Code: 1001/R

Faculty of Science/Commerce/Business Management

B.Com/BBA/B.Sc I-Year, CBCS I-Semester Regular Examinations Nov/Dec-2024

PAPER: ENGLISH-I

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

Section-A

I. Answer any FIVE of the following questions **(5x4=20 Marks)**

1. Answer the following questions
   a) What is common noun. Give two examples
   b) What is diphthong? Give two examples.
   c) Provide four examples of helping verbs.
   d) Write example of reflexive pronoun in two sentences.
2. Fill in the blanks with suitable verb forms
   a) How have you been_____(do).
   b) I have _____(read) many books in the last year .
   c) Last night, while my friend_____(walk) in the park , she saw a snake .
   d) Ravan_____(live) in Chennai for 10 years .
3. Fill in the blanks with the suitable words given in brackets .
   a) Where_____your friends going yesterday (are, were, did).
   b) That car_____always been my favourite. (Has, have, is).
   c) He_____going to be angry when he finds out. (is, will, was).
   d) Where_____you see my phone? (Is, have, did).
4. Fill in the blanks with suitable pronouns given in the brackets.
   a) He never listen to_____(somebody/ anybody).
   b) She saw_____in the garden (anything/ something).
   c) Does_____(somebody/anybody) know the answer for this question?
   d)_____knows the truth.(Anyone/ no one).
5. Fill in the blanks with the words formed by adding suitable suffixes to the words in the brackets.
   a) She was given a_____of sweets. (hand)
   b) Our team won the hockey _____.(champion)
   c) You need a_____ of hard work and determination to succeed. (Combine)
   d)Ayub supervised the_____of the answer scripts.(correct)
6. Match the collocation in column (A) with the meaning in column (B).

(A)	(B)
1. Time to kill.	a) exact time
2. Bang on time.	b) past time
3. Run out of time.	c) profit
4. Reap benefits.	d) no time

7. Pick out the odd sound word of the following

1.	Cat.	Bat.	Meet
2.	Clean.	Mean.	Bear
3.	Church.	Chemistry.	Chip
4.	Gang.	Gut.	Giraffe

8. Write meaning of the following words:
   a) bio: b) chrono: c) logy: d) kilo:

Section-B

II. Answer the following questions **(5x10=50 Marks)**

9. A) **i.** "I've something to tell you" ,said Hartley . Annotate. **5 Marks**

ii. Summarise the poet's message in the poem "If". **5 Marks**

OR

B) i. Read the passage and answer the questions that follow. **5 Marks**

'Vivienne', said Hartley, looking at her pleadingly, 'you did not answer my last letter. It was only by nearly a week's search that I found where you had moved to . Why have you kept me in suspense when you knew how anxiously I was waiting to see you and hear from you?' The girl looked out the window dreamily.

'Mr. Heartly', she said hesitatingly, I hardly know what to say to you . I realize all the advantages of your offer, and sometimes I feel sure that I could be contented with you. But, again, I am doubtful. I was born in a city girl, and I am afraid to bind myself to a quiet sub urban life'.

1) Why did Hartley come to Vivienne? 2) What was Hartley waiting for?

3) Where was Vivienne born? 4) What is Vivienne afraid of?

5) Write an antonym to "advantage".

ii. Write about the mystery and suspense in the story, Girl. **5 Marks**

10. **A) i.** If you can talk with the crowds and keep your virtue or walk with kings nor loose the common touch. –Annotate **5 Marks**

ii. Write phonetic transcription for the following word. **5 Marks**

a.clean. b.remember. c.school. d.open

OR

B) i. Magnanimity and mercy are the noblest attributes of man. **5 Marks**

ii. Read the passage and answer the questions that follow. **5 Marks**

I do not know which of us got into the carriage first. Indeed, I did not know he was in the carriage at all for some time. It was the last train from London to a midland town— a stopping train, an infinitely leisurely train, one of those trains which give you an understanding of eternity. It was tolerably full when it started , but as we stopped at the sub urban stations that travellers Elite head in ones and twos , and by the time we had left the outer ring of London behind, I was alone— or , rather , I thought I was alone .

a) Whom does "he" in the paragraph refer to? b) What is tolerably full?

c) Which city is referred to in the paragraph? d) Who is "I" in the paragraph?

e) Write an antonym to "infinitely".

11. A) i. Don't beat about the bush, my dear fellow. Tell me! Annotate. **5 Marks**

ii. Read the passage and answer the questions that follow. **5 Marks**

The Amazon Rainforest is one of the most incredible places on Earth. It covers over 5.5 million square kilometres across nine countries in South America, including Brazil, Peru, and Colombia. The rainforest is home to an estimated 10% of all known plant and animal species, making it the most biodiverse ecosystem on the planet. Some of the amazing animals that live there are jaguars, sloths, monkeys, and macaws. The Amazon is also crucial for producing oxygen, with its plants absorbing carbon dioxide and releasing oxygen through photosynthesis. Unfortunately, the rainforest faces threats from deforestation, logging, and climate change, which harm its delicate balance.

1. Where is the Amazon Rainforest located?
2. What percentage of known species live in the Amazon?
3. Name some animals that live in the Amazon.
4. What important role does the Amazon play in our ecosystem?
5. What threats does the Amazon Rainforest face?

OR

B) i. What kind of a person is Lomov? Write a brief character sketch. **5 Marks**

ii. Write a dialogue for the following situation: **5 Marks**

Two friends meet by chance after many years. They used to be in the same sports club when they were children.

12. **A) i.** Write a short paragraph on" developing a positive attitude" **5 Marks**

ii. Write words for the following phonetic transcriptions **5 Marks**

1. /mæt/ 2. wɪʃ 3. kɪŋ 4. əbəʊt 5. θɪŋk

OR

B) i. Read the passage (dialogue) and answer the questions that follow. **5 Marks**

Lomov: I have no engagement except with you. Stepan Stepanovitch.

Tschub: But why in evening clothes, my friend This isn't New Year's.

