

Faculty of Commerce, Sciences and Business Management
B.Com/B.Sc/BBA I-Year, CBCS-II Semester Examinations Jul/Aug- 2023

Paper: English

Time: 3 Hours

Max. Marks: 70

Section – A

(5x4=20)

I. Answer any **Five** from the following: (5 out of 8)

1. Write the definitions with the **two** examples for the each of the following.

- a. Define the finite verb with two examples.
- b. Write kinds of Non-finite verbs.
- c. What are the plosives, write the types of voiceless plosives.
- d. Give examples for voiced plosives.

2. Fill in the blanks with the suitable **Adjectives**.

- a. He is the _____ Boy(lazy/lazier/laziest).
- b. Pune is a _____ City(large/larger/largest).
- c. Aman is a _____ leader(great/greater/greatest).
- d. Ramya is a _____ Girl(good/better/best).

3. Find out the following figure of **Speech**.

- a. Deafening silence.
- b. I haven't had the time to breath!
- c. Living death.
- d. Foolish wisdom.

4. Fill in the blanks with the Correct **Articles**.

- a. Sonam is baking _____ cake.
- b. Hameed went to buy _____ umbrella.

c. Padma wants to join _____ university.

d. We flew over _____ pacific ocean.

5. Fill in the blanks with the suitable **Loan Words**.

a. Bungalow word is bozzowed from _____ (Indian/Arabian/Chinese)

b. Assassin word originated in _____ (Arabian/Chinese/African)

c. Dengue word is taken from _____ (Chinese/African/French)

d. Cookie word is taken from _____ (German/Dutch/French)

6. Find out the types of **Adverbs** used in the following sentences.

a. Mary works hard.

b. My friend comes today.

c. Suman lives here.

d. He seldom meets his friend.

7. Define the **Palindrome** and write **EIGHT** examples.

a.

e.

b.

f.

c.

g.

d.

h.

8. Write the **Portmanteau** words

a. Advertising + Entertainment _____

b. Web + Log _____

c. Electronic + Mail _____

d. Fantastic + Fabulos _____

Section – B

(5x4=20)

Answer all the questions :

9. A. i. Annotate the following lines:” Della stood by the window and looked out” **5 Marks**

ii. Discuss the poem “the cloud”.

5 Marks

OR

B. i. Comprehension passage**5 Marks**

Suddenly she whirled from the window and stood before the glass. Her eyes were shining brilliantly, but her face had lost its colour within twenty seconds. Rapidly she pulled down her hair and let it fall to its full length. Now, there were two possessions of the James Dillingham Youngs in which they both took a mighty pride. One was Jim's gold watch that had been his father's and his grandfather's. The other was Della's hair.

- a. Who whirled from the window?
- b. Write the meaning of whirled?
- c. Write the part of speech of "Brilliantly"?
- d. What is the antonym of pull?
- e. What are the possessions of Jim and Della?

ii. Explain the story ' The Gift of Magi'**5 Marks****10. A. i. Annotate the following lines: " I bear light shade for the leaves "****5 Marks****ii. Write phonetic transcription for the following english words****5 Marks**

- a. Please
- b. Allow
- c. Loyal
- d. Connect
- e. Decent

OR

B.i. Annotate the following lines:**5 Marks**

"I've called an event while meeting students in nagaland"

ii. Comprehension passage**5 Marks**

I recalled an event that occurred while meeting students in Nagaland during my recent visit there. A Class 5 student asked me, 'I would like to live in a happy, prosperous, peaceful and safe India. Tell me, what will you do Mr. President? Also, tell me what I should do for that?' During my interactions with school children of 17 states and three Union Territories which I have visited, a series of similar questions were raised.

- a. Who recalled an event?
- b. Where the meeting was held?
- c. What is the question raised by student?
- d. Write the meaning of occurred?
- e. What is the antonym of safe?

