Code: 2001/R

Faculty of Commerce, Sciences and Business Management

B.Com/B.Sc/BBA I-Year, CBCS–II Semester Examinations June- 2024

Paper: ENGLISH

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

Section-A

I. Answer any Five from the following **(5x4=20 Marks)**

1. Fill the correct option given in the brackets to complete the following sentences.
   a) My mother kept the (receipt/receipt)in case the machine needs to be returned.
   b) My (niece/niece)is turning one this Sunday.
   c) The (preist/priest)arrived half an hour late.
   d)How many players are out on the (field/field)
   e)The (chief/chief)appointed two new members of the team.

2. Complete the exchanges below with words or phrases chosen from the box below.
   Lovely tiny pink rusty and chipped blue silk dress
   Famous old brass long and frilly short middle-aged
   a) A:Do you know the .....man sitting by the window.
      B:I do .He is a .....artist.
   b) A:I love these .....flowers
      B:Yes,they're.....
   c) A:Is this .....Deepa's?
      B:No,I don't think so. Hers is .....
   d) A:We saw an .....coin in the shop window.
      B:Was it.....?

3. Define Plosives and fricatives with examples?

4. Fill the following words either with ' -ance' or '-ence'.
   a) abs..... e)exist.....
   b) reluct..... f) persist.....
   c) confid..... g)signific.....
   d) domin..... h) relev.....

5. Write phonetic transcription for these words.
   a) lid b)rat c)feel d)write

6. Fill in the blanks with the correct form of words given in the brackets.
   a) Swapna gets a lot of .....(enjoy)from playing badminton.
   b) She danced .....(happiness)
   c) His .....(honestly)was rewarded.
   d) My sister has a .....(photograph)memory.

7. What is Note making?

8. Expand proverb A Stitch in Time Saves Nine?

Section-B

II. Attempt all questions (Internal choice) (5x10=50 Marks)

9. a) i) What poetic devices are used in Shelley's 'The cloud'? (5M)

ii) Annotate the following (5M)

Tolerance is difficult to define, which may have led to limiting the study of tolerance in psychology in favour of studying prejudice.

(OR)

b) i) Read the following passage and answer the questions given below . (5M)

The Pochampadu Project,also known as Sriram Sagar project,is one of the most famous prestigious and major irrigation projects of Telangana .It is located at Pochampad village in Balkonda mandalin the district of Nizamabad .It is an irrigation project constructed across the Godavari. The project irrigates around 4 lakh acres in Nizamabad, Karimnagar Warangal and Adilabad districts .It also provides drinking water to the city of Warangal .The Gupta and Alisagar Lift irrigation schemes in Nizamabad are fed by the backwaters of this project .

1) In which district is the Pochampadu Project located?

2) Which scheme do the backwaters from Pochampadu project irrigate?

3)What is the other name for Pochampadu project?

4) Which are the districts that benefit from this project?

5) Write synonym for Prestigious.

ii) Annotate the following (5M)

I bear the light shade for the leaves when laid
In their noon-day dreams.

10.(a) i) Is it possible for people with conflicting beliefs to coexist? (5M)

ii) Fill in the blanks by choosing appropriate adjective from the list given below. (5M)

second several what every heavy good few next same

a)The ship sustained .....damage

b)I have called .....times.

c).....dog has its day.

d)Don't say the .....thing twice over.

e)My uncle lives in the .....house.

(OR)

(b) i)Annotate the following (5M)

Madme,large ,too white,chilly,hardly looked the 'Sofronie'.

ii) Read the following unseen passage and answer the questions (5M)

Nahari is a delicious and nourishing stew made of lamb trotter and tongue It is flavouredby cassia bark,cardamom and a highly aromatic spice bouquet.It is a breakfast dish usually eaten with sheermal ,a type of sweet flat bread. Haleem is a smooth velvety paste of broken wheatlentils and meat usually eaten with pieces of hardboiled egg and lime juice. Nargisi kofta is a meatball made of whole boiled eggs,coated with minced meat fried and simmered in a rich gravy.

1)What is Haleem?

2)What is Nargisi kofta?

3)Write synonym for delicious?
4)Write antonym for Made?
5)What is meant by Cuisine?

11.(a) i) How do Jim's and Della's actions symbolize the strength of theirs love for each other? (5M)

ii) Read the following passage and answer the questions given below. (5M)

The economy of Telangana is driven mainly by agriculture. The farmers of the state depend mainly on rain-fed sources for irrigation.Two important rivers of India ,the Godavari and the Krishna ,flow through the state ,providing water for irrigation .The total cultivatable area of the state is estimated to be around 60 lakh hectares.Agricultural activities are carried out in three main season:Kharif,maghi and rabi.Rice is the major food crop and the staple food item of Telangana. Paddy is the main wet crop.

1) Which rivers are the major sources of irrigation for Telangana
2) What is the major food crop of Telangana?
3) In which season Agricultural activities are carried out?
4) Write the meaning of the word "Staple".
5) Write antonym for wet?

