

Marks

(Pages : 14)

S – 3180

Reg. No. :

Name :

Third Semester B.A./B.Sc. Degree Examination, February 2024

First Degree Programme Under CBCSS

Language Course – English

EN 1311.1/EN 1311.3 : ENGLISH FOR CAREER

(Common for B.A./B.Sc. & Career Related Group 2(a) Courses)

(2019 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

1. Answer all the questions. Follow the instructions given in the brackets wherever needed.
1. The correct spelling of the word 'bailinqual' is _____.
2. The antonym of 'alien' is _____.
3. Another word for 'penchant' is _____.
4. The noun form of 'observe' is _____.
5. This new shoes is very expensive. (Correct the sentence)
6. She _____ (go) to school since 2015. (Use the correct tense of the verb in brackets)
7. He injured him while working with a saw. (Underline the error)
8. _____ is the collection and study of postage stamps.

P.T.O.

9. She eats mangoes, _____? (Complete the sentence with a question tag)
10. She tends to _____ people who haven't had the same qualifications. (Fill in the blanks with the phrasal verb which means "to treat someone not worthy of respect".)
- (a) look forward to
 - (b) look down upon
 - (c) look up to
 - (d) look back on

(10 × 1 = 10 Marks)

II. Answer any **eight** of the following questions.

11. Provide one-word substitutes for any **two** of the phrases :

- (a) a solo speech or presentation by a speaker
- (b) a written or multimedia account of one's experiences during journeys
- (c) something said or done without any preparation
- (d) cyber attack using deceptive emails or messages to obtain sensitive information

12. Give the antonyms of any **two** of the following words :

- (a) confidence
- (b) escalating
- (c) sagacious

13. Make sentences of your own with any **two** of the following phrasal verbs :

- (a) turn up
- (b) smell a rat
- (c) look forward to
- (d) bring up

14. Choose the correct option from the brackets :

- (a) The plane will _____ in an hour, we need to hurry to the airport. (take up / take off)
- (b) They had to _____ the event due to bad weather. (call on / call off)

15. Fill in the blanks using a collective noun from those given below :

(fleet, group, collection, flock, fleet)

- (a) The _____ of musicians played a mesmerizing concert last night.
- (b) The naval base housed an impressive _____ of ships.

16. Fill in the blanks using the suitable degree of the adjective given in brackets :

- (a) This is the _____ cake I have ever tasted. (delicious)
- (b) This smartphone is _____ the latest model. (fast)

Correct the error in the words given in italics:

- 17. (a) Exercising has numerous *advantage* effects on both physical and mental well-being.
- (b) It is my *obliging* to complete the assigned tasks before the deadline.
- 18. (a) His *significance* contributions to the project played a crucial role in its success.
- (b) I won't tolerate any more excuses; get the job done or face *consequances*.
- 19. (a) I was upset by his *hostility* attitude.
- (b) Our goal is focused on *eradicate* hunger by supporting local food banks.

20. Fill in the blanks with suitable words from those given in brackets :

(dumped, accumulation, dust bins, indicates)

The plastic _____ 1 _____ inside the oceans _____ 2 _____ that our oceans are slowly becoming _____ 3 _____. A new study found that the waste _____ 4 _____ in oceans is increasing.

21. Read the paragraph and answer the questions given below :

Pet animals, like dogs and cats, contribute to the lives of their owners by providing companionship and joy, fostering deep connections that positively impact both the human and animal involved. Caring for these pets involves responsibilities such as feeding, grooming, and attending to their health needs, instilling a sense of commitment and imparting valuable life skills to their owners.

- (a) How do pet animals positively impact the lives of their owners?
- (b) What skills do pet owners gain from taking care of their animals?

22. Mental health is a crucial aspect of overall well-being, encompassing emotional, psychological, and social aspects of an individual's life. It involves maintaining a balance in one's thoughts, emotions, and behaviors, contributing to a positive and fulfilling life. Seeking support, fostering open conversations, and promoting self-care are essential components in addressing and nurturing mental health.

- (a) What is the meaning of the word 'fostering' as used in the paragraph?
- (b) What components are essential for addressing and nurturing mental health?

(8 × 2 = 16 Marks)

III. Answer any **six** of the following questions.

23. Fill in the blanks with the correct option :

- (a) They asked you to _____, didn't they? (accept it / accept to it)
- (b) His constant complaints were _____ everyone in the office. (irritating / inspiring)
- (c) She was a _____ scientist, widely recognized for her research in quantum physics. (eminent / distinguished)
- (d) Her professional _____ have positioned her as a leader in the field of environmental sustainability. (acknowledgements / achievements)

24. Fill in the blanks with suitable phrases from those given in brackets :

(bring up, come across, set up, take off, look into, run out, show up)

- (a) While cleaning the attic, I _____ an old photo album.
- (b) The detective promised to _____ the mysterious disappearance of the valuable artifact.
- (c) We need to go grocery shopping; we're about to _____ of essential items.
- (d) They decided to _____ a small business to sell handmade crafts online.