Lomov: You see, it's simply this, that – (Cmposing himself) I have come to you, Stepan Stepanovitch, to troube you with a request. It is not that first time I have had the honour of turning to you, for assistance, and you have aways, that is – i beg your pardon, Iam a bit excited! I'll take a drink of water first, dear Stepan Stepanovitch. (He drinks)

Tschub: (Aside) He's come to borrow money! I won't give him any! (To Lomov.) What is it, then, my dear Lomov?

1. Who came in evening clothes? 2. Who is excited? 3. Why did Lomov visit Tschub?
4. What is complete name of Tschub? 5. Write a meaning of the word 'assistance.

ii. Write noun forms of the words below using suffixes '–tion' and '-sion'.

a) frustrate b) educate. c) impress d) expand. e) invent. **5 Marks**

13. **A) i.** Write a dialogue between an employee and his Boss to invite him for dinner. **5 Marks**

ii. Form the antonyms of the words given below using either "dis" or "un"

-obey. -comfort. -safe. -honor. –agree **5 Marks**

OR

B) i. Write a short paragraph on " hard work never goes in vain". **5 Marks**

ii. Write the meanings for the following words. **5 Marks**

1) intrepid 2) insolent 3) apparitions 4) gilt 5) dingy

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Code: 101H/R

Faculty of Commerce/Science/Business Management

B.Com/BBA/B.Sc I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: HINDI-I

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

भाग-'अ'

I. निम्न में से किन्हीं चार प्रश्नों के उत्तर दीजिए। (4x5=20)

1. मनुष्य की चरित्र निर्धारित करने के लिए किन-किन गुणों की आवश्यकता होती है?
2. भाभी पात्र का चरित्र चित्रण कीजिए ?
3. प्रेमचंद का कवि परिचय लिखिए ?
4. वचन कितने प्रकार के हैं, उदाहरण सहित समझाइये ?
5. बाबू गुलाबराय का कवि परिचय लिखिए ?
6. जयशंकर प्रसाद जी का कवि परिचय लिखिए ?

भाग-'आ'

II. 2. निम्नलिखित प्रश्नों में से किन्हीं पाँच प्रश्नों का उत्तर लिखिए। (5x10=50)

(अ) निम्नलिखित तीन प्रश्नों में किन्हीं दो का संदर्भ सहित व्याख्या कीजिए। (5x2=10)

1. विनय विद्या का भूषण है, बिना विनय के विद्या शोभा नहीं देती। संदर्भ सहित व्याख्या कीजिए।
2. भारतीय संस्कृति की विशेषता पर संदर्भ सहित व्याख्या कीजिए।
3. छोटा जादूगर किसके लिए काम करता है ? संदर्भ सहित व्याख्या कीजिए।

III. निम्नलिखित तीन में से किन्हीं एक सारांश पर प्रकाश डालिए। (10x1=10)

3)1. बाजार दर्शन निबंध के उद्देश्य को स्पष्ट कीजिए ?
2. सद्गति कहानी को संक्षिप्त रूप से समझाइये ?
3. प्रायश्चित कहानी पर प्रकाश डालिए ?

IV. निम्नलिखित में से किन्हीं एक पात्र का चरित्र चित्रण कीजिए। (10x1=10)

4)1. सर्वदयाल 2. दुखी 3. छोटा जादूगर

V. निम्नलिखित में से किन्हीं एक लेखक का परिचय दीजिए। (5x1=5)

5)1. महादेवी वर्मा 2. रामधारी सिंह दिनकर 3. सुदर्शन

VI. निम्नलिखित में से किन्हीं एक प्रश्न का उत्तर दीजिए। (5x1=5)

6)1. कारक कितने प्रकार के हैं ?
2. काल कितने प्रकार के हैं ? उदाहरण सहित समझाइये।
3. लिंग कितने प्रकार के हैं ? उदाहरण सहित समझाइये।

VII. निम्नलिखित में से किन्हीं पाँच शब्दों का अंग्रेजी से हिंदी में अनुवाद कीजिए। (5x1=5)

7)1. Accountant 2. Adviser 3. Ambassador 4. Cashier 5. Director
6. Forest officer 7. Benefit

VII. निम्नलिखित में से किन्हीं पाँच शब्दों का वाक्य शुद्ध कीजिए। (5x1=5)

8)1. घोड़ा घास खाया 2. गंगा बड़ा नदी है 3. तुम तुम्हारे गाँव जाओ
4. वह मेरे को मारा 5. राम वन जाते हैं 6. मोहन ने कॉफी बनाया
7. वह मेरे को नहीं बुलाता।

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Code: 101T/R

Faculty of Commerce/Science/Business Management

B.Com/BBA/B.Sc I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: TELUGU-I

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

విభాగము- ఎ

I. ఏవైనా నాలుగు ప్రశ్నలకు సమాధానం రాయండి. 4×5=20

1. "తప్ప బలుక నగునె ధార్మికులకు" సందర్భ సహిత వ్యాఖ్య రాయండి.
2. "సమిధనొక్కటి ఆహుతిచ్చాను" సందర్భ సహిత వ్యాఖ్య రాయండి.
3. ఈ క్రింది పదాలకు నానార్థాలు వ్రాయండి.

1)భార్య 2) అంబరము 3)ఆశ్రమము 4)హస్తము 5)కరము

4 ఈ క్రింది పదాలకు పర్యాయపదాలు వ్రాయండి.

1) ఆకాశము 2) అస్త్రము 3) అద్రి 4) పక్షి 5) శివుడు

5. గురజాడ అప్పారావు ను పరిచయం చేయండి

6. ఓరుగల్లు కోట

విభాగము- బి

II ఈ క్రింది ప్రశ్నలకు సమాధానములు వ్రాయండి . 5×10=50

ఒక పద్యానికి కవి పరిచయం,సందర్భం, ప్రతిపదార్థ తాత్పర్యం, వ్యాకరణాంశాలు తెలపండి.

7. (a) విమల యశోనిధీ! పురుష వృత్త మెరుంగుచునుండు జూవె వే
దములును బంచభూతములు ధర్మవు సంధ్యలు నంతరాత్మయన్
యముడును జంద్రసూర్యులు నహంబును రాత్రియు ననఘపదా
ర్థము లివి యుండగా నరుడు దక్కొన నేర్చునె తన్ను మృచ్ఛిలన్.