11. A. i. Annotate the following lines: "What is Antonio here?"

5 Marks

ii. Comprehension passage

5 Marks

The woman in this story finds a pot of treasure on her walk home. As she carries it home, the treasure keeps changing, becoming things of lesser value. However, the woman's enthusiasm makes her see only the positive after each change, which would have upset anyone else. Her positive personality tries to make every negative situation seem like a gift! This story shows how important it is to look at things from a positive point of view. Instead of being disappointed in what we don't have, this story reminds us to view what we do have as blessings.

- a. What was found by the women?
- b. Write the part of speech of the word "finds"?
- c. How is her point of view?
- d. Write the meaning of enthusiasm?
- e. What is the antonym of the word upset?

OR

B. i. Sketch the character of Bassanio?

5 Marks

ii. Write a dialogue asking for advice ?

5 Marks

12. A. i. Write a paragraph on importing perception ?

5 Marks

ii. Write the words for the following phonetic transcription

5 Marks

- a. /sɪvɪlaɪzd/
- b. /daʊt/
- c. /swi:t/
- d. /fɑ:p/

e./isti:m/

OR**B. i. A comprehension passage****5 Marks**

Why, this bond is forfeit; And lawfully by this the Jew may claim. Apound of flesh, to be by him cut off. Nearest the merchant's heart. Be merciful: Take thrice thy money; bid me tear the bond. When it is paid according to the tenor. It doth appear you are a worthy judge; You know the law, your exposition hath been most sound: I charge you by the law, Whereof you are a well-deserving pillar, Proceed to judgment.

- a. Who is the Jew in the passage?
- b. Who claims a pound of flesh?
- c. How much money was offered?
- d. Write the part of speech of the word merciful?
- e. What is the meaning of tear?

ii. Spelling**5 Marks**

- a. Co__rd
- b. De__roy
- c. Di__erse
- d. Re__lsion
- e. __leep

13. A. i. Write a Dialogue, planning to hold a meeting**5 Marks****ii. Write an antonyms for the following words****5 Marks**

- a. Abridge
- b. Associate
- c. Benevolent
- d. Country
- e. Diligent

OR**B. i. Write a paragraph on Body Language****5 Marks**

ii. Write an synonyms for the following words

5 Marks

- a. Abolish
- b. Blame
- c. Bliss
- d. Clumsy
- e. Defend

5022

భాగము--- అ

క్రింది వానిలో ఏవైనా నాలుగు ప్రశ్నలకు సమాధానములు రాయండి 4×5=20

1. వినడే చూడడే తలపడే వేగ రాడే --- సందర్భ సహిత వ్యాఖ్య.
2. లెక్కకు రానీయడు కార్యసాధకుడు దుఃఖంబును సుకంబునన్ --- సందర్భ సహిత వ్యాఖ్య.
3. రాయప్రోలు సుబ్బారావు
4. ఈ క్రింది కవిత ఖండికను విశ్లేషణ చేయండి
యాగములలో హవిన్సుల నాదరించు
పూత తేజస్వి, ఋషిగేయు, వీతి హేత్రు,
నెదను వినయాంజలి ఘటించి తుదకు తండ్రి!
ప్రార్థనలు సల్పితిని అంబ పజ్జ నిలువ!
5. యుగాంతము కథ ఆధారంగా దిలావర్ పాత్ర.
6. ఈ క్రింది పద్య పాదాన్ని గణ విభజన చేసి చందస్సును తెలపండి.
లావోక్కింతయు లేదు ధైర్యము విలోలంబయ్యె బ్రాణంబులున్

భాగము - ఆ

5×10=50

7. ఈ క్రింది వానిలో ఒక దానికి ప్రతిపదార్థా తాత్పర్యములతో పాటు వ్యాఖ్యానించండి.
ఏ) అలవైకుంఠ పురంబులో నగరిలోనామూల సాధంబు దా
పల మందార వనాంతరామృత సరః ప్రాంతేందు కాంతోపలో
త్పలపర్యంకరమావినోది యగు నాపన్న ప్రసన్నుండు వి
హ్వల నాగేంద్రము పాహి పాహియన కుయ్యాలించి సంరంభియై
లేదా

బి) ఆకాశంబున నుండి శంభుని శిరం, బందుండి శీతాద్రి, సు
శ్లోకంబైన హిమాద్రినుండి భువి, భూలోకమునందుండి య
స్తోకాంభోధి, పయోధినుండి పవనాంధోలోకమున్ చేరె గం
గా కూలంకష, పెక్కుభంగులు వివేక భ్రష్ట సంపాతముల్.