25. Correct the error in any **four** of the following sentences :

- (a) She don't like coffee, but she loves tea.
- (b) The meeting was schedule for 3:00 PM, but it got postponed.
- (c) Neither the teacher nor the students is aware of the upcoming exam.
- (d) Of the two brothers, he is the tallest.
- (e) His ability to adapt to new situations are one of his strongest qualities.

26. Correct the error in the section in italics in any **four** of the following sentences :

- (a) *What fantastic* movie that was!
- (b) Oh, *what adorable* those kittens are!
- (c) *How an impressive* your artwork turned out!
- (d) *What beautiful garden* you've created!
- (e) *How thrilling is it* to ride a roller coaster!

27. Fill in the blanks with suitable pronouns from those given in brackets :

(myself, it, it's, us, them, I, her, she, you, me, they)

A : I went to the shopping mall today. _____ bought a new laptop for _____.

B : I need a laptop too. Can you tell _____ more about _____? What brand did _____ get?

A : I chose a popular brand. _____ sleek. _____ have a good collection.

B : Thanks. I want to buy a new laptop for my friend on _____ birthday.

28. Correct the error in the sections in italics :

(a) Of the two boys, Jim is *the fastest*.

(b) She plays the piano *more skillfull than* anyone in the band.

(c) This is the *more worst* movie I've ever seen.

(d) She is not *as taller as* her friend.

29. Fill in the blanks with suitable words from those given in brackets :

(symptoms, encourage, presently, possibility, ailment, home, feeble, wished)

Tom lay thinking. _____ it occurred to him that he _____ he was sick; then he could stay _____ from school. Here was a vague _____. He canvassed his system. No _____ was found, and he investigated again. This time he thought he could detect colicky _____, and he began to _____ them with considerable hope. But they soon grew _____, and presently died wholly away.

30. Read the passage and answer the questions given below :

Big mountains, so amazing and old, have seen time passing and how people and societies change. The tall peaks, sometimes covered in mist or touched by the sun, get respect and make people dream. Mountains, with their rough landscapes and high points, feel both challenging and peaceful. They act like borders, keeping different environments safe for plants and animals used to tough conditions. As Earth's history keepers, mountains tell stories of crashes and weathering that made them beautiful for millions of years. These huge formations attract both adventurers and thinkers, giving a break in high places with fresh air and endless views, making us appreciate nature's wonders and strength.

- (a) What makes people dream?
- (b) Why are mountains considered to be challenging?
- (c) Define "history keepers."
- (d) Who are more fascinated towards mountains?

31. Read the passage and answer the questions given below :

The RMS Titanic, a British passenger liner, remains one of the most iconic and tragic stories in maritime history. On April 15, 1912, during its maiden voyage from Southampton to New York City, the Titanic struck an iceberg and sank in the North Atlantic Ocean. Despite being equipped with advanced safety features for its time, the ship could not withstand the impact, leading to the loss of more than 1,500 lives. The disaster exposed shortcomings in maritime safety practices and sparked significant changes in international regulations. The sinking of the Titanic has since captured the collective imagination, serving as a poignant reminder of the delicate balance between human innovation and the forces of nature.

- (a) What was the fate of the RMS Titanic during its maiden voyage in 1912?
- (b) What was the destination of the RMS Titanic during its maiden voyage?
- (c) What caused the sinking of the Titanic?
- (d) The word poignant means:
 - (i) touching
 - (ii) happy
 - (iii) unemotional
 - (iv) indifferent

(6 × 4 = 24 Marks)

IV. Answer any **two** of the following questions, choosing **one** from each group.

GROUP – A

32. Read the following passage and answer the questions given below :

Diego Maradona, widely regarded as one of the greatest footballers in history, left an indelible mark on the sport with his extraordinary skills and charismatic presence. Born in Argentina in 1960, Maradona's rise to football stardom began in his early teens when he joined the youth team of Argentinos Juniors. His exceptional dribbling abilities and vision on the field quickly caught the attention of scouts, leading to his debut in the professional arena at the tender age of 16. Maradona's career reached its pinnacle during the 1986 FIFA World Cup in Mexico, where he single-handedly propelled Argentina to victory. His infamous "Hand of God" goal and the stunning solo effort against England in the quarterfinals showcased his unparalleled talent and cemented his status as a football legend.

Off the field, Maradona's life was marked by both triumphs and tribulations. His battles with drug abuse and personal demons added a complex layer to his narrative, but his impact on the game and the love he garnered from fans worldwide remained unparalleled. Despite the controversies, Diego Maradona's legacy endures, with his name etched in football history as a symbol of skill, passion, and the indomitable spirit that defines the beautiful game.

1. _____ is the word from the passage which means "first public appearance".
2. Charisma in the given context means _____.
(a) Compelling charm (b) Very eloquent
(c) Totally difficult (d) Calm and cool
3. Name the word which is a synonym for 'notorious' from the passage.