లేదా

(b) నాళీకాప్తుడు గోరగించు నటమున్ ప్రత్యూష కాలంబునన్
వాలాయంబుగ పుల్లతామరస భవ్యంబైన శృంగారపుం
గేళాకూళిని దీర్ఘమాడి యనురక్తిన్ ధాత కాషాయుడై
ఫాలాది స్థలులందు నవ్య భసిత ప్రాగల్భ్య మేపారగన్

8 (a) గొడగూచి ముర్ఖ భక్తిని వివరించండి.

లేదా

b) రాజు కవి సారాంశం ని వివరించండి

9) a) రుద్రమదేవి పాత్ర చిత్రణను విశ్లేషించండి.

లేదా

b) సోమదేవ రాజు వృత్తాంతాన్ని తెలపండి.

10) a) "గోన గన్నా రెడ్డి" గురించి వివరించండి.

లేదా

b) దేవగిరి మహా దేవరాజు పాత్ర చిత్రణ

11) a) సామాన్య, సంశ్లిష్ట వాక్యాలను సోదాహరణంగా వివరించండి.

లేదా

b) ఈ క్రింది మూడు సంధులను లక్ష్యలక్షణ సమన్వితం చేయండి.

1) యణాదేశ సంధి 2) వృద్ధి సంధి 3) గసడదవాదేశ సంధి.

Faculty of Commerce/Science/Business Management

Second Language - Arabic

B.B.A., B.COM & B.SC. Under (CBCS)

Regular I - Semester Examination Nov/Dec - 2024

Title of the Paper: Classical Prose, Modern Prose, Grammar & History of Arabic Literature

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

Section – A

Answer any **4** Questions, Each Question Carries 5 Marks. **(4×5=20)**

1. Translate the following verses with reference to the context

١) ترجم الآيات التالية مع الإشارة إلى نصها :

" والتين والزيتون 0 وطور سينين 0 وهذا البلد الأمين 0

2. Answer the following question

٢) أذكر حديث الرسول صلى الله عليه وسلم فى النظافة ؟

3. Write Five Examples of "المؤنث"?

٣) أكتب خمسة أمثلة للمؤنث ؟

4. Write the Five names of the poets of " المعلقات السبع "

٤) أكتب خمسة أسماء الشعراء المعلقات السبع ؟

5. Write any Five Meanings of the following words

٥) هات خمسة معاني من الكلمات التالية

طريق - لغة - بلد - عصر - ظهرك - كلية - صدر - سماء

6. Convert any Five Following Singular words into Plural

٦) آت خمسة جموع للكلمات الآتية

كلية - جديد - سيارة - طالب - أخ - حافلة - بيت - مذهب

Cont. Page – 2

Section - B

Answer all questions. Each question carries 10 Marks. **(5×10=50)**

7. (A) Write the summary of "Suratul Inshirah ".

٧) (ا) اكتب خلاصة سورة الإنشراح .

(OR)

(B) Explain the summary of " Suratut Teen" in detail.

(ب) بين خلاصة سورة التين مفصلا.

8. (A) Write the summary of . "النظافة "

٨ . (ا) اكتب خلاصة عن " النظافة " .

(OR)

(B) Explain the summary of the lesson "الحوار".

(ب) بين خلاصة الدرس" الحوار".

9. (A) How many Kinds of Noun in Arabic ? Explain them with examples:

٩). (ا) أكتب عن الكلمة وأقسامها .

(OR)

(B) Write about the "الكلمة". The Word in Arabic and its Kinds

(ب) كم نوعا للاسم ؟ اشرح بالأمثلة .

10. (A) Write the Characteristics feature of Arabic Language.

١٠). (ا) أذكر ميزات اللغة العربية.

(OR)

(B) Write a note on "Poetry during Pre-Islamic Period"

(ب) اكتب عن " الشعر في العصر الجاهلي" .

11. (A) What a note on "poets of pre-Islamic period".

١١) (ا) أكتب عن الشعراء في العصر الجاهلي .

(OR)

(B) Write a summary of the lesson " المعلقات السبع":

(ب) أكتب خلاصة الدرس " المعلقات السبع " .

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Code: 101S/R

Faculty of Commerce/Science/Business Management
B.Com/BBA/B.Sc I-Year, CBCS-I Semester Regular Examinations
Nov/Dec-2024
PAPER: SANSKRIT-I

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

I सूचना :- चत्वारि प्रश्नाः समाधेयाः।

1. श्लोकं भाषान्तरीकुरुत।

'रामः सत्पुरुषो लोके सत्यधर्मपरायणः।
धर्मज्ञः सत्यसंधश्च शीलवाननसूयकः॥'

2. का एष मामनुत्तरयन् मुमूर्षुं समायति वाधिरः? इदं वाक्यं प्रसन्दर्भं व्याख्यात।

3. मनस्येकं ..... दुरात्मनाम्॥ श्लोकममुं पूरयत।

4. "सर्वस्य लोकस्य हिते निविष्टम्"- वाक्यमिमं प्रसन्दर्भं व्याख्यात।

5. एकं प्रसूयते माता द्वितीयं वाक्प्रसूयते।
वाग्जातमधिकं प्रोचुः सोदर्यादपि बन्धुवत्॥- श्लोकममुं भाषान्तरीकुरुत।

6. सन्धिं विघटयत।

(1) गुर्वाज्ञा (2) हरीच्छा (3) षण्मुखः (4) रामस्तुतिः
(5) सुबन्त

PART B

सूचनाः सर्वे प्रश्नाः समानाङ्काः सन्ति। सर्वे समानाङ्किताः।

7. अ) अस्त्युत्तरस्यां दिशि देवतात्मा हिमालयो नाम नगाधिराजः।
पूर्वापरौ तोयनिधी वगाह्य स्थितः पृथिव्या इव मानदण्डः॥
(04)