8. ఏ) గజేంద్రుడు భగవంతుని ప్రార్థించిన విధానాన్ని తెలపండి.?

లేదా

బి) వరకట్న దురాచారాన్ని నిరసిస్తూ స్నేహలత తన తండ్రికి తెలిపిన విషయాలు ఏమిటి?

9. ఎ) సీతక్క ఎంకన్నల మూగ ప్రేమను వర్ణించండి.

లేదా

బి) దేవులపల్లి కృష్ణ శాస్త్రి తన పుట్టిన ఊరు చంద్రంపాలెం గురించి చెప్పిన విశేషలేవి?

10. ఎ) యుగాంతం ఆధారంగా స్వామి వృత్తాంతాన్ని తెలియజేయండి?

లేదా

బి) మామిడిపండు పుట్టు పూర్వోత్తరాలను తెలిపి దాని చరిత్రను జాతి భేదాలు తెలియజేయండి?

11. ఎ) ఈ క్రింది వానిలో రెండింటికి లక్ష్య లక్షణ సమన్వితంగా వివరించండి

1) ఉత్పలమాల 2) మత్తేభం 3) తేటగీతి 4) కందం 5) ఉత్సాహం

లేదా

బి) ఈ క్రింది వానిలో ఈ క్రింది వానిలో రెండు పద్య పాదాలకు గణ విభజన చేసి యతిస్తానాన్ని చందస్సును తెలపండి.

1. తన వేంచేయు పదంబు బేర్కొన డనాథ స్త్రీ జనాలాపముల్

2. విద్య యశస్సు, భోగకరి, విద్య గురుండు విదేశ బంధుడన్.

Faculty of Commerce, Sciences and Business Management
B.Com/B.Sc/BBA I-Year, CBCS-II Semester Examinations - Aug- 2023

Subject: HINDI

Time: 3 Hours

Max Marks: 70

भाग - अ

I. निम्न में से किन्ही चार प्रश्नों के उत्तर लिखिए I

4×5=20

1. धरती का स्वर्ग पाठ के आधार पर कश्मीर की सुंदरता का वर्णन कीजिए ?
2. प्रदूषण बढ़ने की क्या-क्या कारण हैं ?
3. सेवा कहानी की विशेषता को अपने शब्दों में लिखिए ?
4. ममता कालिया की जीवन परिचय लिखिए ?
5. हरिशंकर परसाई जी का संक्षिप्त परिचय लिखिए ?
6. संधि कितने प्रकार की है ? समझाइए ?
7. पत्राचार के महत्व को स्पष्ट कीजिए ?

भाग - आ

II. निम्न लिखित चार में से किन्ही दो सन्दर्भ सहित व्याख्या लिखिए I

2×6=12

8. (अ) . आओ भाई आओ, दो क्षण की शांति के लिए यहाँ आकर देखो। ये झील तुम्हें संजीवनी से भर देगी ।
(आ) . हमारी शिक्षा एक सूचना मात्र नहीं होनी चाहिए । वह इस प्रकार की होनी चाहिए, जिससे कि हमारे जीवन का निर्माण कर सके ।
- (इ) . गाँव से बहुत पढे लिखों ने, ब्राह्मणों, बनियों ने सिलिया की माँ को सलाह दी - सिलिया की माँ तुम्हारी सिलिया मैट्रिक पढ रही है, बहुत होशियार है समझदार भी है ।तुम उसका फोटो, परिचय, नाम, पता लिखकर भेज दो ।
- (ई) . भाई बताओ तो सही कि ऐसी कौन-सी कठिनाई तुम्हारे सामने आ पडी है, जिसको हल करने में तुम असमर्थता अनुभव कर रहे हो संभव है मैं आपकी कुछ सेवा कर सकूँ ।

9. निम्न में से किसी एक प्रश्न का उत्तर लिखिए I 1×8=8

(अ). विष्णु प्रभाकर जी ने कश्मीर को धरती का स्वर्ग क्यों कहा है अपने शब्दों में लिखिए ?