4. "Cemented" in the passage means _____.
(a) put out (b) firmly established
(c) made irrelevant (d) well protected
5. The word _____ from the passage is synonym for the word 'incomparable'.
6. The phrase 'single handed' means _____.
(a) collaboratively (b) with one hand
(c) in tandem (d) solely executed
7. _____ is not a synonym of 'complex'.
(a) intricate (b) elaborate
(c) composite (d) nefarious
8. Identify the word in superlative degree from the above passage.
9. The word 'exceptional' is related to _____.
(a) unique (b) ordinary
(c) mediocre (d) normal
10. _____ is a single word for "adhering to standards".
(a) professional (b) professionalization
(c) profess (d) professionalism
11. _____ is a synonym for 'success'.
12. Which phrase means "create an everlasting memory"?
13. The phrase _____ means "attain the highest level".
14. Find a synonym for "invincible will" from the passage.
15. Make a sentence on your own with the word "legacy".

OR

33. Answer all the following questions :

Fill in the blanks with suitable articles, prepositions, conjunctions, adverbs or adjectives.

1. She is _____ expert in _____ field of environmental science.
2. She decided to go for a run, _____ the weather was chilly and the sky was clear.
3. He completed the task _____, showcasing his efficiency and dedication.
4. She was _____ interested nor impressed by the mundane presentation.
5. _____ it was raining, they decided to go for a walk in the park.
6. I bought _____ new laptop yesterday, and it came with _____ sleek case.
7. We took a leisurely stroll through the _____ park, enjoying the tranquility.
8. She had _____ time to finish the project before the deadline.
9. Of all mountain peaks, Everest is _____. (use the correct degree of 'tall')
10. He was given two options, and he chose the _____, which was a practical one. (later/latter)

Rewrite as directed :

11. English is spoken all over the world. (change the voice)
12. "What inspired you to pursue a career in environmental conservation"? inquired the journalist. (write in indirect speech)
13. he exclaimed this is the best news I've heard all week (punctuate the sentence)
14. We witnessed a stunning sunset at the beach. (write as exclamatory sentence)
15. Not only the students but also the teacher _____ surprised by the unexpected turn of events. (use the correct form of 'be')

GROUP B

34. Read the passage and answer the questions given below :

It was raining when Rahel came back to Ayemenem. Slanting silver ropes slammed into loose earth, plowing it up like gunfire. The old house on the hill wore its steep, gabled roof pulled over its ears like a low hat. The walls, streaked with moss, had grown soft, and bulged a little with dampness that seeped up from the ground. The wild, overgrown garden was full of the whisper and scurry of small lives. In the undergrowth a rat snake rubbed itself against a glistening stone. Hopeful yellow bullfrogs cruised the scummy pond for mates. A drenched mongoose flashed across the leaf-strewn driveway. The house itself looked empty. The doors and windows were locked. The front verandah bare. Unfurnished. But the skyblue Plymouth with chrome tailfins was still parked outside, and inside, Baby Kochamma was still alive. She was Rahel's baby grandaunt, her grandfather's younger sister. Her name was really Navomi, Navomi Ipe, but everybody called her Baby. She became Baby Kochamma when she was old enough to be an aunt. Rahel hadn't come to see her, though. Neither niece nor baby grandaunt labored under any illusions on that account. Rahel had come to see her brother, Estha.

(Arundhati Roy: God of Small Things)

Questions:

1. The word 'drenched' in the passage is closest in meaning to:
(a) violent (b) aggressive
(c) warm (d) damp
2. "Flashed across" means:
(a) move swiftly (b) appear in a flash
(c) come back (d) move carefully
3. Find the word in the passage which is opposite in meaning to 'faded'.
(a) empty (b) glistening
(c) slanting (d) gabled

4. The word 'scummy' in the passage means:
(a) clean (b) wet
(c) muddy (d) slippery
5. The phrase slammed into means:
(a) intrude (b) deliver
(c) paste (d) hit
6. 'Undergrowth' means _____.
7. Identify the statement which is true:
(a) The residence appeared deserted.
(b) The people were noisy.
(c) Rahel was greeted warmly.
(d) The garden appeared to be charming.
8. The word 'overgrown' in "overgrown garden" means:
(a) clear (b) dense
(c) captivating (d) deserted
9. How did Navomi become "Baby Kochamma"?
10. What was the weather like when Rahel returned to Ayemenem?
11. How does the old house on the hill appear in the passage?
12. Describe the condition of the walls of the old house.
13. What animals are mentioned in the wild, overgrown garden?
14. Who is Baby Kochamma, and how is she related to Rahel?
15. Why did Rahel come back to Ayemenem, and who did she come to see?

