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Reg. No. : .....

Name : .....

Third Semester B.A./B.Sc. Degree Examination, January 2019
(First Degree Programme Under CBCSS)
English (Language Course)
EN 1311.1/EN 1311.3 : WRITING AND PRESENTATION SKILLS
(Common for B.A./B.Sc. (Language Course VI) and Career Related 2(a) (Language Course V)
(2013 and 2014 Admissions)

Time : 3 Hours Max. Marks : 80

I. Answer **all** questions :

A) Rewrite the following sentences, correcting the errors, if any.

1) The news is true.
2) I shall describe about it.
3) Take an umbrella lest you may get wet.
4) What a wonderful creature is an elephant !
5) She sings delightful.

B) Write **one** synonym **each** for the following words .

6) Emancipate.
7) Tipsy.
8) Super.
9) Punch.
10) Decease.

(10×1=10 Marks)

II. Write a short paragraph **each** on **any eight** of the following :

11) E-mail writing, a more popular way of writing.
12) "Unity", in a paragraph.
13) Descriptive Essays.

P.T.O.

14) Various types of Business letters.

15) Chronological Resume.

16) Salient features of Business Reports.

17) Acronym.

18) Intimate Zone.

19) Importance of Note Making.

20) 'Topic Sentence' in a paragraph.

21) Non-verbal Communication.

22) 'Rate' as a paralinguistic feature. **(8×2=16 Marks)**

III. Answer **any six** of the following, **each** in a paragraph of about **100** words :

23) Write a letter to your friend, congratulating him for getting elected as College Union Chairman.

24) Make a précis of the following :

The flow of water has undoubtedly played a great part and a beneficent one in the geological processes by which the soil on the earth's surface has been formed from the rocks of its crust. The same agency, however, under appropriate conditions, can also play a destructive part and wash away the soil which is the foundation of all agriculture and if allowed to proceed unchecked can have the most disastrous effects on the life of the country. The problem of soil erosion is one of serous import in various countries and especially in many parts of India. The conditions under which it occurs and the measures by which it can be checked deserve the closest study. Soil erosion occurs in successive steps, the earliest of which easily pass unnoticed. In the later stages, the cutting and washing away of the earth is only too painfully apparent in the formation of deep gullies and ravines which make all agriculture impossible. Sudden bursts of rain resulting in a large run of surplus water are the principal factors in causing soil erosion. Contributory causes are the slope of land, removal of the natural protective coat of vegetation, the existence of ruts along which the water can flow with rapidly gathering momentum and the absence of any checks to that flow.

25) Script a conversation between two friends who chance to meet after twenty years.

26) Prepare a questionnaire of ten questions for a survey of flood victims in your area.

27) As a journalist of a newspaper, prepare a report on a dog show in your city.

28) Send an e-mail message to your professor, requesting for permission to be absent on the three following days in preparation of your sister's marriage.

29) Discuss 'Haptics'.

30) Bring out the difference between Informal Reports and Formal Reports.

31) List out the elements to be considered while composing e-mail messages. **(6×4=24 Marks)**

V. Write essays of about **300** words on **any two** of the following :

32) Paralinguistic Features of Communication.

33) The Structure of a Paragraph.

34) The steps involved in the editing process of a written matter.

35) Types of Essays. **(2×15=30 Marks)**

Reg. No. : .....

Name : .....

Third Semester B.A./B.Sc. Degree Examination, January 2019
First Degree Programme under CBCSS
LATIN – LANGUAGE COURSE
LT 1311 : Literature In Latin
(2013 Admission Onwards)

Time : 3 Hours Max. Marks : 80

PART – A

RESPONDE OMNIBUS (10 ×1 =10 marks)

1. Scribe quod non aptum
   (Cerberus, coquus, grumio, Romulus)
2. Delige verbum aptissimum
   Cincinnatus _____ suos bene amabat. (agros, agris, ager)
3. Indica Verum (T) an falsum (F)
   Alcumena was the wife of Amphitryon.
4. Redde Latine: The master is coming into the school with a friend.
   Magistri in scholam cum amico venit.
   Magister in scholam cum amico venire.
   Magister in scholam cum amico veniunt.
   Magister in scholam cum amico venit.
5. Redde Anglice: Romulus et Remus erant filii dei armorum et belli.
   Romulus and Remus were the friends of god of weapons and war
   Romulus and Remus were the sisters of god of weapons and war
   Romulus and Remus were the brothers of god of weapons and war
   Romulus and Remus were the sons of god of weapons and war
6. Who were the 'tres venatores?
   Lion, ass and the dog.
   Lion, wolf and the dog.
   Lion, goat and the dog.
   Lion, elephant and the dog.
7. Write the title of the poem '**Caetera rerum opifex animalia finxit ad usus..**'
8. Quis erat Sossia?
   The servant of Amphitryon
   The army cheif of Amphitryon
   The friend of Amphitryon
   The wife of Amphitryon

P.T.O.