(अथवा)

(आ). स्वामी विवेकानंद पाठ का सारांश संक्षिप्त में लिखिए ?

10. निम्न दो में से एक सारांश लिखिए I 1×10=10

(अ). वापसी कहानी के महत्व को संक्षिप्त में लिखिए ?

(अथवा)

(आ). हँसू या रोऊँ कहानी की विषय-वस्तु क्या है ?

11. निम्न लिखित में से किन्हीं दो पात्रों का चरित्र - चित्रण कीजिये I 2×5=10

(क). ताई

(ख). भैयाजी

(ग). सिलिया

(घ). गदल

12. निम्न में से किन्हीं दो शब्दों के संधि विच्छेद कीजिये I 2×1=2

(अ) (क). अनाथालय

(ख). निर्मल

(ग). अत्यंत

(घ). सदैव

(घ). निम्न में से किन्हीं दो शब्दोंके विलोम शब्द लिखिए I 2×1=2

(आ) . (क) . उजाला

(ख). खरीदना

(ग). पराधीन

(घ). उतार

(इ) . अपनी पढाई का विवरण देते हुए फीस भरने के लिए रुपये माँगते हुए पिता के नाम पत्र लिखिए ।

6×1=6

(अथवा)

पर्यावरण प्रदूषण पर निबंध लिखिए ।

حصہ (الف)

4X 5 = 20

نوٹ: ذیل میں سے کوئی چار سوالات کے جوابات مطلوب ہیں ہر سوال کے پانچ نشانات مقرر ہیں

1- خواجہ حیدر علی آتش کے کلام کی خصوصیات بیان کیجئے۔

2- ساحر لدھیانوی نے نظم "اے شریف انسانوں" کس پس منظر لکھی ہے بیان کیجئے۔

3- مشتاق احمد یوسفی کے مشہور کتابوں کے نام لکھیے

4- خاکہ نگاری پر نوٹ لکھیے۔

5- غزل گوئی کی فنی خصوصیات بیان کیجئے۔

6- محدود کے حالات زندگی مختصر بیان کیجئے

حصہ (ب)

5X 10 = 50

نوٹ: ذیل میں دیے گئے تمام سوالات کے جواب لکھیے ہر سوال کے دس نشانات مقرر ہیں

7- (الف) مرزا غالب کے اخلاق و عادات اور خیالات پر جامع نوٹ لکھیے۔

یا

(ب) طنز و مزاح نگار مجتبیٰ حسین کے حالات زندگی بیان کیجئے۔

8- (الف) الطاف حسین حالی کی غزل گوئی کی امتیازی خصوصیات پر روشنی ڈالیے۔

یا

(ب) نظم "اب کے برس" سے شاعر کیا کیا امیدیں باندھتا ہے واضح کیجئے۔

9- (الف) مشتاق احمد یوسفی نے اردو مزاح کو ایک نئے مزاح سے آشنا کیا ہے تفصیلی روشنی ڈالیے۔

یا

(ب) حفیظ جالندھری کے حالات زندگی پر تفصیلی روشنی ڈالیے۔

10- (الف) نظم "پریت کا گیت" میں شاعر نے کیا پیغام دیا ہے واضح کیجئے۔

یا

(ب) "سلیمان اریب" خاکہ میں مجتبیٰ حسین نے اریب کی کن کن خوبیوں کا احاطہ کیا ہے۔

11- (الف) مرزا غالب کی غزل گوئی کی امتیازی خصوصیات کی نشاندہی کیجئے۔

یا

(ب) ذیل سے کوئی دو اشعار کی بہ حوالہ متن کی تشریح کیجئے

(1) طبل و علم ہے پاس نہ اپنے ہے ملک و مال ہم سے خلاف ہو کے کرے گا زمانہ کیا!