आ) आमेखलं सञ्चरतां घनानां छायामधः सानुगतां निषेव्य।
उन्मेषशालिनी वृष्टिभिराश्रयन्ते शृङ्गाणि यस्यातपवन्ति सिद्धाः॥

8. अ) दिवाकराद्रक्षति यो गुहासु लीनं दिवाभीतमिवान्धकारम्।
क्षुद्रेऽपि नूनं शरणं प्रपन्ने ममत्वमुच्चैः शिरसां सतीव॥
(04)

आ) कपोलकण्डूः करिभिर्विनेतुं विघट्टितानां सरलद्रुमाणाम्।
यत्र स्रुतक्षीरतया प्रसूतः सानूनि गन्धः सुरभीकरोति॥

9. अ) धर्मबद्धो दौवारिकः इति पाठ्यांशस्य सारं लिखत।
(04)

आ) वानरमकरयोः कथां पञ्चतन्त्रमनुसृत्य वर्णयत।

10. द्वौ शब्दौ सर्वासु विभक्तिषु लिखत।
① नदी ② फल
(04)
③ कवि ④ पितृ

11. पञ्चानां नामनिर्देशपूर्वकं सन्धत्त।
(1) हरि + इच्छा (2) नव + उदयः (3) इति + अत्र
(4) वाक् + ईशः (5) वाक् + मयम्
(04)
(6) तत् + लयः (7) कविः + आयाति (8) हरे + त्र
(9) तत् + टीका (10) हरिः + चरति

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Code: 101U/R

Faculty of Commerce/Science/Business Management
B.Com/BBA/B.Sc I-Year, CBCS-I Semester Regular Examinations
Nov/Dec-2024
PAPER: URDU-I

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

SECTION 'A'

نوٹ : مندرجہ ذیل سوالات میں سے کوئی چار (4) کے مختصر جوابات مطلوب ہیں۔ 4 x 5 = 20

ہر سوال کے لئے پانچ (5) نشانات مختص ہیں۔

(1) غزل کے پہلے اور آخری شعر کو کیا کہتے ہیں۔

(2) ولی دکنی کا تعارف بیان کیجئے۔

(3) نظم کی تعریف بیان کیجئے۔

(4) اکبرالہ آبادی کا تعارف بیان کیجیے۔

(5) حکایت کسے کہتے ہیں۔

(6) ڈرامے کی تعریف بیان کیجئے۔

SECTION 'B'

II. تمام سوالات کے جوابات مطلوب ہیں۔ 5 x 10 = 50

7) a) صالحہ عابد حسین کے سفرناموں کا تجزیہ کیجئے۔ یا

b) ''فنون لطیفہ'' میں علامہ اقبال نے کیا پیغام دیا تفصیل سے لکھئے۔

8) a) میر تقی میر کی شاعری کی امتیازی خصوصیات پر روشنی ڈالئے۔ یا

b) اُردو شاعری کی اولیت کا سہرا ولی کے سر ہے کیوں؟

9) a) نظم ''توحید'' کا مرکزی خیال بیان کیجئے۔ یا

b) ڈرامہ ''تلاش'' کا خلاصہ اپنے الفاظ میں لکھئے۔

10) a) اکبرالہ آبادی کی نظم ''مستقبل'' کا خلاصہ لکھئے۔ یا

b) مظہر علی خاں ولا کی حکایتوں خلاصہ بیان کیجئے۔

11) a) سراج اورنگ آبادی کے حالات زندگی پر نوٹ لکھئے۔ یا

b) کسی دو اشعار کی معہ متن تشریح کیجئے۔

1) وہی مرد ہے جسے دنیا میانے دین کا کرے کام سا جے اوسے کامرانی

2) ہوا ہوں جیوں کماں خم روز غم سوں سینے میں تیر ہے آہ جگر نیں

3) مجکوں یکدم قرار نیں ہرگز تجھ بغیر اختیار نہیں ہرگز

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Code: 1023/R

Faculty of Science

B.Sc I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: DIFFERENTIAL AND INTEGRAL CALCULUS(Mathematics-I)

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

Section-A

I. Answer any SIX of the following questions (6x5=30 Marks)

1. If $Z = y\cos x - xy$ then find $\frac{\partial z}{\partial x}$ and $\frac{\partial z}{\partial y}$
2. If $z = \tan^{-1}(y/x)$ then show that $\frac{\partial^2 z}{\partial x^2} + \frac{\partial^2 z}{\partial y^2} = 0$
3. If $U = x^3 + y^3$ and $x = a\cos t$, $y = b\sin t$ then find $\frac{dU}{dt}$
4. If the curves $f(x, y) = 0$, $\emptyset(x,y) = 0$ touch each other then show that at a point of contact $\frac{\partial f}{\partial x}\frac{\partial \emptyset}{\partial y} - \frac{\partial f}{\partial y}\frac{\partial \emptyset}{\partial y} = 0$
5. Find the Radius of curvature of $s = 4a\left(\sin\frac{\Psi}{3}\right)$ at a point $\left(\frac{\pi}{2}, 2a\right)$
6. Find the Radius of curvature of $y = x^4 - 4x^3 - 18x^2$ at (0 0)
7. Find the length of the curve catenary $y = c\cos h\left(\frac{x}{c}\right)$ from the vertex (0, 0) to (x, y)
8. Find the perimeter of the cardiae $r = a(1 - \cos\theta)$ from $\theta = 0$ to $\theta = \pi$
9. Find the envelope of the family of curves $y = mx + \frac{a}{m}$ where 'm' is parameter.
10. If $U = \frac{1}{\sqrt{x^2+y^2+z^2}}$ then show that $\frac{\partial^2 U}{\partial x^2} + \frac{\partial^2 U}{\partial y^2} + \frac{\partial^2 U}{\partial z^2} = 0$

SECTION-B

II. Answer the following questions (4x10=40 Marks)

11. a) Define Homogeneous function state and prove Euler's theorem

OR

b) If $U = \cot^{-1}\left[\frac{x+y}{\sqrt{x}+\sqrt{y}}\right]$ then prove that $x\frac{\partial U}{\partial x} + y\frac{\partial U}{\partial y} = \frac{-1}{4}\sin 2U$

12. a) Expand $f(x, y) = x^2 + xy + y^2$ in powers of $(x - 2)$ and $(y - 3)$

OR

b) If 'z' is a function of x & y where $x = e^u + e^{-v}$, $y = e^{-u} - e^v$ then prove that $\frac{\partial z}{\partial u} - \frac{\partial z}{\partial v} = x\frac{\partial z}{\partial X} - y\frac{\partial z}{\partial y}$

13. a) Find the evolute of the parabola $y^2 = 4ax$

OR

b) Find the circle of curve of the curve $\sqrt{x} + \sqrt{y} = \sqrt{a}$ at $\left(\frac{a}{4}, \frac{a}{4}\right)$

14. a) Find the volume of the solid obtained by revolving the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ about x-axis.

