconomics and macroeconomics
2. Central Problems of an Economy
3. Linear function
4. Non-linear functions
5. HDI of India
6. Demographic dividend
7. The concept of Green Economy
8. Online platforms: SWAYAM and NPTEL

SECTION -B

Answer the following questions. Each question carrying 10 marks 5 X 10 = 50

9. a) Describe the difference between Positive and Normative economics?

   Or

   b) Explain the concept of Production Possibility Frontier (PPF)

10. a) Define the different types of sets with suitable examples.

    Or

    b) Define a relation and a function. Distinguish between the two with the help of examples

11. a) Explain the three sectors of the Indian economy. Compare their contributions to India's GDP and employment.

    Or

    b) Describe the demographic features of India

12. a) Explain the causes and consequences of recent global tensions and trade wars

    Or

    b) Explain the concept of a Nudges in behavioral economics

13. a) Discuss the scope of Economics in higher education

    Or

    b) List and explain the relevance of economics in competitive examinations

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25HIS101CT

CLUSTER UNIVERSITY :: KURNOOL

UG First year **I** Semester End Examinations - **February 2026**

Programme : BA Subject : History -I

Course 1 : Introduction to Indian History

Time: 3 hours Max. Marks: 70

SECTION – A
(Short Notes)

Answer any **FIVE** of the following questions Marks: 5 x 4M = 20

1 Archaeological Sources
2 History and its Relation with Economics
3 Mesolithic tools
4 Indus Script
5 The Great Bath
6 Vedic Religion
7 Varna system
8 Megalithic Burials

SECTION – B
(Essays)

Answer any **FIVE** of the following questions Marks: 5 x 10 M = 50

9 A Examine the relationship between History and other Social Sciences.
OR
B Write an essay on various sources of History.

10 A Describe the Paleolithic culture in India with special reference to tools and life style.
OR
B Examine the Chalcolithic cultures of India and their main characteristics.

11 A Describe the salient features of Indus Valley Civilizaion
OR
B Analyse the reasons for the disappearance of Indus Valley Civilization.

12 A Explain the development of Iron Age technology in India
OR
B Analyze the impact of iron technology on Indian society and economy.

13 A Examine the social, economic, religious, and political conditions during the Vedic Period.
OR
B What are the differences between early Vedic and later Vedic Cultures?

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25POL102CT

CLUSTER UNIVERSITY :: KURNOOL

UG **FIRST** YEARI SEMESTER END EXAMINATIONS– **FEBRUARY 2026**

Programme :**B.A.** Subject : **Political Science**

Course Title: **CONCEPTS AND IDEOLOGIES OF POLITICAL SCIENCE**

Time : **3** Hours Max Marks : **70** M

SECTION -A

Answer the following any FIVE questions. Each question carries 4 Marks. 5 x 4 M = 20 M

1 Classification of Law
2 Rule of Law
3 Relationship between Liberty and Equality
4 Authority
5 Human Rights
6 Anarchism
7 Fascism
8 Nationalism

SECTION -B

Answer the following questions Each question carrying 10 Marks 5 x 10 M = 50 M

9 a) Define Law and explain its sources?

OR

b) Explain the concept of Liberty and discuss various types of Liberty?

10 a) What are the various kinds of Equality?

OR

b) What are the different kinds of Authority?

11 a) Define Rights and describe the classification of the Rights?

OR

b) Explain the Legal Theory of Rights?

12 a) Write an essay on Liberalism?

OR

b) Explain the principles of Utilitarianism?

13 a) Critically examine Marxism?

OR

b) Discuss Multiculturalism?

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25ECN102CT

CLUSTER UNIVERSITY: KURNOOL

UG FIRST YEAR - I SEMESTER END EXAMINATIONS - FEBRUARY 2026

Programme: **BA** Subject : **Economics - II**

Course II : **MICRO ECONOMICS**

Time: 3 Hours Max Marks: 70

SECTION -A

Answer the following FIVE questions. Each question carrying 4 marks 5 X 4 = 20

1. Cardinal and Ordinal Utility
2. Law of Demand
3. Total, AC & MC relationship
4. Cobb- Douglas Production Function
5. Characteristics of Perfect Competition market
6. Price discrimination under Monopoly
7. Selling Costs
8. Classical Theory of interest

SECTION -B

Answer the following questions. Each question carrying 10 marks 5 X 10 = 50

9. a) Define Microeconomics. Explain the nature and scope of microeconomics

   Or

   b) Explain the Consumer Equilibrium under Indifference Curve analysis

10. a) Explain the Law of Variable Proportions and its importance.