(2) کوئی دن گزر نہ گانی اور ہے اپنے جی میں ہم نے ٹھانی اور ہے

(3) دیکھنا ہر طرف نہ مجلس میں رخنہ نکلیں گے سیکڑوں اس میں

(4) آپ کی یاد آتی رہی رات بھر چشم غم مسکراتی رہی رات بھر

☆☆☆☆☆

PART- A

4x5 = 20M

चत्वारि प्रश्नाः समाधेयाः।

1. सप्तप्रश्नेन विजितो ब्रह्मलोकस्त्वयाऽभ्यः।
इत्युक्त्वा वाक्ये धर्मं तु यानमारुह्य स द्विजः॥ अनुवृत्त।
2. वृष्टुमितिः किं न करोति पापम्। - वाक्यामीदं ससन्दर्भं व्याख्यात।
3. श्लोकममुं पूरयत। असत्य - - - - हेतुकम्।
4. कुडवं कुडवं सर्वे व्यञ्जन्त तपस्विनः। वाक्यामीदं ससन्दर्भं व्याख्यात।
5. "वैज्ञानिक संहिता" पाठ कवि परिचयम् लिखत।
6. समाशनामं लिखत।
1. अर्षापिप्पली 2. अन्नवुष्टुष्टुः 3. कुण्डलद्विरण्यम्
4. कृष्णार्षः 5. पञ्चमाम्

PART B

सर्वे प्रश्नाः समाधेयाः। सर्वे समाशनाः।

7. द्वयोः श्लोकयोः प्रतिपदार्थं तात्पर्यं च लिखत।

1. ॥ एष शोः सूत नरोऽभ्युपेतः केशैः सितैर्यष्टिविष तादृस्तः ।
श्रु संवृताङ्गः शिथिलानताङ्गः कि विक्रियैषा ऋतियदृच्छा ।
(08)
2. इत्येवमुक्ते चलितः स किञ्चिद्राजात्मजः सूतमिदं वशेषे ।
निमेष दौषे श्विता ममापीत्यस्मै ततः साश्र्वरभ्युवाच ॥
8. 1. स्त्रूलोदरः श्वासयत्नच्छरीरः स्त्रस्तांसबाहुः कृशापाण्डुगात्रः ।
अम्बेति वाचं करुणं नृवाणः परं समात्रित्य नरः क एषः ।
(08)
2. ततो वशेषे स रश्मिपणेता कुमार साधारण एष दौषः ।
एवं हि श्रेष्ठैः परिपीड्यमानो रुजातुरो दृष्यमुपैति लोकः ॥
9. अ) वराहमिहिरेण बृहत्संहितायां वर्णितान् अंशान् विवृणुत ।
(08)
- अ) पञ्चतन्त्रमनुसृत्य गङ्गादत्तस्य कर्मा विशदयत ।
10. त्रयाणां धातूनां निर्दिष्टलकारानुसारं धातुरूपाणि लिखत ।
a) श्रू- (लट्) b) दृशीर- प्रेम्नवे c) युर- (लोट्)
(08)
- a) मुद्- (लङ्) b) भाष्- (लृट्) c) ई इष्- विधिलिङ्.
11. अधोनिर्दिष्टेषु पञ्चपदानां नामनिर्देशपूर्वकं लिखत ।
a) अष्विदरि b) अतिनिद्रम् c) वाप्रमगतः d) विद्यानिपुणः e) राजपुरुषः
(08)
- a) गुरुदक्षिणा b) चोरत्रयम् c) अनुदारः d) मुखयन्त्रः e) धाममातुरः

Faculty of Commerce, Sciences, Social Sciences and Business Management
B.Com/B.Sc/BBA I-Year, CBCS–II Semester Examinations Aug- 2023
PAPER: CLASSICAL PROSE, MODERN PROSE, GRAMMAR & HISTORY OF
ARABIC LITERATURE

Time: 3 Hours

Max Marks: 70

Section-A

I- Answer any 4 Questions. Each Question carry Five marks. (4x5=20 Marks)

Q.1. Translate the following verses with reference to the context:

(١) ترجم الآيات التالية مع الإشارة إلى نصها:

إنا أنزلنا في ليلة القدر * وما أدراك ما ليلة القدر * ليلة القدر خير من ألف شهر *.