OR

b) Prove that the loop (whole length) of the curve $x = t^2$, $y = t - \frac{t^3}{3}$ is of the length $4\sqrt{3}$

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Code: 1022 / R

Faculty of Science

B.Sc I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: Mechanics of Oscillations(Physics-I)

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

Section-A

I. Answer any SIX of the following questions (6x5=30 Marks)

1. Define scalar and vector fields. Give three examples for each?
2. Define curl of a vector and explain its significance?
3. What is variable mass explain with a good example?
4. Define a rigid body, write examples.
5. State kepler's laws of planetary motion?
6. What is a non inertial frame ?
7. What is simple harmonic motion? Write its physical characteristics?
8. Explain what do you mean by over damped and critically damped vibrations?
9. Find curl A, where A=2xi +2yj. Is the motion is irrotational?
10. The velocity of a particle is 0.01c. How many times does the relativistic mass exceeds the rest mass value?

Section-B

II. Answer the following questions (4x10=40 Marks)

11.(a) State and prove Gauss's theorem of divergence.

OR

(b) Define green's theorem. Give the proof of green's theorem?

12.(a) Derive the expression for motion of a rocket

OR

(b) State and explain Euler's equations in detail?

13.(a) Describe Michelson-Morley experiment. What is the significance of the experiment

OR

(b) What is a central force show that central force is a conservative force?

14.(a) Define S.H.M. Give three examples. Derive the equation of motion of S.H.M. and solve it?

OR

(b) Derive the equation of damped harmonic oscillator and give solution for it?

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Code: 1021/R

Faculty of Science

B.Sc I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: Descriptive Statistics and Probability (Statistics-I)

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

Section-A

I. Answer any SIX of the following questions (6x5=30 Marks)

1.Define primary data? Write it's merits and demerits of collecting primary data
2. Explain the concept of kurtosis?
3.Write down the Axiomatic definition of probability?
4.Define the conditional probability?
5.Define probability mass function and probability distribution of a random variable?
6.Define discrete random variable? it's example
7.Define mathematical expectations of a discrete and continuous random variable?
8.Define P.G.F?
9.Define Sheppard's correction?
10.Define cov(ax,by)=ab cov(x,y)?

Section-B

II. Answer the following questions (4x10=40 Marks)

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

OR

(b) Define moments? Establish the relationship between the moments about any arbitrary point in terms of the moments about the mean?

12. (a) Define the following terms?

a)Random experiment b)Trial c)Out come d) Event. e) Sample space

f)Equally likely events g)Mutually exclusive event h)Exhaustive events

OR

(b) State and prove addition theorem of probability for n events.

13.(a) Values of x 0 1 2 3 4 5 6 7 8

P(x) a 3a 5a 7a 9a 11a 13a 15a 17a

(1) Determine the value of a?

(2) Find (i) $p(x<3)$ (ii) $p(x\leq 3)$ (iii) $p(x>7)$ (iv) $p(2\leq x\leq 5)$

OR

(b) Define the following?

(i) Joint distribution of two random variables

(ii) Marginal distribution? (iii) conditional distribution?

14. (a) State and prove chebbychev's inequality

OR

(b) Define M.G.F? State and prove properties of moment generating function?

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Code: 1025/R

Faculty of Science

B.Sc(Computer Science) I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: Programming in C (Computer Science-I)

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

Section-A

I. Answer any SIX of the following questions (6x5=30 Marks)

1. Explain about Algorithms and Flowcharts.
2. Explain about Structure of C Program
3. Explain about goto statement
4. What is Character Array
5. Explain about Call By Value
6. Explain about Recursion?
7. Explain about Structure and Union
8. Explain about Array of Structures
9. Explain about precedence and associativity
10. Explain about break Vs continue.

Section-B

II. Answer the following questions (4x10=40 Marks)

11.a). What is Programming? Explain about Generations and Classifications of Programming Languages.

OR

b). Explain about C Tokens.

12.a). Explain about Formatted I/O operations in C program.

OR

b). Explain about nested if else and else if ladder.

13.a). What is Function? Explain about String handling Functions.

OR

b). What is Pointer? Explain about Pointer arithmetic operations with program.

14.a). What is Structure? Explain about Array of Structure with example.

OR

b). What is Union? Explain about Structures Vs Unions.

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Code: 1024/R

Faculty of Science

B.Sc(Data Science) I-Year, CBCS-I Semester Regular Examinations

Nov/Dec-2024

PAPER: Fundamentals of Information Technology (Data Science-I)

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

Section-A

I. Answer any SIX of the following questions (6x5=30 Marks)

1. Explain about block diagram of Computer.
2. Explain about Desktop Computer.
3. Explain about physical devices used for Storage Cells.
4. Explain about RAM and ROM.
5. Explain about LAN and WAN.
6. Explain about E-Ink Display
7. What is Information Hiding?
8. Explain about software project.
9. Explain about how Numeric Data is represented.
10. Explain about Embedded Processors.

Section-B

II. Answer the following questions (4x10=40 Marks)

11. a). Explain about Representation of Characters in Computer.

OR

b). What is Data and it's Types? Explain about Data Processing using a computer.

12. a). What is Process? Explain about Structure of Central Processing Unit.

OR

b). What is Memory? Explain about types of Memory.

13. a). Explain about Input Devices of Computer.

OR

b). What is Programming? Explain about Classification of Programming Languages.