9. Quis erat cerberus?
   Pig in the house of Caecilius
   Lion in the house of Caecilius
   Dog in the house of Caesar.
   Dog in the house of Caecilius
10. Make a sentence of your own using the word 'Laudare'

PART – B

(8 ×2 =16

RESPONDE OCTO DE DATIS

11. Explica : *Felix*
12. Explica: *Bona fide*
13. Expande et Explica: RIP
14. Qui erat Amphitruo?
15. Conjugate the Latin verb 'ornare' in the present, imperfect and perfect tenses
16. Differentiate between 'alumnus' and 'alumna'
17. Name the kings of ancient Rome.
18. Describe the role of **Cincinnatus** in the history of Rome
19. Give English derivation of the Latin word italicized in the line given below explaining its meaning in English.

    Amicus Caecilium *visitat*.

20. Redde Anglice

    Nam et si ambulavero in medio umbræ mortis,
    non timebo mala, quoniam tu mecum es.

21. Redde Latine
    O what a brightness, crow, your feathers have.
22. Correct the following sentence.
    Leo in regis hortum ibant.

PART – C

RESPONDE SEX DE DATIS

(6 ×4 =2

Explica sententias datas

23. Tertiam mihi dabitis, sum enim rex vester.
24. Grumio pavonem coquit.
25. Ne puerum mendacium imitate sitis.
26. Metella est in atrio.
27. Write a short note on the kings of Rome.

Redde in Latinam linguam

28. Italy is a peninsular in Europe. The peninsular is long and wide. Many inhabitants are farmers and sailors. Italy is famous and ancient. Great is the fame of Italy. In Italy there are many roads and they are beautiful and long.
29. Caecilius is in the garden. Caecilius is sitting in the garden. Servant is in the hall. Servant is working in the hall. Metella is in the hall. Metella is sitting in the hall. Quintus is in the study room. Quintus is writing in the study room.

Redde in Anglicam linguam

30. Parasti in conspectus meo mensam
adversus eos qui tribulant me;
impinguasti in oleo caput meum:
et calix meus inebrians, quam præclarus est!
Et misericordia tua subsequetur me
omnibus diebus vitæ meæ;
et ut inhabitem in domo Domini
in longitudinem dierum.

31. Amicus Caecilium visitat. Amicus est Mercator. Mercator villam intrat. Clemens est in atrio. Clemens mercatorem salutat. Caecilius est in tablino. Caecilius pecuniam numerat. Caecilius est argentarius.

PART – D

RESPONDE DUO DE DATIS (2×15 =30 marks)

32. What is the moral of the story 'Tres Venatores' and its relevance today.
33. Horatius the noble hero and saviour of Rome.

Scribe fabulam verbis aptis

34. Quod Romulus et Remus filii __1____ (ero, erat, erant) dei armorum et ___2____ (bellarum, belli, bellum) populus Romanus proelia ___3____ (amabat, amo, amamus). __4___ (Ero, Eramus, Erant) etiam filii Rheae Silviae. Amulius ___5___ (ero, erat, eramus) avunculus Rheae Silviae et Albam Longam regnabat, sed pueros non ___6____ (amabat, amabo, amabunt). Amulius filios Rheae Silviae ____7___ (necavit, necare, necamus) parabat, sed servus in ___8____ (aqua, aquam, aquae) in arca ___9____ (pueri, puer, pueros) locat et vitas puerorum __10___ (servas, servat, servamus). Mars filios ___11___ (suos, suas, suus) ad ripam Tiberis ___12___ (portamus, porto, portat). Lupa pueros ibi ___13___ (curo, curabat, curam). Tum Agricola __14___ (bonus, bona, bonam) ad casam suam Romulum et Remum ___15____ (porto, portamus, portat).

35. Puer quidam oves .....1.... (pascebant. pascebamus, pascebat). Vidit procul .....2.....(agricolas, agricolum,agricolarum) in .....3.....(ager, agros,agris) arantes et .....4..... (magnus, magna, magnum) .....5..... (clamoris, clamor, clamorem) dedit: "Heus. hues. amici! Venite, venite ! Lupus, lupus!" .....6..... (Audierunt. audit, audis) agricolae, confestim .....7.....(laborem, labor, laboris) relinquunt. et ad .....8.....(puer. puerorum. puerum) contendunt .....9..... (hasta, hastarum, hastis) armati. .....10.....(Lupus, Luporum, Lupum) tamen non inveniunt. sed in .....11..... (arbores, arbore. arborem) puerum ridentem .....12..... (vides, videt, vident). Irati ad .....13..... (agros, agris, ager) redeunt. Paucos post dies puerum rursus clamantem et auxilium petentem audiunt, sed nunc laborem non reliquunt. .....14.....(Eo, ea. eis) die tamen lupus gregem invaserat et multas oves cum ipso puero necavit. Haec fuit .....15.....(poena, poenis, poenum) mendacii.