    Or

    b) Explain the Law of Supply and its limitations

11. a) What is market? Explain the classification of markets

    Or

    b) Explain how Price and Output Determinations in Monopoly market

12. a) Explain equilibriums of the Firm and Group in monopolistic competition

    Or

    b) Explain the Kinked Demand Curve with diagram

13. a) Explain the Ricardian Theory of Rent

    Or

    b) Discuss the Innovative Theory of Profit

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25HIS102CT

CLUSTER UNIVERSITY :: KURNOOL

UG First year **I** Semester End Examinations - **February 2026**

Programme : BA Subject : History -II

Course 2 - Early India: Enlightenment and State Formation

Time: 3 hours Max. Marks: 70

SECTION – A

(Short Notes)

Answer any **FIVE** of the following questions Marks: 5 x 4M = 20

1 Charvaka (Lokayata) philosophy

2 Teachings of Vardhamana Mahaveera

3 Buddhist Councils

4 Write any 6(Six) Mahajanapadas

5 Arthasasthra

6 Gandhara Art

7 Allahabad Inscription

8 Ajanta and Ellora Paintings

SECTION – B

(Essays)

Answer any **FIVE** of the following questions Marks: 5 x 10 M = 50

9 A Examine the philosophy of Ajivikas and Charvakas.

OR

B Explain the life and Teachings of Gautama Buddha..

10 A Discuss the factors responsible for the rise of Magadha as a powerful state.

OR

B Give an account of Alexander's invasion and its consequences.

11 A Explain Ashoka's Dhamma and its significance.

OR

B Describe the Mauryan administration System

12 A Describe the literary importance of Sangam literature.

OR

B Estimate the greatness of Kanishka

13 A Estimate the role of Samudra Gupta in Indian history

OR

B What are the causes for the downfall of Gupta Dynasty

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25CHE102CT

CLUSTER UNIVERSITY:: KURNOOL

UG **FIRST** YEAR **I** SEMESTER END EXAMINATIONS – **FEBRUARY 2026**

Programme : **B.Sc.** Subject : **Chemistry**

Course Title : INORGANIC CHEMISTRY

Time : **3** Hours Max Marks : **70 M**

SECTION -A

Answer any FIVE questions. Each question carrying 4 Marks **5 x 4 M = 20 M**

1. Explain the structure of Borazine.
2. Explain the structure of oxoacids of sulphur
3. Write a short note on Pseudo halogens.
4. Explain the Magnetic properties of d-block elements.
5. Write about Color properties of d-block elements.
6. Write the electronic configuration of f-block elements
7. What are minerals and ores? Give examples.
8. Difine calcination and give examples.

SECTION-B

Answer the following questions. Each question carries 10 marks. **5 x 10 – 50 M**

9. **a.** Explain the structure of diborane.

OR

b. Explain the classification, preparation and uses of silicones.

10. **a.** Explain the Classification of oxides based on Oxygen content.

OR

b. Write about the preparation and structures of Interhalogen compounds.

11. **a.** Explain the following characteristic properties of d-block elements

(i)Variable oxidation states (ii) Catalytic formation

OR

b. Explain the following characteristic properties of d-block elements

(i) Stability of 3d-series (ii) Complex formation

12. **a** What is Lanthanide Contraction and give the reasons and consequences

OR

b. Compare the properties of Lanthanides and Actinides.

13. **a.** Explain the following refining methods of crude metal.

(i) Electrolysis (ii) Zone refining

OR

b. Explain corrosion and its preventive methods

25OFM102CT

CLUSTER UNIVERSITY :: KURNOOL

UG First year I Semester End Examinations- **February 2026**

Programme : **B.Sc** Subject : **Organic Farming-2**

Course -2 : **Practices in Organic Farming**

Time: 3 Hours Maximum: 70 marks

SECTION - A

Answer any FIVE of the following question **5 X 4= 20M**

1. Describe organic potato crop management with special reference to nutrient management.
2. Explain the important organic practices followed in tomato cultivation.
3. Briefly discuss organic rice cultivation methods.
4. Write short notes on organic red gram production practices.
5. Explain the importance of crop rotation in organic farming systems.
6. Write a note on Integrated Farming System (IFS) in organic agriculture.
7. List the major health benefits of organic foods.
8. Explain the need and importance of organic certification.