14. a). What is Software Process? Explain about Software Development Process.

OR

b). Explain about Coding Standards in software Engineering.

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Code: 1001EC/R

Faculty of Science

BCA I-Year, CBCS I-Semester Regular Examinations Nov/Dec-2024

PAPER: EFFECTIVE COMMUNICATION

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

Section-A

I. Answer any FIVE of the following questions **(5x4=20 Marks)**

1. Use the suitable **articles** in the blanks:
   a. Have you been to ..... Arctic?
   b. Newyork is ..... large city.
   c. She is .....best friend of mine.
   d. It is .....Indication.
2. Complete each sentence with the correct tense form of Verb
   a .How have you been..... (do)
   b. Keep.....(guess)the answers till you get them right .
   c. I have ..... (read)many books in the last one year.
   d ..... (spoke)to my friend before I wrote to you.
3. Choose the correct option:
   a. Sumathi ..... a wise girl.(is /are/was)
   b. We..... a big National.(are/was/were)
   c. There ..... no need of your help.(is/are/been)
   d. India .....a big country.(is/are/be)
4. Write suitable prepositions in the blanks:
   a. He met Krishna .....a super market.
   b. We work..... Monday to Friday.
   c. My father bought a new bike .....me.
   d. She goes to college ..... bus.
5. Write correct form of pronoun for the following sentences:
   a. She is the same height as..... Sister.
   b. I bought the coffee with ..... money.
   c. You can't blame .....for everything.
   d..... are trying to flog their house.
6. Write prefix & suffix for the following words
   a. .....place .....
   b. .....health .....
   c. .....courage .....
   d. ....appear .....
7. Use the correct tense for the following sentences.
   a. We..... (go)to New Delhi tomorrow.
   b. The political leaders..... (make)big promises .
   c. Someone ..... (knock) at the door.
   d. It ..... (rain)heavily in July and August.
8. What are the factors of team work?

Section-B

II. Answer the following questions **(5x10=50 Marks)**

9. A. i. Why verbal and non verbal communication is important in the work place ? **5 Marks**

ii. Why is Knapps model important? **5 Marks**

OR

i. Read carefully and answer the questions from the Unseen Passage : **5 Marks**

A man once observed three masons working with other workers to construct a temple. He observed the masons for three days and found that, despite the fact that they were all performing the same type of work, their methods of doing it differed noticeably.

He observed that the first mason arrived late for work, worked slowly and half-heartedly, took longer breaks, frequently checked his watch, and finished early.

Being naturally curious, the man wanted to know the three masons' opinions of his work. What were they doing, he enquired. I'm working to provide for myself, the first mason said, hitting his large belly with his hand. The second one announced, "I'm erecting a building." I'm constructing the house of God, the third mason declared as he regarded the enormous structure.

a. The three masons were engaged in what?

b. How long did "a man" watch them for?

c. What aroused the man's curiosity?

d. How did the first mason carry out his duties?

e. What was the second Mason's philosophy regarding his work?

ii. What is the importance of personality development in the work place? **5 Marks**

10. A. i. What are the barriers of Effective communication? **5 Marks**

ii. Read carefully and answer the questions from the Unseen Passage **5 Marks**

Google is one of the biggest companies in the world. It is a multinational company. People also know it as the most famous search engine. People mainly use this search engine to get answers to their questions.

It keeps a lot of information with itself. Google earns money through advertisers.

Advertisers run ad campaigns on it to sell their products and pay according to the reach of the people. It was established on 4th September 1998 by two Ph.D. students whose names were Sergey Brin and Larry Page.

There are some other very popular websites of Google, in which YouTube is the most famous. It is used to share video content. Google has many competitors like Yahoo, Baidu, and Bing, but they are not as big brands as Google.

Questions –

1. Who were Sergey Brin and Larry Page?
2. When was Google established?
3. How does Google make money?
4. What is Google? And why do people use it?
5. What is YouTube?

OR

B. i. Write the expressions for the following one word substitution **5 Marks**

a) Autograph b) Ecology c) psychology d) Democracy e) Astronomy

ii. A Comprehension Passage : **5 Marks**

Sachin Tendulkar was born on 24 April 1973. He was one of the best batsmen and was also called the God of Cricket.

He was awarded, Bharat Ratna, India's highest civilian award in 2014. Moreover, he received many awards like Arjuna Award, Padma Shri Award, Padma Vibhushan Award, etc.

He scored more than 14,000 runs in his cricket career. Presently, he is associated with an organization named Apnalaya.

In this organization, he takes care of the upbringing of about 200 children. There is a film` related to his life. The name of the film is Sachin: A Billion Dreams which was released in 2017.

The film was directed by James Erskine.

Questions –

a. In which year was the film released?
b. What is Apnalaya?
c. How many runs did Sachin score in his cricket career?
d. When was Sachin Tendulkar born?
e. Write any two names of his awards.

11. A. i. What is the role of Redundancy in language ? **5 Marks**

ii. Choose the correct Homophone to complete the sentences **5 Marks**

a) The wind..... hard (blue/blew)
b) The members meet every..... (Week/weak)
c) The .....(fax/facts)were presented by the lawyer.
d) The.....(leak/leek)in the roof would not stop.
e) Jenny looked very..... (pale/pail)

OR

B. i. Write a Report on Blood donation camp. **5 Marks**

ii. Write a letter to your father asking for money to buy books. **5 Marks**

12. A. i. Write an essay on Effects of Social media on youth.. **5 Marks**

ii. Antonyms **5 Marks**

a)discipline b)polite c)patient d)visible e)great

OR

B. i. What are the basic rules of paragraph writing. **5 Marks**

ii. Fill in the blanks with correct phrasal verb. **5 Marks**

a) He .....All struggle (gave up/ gave out)
b) Why are you..... (looking around/looking for)
c) Please..... your shoes.(take off/take out)
d) All the fruit in the basket has..... (gone off/ gone out)
e) ..... the light, please(switch on/switch for)