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Reg. No. : .....

Name : .....

Third Semester B.A./B.Sc. Degree Examination, January 2019
First Degree Programme Under CBCSS
MALAYALAM LANGUAGE
Language Course – VII-Additional Language – III
ML 1311.1 : Drishyakalasahithyam
ദൃശ്യകലാസാഹിത്യം
(2014 Admission Onwards)

Time : 3 Hours Max. Marks : 80

I. **ഒരു** വാക്കിലോ **രണ്ടു** വാക്യത്തിലോ ഉത്തരമെഴുതുക.

1) രാമനാട്ടത്തിന് ആ പേരു വരാൻ കാരണമെന്ത് ?

2) കല്യാണസൗഗന്ധികം ഏതു തുള്ളൽ വിഭാഗത്തിലാണ് ഉൾപ്പെടുന്നത് ?

3) വൈശാലി ചലച്ചിത്രത്തിന്റെ സംവിധായകൻ ആര് ?

4) ''സ്മരിയായ്ക നിന്നെയവനോർമ്മ നൽകിലും
പെരികെ പ്രമത്തനിഹ പൂർവ്വവർത്തപോൽ'' ആരുടെ വാക്കുകൾ ?

5) ''രാജദാസികൾ കൊട്ടാരത്തിലെ വിനോദത്തിനല്ലെ ? ഒരുത്തി പോയാൽ ആ സ്ഥാനം ഏറ്റെടുക്കാൻ നൂറുപേർ വരും!'' ആരാണിങ്ങനെ അഭിപ്രായപ്പെടുന്നത് ?

6) മഹാഭാരതം വനപർവ്വത്തിൽ ആര് ആരോടു പറയുന്നതാണ് നളകഥ ?

7) കല്യാണസൗഗന്ധികത്തിലെ കല്യാണശബ്ദത്തിന്റെ അർത്ഥമെന്ത് ?

8) ഋശ്യശൃംഗന്റെ കഥ മഹാഭാരതത്തിലെ ഏതു പർവ്വത്തിൽ ഉള്ളതാണ് ?

9) ''ഭ്രാന്തിനേക്കാൾ വലിയ ഒരു സത്യമുണ്ടോ ? ഭ്രാന്തൻ സത്യമേ പറയൂ'' ഏതു കഥാപാത്രമാണ് ഇങ്ങനെ അഭിപ്രായപ്പെടുന്നത് ? നാടകമേത് ?

10) 'കറുത്ത ദൈവത്തെത്തേടി' എന്ന നാടകം അവതരിപ്പിക്കപ്പെട്ട വർഷം ?

(10×1=10 Marks)

P.T.O.

II. **ഒരു** ഖണ്ഡികയിൽ കവിയാതെ **എട്ടു** ചോദ്യത്തിന് ഉത്തരമെഴുതുക.

11) ''പാഥസാം നിചയം വാർന്നൊഴിഞ്ഞളവു
സേതുബന്ധനോദ്യോഗമെന്തോടോ ?'' ആര് ആരോടു പറയുന്നു ? സാംഗത്യമെന്ത് ?

12) ''വൃദ്ധനായോരുബലീമുഖനെക്കണ്ടു
ക്രുദ്ധനായിപ്പറഞ്ഞീടിനാൻ '' പറഞ്ഞതെന്തെല്ലാം ?

13) ''നന്ദിച്ചു മുല്ലയിതു ചേർന്നിതു മാവിനോടു –
മെന്നുള്ളിൽ നിങ്ങളെ നിനച്ചിനിയില്ല ശോകം ''ആരാണിങ്ങനെ ആശ്വസിക്കുന്നത് ?
കാരണമെന്ത് ?

14) അംഗരാജ്യത്തിലെ വരൾച്ച വൈശാലി തിരക്കഥയിൽ അവതരിപ്പിക്കുന്നതെങ്ങനെ?

15) ഋശ്യശൃംഗനെ വശീകരിച്ചെത്തിക്കാൻ ലോമപാദൻ വാരനാരിക്കു നൽകിയ വാഗ്ദാനങ്ങൾ എന്തെല്ലാം ?

16) കാട് കറുത്ത ദൈവത്തെത്തേടി നാടകത്തിൽ മുഖ്യകഥാപാത്രമാകുന്നതെങ്ങനെ ?

17) ''നൈഷധേന്ദ്രൻ നീയല്ല, കേളിനിമേലഹമത്രേ'' ഇങ്ങനെ പറയാനുള്ള കാരണമെന്ത് ?