SECTION – B

Answer ALL of the following questions. **5 X 10 = 50M**

9. (a). Explain in detail the organic crop management practices of potato.

OR

(b). Describe the organic cultivation practices of tomato.

10. (a). Explain organic cultivation of red gram and groundnut.

OR

(b). Explain organic management of mango and tea crops.

11. (a). Explain transition to organic farming and its challenges.

OR

(b). Explain crop planning, crop rotation, and IFS in organic farming.

12.(a). Explain natural antioxidants in fruits and vegetables and their benefits.

OR

(b). Explain role of organic foods in human health.

13.(a). Explain organic certification process definition, need, scope, and requirements.

OR

(b). Explain organic certification structure, NPOP, labelling, and marketing.

25ZL5102CT

CLUSTER UNIVERSITY:: KURNOOL

UG **FIRST** YEAR **I** SEMESTER END EXAMINATIONS – **FEBRUARY 2026**

Programme: B.Sc. **Subject: ZOOLOGY (H) (Major)**

COURSE 2: Animal Diversity-II Biology of Chordates

Time : 3 Hours Max Marks : 70 M

SECTION -A

Answer the following any FIVE questions. Each question carrying 4 Marks 5 x 4 M = 20 M

1. Retrogressive metamorphosis
2. Dipnoi Fishes
3. Frog brain
4. Cycloid scales
5. General characters of Reptelia
6. Bird migration
7. Prototheria
8. Aquatic adaptations in Mammals

SECTION -B

Answer the.following. Draw the diagrams where ever necessary
Each question carrying 10 Marks **5 x 10 M = 50 M**

9 a) Give a comparisons between petromyzon and myxine

OR

b) Describe the structure and Life history of Herdmania

10 a) Describe the structure and function of Heart of Scoliodon

OR

b) Write about migration in Fishes

11 a) Describe the Respiratory system of Frog

OR

b).Describe the Brain of Calotes

12 a) Describe the Digestive system of Pigeon

OR

b).Write about Flight adaptations in Birds

13 a) Explain the classification of Mammalia

OR

b) Write about Dentition in Mammals

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25BOT102CT

CLUSTER UNIVERSITY :: KURNOOL

UG **FIRST** YEAR **I** SEMESTER END EXAMINATIONS – **FEBRUARY 2026**

Programme : B.Sc

Subject : **Botany-2**

Course 2 : **DIVERSITY OF THALLOPHYTES**

Time : 3 Hours

Max Marks : 70 M

SECTION -A

Answer the following any FIVE questions. Each question carrying 4 Marks **5 x 4 M = 20 M**

1. Pigments in algae.
2. Ecological Importance of Algae
3. Conjugation in *Spirogyra*.
4. Tetra Sporophyte in Polysiphonia
5. Economic Importance of Fungi
6. Nutrition in fungi.
7. Asexual Reproduction in *Rhizopus*.
8. Vegetative Reproduction in Lichens.

SECTION -B

Answer the following questions Each question carrying 10 Marks **5 x 10 M = 50 M**

9. A. Explain F.E. Fritsch's classification of algae

   Or

   B. Discuss about the Occurrence and distribution of Algae.

10. A. Describe the occurrence, structure, reproduction and life cycle of *Ectocarpus*.

    Or

    B. Explain the culture and cultivation of *Chlorella* and mention its applications.

11. A. Explain about Thallus Organization in Fungi.

    Or

    B. What is heterothallism in the concept of Fungal Reproduction.

12. A. Describe the reproduction and life cycle of *Penicillium*.

    Or

    B. Discuss about the types of spored formed by *Puccinia* on Bargery plant with suitable diagrams.

13. A. Discuss the classification of lichens based on growth forms.

    Or

    B. Explain about Ecological and economic importance of Lichens.

25CSC102CT

CLUSTER UNIVERSITY :: KURNOOL

UG First year I Semester End Examinations - February 2026

Programme : B.Sc Subject : Computer Science-2

Course - 2 : Problem Solving Using C

Time: 3 Hours Max. Marks: 70

SECTION – A (Short Answer Questions)

Answer any FIVE of the following questions **Marks: 5 × 4 = 20**

1. Define flowchart. Explain any four flowchart symbols.
2. Discuss various data types in C.
3. Explain if-else ladder with suitable example.
4. Differentiate between compiler and interpreter.
5. What is break statement? Illustrate with an example.
6. Define string. Explain string initialization in C.
7. Explain one-dimensional arrays with example.
8. Differentiate structures and unions.