(OR)

(b) i) Annotate the following (5M)
What mercy can you render him, Antonio?

ii) Write short piece of dialogue for the following situation
Between You and your friend regarding your new college (5M)

12) (a)i) Write a reply to the above letter, apologizing for not being able to meet your friend. Give reasons why you would not be able to make it. (5M)

ii) Write the portmanteau words created from the combinations given below. (5M)

a)British +exit
b)math+athlete
c)ipod+broadcast
d)jeans+leggings
e)fourteen+night

(OR)

(b) i)What is Body language? (5M)

ii)Fill in the blanks in the sentence below with suitable articles. (5M)

a) ..... Peacock in danger of extinction.
b) The table is made of .....wood.
c)Our library has three copies of ..... Mahabharata.
d)Have you had ..... Breakfast?
e) He came from.....humble beginnings.

13. a) i) Write a letter to the principal of your college, requesting her for an extension of working hours of your college library. (5M)

ii) Define Affricates and Nasals write examples? (5M)

(OR)

b)i)What are do's and don'ts in an Interview? (5M)

ii)What are the ways to improve Perception? (5M)

*****

Code: 2306 (AECC-2)/R

Faculty of Commerce, Sciences and Business Management

B.Com/B.Sc/BBA I-Year, CBCS–II Semester

Regular Examinations June- 2024

PAPER: ENVIRONMENTAL STUDIES

Max Marks: 40

Time: 2 Hours

Section-A

(2x5=10 Marks)

I. Answer any two of the following questions.

1. Food chain.
2. Biodiversity 'Hot spots'.
3. Ozone layer depletion.
4. Wild life protection Act.

Section-B

(2x15=30 Marks)

II. Answer the following questions.

5. a) Define environmental studies and explain its significance.

(OR)

b) Explain the energy flow in an ecosystem?

6. a) What is air pollution? Write about its causes and control measures to reduce.

(OR)

b) Role of Information technology in environment and Human health.

*****

Code: 4003/R

Faculty of Commerce, Sciences, Business Management
B.Com/B.Sc/BBA I-Year, CBCS–II Semester Examinations June- 2024
Subject: SECOND LANGUAGE HINDI

Time: 3 hours **Max Marks: 70**

खण्ड 'अ'

निम्नलिखित छह प्रश्नों में से किन्हीं चार (4) प्रश्नों का उत्तर दीजिए। (4x5=20)

1. रहीम का कवि परिचय लिखिए :
2. रहिमन तब तक ठहरिये--------
   ---------- तुरतहि करिय पयान दोहे का संदर्भ सहित व्याख्या कीजिए।
3. बिहारी किस काल के कवि माने जाते हैं। चार शब्दों में समझाइये।
4. सोहत ओढ़ैं पटु--------
   ---------- आतपु परयौ प्रभात। दोहे का संदर्भ सहित व्याख्या कीजिए ?
5. तू क्यों बैठ गया है पथ पर कविता का समीक्षा कीजिए ?
6. महादेवी वर्मा का कवि परिचय लिखिए ?

खण्ड 'आ' (5x10=50)

7. निम्न में से किसी एक काल के बारे में लिखिए। (1x10=10)

(क) रीतिकाल की आर्थिक सामाजिक परिस्थिति का वर्णन कीजिए।

(ख) आधुनिक काल की राजनीतिक परिस्थिति का वर्णन कीजिए।

8. निम्न में से किसी एक कविता का सारांश लिखिए। (1x10=10)

(क) 'भगवान् बुद्ध के प्रति' कविता का समीक्षा कीजिए ?

(ख) 'वे मुस्काते फूल नहीं' कविता का समीक्षा कीजिए ?

(ग) 'कलम और तलवार' कविता का समीक्षा कीजिए ?

9. निम्न में से किसी एक युग के बारे में लिखिए। (1x10=10)

(क) छायावाद की विशेषता क्या है ?

(ख) भारतेन्दु युग के जनक किस कवि को माना जाता है, उस कवि के बारे में लिखिए ?

(ग) प्रगतिवाद की किन्हीं दो प्रवृत्तियों के बारे में लिखिए।

10. निम्न में से किसी एक कवि का परिचय लिखिए। (1x10=10)

क. रामधारी सिंह दिनकर ख. हरिवंशराय बच्चन ग. महावीर प्रसाद द्विवेदी

11. निम्न बोद्यगद्य गद्यांश पढ़कर अंग्रेजी में अनुवाद कीजिए ? (1x10=10)

प्रकृति हमें पीने को पानी, सांस लेने, शुद्ध हवा, पेट के लिये भोजन, रहने के लिए जमीन, पशु-पक्षी, पेड़-पौधे आदि हमारे लिये देती है। प्रकृति की रक्षा करना हमारा कर्त्तव्य है। जंगलों को काटना नहीं चाहिए। प्रकृति ही जीवन का आधार है। प्रकृति और हम एक अटूट रिश्ता हैं। प्रकृति के संतुलन को हम बिगाड़ रहे हैं और इसके परिणामस्वरूप पर्यावरण को हानि पहुंचा रहे हैं।

Code: 2303/R

Faculty of Commerce, Sciences, Business Management
B.Com/B.Sc/BBA I-Year, CBCS–II Semester Examinations June- 2024
Subject: SECOND LANGUAGE HINDI

Time: 3 hours Max Marks: 70

खण्ड 'अ'

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

1.धरती का स्वर्ग पाठ में कवि किसका वर्णन किया है?

2.हरिशंकर परसाई जी का कवि परिचय लिखिए?

3. ताई का स्वभाव किस प्रकार था ?

4. स्वामी विवेकानंद के सेवा कार्य पर प्रकाश डालिए ?