Q.2. Answer the following question:

(٢) بما يعرف الملك الأخير بمدينة حيدرآباد؟

Q.3. Write adjectival phrase with examples.

(٣) اكتب عن المركب التوصيفي مع الأمثلة.

Q.4. Write briefly about the Quran influenced on Arabic poetry.

(٤) اكتب عن أثر القرآن الكريم على الشعر.

Q.5. Write any five meaning of the following words:

(٥) هات معاني خمس كلمات من التالية:

الكسب الأدبي العناية الأفضى خصصت المنتجات يهتف تشتمل.

Q.6. Convert any five of the following singular words into plurals:

(٦) آت بخمسة جموع الكلمات الآتية:

أم أب كوب ملعقة دراجة مدينة عالم خدمة.

Section-B

II- Answer all questions Each question carry (10) (5×10=50 Marks)

Q.7. (A) Write the summary of Suratul Qad`r:

(٧) بيّن تفسير سورة القدر:

(OR)

(B) Describe the summary of "Suratul Zilzal"

اكتب تفسير سورة "الزلزال"

Q.8. (A) Write the summary of the "Nawab Mir Osman Ali Khan: the seventh Nizam":

(٨) اكتب خلاصة "النظام السابع: مير عثمان علي خان":

(OR)

(B) Write the summary of "The Industrial Exhibition":

اكتب خلاصة "المعرض الصناعي":

Q.9. (A) Explain Verbal Sentence with Example:

(٩) اكتب عن الجملة الفعلية مع الأمثلة.

(OR)

(B) Define "the Possive phrase" with examples:

عرّف المركب الإضافي بالأمثلة.

Q.10. (A): Write a note on "Impact of the Quran on Arabic Literature":

(١٠) اكتب عن "أثر القرآن الكريم على الأدب العربي".

(OR)

(B) Write in detail about the "Compilation of Holy Qur'an":

اذكر عن تدوين القرآن المجيد مفصلاً.

Q.11. (A): Translate and explain with reference to the context:

(١٠) ترجم وشرح واذكر مرجع هذه العبارة:

ذهبت مع أسرتي إلى المعرض الصناعي في مدينة حيدرآباد، بعد تمام الساعة السادسة مساءً،

فوصلنا إلى المعرض بالسيارة، فأوقفنا السيارة في الموقف واشترينا تذاكر، ودخلنا المعرض ببوابة غاندي بهون.

(OR)

(B) Write a note on "Impact of the Hadith -e- Shareef on Arabic Literature":

اكتب عن "أثر الحديث الشريف على الأدب العربي".

Faculty of Commerce, Sciences & Business Management
B.Com./B.Sc./BBA I Year, II Semester Examinations, Aug-2023
Paper: ENVIRONMENTAL STUDIES

Time: 2 Hours

Max Marks: 40

Section-A

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

1. Write a note on Exsitu conservation of biodiversity
2. Explain the importance of water shed management
3. Write a brief account on Solid waste management
4. Write about Global Warming

Section-B

II. Answer all of the following questions. (2x15=30)

5. a) Define biodiversity? Explain the elements of biodiversity in terms of Genetic, Species and Ecosystem diversity?

(OR)

- b) Define Renewable and Non-renewable resources. Explain in detail Forest resources?

6. a) Give a detailed account on role of Information technology on Environment and Human health?