SECTION – B (Essay Answer Questions)

Answer ALL the following questions **Marks: 5 × 10 = 50**

9. a) Explain the structure of a C program with suitable example.

OR

b) Explain operators in C with suitable examples.

10. a) Illustrate decision making statements in C.

OR

b) Explain looping statements in C with examples.

11. a) Explain the memory representation of 1D and 2D arrays with examples.

OR

b) Explain string handling functions in C.

12. a) Explain parameter passing mechanisms in C.

OR

b) Explain storage classes in C with examples.

13. a) Explain dynamic memory allocation functions in C.

OR

b) Explain structures in C. Discuss declaration, initialization and accessing members.

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CLUSTER UNIVERSITY :: KURNOOL

UG **FIRST** YEARI SEMESTER END EXAMINATIONS– **FEBRUARY 2026**

Programme :**B.Sc.**Subject : Statistics

Course Title: **Descriptive Statistics**

Time :3 Hours Max Marks :70

SECTION -A

Answer the following any FIVE questions. Each question carrying 5 Marks 5 x 4 = 20 M

1. Define the term "Statistics" and discuss functions
2. Distinguish between Primary and Secondary data.
3. If the Mean and Median of a distribution are 40 and 42 respectively, estimate the **Mode** using the **Empirical relationship** between the three measures.
4. Explain pie diagram.
5. Define the term Dispersion and write its measures.
6. Define the Coefficient of Variation (CV). Explain its significance in comparing the variability of two different datasets.
7. Explain the concept kurtosis and give the measure of kurtosis.
8. Show that for any distribution $\beta_2 \geq 1$.

SECTION -B

Answer the following questions Each question carrying 10 Marks 5 x 10 = 50 M

9. (a) Explain Scope of the Statistics and its limitations.

OR

(b) Explain Primary data. Give various methods of collecting Primary data. Also mention merits and demerits.

10. (a) Explain Measurement of scales with examples.

OR

(b) Draw the ogive curves and hence estimate the Median..

Class	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79
Frequency	08	32	142	216	240	206	143	13

11. (a) What is a measure of central tendency? Explain various measures of central

OR

(b) Calculate the **Median and Mean** for the following data:

Class Interval	10–20	20–30	30–40	40–50	50–60
Frequency	12	18	25	15	10

12. (a) Define Mean Deviation and explain its merits and demerits

OR

(b) Compute mean and standard deviation for the following frequency distribution.

Class	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79
Frequency	08	32	142	216	240	206	143	13

13. (a) Define raw and central moments and obtain relations between central moments in terms of raw moments.

OR

(b) Explain the concept skewness. Give various measures of skewness.

25MAT101CT

CLUSTER UNIVERSITY :: KURNOOL

UG FIRST YEAR I SEMESTER END EXAMINATIONS – FEBRUARY 2026

Programme: **B.Sc.** Subject: **Mathematics -I**

Course Title: **Differential Equations**

Time: **3 Hrs** Max Marks: **70 M**

SECTION – A

Answer any **FIVE** of the following questions. (5 × 4 M = 20 M)

1. Solve the differential equation $(x^2+1)\dfrac{dy}{dx}+4xy=\dfrac{1}{x^2+1}$.
2. Solve the differential equation $\dfrac{dy}{dx}+y=y^2\log x, x>0$.
3. Solve the differential equation $y^2 \quad 2pxy + p^2(x^2 \quad 1) = m^2$, where $p=\dfrac{dy}{dx}$.
4. Find the general solution of the differential equation $(D^4+18D^2+81)y=0$.
5. Find the general solution of the differential equation $(D^2-5D+6)y=e^{4x}$.
6. Solve the differential equation $(D^2-4)y=x^2$.
7. Solve the differential equation $(D^2-4D+4)y=xe^{2x}$.
8. Solve the differential equation $x^2\dfrac{d^2y}{dx^2}-2x\dfrac{dy}{dx}-4y=x^2$.

SECTION – B

Answer **ALL** the following questions. (5 × 10 M = 50 M)

9. (a). Solve the differential equation $y^2dx+(x^2-xy-y^2)dy=0$.

OR

(b). Solve the differential equation $(1+xy)xdy+(1-xy)ydx=0$.