OR

35. Spot the error in the underlined sections in the following sentences. If there is no error, the answer is 'd'.

1. Despite a heavy rain, she insisted on going for a run in the park. No Error.
 a b c d
2. Each of the student in the class has their own opinion about the topic.
 a b c
- No error.
 d

11. The reasons for the project delay are still unclear. No error.

a b c d

12. Me and my sister are planning a trip to Europe next summer. No error.

a b c d

13. The cake, along with the cookies, were baked by my grandmother. No error.

a b c d

14. Each of the employees were given a bonus for their hard work last quarter.

a b c

No error.

d

15. The car needs washed before we go on our road trip. No error.

a b c d

(2 × 15 = 30 Marks)

Reg. No. :

Name :

Third Semester B.A./B.Sc. Degree Examination, February 2024

First Degree Programme under CBCSS

Language Course VII – Additional Language III – Malayalam

ML 1311.1 : ഭാഷാവബോധവും സർഗ്ഗാത്മകതയും

(2021 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

- I. ഒരു വാക്കിലോ വാക്യത്തിലോ ഉത്തരം എഴുതുക.
1. സ്രോതഭാഷ എന്നാൽ എന്ത്?
2. ഇതര ജീവികൾക്കില്ലാത്ത സാംസ്കാരിക ജീവിതം മനുഷ്യർക്ക് സാധ്യമായത് എന്തിന്റെ ഫലമായിട്ടാണ്?
3. ഭാഷാടിസ്ഥാനത്തിൽ ഭാരതത്തെ പുനഃസംഘടിപ്പിക്കാൻ എന്ന ആശയത്തിന്റെ ഉപജ്ഞാതാവ് ആര്?
4. വികാരങ്ങൾ കൈമാറ്റം ചെയ്യുന്നതാണ് കല എന്ന് പറഞ്ഞതാരാണ്?
5. സത്യശകലങ്ങൾ കൂട്ടിച്ചേർത്തുണ്ടാക്കുന്ന നൂണയാണ് കഥ എന്ന് പറഞ്ഞതാര്?
6. നാലിതൽപ്പൂവ് എന്നതുകൊണ്ട് ഉദ്ദേശിക്കുന്നത് എന്താണ്?
7. എന്താണ് ആഗമസന്ധി?

17. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

16. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

കുറിപ്പ്

- കവിയുടെ സൂക്തങ്ങൾ പരിശോധിക്കുക. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

15. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ

14. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ

13. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

12. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

11. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ

10. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

(10 x 1 = 10 Marks)

പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

10. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

9. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

8. പരമേശ്വരൻ്റെ സൂക്തങ്ങൾ പരിശോധിക്കുക.

യഥാ

25. സി. പ്ര. രാമൻ പ്രസിദ്ധീകരിച്ച 'കേരളം' എന്ന പേരിൽ എഴുതിയ കൃതികളിൽ ഏതൊരു കൃതിയും പഠിപ്പിക്കാൻ ഉദ്ദേശിക്കുന്നു. കേരളത്തിലെ സാമൂഹിക സാഹചര്യങ്ങൾക്കനുസരിച്ച് ഏതൊരു കൃതിയും പഠിപ്പിക്കാൻ ഉദ്ദേശിക്കുന്നു.

24. മലയാളം ഭാഷയിൽ 'കേരളം' എന്ന പേരിൽ എഴുതിയ കൃതികളിൽ ഏതൊരു കൃതിയും പഠിപ്പിക്കാൻ ഉദ്ദേശിക്കുന്നു. കേരളത്തിലെ സാമൂഹിക സാഹചര്യങ്ങൾക്കനുസരിച്ച് ഏതൊരു കൃതിയും പഠിപ്പിക്കുന്നു.

23. സാഹചര്യങ്ങൾക്കനുസരിച്ച് 'കേരളം' എന്ന പേരിൽ എഴുതിയ കൃതികളിൽ ഏതൊരു കൃതിയും പഠിപ്പിക്കാൻ ഉദ്ദേശിക്കുന്നു. കേരളത്തിലെ സാമൂഹിക സാഹചര്യങ്ങൾക്കനുസരിച്ച് ഏതൊരു കൃതിയും പഠിപ്പിക്കുന്നു.

III. മീറ്റർ പാലിൽ കയറിയപ്പോൾ എഴുതിയ കൃതികളിൽ ഏതൊരു കൃതിയും പഠിപ്പിക്കാൻ ഉദ്ദേശിക്കുന്നു. കേരളത്തിലെ സാമൂഹിക സാഹചര്യങ്ങൾക്കനുസരിച്ച് ഏതൊരു കൃതിയും പഠിപ്പിക്കുന്നു.

(8 x 2 = 16 Marks)

22. എന്താണ് പ്രായോഗികം?

21. സാഹചര്യങ്ങൾക്കനുസരിച്ച് 'കേരളം' എന്ന പേരിൽ എഴുതിയ കൃതികളിൽ ഏതൊരു കൃതിയും പഠിപ്പിക്കാൻ ഉദ്ദേശിക്കുന്നു. കേരളത്തിലെ സാമൂഹിക സാഹചര്യങ്ങൾക്കനുസരിച്ച് ഏതൊരു കൃതിയും പഠിപ്പിക്കുന്നു.

20. ഞാൻ കയറിയപ്പോൾ എഴുതിയ കൃതികളിൽ ഏതൊരു കൃതിയും പഠിപ്പിക്കാൻ ഉദ്ദേശിക്കുന്നു. കേരളത്തിലെ സാമൂഹിക സാഹചര്യങ്ങൾക്കനുസരിച്ച് ഏതൊരു കൃതിയും പഠിപ്പിക്കുന്നു.