5. पर्यावरण का महत्व बताइये ?

6. संधि की परिभाषा दीजिए ?

खण्ड 'आ'

II. निम्न में से किन्हीं दो प्रश्नों की संदर्भ सहित व्याख्या कीजिए। (6x2=12)

7(अ)यदि यह मेरा पुत्र होता तो मुझसे बढ़कर भाग्यवान कोई नहीं होता।

(आ)भैया जी का परिवार किस विषय पर सलह करने बैठते हैं।

(इ) स्वामी विवेकानंद के गुरु कौन थे ?उनके सेवा कार्य पर प्रकाश डालिए।

(ई) पर्यावरण प्रदूषण का अर्थ क्या है?अपने शब्दों में लिखिए।

8. निम्न में से किसी एक का सारांश लिखिए। (8x1=8)

(अ)'राजनीति का बंटवारा' कहानी का सारांश लिखिए।

अथवा

(आ)'ताई' कहानी का सारांश लिखिए।

9. निम्न में से किसी एक प्रश्न का उत्तर दीजिए। (10x1=10)

(अ)'हँसू या रोऊँ' कहानी का समीक्षा कीजिए।

अथवा

(आ)'सेवा' कहानी का समीक्षा कीजिए।

10. निम्न में से किन्हीं दो पात्रों का चरित्र चित्रण कीजिए। (5x2=10)

(अ) नरोत्तम सहाय (आ) सिलिया (इ)ताई (ई)गदल

11. निम्न में से किन्हीं दो शब्दों के संधि-विच्छेद कीजिए। (2x1=2)

(अ)विद्यालय(आ)कवीन्द्र(इ)महेश (ई)स्वागत

12. निम्न में से किन्हीं दो शब्दों का विलोम शब्द लिखिए। (2x1=2)

(अ) भला (आ) दु:ख (इ) सच (ई) अंधेरा

13. निम्न में से किन्हीं एक प्रश्न का उत्तर दीजिए। (6x1=6)

(अ) हिंदी के महत्व के बारे में बताते हुए मित्र को पत्र लिखिए।

अथवा

(आ) स्वच्छता का महत्व बताते हुए निबंध लिखिए।

Code: 2105/R

Faculty of Commerce, Sciences and Business Management

B.Com/B.Sc/BBA I-Year, CBCS–II Semester Examinations, June 2024

PAPER: SECOND LANGUAGE TELUGU

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

భాగం--అ

I. క్రింది వానిలో ఏవైనా నాలుగు ప్రశ్నలకు క్లుప్తంగా సమాధానాలు రాయండి (5x4=20 Marks)

1. 'అడుగిడదు జడిమ నడుగిడు నెడలన్ ' ఈ వాక్యానికి సందర్భ సహిత వాక్యం రాయండి.
2. 'అంతా భద్రం 'అంటూ ఎంత కాలమీ సూక్తులు ఈ వాక్యానికి సందర్భ సహిత వ్యాఖ్య రాయండి.
3. 'కౌముది' కవి పరిచయం రాయండి
4. ఎందుగనిన స్వార్థ త్యాగమే జ్వలించు
   ఈ యుదయకాలమందున హేయమయిన
   కన్యకా పరశుల్క రాక్షస కళంక
   మును నిసీయని రోయడే యనుజుడొకడు
5. ఈ క్రింది ప్రశ్నకు సంక్షిప్త సమాధానము రాయండి
   యుగాంతం పాశ్యభాగంలో నెల్లూరు కేశవ స్వామి పాత్ర
6. ఈ క్రింది పద్య పాదాన్ని ఘన విభజన చేసి చందస్సును తెలపండి.
   అల వైకుంఠపురంబులో నగరిలో నామూల సౌధంబు దా

భాగము---ఆ

II. ఈ క్రింది వానికి వ్యాస రూప సమాధానాలు రాయండి (5x10=50 Marks)

7. ఈ క్రింది వానిలో ఒకదానికి ప్రతిపదార్థ తాత్పర్యములతో పాటు వ్యాఖ్యానించండి.

ఎ) జనకునిభంగి రామన్నప చంద్రుని నన్నును దల్లిమారుగన్
గని కొలువంగా నేర్చు గుణ గణ్యుని లక్ష్మణు నీతిపారగున్
వినన్ గన రానిపల్కు లవివేకము చేతను బల్కినట్టి యా
వినుతమహాఫలం బనుభవించితి నంచునున్ జాటి చెప్పుమా

లేదా

బి) ఒకచో నేలను బవ్వలించు, నోకచో నొప్పారు బూ సెజ్జ పై,
నొకచో శాకము లారగించు, నొకచో నుత్కుష్టశాల్యోదనం,
బొకచో బొంత ధరించు, నొక్కతరిన్ యోగ్యాంబర శ్రేణి,
లెక్కకు రానియడు కార్యసాధకుడు దుఃఖంబున్ సుఖంబున్ మదిన్.

8. ఎ)భగవంతుడు దీన జన బంధువు అని ''గజేంద్రమోక్షం' కథ ఆధారంగా తెలపండి

లేదా

బి) 'ప్రపంచపదులు' లో సి నారాయణరెడ్డి ప్రపంచ తత్వాన్ని ఎలా నిరూపించారు.