13. A: i. What are the basic rules of E-Mail Etiquettes in the work place? **5 Marks**

ii. Synonyms: **5 Marks**

a) Beautiful b) strange c) brave d) explain e) great

OR

B. i. How many types of tenses are there in English? Explain them with examples? **5 Marks**

ii. What is persuasive communication explain with example? **5 Marks**

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Code: 1042/R

Faculty of Science

BCA I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE

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

Section-A

I. Answer any FIVE of the following questions **(5x4=20 Marks)**

1. Define the following laws of logic (i) Demorgan's laws (ii) Commutative laws
2. If $f: \mathbb{R} \to \mathbb{R}$ and $g: \mathbb{R} \to \mathbb{R}$ are given by $f(x) = \cos x$ and $g(x) = 3x^2$. Then find $(fog)(x)$ and $(gof)(x)$
3. Solve the recurrence relation $a_n = 7\,a_{n-1} - 10\,a_{n-2}$ with $a_0 = 2$, $a_1 = 3$
4. Define Group. Give one example
5. Write about planar Graphs.
6. Construct the truth table for the compound statement $p \to [\sim(q \wedge r)]$
7. Show that $G = \{0,1,2\}$ forms a group under addition modulo 3
8. Prove that $A \cup (A \cap B) = A$

Section-B

II. Answer the following questions **(5x10=50 Marks)**

9.(a) Use logical equivalences to prove that $(\sim q \wedge (p \to q)) \to \sim p$ is a Tautology.

(OR)

(b) State and Prove Division Algorithm.

10.(a) Define equivalence relation. Give an example for the following relation

(i) Reflexive and symmetric but not transitive

(ii) Reflexive and transitive but not symmetric

(OR)

(b) Determine the number of positive integers n where 1≤ n ≤ 100 and n is not divisible by 2, 3 or 5

11.(a) Solve the recurrence relation $a_n = a_{n-1} + n$ with initial term $a_0 = 4$.

(OR)

(b) Define generating Function?

1. Find the generating function of the sequence 1, -1, 1, -1 .....

2. Determine the sequence for the function $f_n = x^3 / 1-x^2$

12.(a) What is homomorphism? Give an example for Homomorphism.

(OR)

(b) Prove that the set $G = \{1, -1, i, -i\}$ is an abelian group with respect to multiplication.

13. (a) Define Minimum spanning tree? Describe in brief about kruskal's algorithm with example.

(OR)

(b) Define (i) Euler circuit (ii) directed graph (iii) degree of vertex in graph (iv) connected graph (v) graph isomorphism

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Code: 1053/R

Faculty of Science

BCA I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: Programming in C

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

Section-A

I. Answer any FIVE of the following questions **(5x4=20 Marks)**

1. What is Flow Chart?
2. What is Recursion?
3. What is array?
4. What is Pointer?
5. Define structure.
6. What is Identifiers in C?
7. Define String.
8. What is Preprocessor?

Section-B

II. Answer the following questions **(5x10=50 Marks)**

9. a). Explain about Input Output statements.

OR

b). Explain about operators used in C with Example.

10 a). Explain about if else if and else if ladder statements with example.

OR

b). Explain about Storage Classes in C.

11. a). Explain about Bubble sort.

OR

b). Define array. Explain about Multi dimensional Arrays.

12. a). Explain about Pointer Arithmetic and Array of Pointers.

OR

b). Define string? Explain about String handling functions in C.

13. a). Explain about Structures Vs Unions.

OR

b). What is File? Explain about modes of Files with examples.

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Code: 1041/R

Faculty of Science

BCA I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: Digital Principles

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

Section-A

I. Answer any FIVE of the following questions (5x4=20 Marks)

1.Covert the given binary numbers into decimal form?
   I. 111.101
   II.101101.01

2. Draw K-MAP for three variables?

3. How can you connect a NAND gate to get an inverter?

4. Define shift register and explain its procedure to construct?

5. What is race around condition?

6. Explain ONE'S AND TWO'S complement methods?

7. Explain the concept of DE MULTIPLEXER (De-Mux)?

8. Define asynchronous sequential circuit?

Section-B

II. Answer the following questions (5x10=50 Marks)

9. (a) State and explain logic gates with truth table?

OR

(b) Explain why NAND AND NOR gates are called universal gates?

10. (a) Draw the logic circuit for Y=(A+B+C)(A+B+D) use Boolean algebra to simplify the equation .then Draw the corresponding logic circuit?

OR

(b) Simplify the given boolean expression using SOP
F(A,B,C,D) = sum of m(1,2,3,4,8,9,10,11,15)?

11. (a) Explain working of SR FLIP FLOP with truth tables?

OR

(b) Show how to convert SR flip flop to JK flip flop? and mention race around condition?

12. (a) Explain different types of asynchronous counter. Give an example using three bits?

OR

(b) Design Johnson counter for four bits?

13. (a) Explain the design procedure for sequential circuits?

OR

(b) What are various applications of sequential circuits? Mention advantages of sequential circuits over combinational circuits?

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Code: 101WT/R

Faculty of Commerce/Science/Business Management
BCA I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024
PAPER: Introduction to Web Technologies

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

Section-A

I. Answer any FIVE of the following questions **(5x4=20 Marks)**

1. Write DOM and BOM
2. Write about advantages of CSS ?
3. What is Responsive Web Design ?
4. Write about variable declaration of variables with example
5. Define Type script and explain its features?
6. Write about control statements in JavaScript?
7. Write about ID selector with example?
8. Write Hyperlinks in HTML with example ?

Section-B

II. Answer the following questions **(5x10=50 Marks)**

9. a) Explain types of lists in HTML and explain with example programs ?

OR

b) Write about form controls with example program?

10. a) Explain Inline styles sheet and External Style sheet with example ?

OR

b) Explain display and visibility property with example?

11. a) Write about principles of responsive web design ?

OR

b) What is a View port? explain in detail ?

12. a) Explain types of operators in JavaScript ?

OR

b) Explain about String functions in JavaScript?

13. a) Define interface ? Explain with example?