രക്ഷയ്ക്കു

(i) അപരിചിതൻ
(ii) അപരിചിതൻ സാഹചര്യങ്ങൾക്കനുസരിച്ച് എഴുതിയ കൃതികളിൽ ഏതൊരു കൃതിയും പഠിപ്പിക്കാൻ ഉദ്ദേശിക്കുന്നു. കേരളത്തിലെ സാമൂഹിക സാഹചര്യങ്ങൾക്കനുസരിച്ച് ഏതൊരു കൃതിയും പഠിപ്പിക്കുന്നു.

19. തെറ്റിദ്ധാരണകളെന്തൊന്നും തിരുത്തുക.

18. ചാനൽ അപരിചിതൻ സാഹചര്യങ്ങൾക്കനുസരിച്ച് എഴുതിയ കൃതികളിൽ ഏതൊരു കൃതിയും പഠിപ്പിക്കാൻ ഉദ്ദേശിക്കുന്നു. കേരളത്തിലെ സാമൂഹിക സാഹചര്യങ്ങൾക്കനുസരിച്ച് ഏതൊരു കൃതിയും പഠിപ്പിക്കുന്നു.

29. ശബ്ദവിഭജനരീതികൾ വിശദീകരിക്കുക.

30. ഇംഗ്ലീഷിലേക്ക് വിവർത്തനം ചെയ്യുക.

“എനിക്ക് ആ വൃദ്ധയുടെ പരിതസ്ഥിതിയിൽ വലിയ സഹതാപം തോന്നി. അവർ കണ്ണിരിൽ കലർത്തി പറഞ്ഞ കഥകൾ എന്നെ വികാര പരവശനാക്കി. അവർ പറഞ്ഞതെല്ലാം പാകപ്പെടുത്തി, സ്വന്തം വകയായി ചില സരസ്വതിവിലാസങ്ങളും ചേർത്ത് ഞാൻ ആ മടയനായ മകന് തുടരെത്തുടരെ കത്തുകൾ എഴുതി അയച്ചു.”

31. മലയാളത്തിലേക്ക് വിവർത്തനം ചെയ്യുക.

“It was hard to tell his age from his face and his acts. His innocent face said he was about fourteen but the smoke and words gushed out from his mouth suggested he was beyond seventeen. But everyone treated him as a small boy.”

(6 × 4 = 24 Marks)

IV. മൂന്നു വാക്കിൽ കവിയാതെ ഏതെങ്കിലും രണ്ടു ചോദ്യത്തിന് ഉത്തരം എഴുതുക.

32. കഥ എങ്ങനെ എഴുതണമെന്നും എന്തിനുവേണ്ടി എഴുതണമെന്നുമാണ് കേശവദേവ് അഭിപ്രായപ്പെടുന്നത്?

33. തർജ്ജമയിൽ വരാവുന്ന അപാകതകൾ എന്തെല്ലാമാണെന്ന് വിശദീകരിക്കുക.

34. വ്യത്യസ്തഭാഷകൾ സംസാരിക്കുന്ന കോടിക്കണക്കിന് ജനങ്ങൾ ഉള്ള ഭാരതത്തിൽ ഐക്യവും അഖണ്ഡതയും പുലരുന്നത് എങ്ങനെയെന്ന് വിശദീകരിക്കുക?

35. താഴെപ്പറയുന്നവയിൽ ഏതെങ്കിലും ഒരു വിഷയത്തിൽ ഉപന്യാസം തയ്യാറാക്കുക.

(i) പരസ്യങ്ങളിലെ കേരളീയത.

അല്ലെങ്കിൽ

(ii) മലയാളി ജീവിതവും സിനിമയും.

(2 × 15 = 30 Marks)

Reg. No. :

Name :

Third Semester B.A./B.Sc. Degree Examination, February 2024

First Degree Programme under CBCSS

Language Course : Additional Language – Hindi

HN 1311.1 – HINDI NATAK, VYAKARAN TATHA ANUVAD

(2020 Admission onwards)

Time : 3 Hours

Max. Marks : 80

1. एक या दो वाक्यों में उत्तर लिखिए।
1. नादिरा ज़हीर बब्बर का जन्म कब हुआ?
2. 'औरत' – शब्द का पुल्लिंग लिखिए।
3. सकुबाई के भाई का नाम क्या है?
4. हिन्दी में कितने व्यंजन हैं?
5. साइली कौन है?
6. अधिकरण कारक के प्रत्यय लिखिए।
7. सकुबाई का असली नाम क्या था?
8. 'Translation' का हिन्दी शब्द क्या है?
9. सकुबाई की मेम साहब का नाम क्या था?
10. शुद्ध कीजिए – सुशीला की भाई का नाम गोविन्द है।

(10 × 1 = 10 Marks)

P.T.O.