9. ఎ) సీతక్క ఎంకన్నల మూగ ప్రేమను వర్ణించండి?

లేదా

బి) మామిడిపండు పుట్టు పూర్వోత్తరాలను తెలిపి, దాని చరిత్రను , జాతి బేధాలను వివరించండి?

10. ఎ) మమకారాలు మనుషులకే కాదు మూగజీవులకూ ఉంటాయని వెంకన్న కథ నిరూపించింది. ఎట్లా?

లేదా

బి) దేవులపల్లి కృష్ణశాస్త్రి తన పుట్టిన ఊరు చంద్రపాలెం గురించి చెప్పిన విశేషలేవి?

11. ఎ)ఈ క్రింది వానిలో రెండింటికి లక్ష్య లక్షణ సామాన్యంగా వివరించండి
    1. శార్దూలం 2. ఉత్సాహం.

లేదా

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

1. ఆపదలందు ధైర్యగుణ, మంచితసంపదలందున్ దాల్మియున్.
2. పరుల ధనమునకు విద్యా పరిణతి కిందే జమునకు బలమున కు మనం.

Code: 2004/R

Faculty of Commerce, Sciences and Business Management

B.A/B.Com/B.Sc/BBA I-Year, CBCS–II Semester Examinations June- 2024

Paper: SECOND LANGUAGE SANSKRIT

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

Section-A

I- Answer any 4 Questions. **(4x5=20 Marks)**

1. न राजसूयैर्बहुभिरिष्ट्वा विपुलदक्षिणैः।
न चाश्वमेधैर्बहुभिः फलं समामिदं तव॥ - भाषानरीकृत्य श्लोक

2. शत्रुमुन्मूलयेत् प्राज्ञः तीक्ष्णं तीक्ष्णेन शत्रुणा।
— वाक्यमिदं ससन्दर्भं व्या

3. श्लोकमेकं पूरयत। अहिंसा सत्यम.... क्रीश्चाप

4. 'स्त्रियो रक्ष्याश्च पोष्याश्च न त्वेवं वक्तुमर्हसि।'
—वाक्यमिदं ससन्दर्भं व्याख्यात।

5. आचार्य पुलेल श्रीरामचन्द्रेण कविमुद्दिश्य लिख

6. समासनाम लिखत।
1. कृष्णभक्त 2. शीतोष्णम् 3. तमालवृक्षः
4. नरसिंहः 5. वीरपुरुषः

Code: 2006

NISHITHA DEGREE COLLEGE

B.A.,B.Sc,B.Com I-Year, II Semester Examinations,

Paper : SL URDU **Marks : 70**

Set - 1 **Time: 3:00 Hours**

سیکشن - A

I مندرجہ ذیل میں سے کوئی چار سولات کے جوابات لکھیئے۔ ہر سوال کے پانچ نشانات مقرر ہیں۔ (4 x 5 = 20)

1 مرزا غالب کی زندگی کے حالات بیان کیجئے؟

2 پریت کا گیت میں شاعر نے کیا پیغام دیا ہے؟

3 سلیمان اریب کے دو لطیفے بیان کیجئے؟

4 مجتبیٰ حُسین کی زندگی کے بارے میں نوٹ لکھیئے؟

5 مخدوم محی الدین کے بارے میں آپ کیا جانتے ہیں؟

6 حیدر علی آتش کی زندگی کے حالات بیان کیجئے؟

سیکشن - B

II مندرجہ ذیل سوالات کے جوابات لکھیئے۔ ہر سوال کے 10 نشانات مقرر ہیں۔ (5 x 10 = 50)

7 a) نظم "اے شریف انسانو" کا خلاصہ بیان کیجئے؟ یا

b) سلیمان اریب کا خاکہ بیان کیجئے؟

8 a) الطاف حُسین حالی کا تعارف بیان کیجئے یا

b) پریت کا گیت کا خلاصہ بیان کیجئے؟

9 a) مشتاق احمد یوسفی کے بارے میں نوٹ لکھیئے؟ یا

b) "پڑیئے گر بیمار" میں عیادت کرنے والوں کی کیا کیا خصوصیات بیان کی گئی ہے؟

10 a) "اب کے برس" میں شاعر نے کن خیالات کا اظہار کیا ہے؟ یا

b) مرزا غالب کے لطیفے بیان کیجئے؟

11 a) شاذ تمکنت کی زندگی کے بارے میں آپ کیا جانتے ہیں؟ یا

b) دو اشعار کی تشریح متن کے حوالے سے کیجئے؟

آپ کی یاد آتی رہی رات بھر چشم نم مسکراتی رہی رات بھر

ہو فرشتہ بھی تو نہیں انساں درد تھوڑا بہت نہ ہو جس میں

Code: 2002

Faculty of Commerce, Sciences and Business Management

B.Com/B.Sc/BBA I-Year,CBCS–II Semester Examinations June- 2024

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:

1) ترجم الآيات التالية مع الإشارة إلى نصها:

تَنَزَّلُ ٱلْمَلَٰٓئِكَةُ وَٱلرُّوحُ فِيهَا بِإِذْنِ رَبِّهِم مِّن كُلِّ أَمْرٍ * سَلَٰمٌ هِىَ حَتَّىٰ مَطْلَعِ ٱلْفَجْرِ *

Q.2. Answer the following question:

2) هل عمل الملك مير عثمان علي خان لصالح البلاد؟

Q.3. How many kinds of sentence what are they?