OR

b) Explain about Generic with example

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Code: 1042/R

Faculty of Science

B.Sc (Honours) I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: CALCULUS AND DIFFERENTIAL EQUATIONS

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

Section-A

Answer any SIX of the following questions **(6x5=30 Marks)**

1. If $y = \frac{\log x}{x}$ then show that $y_2 = \frac{2\log x - 3}{x^3}$
2. If $ax^2 + 2hxy + by^2 = 1$ then show that $y_2 = \frac{h^2 - ab}{(hx+by)^3}$
3. Solve : $(x^2 + y^2)\,.dx + 2xydy = 0$
4. Solve : $y^2\,dx + (x^2 - xy - y^2)\,dy = 0$
5. Solve : $x = y - P^2$
6. Solve : $P = \sin(y - px)$
7. Solve : $(D^2 + 4D + 4)\,y = 0$
8. Solve : $(D^3 + D - 2)y = 3e^{-2x}$
9. Find n^{th} order derivative of $y = \frac{x+1}{x^2-4}$
10. Solve : $(D^2 + (a + b)\,D + ab)\,y = 0$

SECTION-B

Answer the following questions **(4x10=40 Marks)**

11.A) State and prove leibnitz theorem

OR

B) If $y = \frac{\sin^{-1}x}{\sqrt{1-x^2}}$ then show that $(1 - x^2)\,y_{n+2} - (2n+3)\,xy_{n+1} - (n+1)^2\,y_n = 0$

12.A) Solve : $(3x^2y^4 + 2xy)\,dx + (2x^3\,y^3 - x^2)\,dy = 0$

OR

B) Solve: $xy - \frac{dy}{dx} = y^3e^{-x2}$

13.A) Solve : $xp^2 - 2yp + ax = 0$

OR

B) Solve : $y = x\,(P + \sqrt{1 + p^2})$

14. A) Solve : $y^{II} - 2y^{I} + y = e^x \log x$ by using method of variation of parameters.

OR

B) Solve : $x^2\,y^{II} - xy^{I} + 2y = x \log x$

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Code: 1041/R

Faculty of Science

B.Sc (Honors) I-Year, CBCS-I Semester Regular Examinations

Nov/Dec-2024

PAPER: Statistics and Probability Models

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

Section-A

I. Answer any SIX of the following questions (6x5=30 Marks)

1. Define Arithmetic mean, Geometric mean, Harmonic mean.
2. Define Skewness.
3. Define random variable with two suitable examples.
4. Define the following (i) probability mass function (ii) probability density function.
5. Define moment Generating function.
6. State any two properties of characteristic function.
7. Find moment Generating function of rectangular distribution.
8. Find mean of exponential distribution.
9. Define a formula of central moment.
10. Define statistical definition of probability

Section-B

II. Answer the following questions (4x10=40 Marks)

11. (a) Derive the relation between central and non-central moments.

(OR)

(b) State and prove multiplication theorem of probability.

12. (a) Define a random variable. What are different types of random variables? Give an example for each.

(OR)

(b) State and prove addition theorem of expectation for two random variables.

13. (a) Find first four moments of Binomial distribution.

(OR)

(b) Define mean of Poisson distribution.

14 (a) State and prove the normal distribution of moment Generating function.

(OR)

(b) Define the characteristic function of random variable and state its properties.

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Code: 1043/R

Faculty of Science

B.Sc(Honours) I-Year, CBCS-I Semester Regular Examinations

Nov/Dec-2024

PAPER: Programming with C

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

Section-A

I. Answer any SIX of the following questions (6x5=30 Marks)

1. Explain about the Structure of C program.
2. Explain Type Conversion.
3. Explain about for statement with example
4. Explain about while and do while loops with example
5. Explain about Inline Functions.
6. What is Dynamic Memory allocation?
7. What is union? Give an Example.
8. What is enum?
9. Explain about Escape sequences
10. What is multi dimensional array?

Section-B

II. Answer the following questions (4x10=40 Marks)

11. a). Explain about Operators and types in C with examples.

OR

b). Explain about non-formatted I/O operations with Examples

12. a). Explain about Arrays and Character arrays with examples.

OR

b). Explain about nested if else and else if ladder with examples.

13. a). Explain about call by value and call by reference with examples.

OR

b). Explain about Pointer Arithmetic and Pointer to Pointer with examples.

14. a). What is Union? Explain about Structures Vs Unions.

OR

b). What are Files in C and also explain about Binary files.

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Code: 1311AECC/R

Faculty of Science

B.Sc(Honors) I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: COMMUNICATION

Time: 2 Hours **Max Marks: 40**

Section-A

I. Answer any TWO of the following questions (2x5=10 Marks)

1.Define Monologue in communication?

2.Why is Documentation important in writing?

3.What is the difference between effective and miscommunication?

4.Why Group communication is important ?

Section-B

II. Answer any TWO of the following questions (2x15=30 Marks)

5.(a)What is Verbal and Non Verbal communication?

(OR)

(b).Why is public speech important ?

6 (a).Explain why analysis and interpretation important in reading comprehension?

(OR)

(b).What is business letter and report writing ? How these two differ from each other ?

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Code : 1309/R

Faculty of Science

B.Sc (Honours) I-Year, CBCS-I Semester Regular Examinations Nov/Dec-2024

PAPER: FUNDAMENTALS OF INFORMATION TECHNOLOGY

Time: 3 Hours **Max Marks: 40**

Section-A

Answer any EIGHT of the following questions **(8x2=16 Marks)**

1. Discuss about Data and Information.
2. What is booting?
3. What is System Software?
4. What is Flash Memory?
5. What is DBMS?
6. What is Diskette?
7. What is WWW?
8. What is HTML?
9. What is Spreadsheet?
10. What is VIRUS in Computer?
11. Explain about Threats.
12. What is MIS?

Section-B

Answer the following questions **(4x6=24 Marks)**

13. a). Explain about different Programming Languages.

OR

b). Explain about operating system and its functions.

14. a). Explain about different output devices of computer.

OR

b). Explain about different memory devices used in computer.

15. a). Explain about communication channels and networks.

OR

b). Explain about Internet Programming with HTML.

16. a). What is Information System? Explain about MIS.

OR

b). Explain about Software Development Life Cycle.

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