II. किन्हीं आठ प्रश्नों के लघु उत्तर (करीब 50 शब्दों में) लिखिए -

11. स्वर किसे कहते हैं? उसके भेदों का परिचय दीजिए।
12. हुमैन मामा कौन है?
13. चचन क्या है? उसके प्रकारों पर प्रकाश डालिए।
14. शहनाज मेम कौन है?
15. यशवंत को कैसी बीमारी थी? बीमार पड़ने के बाद उसे क्या हुआ?
16. विशेषण और विशेष्य में अंतर क्या है? उदाहरण लिखिए।
17. डॉक्टर सकुबाई को क्या उपदेश देता है?
18. विधेय और उद्देश्य में अंतर क्या है? उदाहरण लिखिए।
19. सकुबाई ने अपनी बेटी का नाम साइली क्यों रखा था?
20. सुमन का परिचय दीजिए।
21. अविकारी (अव्यय) शब्द क्या है? अव्यय के कितने प्रकार हैं?
22. मिश्राइन के साथ यशवंत का रिश्ता कैसा था?

(8 × 2 = 16 Marks)

III. किन्हीं छः प्रश्नों के उत्तर करीब 120 शब्दों में लिखिए।

23. नादिरा ज़हीर बब्बर का परिचय दीजिए।
24. स्रोत के आधार पर शब्दों का वर्गीकरण उदाहरण सहित कीजिए।
25. सकुबाई के रूप का वर्णन कीजिए।
26. 'दो-चार महीने और ज़्यादा जीऊंगा यही न...? मैं इधर बम्बई में नहीं मरना चाहता... गाँव जाएगा... उधर ही रहेगा...'
सप्रसंग व्याख्या कीजिए।

27. 'ने' प्रत्यय का प्रयोग सोदाहरण लिखिए।
28. सकुबाई के परिवार का परिचय दीजिए।
29. वाक्य क्या है? रचना के आधार पर वाक्य के कितने प्रकार हैं? प्रकाश डालिए।
30. 'सकुबाई' नाटक में व्यक्त सामाजिक समस्याओं का विवरण दीजिए।
31. कारक और उसके प्रकारों पर प्रकाश डालिए।

(6 × 4 = 24 Marks)

IV. किन्हीं दो प्रश्नों के उत्तर करीब 250 शब्दों में लिखिए।

32. संज्ञा और सर्वनाम का अंतर स्पष्ट करते हुए उन दानों के भेदों पर सोदाहरण प्रकाश डालिए।
33. सकुबाई का चरित्र चित्रण कीजिए।
34. नाटक के विभिन्न तत्वों के आधार पर 'सकुबाई' नाटक की विस्तृत विवेचना कीजिए।
35. हिन्दी में अनुवाद कीजिए।

Vidyasagar was a very generous and charitable man. From his earliest years he helped the poor and needy to the utmost of his power. As a boy at school, he often gave the food to another boy who had none. If one of his school-fellows fell ill little Easwar would go to his house, sit by his bed and nurse him. His name became a household word in Bengal. Rich and poor, high and low, all loved him alike. No begger ever asked him for relief in vain.

(2 × 15 = 30 Marks)

(Pages : 4)

S – 3417

Reg. No. :

Name :

Third Semester B.Sc. Degree Examination, February 2024

First Degree Programme under CBCSS

Mathematics

Core Course

MM 1341 : ELEMENTARY NUMBER THEORY AND CALCULUS I

(2018 Admission onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – I

All the questions are compulsory. Each question carries 1 mark

1. State the Pigeonhole Principle.
2. State the Fundamental Theorem for Arithmetic.
3. Define continuity of a vector valued function.
4. If $r_0 = r(t_0), v_0 = r'(t_0)$, give the vector equation of the tangent line to the graph of $r(t)$ at r_0 .
5. Define Unit Tangent Vector.
6. Give the formula for a_T , the tangential component of acceleration for a moving particle in terms of the velocity v and the acceleration a .

P.T.O.

7. Find the natural domain of $f(x,y) = \sqrt{y+1} + \ln(x^2 - y)$.
8. Define boundary point of a set.
9. Define directional derivative of $f(x,y,z)$ in the direction u .
10. Give the equation of the tangent plane to a level surface S at a point (x_0, y_0, z_0) .

(10 × 1 = 10 Marks)

SECTION – II

Answer any **eight** questions. **Each** question carries **2** marks

11. Prove that there are infinitely many primes.
12. Express 3014 in base 8.
13. Prove that if p is a prime and $p \mid ab$, then $p \mid a$ or $p \mid b$.
14. Give the general solution of an LDE $ax + by = c$, if (x_0, y_0) is its particular solution.
15. Find the parametric equations that represent a line in 3-space that passes through the point $(1,0,0)$ and is parallel to the vector $(-1,3,2)$.
16. Find the derivative of $r(t) = t^2i + e^tj - (2\cos \pi t)k$.
17. If $r_1(t)$ and $r_2(t)$ are two vector functions of t , derive the expression for $\frac{d}{dt}(r_1 \cdot r_2)$.
18. A particle moves along a circular path in such a way that its x – and y – coordinates at time t are $x = 2\cos t, y = 2\sin t$. Find the instantaneous velocity and speed of the particle at time t .
19. Define Level Surfaces of $f(x,y,z)$ and find the level surfaces of $f(x,y,z) = x^2 + y^2 + z^2$.