(OR)

- b) What are the causes and effects of Air pollution? Explain in detail the measures for controlling air pollution

Time: 3 Hours

Max. Marks: 70

SECTION – A

I. Answer any SIX questions. All questions carry equal Marks

(6 x 5 = 30 Marks)

1. Solve $(1 + e^{x/y}) dx + e^{x/y} (1 - \frac{x}{y}) dy = 0$.
2. Solve $\sec^2 y \frac{dy}{dx} + 2x \tan y = x^3$
3. Solve $p^2 - 7p + 12 = 0$
4. Solve $x = y + a \log p$
5. Solve $(D^3 - D^2 - 4D + 4)y = 0$
6. Solve $(D^2 + 1)y = 3e^{-2x}$.
7. Solve $x^2 y'' - xy' + y = 0$ given solution is $y_1 = x$
8. Form p.d.e by eliminating arbitrary constants a, b from $ax^2 + by^2 + z^2 = 1$.
9. Solve $(D^2 - 10D + 9)y = 0$.
10. Solve $P = \log(px - y)$.

SECTION B

II. Answer any ALL questions. All questions carry equal Marks

(4 x 10 = 40 Marks)

- 11.(a) Prove that the necessary and sufficient condition for $Mdx + Ndy = 0$ to be exact diff. eqn is $\frac{\partial M}{\partial y} = \frac{\partial N}{\partial x}$.

OR

(b) Solve $\frac{dx}{x(y^2 - z^2)} = \frac{dy}{y(z^2 - x^2)} = \frac{dz}{z(x^2 - y^2)}$.

12.(a) Solve: $xy^2(p^2 + 2) = 2py^3 + x^3$

OR

- (b) Find Orthogonal Trajectories of Family of parabolas $x^2 = 4ay$ where a is a parameter.

13.(a) Solve $(D^2 - 4D + 4)y = x^2 + e^x + \sin 2x$.

OR

- (b) Solve $y'' + y = \sin x + e^{-x}$ using Method of un-determined coefficients.

14.(a) Solve $(D^2 + a^2)y = \tan ax$ using method of variation of parameter.

OR

(b) Solve $(mz - ny)p + (nx - lz)q = ly - mx$

SECTION – A

I. Answer any SIX of the following questions.

(6X5=30Marks)

1. Outline how kinetic theory of gases explains the Transport Phenomena.
2. Write a note on Entropy and Disorder.
3. Write Maxwell's thermodynamic relations.
4. Write a short note on adiabatic Demagnetization.
5. Determine the temperature of the sun with the help of Wien's law.
[Given: $b = 2.92 \times 10^{-3}$ m K. Maximum wavelength = 4900 \AA .]
6. Write a brief note on Optical Pyrometer.
7. Define the terms: a) Phase space; b) Ensemble.
8. What are fermions and bosons? Mention the difference between them.
9. Find the change in entropy of a system consisting of 1kg of ice at 0°C which melts into water at the same temperature. [Given: Latent heat of melting of ice = 79.6 cal/g]
10. What is a black body? Explain the distribution of energy in a black body radiation.

SECTION – B

II. Answer the following questions.

(4X10=40Marks)

11. a) Derive an expression for Maxwell's law of distribution of speeds among the molecules of gas on the basis of kinetic theory of gases. (10)
(OR)
- b) Define Entropy? Describe the change in entropy in reversible and irreversible processes. (2+4+4)
12. a) Obtain Clausius-Clapeyron equation. Derive the expression for ratio of specific heats. (4+6)
(OR)
- b) What is Joule-Kelvin effect? Derive an expression for Joule-Kelvin coefficient. (3+7)
13. a) Describe Planck's distribution formula. How does it explain Wien's distribution law and Rayleigh-Jeans law? (4+3+3)
(OR)
- b) Define solar constant. Explain how the solar constant is determined with necessary theory. How is the temperature of the sun determined? (2+4+4)
14. a) Distinguish between classical and quantum statistics. Obtain an expression for Fermi-Dirac distribution laws. (6+4)
(OR)
- b) Express Bose-Einstein distribution law mathematically. Apply it to a photon gas to obtain the energy distribution. (4+6)

PAPER: PROBABILITY DISTRIBUTIONS

Time: 3 Hours

Max. Marks: 70

SECTION – A

I. Answer any SIX questions. All questions carry equal Marks

(6 x 5 = 30 Marks)

- 1) Define Poisson distribution. Give a real life example.
- 2) Find characteristic function of Binomial distribution.
- 3) Find mean of Negative Binomial distribution.
- 4) Define Hyper Geometric distribution. Give an example.
- 5) Define Normal distribution does odd moments exist of this distribution.
- 6) Write characteristic function of normal distribution. Find mean.
- 7) Define Rectangular distribution find mean.
- 8) Define Exponential distribution
- 9) State any two properties of normal distribution.
- 10) Define Cauchy distribution.