10. (a). Solve the differential equation $p^2+2py\cot x=y^2$, where $p=\dfrac{dy}{dx}$.

OR

(b). Solve the differential equation $y^2\log y=xyp+p^2$, where $p=\dfrac{dy}{dx}$.

11. (a). Solve the differential equation $(D^2-4D+3)y=\sin 3x\cos 2x$.

OR

(b). Solve the differential equation $(D^2+4)y=e^x+\sin 2x+\cos 2x$.

12. (a). Solve the differential equation $\dfrac{d^2y}{dx^2}-6\dfrac{dy}{dx}+13y=8e^{3x}\sin 2x$.

OR

(b). Solve the differential equation $(D^2 - 2D + 4)y = 8(x^2 + e^{2x})$.

13. (a). Solve the differential equation $(D^2 + a^2)y = \tan ax$ by the method of variation of parameters.

OR

(b). Solve the differential equation $(x^2D^2 - xD + 2)y = x \log x$.

25PHY101CT

CLUSTER UNIVERSITY :: KURNOOL

UG **FIRST** YEAR **I** SEMESTER END EXAMINATIONS – **FEBRUARY 2026**

Programme : **B.Sc** Subject : **Physics**

Course 1 : **Introduction to Mathematical Physics**

Time : **3** Hours Max Marks : **70**

SECTION -A

Answer the following any FIVE questions. Each question carrying 4 Marks **5 x 4 M = 20 M**

1. Distinguish between ordinary derivatives and partial derivatives.
2. Define divergence of a vector field and state its physical significance.
3. Write about determinant and trace of a matrix with example
4. Find the inverse of a 2×2 matrix using determinant method.
5. Write Euler's formula and express a complex number in exponential form
6. Define conditional probability and state Bayes' theorem.
7. Explain binomial probability distribution and mention one application
8. What is Fourier series? State the need for Fourier analysis in physics.

SECTION -B

Answer the following questions Each question carrying 10 Marks **5 x 10 M = 50 M**

9 a) Define gradient of a scalar field. Derive its expression and explain its physical significance.

OR

b) State and prove Gauss divergence theorem.

10 a) Define the terms eigenvalue and eigenvector. Find the eigenvalues of any 3×3 matrix using characteristic equation.

OR

b) Solve a system of two linear equations using matrix method and give a simple physics application.

11 a) Explain modulus and argument of a complex number. Represent a complex number in polar and exponential form.

OR

b) Explain phasor representation of voltage and current. Derive the expression for admittance of a parallel resonant LCR circuit.

12 a) Explain random variables. Describe binomial distributions with applications.

OR

b) State and prove Bayes' Theorem. Discuss its significance.

13 a) State Fourier theorem and derive expressions for Fourier coefficients of any periodic function.

OR

b) Obtain Fourier series for a square wave

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25CHE101CT

CLUSTER UNIVERSITY :: KURNOOL

UG **FIRST** YEAR **I** SEMESTER END EXAMINATIONS – **FEBRUARY 2026**

Programme : **B.Sc.** Subject : **Chemistry**

Course Title : GENERAL CHEMISTRY

Time : **3** Hours Max Marks : **70** M

SECTION - A

Answer any FIVE questions. Each question carrying 4 Marks **5 x 4 M = 20 M**

1. Define Hund's rule and Pauli's exclusion principle. Give one example for each.
2. Define Aufbau's rule and covalent radius. Give one example for each.
3. Write about Fajan's rules.
4. Explain the structure of PCl_5 using Hybridization.
5. Explain the structure of NH_3 and XeF_4 using VSEPR theory.
6. What are the properties of metals.
7. Define Isotopes and Soddy-Fajan's displacement law. Give examples
8. What are the types of Radioactive decay series? Give examples.

SECTION - B

Answer the following questions. Each question carries 10 marks. **5 x 10 = 50 M**

9. **a.** What is periodic law? Explain the periodic trends of (i) Atomic radius (ii) Ionization potential (iii) Electron affinity (iv) Electronegativity

OR

b. Explain (i) Diagonal relationship (ii) Inert Pair effect (iii) Variable valency (iv) Pauling scale

10. **a.** Explain the Favourable conditions for the formation of ionic compounds.

OR

b. What is Lattice energy? How is it determined using Born-Haber cycle.

11. **a.** What is hybridization? Explain SP, SP^2 and SP^3 hybridizations with one example.