20. For $f(x,y) = x^2y + 5y^3$, find the slope of the surface $z = f(x, y)$ in the x-direction in the y-direction at the point $(1, -2)$.
21. Let $f(x,y) = x^2e^y$. Find the maximum value of a directional derivative at $(-2,0)$.
22. State the Second Partial test for finding the relative extrema of a function.

(8 × 2 = 16 Marks)

SECTION – III

Answer any **six** questions. **Each** question carries **4** marks.

23. Let a and b are any positive integers. Prove that the number of positive integers $\leq a$ and divisible by b is $[a \setminus b]$.
24. Prove that every integer $n \geq 2$ has a prime factor.
25. Prove that two integers a and b are relatively prime if and only if there are integers α and β such the $\alpha a + \beta b = 1$.
26. Prove that, if $r(t)$ is a vector-valued function and $r(t)$ is differentiable at t , then $r'(t) = x'(t)i + y'(t)j$. Also for vector-valued functions $r_1(t)$ and $r_2(t)$, Prove that
$$\frac{d}{dt}[r_1(t) + r_2(t)] = \frac{d}{dt}[r_1(t)] + \frac{d}{dt}[r_2(t)].$$
27. If $r(t)$ is a differentiable vector-valued function in 2-space or 3-space and $\|r(t)\|$ is constant for all t , then $r(t) \cdot r'(t) = 0$.
28. Give the formula for arc Length L from $t = a$ to $t = b$, for the graph of a smooth vector-valued function $r(t)$. Also Find the arc length of that portion of the circular helix, $x = \cos t, y = \sin t, z = t$ from $t = 0$ to $t = \pi$.
29. Assuming that polynomials in one variable and sine function are continuous, show that $f(x, y) = \sin(3x^2y^5)$ is continuous everywhere State the results used for the proof.
30. Prove that if a function $f(x,y)$ is differentiable at a point, then it is continuous at that point.
31. Suppose that $w = \sqrt{x^2 + y^2 + z^2}, x = \cos \theta, y = \sin \theta, z = \tan \theta$. Use the chain rule to find $\frac{dw}{d\theta}$ when $\theta = \frac{\pi}{4}$.

(6 × 4 = 24 Marks)

SECTION – IV

Answer any two questions. Each question carries 15 marks.

32. (a) State and prove the Division Algorithm for integers.
(b) Using Euclidean Algorithm express (4076, 1024) as a linear combination of 4076 and 1024.
33. (a) Find $T(t)$ and $N(t)$ for the circular helix $x = a \cos t$, $y = a \sin t$, $z = ct$ where $a > 0$.
(b) Find the curvature for the ellipse $r = 2 \cos t i + 3 \sin t j$ ($0 \leq t \leq 2\pi$).
34. Find $\frac{\partial z}{\partial x}$ and $\frac{\partial z}{\partial y}$ if $z = x^4 \sin(xy^3)$. Given $f(x,y) = -\frac{xy}{x^2 + y^2}$, Find the limit of $f(x,y)$ as $(x,y) \rightarrow (0,0)$ limit along.
(a) the x-axis (b) the y-axis
(c) the line $y = x$ (d) the line $y = -x$
(e) the parabola $y = x^2$
35. Explain Lagrange's Multiplier method for finding extreme values and find the points on the sphere $x^2 + y^2 + z^2 = 36$ that are closest to and farthest from the point (1,2,2).

(2 × 15 = 30 Marks)

(Pages : 3)

S – 3409

Reg. No. :

Name :

Third Semester B.Sc. Degree Examination, February 2024

First Degree Programme under CBCSS

Statistics

Complementary Course for Mathematics

ST 1331.1 : STATISTICAL DISTRIBUTIONS

(2022 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer all questions. Each question carries 1 mark.

1. Define discrete uniform distribution.
2. What is the distribution of the sum of two independent binomial distributions?
3. Define the memoryless property of the exponential distribution.
4. Define gamma distribution.
5. Write any two properties of Normal distribution.
6. State Chebychev's inequality.
7. What is the Weak Law of Large Numbers (WLLN)?

P.T.O.

8. What is a parameter in statistics?
9. Explain the concept of sampling distributions.
10. Write the use of t distribution in Statistics.

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions. **Each** question carries **2** marks.

11. State the additive property of the binomial distribution.
12. What is the moment-generating function for continuous uniform distribution over the interval $[a,b]$.
13. Write the mode of Poisson distribution.
14. Express the probability mass function for a hypergeometric distribution.
15. What are the first two raw moments of the beta distribution (1 kind)?
16. Write the Characteristic function of Normal distribution.
17. Briefly explain the Central Limit Theorem.
18. What is the key assumption for the CLT to hold?
19. Write the mean and variance of the chi-square distribution with n degrees of freedom.
20. Provide the definition of the F distribution.
21. How does the chi-square distribution relate to categorical data analysis?
22. Give some applications of F distribution.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions. **Each** question carries **4** marks.