SECTION B

II. Answer any ALL questions. All questions carry equal Marks

(4 x 10 = 40 Marks)

- 11) (a) Obtain the recurrence formula for the central moments of Binomial distribution.
OR
(b) Derive Poisson distribution is a limiting form of a binomial distribution.
- 12) a) Obtain the Poisson distribution, as a limiting case of the negative Binomial distribution.
OR
b) Find first four moments generating function of Geometric distribution.
- 13) a) Find the Mode of normal distribution.
OR
b) Find M.G.F. hence obtain its mean and variants .
- 14) a) Define gamma distribution of first kind, Find man and variance.
OR
b) Discuss briefly the role of Cauchy distribution in statistics.

Faculty of Science

B.Sc. (Computer Science) I-Year CBCS II-Semester Regular Examinations Aug – 2023

Paper: Programming in C++

Time: 3 Hours

Max. Marks: 70

SECTION – A

I. Answer any SIX questions. All questions carry equal Marks (6 x 5 = 30 Marks)

1. What is Operator? Explain the importance of operator precedence and associativity.
2. What is Inline Function? When to use? Explain.
3. Write about Destructors.
4. Explain the usage of static member variable and functions.
5. Explain the uses of Virtual Keyword with example programs.
6. Explain multiple Inheritance.
7. Write uses of Templates.
8. How to use Standard Template Libraries? Explain.
9. Define Array with Example.
10. What is Object? How to create Array of Objects?

SECTION B

II. Answer any ALL questions. All questions carry equal Marks (4 x 10 = 40 Marks)

11. (a) What is Function? Explain various parameter passing mechanisms with swapping of 2 numbers.
OR
(b) What is Object Oriented Programming? Explain its features and compare with Procedural Programming.
12. a) What is Class? Explain access specifiers with program.
OR
b) What is Constructor? Explain various types of Constructors with Program.
13. a) What is Polymorphism? Explain Binary Operator Overloading with example.
OR
b) What is Stream? Explain C++ stream Classes.
14. a) What is Exception? Explain Multiple Exception handling with program.
OR
b) Explain Overloading with Function Templates.

SECTION – A

I. Answer any SIX questions. All questions carry equal Marks (6 x 5 = 30 Marks)

1. Define Algorithm. Write the Building Blocks of Algorithm.
2. Why Python is Dynamic and Strongly Typed Language? Specify.
3. What are Command Line Arguments? Explain.
4. What are Strings? How to Create and Store Strings in Python?
5. What are Dictionaries? Write the Operations of Dictionaries.
6. What are different Errors and Exceptions occur in Python?
7. What is Encapsulation? How it is achieved in Python?
8. Write a short note on List Comprehensions.
9. Define Tuple. Explain its functionality.
10. What are Void Functions? Explain.

SECTION B

II. Answer any ALL questions. All questions carry equal Marks (4 x 10 = 40 Marks)

- 11.(a) Describe the Data Types used in Python. Explain Type Conversion.
OR
(b) Explain the Decision Control Statements used in Python with example code.
- 12.(a) What is Scope and Life Time of a Variable? Explain both with example programs.
OR
(b) Explain the Python operations used for String Slicing and String Joining.
13. (a) What are Lists? Write List operations. Write a Python Program for Selection Sort.
OR
(b) Write a Python Program to copy the contents of one file to another.
- 14.(a) How to create Classes in Python? Write a Python Program to explain the Constructor Method.
OR
(b) What is Inheritance? How many types of Inheritance used in Python? Explain with example program.