OR

b. Describe Molecular Orbital Energy Diagrams for O_2 and CO molecules.

12. **a.** Explain the Band theory for classification of metals into conductors, semiconductors and insulators.

OR

b. What is Hydrogen bonding? What are the types? Describe it's influence on physical properties of molecules.

13. **a.** Explain the Nuclear Fission and Nuclear Fusion reactions with examples.

OR

b. What are the types of radioactivity? Write about the applications of radioactivity in agriculture and medicine.

25CSC101CT

CLUSTER UNIVERSITY :: KURNOOL

UG **First** year **I** Semester End Examinations – **February 2026**

Programme : I B.Sc (Honours) Subject : Computer Science-1

COURSE – 1: **COMPUTER FUNDAMENTALS AND OFFICE AUTOMATION**

Time: 3 Hours Max. Marks: 70

SECTION – A (Short Answer Questions)

Answer any FIVE of the following questions **Marks: 5 × 4 = 20**

1. Write about the evolution of computers.
2. Explain characteristics of different generations of computers.
3. Briefly explain types of number systems.
4. Discuss the memory hierarchy in computer systems.
5. What are input and output devices? Give examples.
6. Explain any five keyboard shortcuts.
7. How do you format text in MS Word?
8. What is conditional formatting in MS Excel?

SECTION – B (Essay Answer Questions)

Answer ALL the following questions **Marks: 5 × 10 = 50**

9. a) Explain conversion between number systems with examples.

   OR

   b) Explain binary, octal, decimal and hexadecimal number systems.

10. a) Draw the block diagram of a computer and explain its components.

    OR

    b) Explain computer organization and functional units.

11. a) Explain different types of networks with diagrams.

    OR

    b) Discuss networking fundamentals and network topologies.

12. a) Explain the use of mail merge with a suitable example.

    OR

    b) Explain word processing features and applications.

13. a) Describe pivot tables and pivot charts with examples.

    OR

    b) Explain data validation and conditional formatting in MS Excel.

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25MAT102CT

CLUSTER UNIVERSITY :: KURNOOL

UG FIRST YEAR I SEMESTER END EXAMINATIONS – FEBRUARY 2026

Programme: **B.Sc.** Subject: **Mathematics-II**

Course Title: **Solid Geometry**

Time: **3 Hrs** Max Marks: **70 M**

SECTION – A

Answer any **FIVE** of the following questions. $(5 \times 4\text{M} = 20\text{ M})$

1. Find the equation of the plane through the point $(-1, 3, 2)$ and perpendicular to the planes $x + 2y + 2z = 5$ and $3x + 3y + 2z = 8$.
2. If the foot of the perpendicular from $P(1, 2, 3)$ to a plane is $F(0, 1, 1)$, find the equation of the plane.
3. Find the distance of the point $(1, -2, 3)$ from the plane $x - y + z = 5$ measured parallel to the line whose direction cosines are proportional to $2, 3, -6$.
4. Find the equation of the plane through the origin and containing the line
$$x - 3y + z + 3 = 0 = 3x - y + 2z - 5.$$
5. Find the length of the perpendicular from the point $(1, 2, 3)$ to the line through the point $(6, 7, 7)$ whose direction ratios are $3, 2, -2$.
6. Find the equation of the sphere through the points $(1, 0, 0), (0, 1, 0), (0, 0, 1)$ and having the least radius.
7. Find the centre and radius of the circle $x^2 + y^2 + z^2 = 25, 2x + 3y + 2z = 9$.
8. Find the pole of the plane $x + 2y + 3z = 7$ with respect to the sphere
$$x^2 + y^2 + z^2 - 2x - 4y - 6z + 11 = 0.$$

SECTION – B

Answer **ALL** the following questions. Each question carries 10 marks. $(5 \times 10\text{ M} = 50\text{ M})$

9. (a). A plane meets the coordinate axes in A, B and C. If the centroid of ΔABC is (a, b, c), then show that the equation of the plane is $\frac{x}{a} + \frac{y}{b} + \frac{z}{c} = 3$.

OR

(b). Show that $12x^2 - 2y^2 - 6z^2 - 2xy + 7yz + 6zx = 0$ represents a pair of planes and find the angle between them.

10. (a) Find the image of the point $(1, 3, 4)$ in the plane $2x - y + z + 3 = 0$.