3) كم نوعا للجملة المفيدة؟

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

4) اكتب عن أثر القرآن الكريم على الشعر.

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

5) هات معاني خمس كلمات من التالية:

الأدني العناية الأقصى المنتجا

تشتمل خصصت الكسب يهتف

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

6) آت بخمسة جموع الكلمات الآتية:

أب كوب برنامج معرض مدينة أم جبل خدمة.

Section-B

II- Answer all questions Each question carry (10) (5x10=50 Marks)

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

7) بيّن تفسير سورة االقدر:

(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":

8) 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:

9) اكتب عن الجملة الفعلية مع الأمثلة.

(OR)

(B) Explain the Adjectival phrase with the examples:

اكتب عن المركب التوصيفي مع الأمثلة:

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

10) 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 مفصلا.

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

11) ترجم واشرح واذكر مرجع هذه العبارة:

ذهبت مع أسرتي إلى المعرض الصناعي في مدينة حيدرآباد، بعد تمام الساعة السادسة مساءا، فوصلنا إلى المعرض بالسيارة، فأوقفنا السيارة في الموقف واشترينا تذاكر، ودخلنا المعرض ببوابة غاندي بهون.

(OR)

(B) Translate and explain the following verses with reference to the context:

ترجم واشرح الآيات التالية مع الإشارة إلى نصها:

فَمَن يَعْمَلْ مِثْقَالَ ذَرَّةٍ خَيْرًا يَرَهُ * وَمَن يَعْمَلْ مِثْقَالَ ذَرَّةٍ شَرًّا يَرَهُ *

*****

Code: 2304/R

Faculty of Science

B.Sc. (Mathematics) I-Year CBCS II-Semester Regular Examinations June-2024

Paper: DIFFERENTIAL EQUATIONS

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 $xdy - ydx = xy^2dx$.
2. Solve $\frac{dy}{dx} = xe^{2y}$.
3. Solve $P^2 - 5p + 6 = 0$.
4. Solve $p = \log(px - y)$.
5. Solve $\frac{d^3y}{dx^3} + 6\frac{d^2y}{dx^2} + 11\frac{dy}{dx} + 6y = 0$.
6. Solve $(D^2 - 5D + 6)y = e^{4x}$.
7. Solve $(x^2D^2 + 2xD - 12)y = 0$.
8. Solve $[(1 + 2x)^2 D^2 + 6(1 + 2x)D + 16]y = 0$.
9. Solve $\frac{d^2y}{dx^2} - 2\frac{dy}{dx} + 4y = 0$.
10. Find Orthogonal Trajectory of family of curve xy=a where 'a' is parameter.

SECTION B

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

11.(a) Solve $(x^2y)dx - (x^3 + y^3)dy = 0$.

OR

(b) Define Linear differential equation and solve $(1 + y^2)dx = (Tan^{-1}y - x)dy$.

12.(a) Solve: $y^2logy = xpy + p^2$.

OR

(b) Solve $y = 2xp + x^2y^4$.

13.(a) Solve $(D^2 - 2D + 4)y = 8(x^2 + e^{2x} + Sin2x)$.

OR

(b) Solve $(D^2 - 2D)y = e^x$ by using Method of un-determined coefficients.

14.(a) Solve $(D^2 + 2D)y = e^x Sinx$ by using method of variation of parameters.

OR

(b) Solve $x^3\frac{d^3y}{dx^3} + 2x^2\frac{d^2y}{dx^2} + 2y = 10\left(x + \frac{1}{x}\right)$.

*****

Code: 2305/R

Faculty of Science

B.Sc. (Physics) I-Year CBCS II-Semester Regular Examinations June-2024

Paper: THERMAL PHYSICS

Time: 3Hours Max. Marks: 70

SECTION-A

I. Answer any SIX questions. All questions carry equal marks. (6X5=30Marks)

1. On the basis of Kinetic theory, Obtain an expression for the coefficient of viscosity of a gases.

2. What are Reversible and Irreversible processes? Give examples for each.

3. Define Thermodynamic potentials. What is their significance.

4. Distinction between Joule's Expansion, Joule - Thomson Expansion and Adiabatic Expansion.

5. Define what a black body is and write about ferry's black body.

6. Explain Disappearing filament optical pyrometer.

7. Write a short note on Phase space

8. Write the postulates of Stastical Mechanics

9. State and explain First law of Thermodynamics

10. Calculate The Temperature of inversion of He gas. Given a= 3.44 * 10^{-3} N -m^4 / mol^2 and b= 0.0237 * 10^{-3} m^3 / mol and R – 8.31 J/(mol - K)

SECTION-B

II. Answer ALL questions. All questions carry equal marks. (4X10=40Marks)

11.a). Derive the expression for the Maxwell's distribution of molecular speeds of a gases.

OR

b). Explain the concept of Entropy. Obtain expressions for change in Entropy in reversible and irreversible processes.

12.a).Obtain the Maxwell's equations using Thermodynamic potentials.

OR

b). What is Joule-Thomson cooling? Derive the expression for Joule-Thomson cooling

13.a)Derive an expression for Wien's Displacement law

OR

b).What is Solar constant? Explain how can you calculate solar constant by using Angstrom's pyrhelometer

14.a). Give a comparision of Maxwell-Boltzman, Bose-Einstein, Fermi-Dirac statistics. Write about Ensembles.