23. Derive the mode of binomial distribution.
24. State and prove the memoryless property of the geometric distribution.
25. Let $X \sim P(\lambda_1)$ and $Y \sim P(\lambda_2)$ and X and Y are independent. Then find the distribution of $X | X + Y = t$.
26. Find the mean of the hypergeometric distribution.
27. Derive the moment-generating function for the gamma distribution.
28. Derive the beta type II distribution.
29. Establish the convergence of Binomial distribution to Normal distribution.
30. Find the MGF of chi-square distribution.
31. State and prove WLLN.

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. **Each** question carries **15** marks.

32. Fit binomial distribution for the following data

Observations (X)	0	1	2	3	4	5	6	7
Frequency (f)	20	18	16	10	11	17	19	21

33. Derive the convergence of the Poisson distribution to the Normal distribution.
34. State and prove Chebychev's inequality.
35. Derive the interrelationship between chi-square, t and F statistic.

(2 × 15 = 30 Marks)

Maths

(Pages : 3)

S – 3411

Reg. No. :

Name :

Third Semester B.Sc. Degree Examination, February 2024

First Degree Programme under CBCSS

Physics

Complementary Course for Mathematics

PY 1331.1 : OPTICS, MAGNETISM AND ELECTRICITY

(2018 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in **one** or **two** sentences. Each question carries **1** mark.

1. Why the center of Newton's rings is dark for reflected light?
2. How is air wedge formed?
3. Why diffraction is common in sound but not common in light?
4. What is a grating?
5. What would happen when the circular aperture in Fresnel's diffraction is replaced by a circular disc of the same radius?
6. What is an optical fibre? What is its principle?
7. Explain population inversion.
8. Define the term magnetic susceptibility.
9. Explain the term relative permeability.
10. Why the core of a transformer made of laminated sheets?

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

Answer any **eight** questions, not exceeding a paragraph. Each question carries **2** marks.

11. State and explain superposition principle.
12. What are coherent sources? What are the two methods to obtain coherent sources?
13. Why a soap bubble in bright sunlight is beautifully colored?
14. What is band width? Obtain an expression for band width of interference fringes?
15. What is the difference between Fresnel's and Fraunhofer diffraction?
16. What are the assumptions made Fresnel to explain the diffraction pattern?
17. How will you determine the wavelength of light by the diffraction fringes of straight edge?
18. What is a graded index fiber? What is its advantage over step index fiber?
19. Draw the energy level diagram of ruby laser.
20. Explain the difference between ferromagnetism and antiferromagnetism?
21. What is meant by hysteresis in magnetic materials?
22. Explain the term sharpness of resonance?

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six**, each question carries **4** marks.

23. Two sources of intensities I and $4I$ are superimposed. Obtain the intensities where the phase difference is $\pi/2$.
24. Light of wavelength 5880 \AA is incident on a thin film of glass of $\mu = 1.5$ such that the angle of refraction in the plate is 60° . Calculate the smallest thickness of the plate which will make it dark by reflection.
25. In Young's double slit experiment the separation of the slit is 1.9 mm and the fringe spacing is 0.31 mm at a distance of 1 m from the slits. Calculate the wavelength of the light?
26. Find the half angular width of the central bright maximum in the Fraunhofer diffraction pattern of a slit of width $12 \times 10^{-5} \text{ cm}$ when the slit is illuminated by monochromatic wavelength 6000 \AA .

27. A monochromatic light of wavelength 5000 \AA from a distant source falls on a slit 0.5 mm wide. What is the distance between the two dark bands on each side of the central band of the diffraction pattern observed on a screen placed 2 m from the slit.
28. A plane wave of wavelength $6 \times 10^{-7} \text{ cm}$ incident normally on a circular aperture of radius 0.01 cm . Calculate the positions of the brightest and the darkest points on the axis.
29. A bar magnet placed with its axis at 30° with a uniform magnetic field of 0.25 T experiences a torque of magnitude equal to $4.5 \times 10^{-2} \text{ J}$. What is the magnitude of magnetic moment of the magnet?
30. A solenoid of 2000 turns and area of cross section $1.6 \times 10^{-4} \text{ m}^2$ carrying a current of 4 A is suspended through its centre allowing it to turn in a horizontal plane. What is the magnetic moment associated with the solenoid?
31. An a.c voltage of peak value 283 V and frequency 50 Hz is applied to a series LCR circuit in which $L = 25.48 \text{ mH}$, $C = 796 \mu\text{F}$, and $R = 3 \Omega$. Find the impedance of the circuit?

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. **Each** question carries **15** marks.

32. Explain the formation of the Newton's rings. How can these be used to determine the wavelength of monochromatic light.
33. Discuss the Fraunhofer diffraction due to a double slit in detail.
34. On the basis of modern electron theory, briefly explain diamagnetism and paramagnetism?
35. Obtain an expression for a current in a series LCR circuit? Also deduce an expression for impedance and resonance in the circuit.

(2 × 15 = 30 Marks)