OR

(b) Prove that the lines $\frac{x-1}{2} = \frac{y-2}{3} = \frac{z-3}{4}; \frac{x-2}{3} = \frac{y-3}{4} = \frac{z-4}{5}$ are coplanar. Also, find the plane containing the lines.

11. (a) Find the shortest distance between the lines

$$\frac{x-2}{3}=\frac{y-3}{4}=\frac{z-1}{2}, \frac{x-4}{4}=\frac{y-5}{5}=\frac{z-2}{3}.$$

OR

(b) Find the perpendicular distance of the point $(-2,1,5)$ from the line

$$\frac{x-2}{-2}=\frac{y-3}{3}=\frac{z-5}{-6}.$$

12. (a) A variable plane passes through a fixed point (a,b,c) and intersects the axes in A,B,C. Show that the centre of the sphere $OABC$ lies on $\frac{a}{x}+\frac{b}{y}+\frac{c}{z}=2$.

OR

(b) Find the equation of the sphere passing through the circle $x^2+y^2=4, z=0$ and which is intersected by the plane $x+2y+2z=0$ in a circle of radius 3.

13. (a) Show that the plane $2x-2y+z=12$ touches the sphere $x^2+y^2+z^2-2x-4y+2z-3=0$ and find the point of contact.

OR

(b) Find the limiting points of the coaxial system defined by the spheres $x^2+y^2+z^2+4x-2y+2z+6=0$ and $x^2+y^2+z^2+2x-4y-2z+6=0$.

25FLE101AC

CLUSTER UNIVERSITY : KURNOOL

UG First Year **I** Semester End Examinations – **February 2026**

Programme : **B.A/B.Com/ B.Sc** Subject : **English-I** (Common Core Syllabus)

Paper Title : **ENGLISH BRIDGE-I: LIFE SKILLS**

Time: 3 Hours Max. Marks 70

SECTION A

Answer ANY FIVE of the following. **(5x4=20 Marks)**

1. What according to the author are shortcomings of school education presented in 'Letter to a Teacher'.
2. Write the summary of the short story, 'Night at Deoli'.
3. Explain how the feelings of a mother are presented in the poem 'Night of the Scorpion'.
4. **Find the parts of speech of the underlined words in the sentences.**

   One sunny day, a happy

   (1) child was playing in the park. The child saw a beautiful

   (2) butterfly and tried to catch it. The butterfly was flying

   (3) quickly, and the child was running

   4) behind it.

5. **Fill in the blanks with suitable prepositions.**

   a. The book is _____ the table.

   b. She is interested _____ music.

   c. The city is famous _____ its historical monuments.

   d. The teacher is standing _____ the students.

6. **Choose the right question tags given in the brackets.**

   a. She is a good singer, _____ (isn't she?/ is she?)

   b. They are coming tomorrow, _____ (aren't they?/ are they?)

   c. He doesn't like coffee, _____ (does he?/ doesn't he?)

   d. I am right, _____ (aren't I?/ am I?)

7. **Fill in the blanks with the correct word from the pair given in the brackets.**

   a. The _____ (principal/principle) of the school is very strict.

   b. The _____ (stationary/stationery) shop sells books and pens.

   c. The _____ (weather/whether) is cold today.

   d. The _____ (allowed/aloud) reading of the poem was appreciated.

8. Fill in the blanks with suitable verb forms given in brackets.

a. She _____ (has written/wrote/is writing) a letter to her friend just now.

b. They _____ (are playing/played/plays) football yesterday.

c. I _____ (am going/will go/go/went) to the market tomorrow.

d. The teacher _____ (is teaching/teaches/taught/was teaching) English grammar now.

SECTION - B

Answer ALL the questions. **(5x10=50)**

9. A) What is the central theme of the poem Coromandel Fishers'.

OR

B) Describe the typical day of a fisherman described in the poem.

10. A) How does the story 'The Lost Child' explore the theme of childhood innocence?

OR

B) How does the child's attitude towards the material things change after he is separated from his parents?

11. A) Critically appreciate the poem, 'Where the Mind is without Fear'.

OR

B) What is the central idea of the poem, 'Where the Mind is without Fear'.

12. A) Write an essay on the social commentary in the play 'The Proposal'.

OR

B) Discuss the character of Ivan Vassilyevich Lomov in the play 'The Proposal'.

13. A) Discuss the theme of guilt, redemption and forgiveness in 'Astrologer's Day'.

OR

B) Write an essay on the encounter between the astrologer and Guru Nayak.

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