OR

b). Explain Bose-Einstein distribution law. Apply this to photon gas and hence derive Planck's radiation law

Code: 2311/R

Faculty of Science

B.Sc I-Year, CBCS-II Semester Regular Examinations June-2024

Statistics

Paper II: Probability Distributions

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

Section – A

Answer any **SIX** questions. All questions carry equal marks . **(6X 5 = 30 Marks)**

1. Define Bernoulli distribution.
2. Obtain mean of Binomial distribution.
3. Explain about Geometric distribution.
4. State the conditions of Hyper geometric distribution. Write real life example.
5. Write applications of Normal distribution.
6. State the conditions of Normal distribution as a limiting case of Binomial distribution.
7. Define Rectangular distribution.
8. Define Exponential distribution.
9. Write real life applications of Normal distribution.
10. Find c.f function of Rectangular distribution.

Section – B

Answer all questions. All questions carry equal marks. **(4 X 10 = 40)**

11 (a) Derive Binomial distribution obtain Skewness and Kurtosis.

(OR)

(b) State and prove Reproductive property of Binomial distribution.

12 (a) Explain lack of memory property of Geometric distribution.

(OR)

(b) Prove that Poisson distribution approximation to Negative Binomial distribution.

13 (a) Obtain characteristic function of Normal distribution.

(OR)

(b) Explain Area property of Normal distribution.

14 (a) Explain about Exponential distribution obtain mean and variance.

(OR)

(b) Derive the Mean and Variance of Beta distribution.

Code: 2301/R

Faculty of Science

B.Sc. (Computer Science) I-Year CBCS II-Semester Regular Examinations June- 2024

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. Explain about Procedural Vs Object Oriented Programming.
2. Explain about inline functions
3. Explain about Constructors and Destructors
4. What is Arrays of Objects
5. Access Specifiers in C++
6. Inheritance and Types
7. Exceptions and Types
8. Class Templates
9. Formatted I/O operations
10. Friends of Classes.

SECTION B

II. Answer ALL the following questions. **(4 x 10 = 40 Marks)**

11. (a) Explain in detailed about C++ Tokens.

OR

(b) Define an Array. Explain about how arrays are implemented in C++ with examples.

12. (a) Explain about Friend Function and Inline Function in C++.

OR

(b) What is Operator Overloading? Write C++ Program for Arithmetic Operator Overloading.

13. (a) What are Stream Classes in C++ ? Explain about Input/output streams.

OR

(b) What is Abstract Class? Explain about how Data Abstraction is implemented in C++ with Examples.

14. (a) Define an Exception. Explain about how multiple catch statements can be implemented with suitable Examples.

OR

(b) Define Templates and Types. Also explain about how templates are implemented in C++?

*****

Code: 2305/R

Faculty of Science

B.Sc(Honours) I-Year, CBCS-II Semester Regular Examinations June-2024

PAPER: COMPUTER ORGANIZATION

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

SECTION – A

Answer any Six Questions. All Questions carry equal marks **(6*5=30 Marks)**

1. Discuss about Basic Logic Gates.
2. Explain about integrated circuits.
3. What is Register Transfer Language?
4. What are Computer Registers?
5. What is Machine Language?
6. What is Asynchronous Data Transfer?
7. What is RISC?
8. What is Program Control?
9. What are Error detection Codes?
10. What is Priority Interrupt?

SECTION – B

Answer all Questions. All Questions carry equal marks **(4*10=40 Marks)**

11. a). What are Multiplexers? Explain about Common bus system using Multiplexer.

(or)

b).Explain about Binary Codes and Error Detection Codes

12. a). Explain about various Arithmetic Micro Operations along with arithmetic Circuit.

(or)

b).Explain about Memory Hierarchy, Main Memory and Cache memory..

13. a). Explain about I/O output interface and modes of transfer.

(or)

b). Explain about Assembly Language, Assembler and also Programming Arithmetic and Logic Operations.

14. a).Explain about Parallel Processing with different pipelining.

(or)

b).Explain about Register Organization and Stack Organization with Examples..

2305502291171017

Code: 4311/R

Faculty of Science

B.Sc (Honors) I-Year II-Semester Regular Examinations – June – 2024

Subject : STATISTICAL INFERENCE

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

Section – A

Answer any **SIX** questions. All questions carry equal marks . **(6X 5 = 30 Marks)**

1. Define sampling distribution of sample mean.
2. What do you mean by theory of estimation?
3. Explain the following terms 1).Level of significance.2)Type I&II errors.
4. Explain the statistical test procedure of Large sample test.
5. State the Properties of Chi-square test.
6. State the properties of student 't' distribution.
7. Define Test for Randomness.
8. Explain Sign test for two samples.
9. What are the properties of M.L.E
10. Explain Median Test.

Section – B

Answer all questions. All questions carry equal marks. **(4 X 10 = 40)**

11 (a) Explain F distribution , State its properties and applications. Explain the Relationship between t &F. .

(OR)

(b) Explain the criteria of a good estimator.

12 (a) Find the Most powerful critical region for testing Ho: $\mu = \mu_0$ against H_1 ; $\mu = \mu_1$ ($\mu < \mu_0$ and $\mu > \mu_0$) for Normal Distribution with parameters (μ , σ^2) on the basis of a random sample of $x_1, x_2, \ldots, x_n$ of size 'n'.

(OR)

(b)Explain Large sample test for single proportion and difference of proportions.

13 (a) Explain Chi- Square test for goodness of fit, and State the conditions for the validity of Chi-Square test for goodness of fit .

(OR)

(b) (I) Explain t test for difference of means.

(II)Explain F test for equality of two population variances

14 (a) Explain assumptions and advantages over parametric and Non parametric test.

(OR)

(b)Using the number of runs above and below the median, test for randomness the following set of a table of 2-digit numbers.

15,77,01,65,69,69,58,40,81,16,16,20,84,22,28,26,46,66,36,86,66,17,43,49,85,40,51,40,10

******

Code: 2302/R

Faculty of Science

B.Sc. (Data Science) I-Year CBCS II-Semester Regular Examinations June- 2024

Paper: PROBLEM SOLVING AND PYTHON PROGRAMMING

SECTION – A

I. Answer any Six Questions. All Questions carry equal marks **(6*5=30 Marks)**

1. Write the Fundamentals of Computing , Specify different computing devices.
2. Explain about print() and input()
3. Explain about return statement with example
4. Difference between while and for loops with example
5. State the differences between List and Dictionary with Example
6. What is mean by File Handling
7. How classes are created in Python
8. Explain about Generators in Python
9. Explain about continue and break statements in python with example
10. List Comprehension vs for loop in python

SECTION – B

II. Answer all the following Questions. **(4*10=40 Marks)**

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

(or)

b).Explain about Loop Control Statements of python with Example

12. a). Explain about Command Line Arguments. Explain addition of three numbers using CommandLine arguments.

(or)

b). Define String. Explain about String Methods in Python with Examples.

13. a). Explain about different modes in File Handling with Example also compare different file types.

(or)

b). What is Dictionary. Explain about various operations performed on Dictionary with example.

14. a). Explain Lambda in python with examples

(or)

b). Explain about different Object-Oriented Programming methodologies with Examples?

Code: 2309/R

Faculty of Science

B.Sc. (Honors) I-Year CBCS II-Semester Regular Examinations June-2024

Paper: PROBLEM SOLVING AND PYTHON PROGRAMMING

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

SECTION – A

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

1. Write the Fundamentals of Computing, Specify different computing devices.
2. Explain I/O operations in Python.
3. Explain about return statement with example
4. Difference between while and for loops with example
5. Define container type of Data types.
6. What is mean by File Handling?
7. How classes are created in Python
8. Explain about Generators in Python
9. Explain about continue and break statements in python with example
10. What is List Comprehension in Python.

SECTION B

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

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

OR

(b) Explain about Loop Control Statements of python with Example.

12.(a) Explain about Command Line Arguments. Explain addition of three numbers using Command Line arguments.

OR

(b) Define String. Explain about String Methods in Python with Examples.

13.(a Explain about different modes in File Handling with Example also compare different file types.

OR

(b) What is Dictionary. Explain about various operations performed on Dictionary with example.

14.(a) What is Lambda in Python? Explain types functions used in Lambda with examples.

OR

(b) Explain about different Object-Oriented Programming methodologies with Examples?

*****

Code: 2308/R

Faculty of Science

B.Sc. (Honors) I-Year CBCS II-Semester Regular Examinations June-2024

Paper: ALGEBRA

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 group and list all its elementary properties.
2. Let G be any group and $(ab)^2 = a^2b^2 \; \forall \; a, b \in G$. Then show that G is an abelian group.
3. Prove that every subgroup of an abelian group is normal subgroup.
4. Prove that Every quotient group of an abelion group is abelian.
5. Define zero divisors in a ring. Find all zero divisors in the ring$(Z_6, +_6, X_6)$.
6. Define ring homomorphism and ring isomorphism.
7. Define ideal and maximal ideal of ring R .
8. If 'U' is an ideal of R and $1 \in U$, then prove that U=R.
9. In a group G for every $a \in G, a^2 = e$, then prove that G is an abelian group.
10. If M,N are two normal subgroup of G such that $M \cap N = \emptyset$, then prove that every element of M coincides with every element of N.

SECTION B

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

11.(a) If G is a group, then prove that
   i) The identity element of G is unique.
   ii) Every $a \in G$ has a unique inverse in G.
   iii) For every $\in G, (a^{-1})^{-1} = a$.
   iv) For all $a, b \in G, (ab)^{-1} = b^{-1}a^{-1}$

OR

(b) If H and K are two subgroups of a group 'G',then HK is a subgroup of G, if and only if HK=KH.

12.(a) Prove that the order of a subgroup of a finite group divides the order of the group .

OR

(b) A subgroup H of a group G is a normal subgroup of G if and only if the product of two right cosets of H in G is again a right coset of H in G.

13.(a) Define an integral domain. Prove that every field is an integral domain.

OR

(b) Prove that $\emptyset(a + ib) = a - ib \; \forall \; (a + ib) \in C$ is a ring homomorphism.

14.(a) If R is a commutative ring with unit element and M is an ideal of R, then M is a maximal ideal of R if and only if R/M is a field.

OR

(b) Let R be a Euclidean ring and $a, b \in R. If \; b \neq 0$ is not a unit in R then d(a)<d(ab).

*****

Code: 2501/R

Faculty of Science

BCA I-Year, CBCS-II Semester Regular Examinations June-2024

PAPER: FUNDAMENTALAS OF PROBABILITY& STATISTICS

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

Section-A

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

1. Define collection of methods.
2. What are the measures Central tendency, explain any two of them.
3. Define the definition of Mathematical probability.
4. Explain Probability mass function and Probability density function.
5. Define Correlation.
6. Define Classification of data.
7. Define Skewness.
8. Define Regression.

Section-B

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

9. (a) Explain briefly about Classification and Tabulation of data.

OR

(b) Explain concept of Statistics population, Sample and Quantitative data.

10.(a) What are the Measures of Dispersion. Explain briefly.

OR

(b) Define Skewness and Kurtosis with it's formula.

11.(a) Define Addition theorem of probability for 2 events.

OR

(b) Define Multiplication theorem of probability for 2 events.

12.(a) Explain the Expectation of Random variable and mention it's probabilities.

OR

(b) Define Binomial theorem.

13.(a) Define Partial and Multiple Correlations with it's formulae.

OR

(b) Explain test procedure of 'Paid t-test' .

Code: 2203/R

Faculty of Science

BCA I-Year, CBCS-II Semester Regular Examinations June-2024

PAPER: OBJECT ORIENTED PROGRAMMING WITH C++

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

Section-A

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

1. What are the Applications of OOP?
2. What is goto statement?
3. What is friend function?
4. What is multiple inheritance?
5. Define Virtual Function.
6. What are Basic concepts of OOP?
7. Define Constructor.
8. What is Template?

Section-B

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

9. (a) Explain about storage Classes in C++ with example

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) What is Function? Explain about Call by Reference with C++ program.

11.(a) Explain about C++ Constructors and types with examples.

OR

(b) What is Friend Function? Write C++ program on Friend Function.

12.(a) Define Inheritance and Explain its Types with Examples.

OR

(b) What is Pointer? Explain about Pointer arithmetic with example.

13. (a) What is Exception? Explain about C++ exception handling.

OR

(b) Explain about Polymorphism and its types with Examples.

*****

Code: 2503/R

Faculty of Science

BCA I-Year, CBCS-II Semester Regular Examinations June-2024

PAPER: COMPUTER ARCHITECTURE

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

Section-A

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

1. Write about Bus Structures
2. Explain addition of signed numbers
3. Write about Data hazards?
4. Write the difference between RAM and ROM?
5. Write about Interrupts?
6. Explain about virtual memory?
7. Write about software performance
8. Write about Semiconductors

Section-B

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

9. (a) Explain about Memory operations?

OR

(b) Write about Basic I/O operations?

10.(a) Explain about Multiplication of positive numbers with example ?

OR

(b) explain about Floating point numbers and operations ?

11.(a) Write about Microprogrammed control?

OR

(b) Write about Data path and control considerations ?

12.(a) Explain about Memory management requirements?

OR

(b) Write about Secondary storage ?

13.(a) Explain about Accessing I/O devices?

OR

(b) Write about Interface circuits ?

*****

Code: 2504/R

Faculty of Science

BCA I-Year, CBCS-II Semester Regular Examinations June-2024

PAPER: DATA STRUCTURES

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

Section-A

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

1. Define Array and Explain about types of Arrays?
2. Define Stack and operations of stack?
3. Write about Hash functions?
4. Write about Binary Tree Traversal?
5. Define Sorting and explain about Bubble sort?
6. Define Graph and write about terminology?
7. Write about Binary Search ?
8. Write about Abstract Data Types ?

Section-B

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

9. (a) Define class and explain with example program in c++?

OR

(b) Explain about matrices and explain about special matrices and sparse matrices?

10.(a) Explain about Queue and operations with example program?

OR

(b) Explain about stack operations with example program ?

11.(a) Define Linked List and types of Linked Lists?

OR

(b) Define Hashing and explain about static and Hash Tables?

12.(a) Define Tree and explain about Binary Tree and its operations?

OR

(b) Write about DFS with example?

13.(a) Explain about Selection sort with example program?

OR

(b) Write about binary search with example program?

*****

Code: 2505/R

Faculty of Science

BCA I-Year, CBCS-II Semester Regular Examinations June-2024

PAPER: Advance Computer Networks

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

Section-A

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

1. Explain about high speed Networks?
2. Explain about advantages and disadvantages of ATM?
3. Explain about IPv4 address space?
4. Write the differences between Intradomain and Interdomain routing?
5. What is network traffic engineering?
6. Explain about Overlay networks?
7. Explain about advantages and disadvantages of IPv6?
8. What is Domain Name System?

Section-B

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

9. (a) Explain about Network Architecture?

OR

(b) Explain the CRC technique with an example?

10.(a) what is Datagram Network? Explain about features of Datagram Network?

OR

(b) What is ISDN? Explain about ISDN Services.

11.(a) Explain about classful IP Addressing in detail?

OR

(b) Explain about Congestion control algorithms?

12.(a) What is Congestion Control? Explain about Congestion-Avoidance Mechanisms?

OR

(b) Explain about Major Protocols of Unicast Routing in detail?

13. (a) Explain about SONET/SDH Transmission with a neat diagram ?

OR

(b) Explain about Pretty Good Privacy (PGP) protocols and Firewalls.?

*****