18) ''അയ്യോ ! പരമാർത്ഥമേതും ഗ്രഹിയാതെ
നീയെന്തുശാഠ്യം തുടങ്ങുന്നു പൂരുഷ'' ആര് ആരോടു പറയുന്നു ?
എന്തൊക്കെയായിരുന്നു പരമാർത്ഥം ?

19) ''ഭയം ഒരു കുറവല്ല. മനുഷ്യനിലെ പരിശുദ്ധവും പരിപൂർണ്ണവുമായ വികാരം അതാണ്'' ആര് ആരോടു പറയുന്നു ? ഇങ്ങനെ പറയാനുള്ള കാരണമെന്ത് ?

20) ''ഖിന്നൻ ഞാനിതുമട്ടഹോ മമതയാൽ
മാൾകുന്നിതാരണ്യകൻ
ദണ്ഡിപ്പൂ ഗൃഹിയെത്രതാൻ പുതിയതാം
പുത്രീവിയോഗാർത്തിയാൽ'' ആശയഭംഗി വിശദമാക്കുക.

21) ഗുഡ്നൈറ്റ് നാടകത്തിലെ മാന്യൻ ആഗതന്റെ ഭാര്യയുടെ കാമുകനായിരുന്നുവെന്ന് വെളിപ്പെടുന്നതെങ്ങനെ ?

22) സത്യാന്വേഷണം കറുത്ത ദൈവത്തെത്തേടി നാടകത്തിൽ പ്രമേയത്തെ മുന്നോട്ടു നയിക്കുന്നതെങ്ങനെ ? **(8×2=16 Marks)**

II. **നൂറ്റിയിരുപത്** വാക്കിൽ കവിയാതെ **ആറു** ചോദ്യത്തിന് ഉത്തരമെഴുതുക.

23) നളചരിതം രണ്ടാം ദിവസത്തിലെ ഉദ്യാനവർണ്ണന ചുരുക്കി അവതരിപ്പിക്കുക.

24) ശകുന്തള തപോവനം വിട്ടു യാത്രയാകുന്നത് കാളിദാസൻ അവതരിപ്പിക്കുന്നതെങ്ങനെ ?

25) ''മരണത്തിന്റെ മുഖത്തു നോക്കുന്ന മനുഷ്യൻ സത്യമേ പറയൂ''. ഈ സംഭാഷണത്തിന് ഗുഡ്നൈറ്റ് നാടകത്തിലുള്ള പ്രാധാന്യമെന്ത് ?

26) കറുത്ത ദൈവത്തെത്തേടി എന്ന നാടകത്തിന് നാടോടിനാടകങ്ങളുടെ സ്വഭാവം ഉണ്ടോയെന്ന് വിലയിരുത്തുക.

27) ഇതിഹാസകഥയിൽ നിന്ന് തിരക്കഥയിലേക്കുള്ള സാധ്യതയായി എം. ടി. വാസുദേവൻ നായർ കണ്ടെത്തുന്ന യുക്തിയെന്ത് ? തിരക്കഥയെ അതെത്രത്തോളം മുന്നോട്ടു നയിക്കുന്നു ?

28) ''മാരുതി വൃദ്ധന്റെ വാക്കുകൾ കേട്ടുടൻ
മാരുതിഭീമൻ കയർത്തുചൊല്ലീടിനാൻ'' ചൊല്ലിയതെന്തെല്ലാം ?

29) ഭർതൃ ഗൃഹത്തിലേക്കു പോകുന്ന ശകുന്തളയ്ക്ക് കാശ്യപൻ നൽകുന്ന ഉപദേശങ്ങൾ എന്തെല്ലാം ?

30) ''ദൈവത്തെത്തേടിയുള്ള അന്വേഷണം എന്നതിലുപരി മനുഷ്യജീവിതത്തിന്റെ എല്ലാ മേഖലകളിലുമുള്ള അന്വേഷണമാണ് കറുത്ത ദൈവത്തെത്തേടി നാടകം'' നിങ്ങൾ ഈ അഭിപ്രായത്തോടു യോജിക്കുന്നുവോ ?

31) വൈശാലി തിരക്കഥയിൽ പുരോഹിതനുള്ള പ്രാധാന്യം എന്ത് ? **(6×4=24 Marks)**

IV. **മൂന്നു** പുറത്തിൽ കവിയാതെ ഏതെങ്കിലും **രണ്ടു** ചോദ്യത്തിന് ഉത്തരമെഴുതുക.

32) നളചരിതം ആട്ടക്കഥയുടെ സവിശേഷതകൾ രണ്ടാം ദിവസം മുൻനിർത്തി പരിശോധിക്കുക.

33) ഹനുമാനും ഭീമനും തമ്മിൽ നടന്ന സംവാദം ക്രോഡീകരിച്ചു കല്യാണസൗഗന്ധികത്തിൽ പ്രസ്തുത ഭാഗത്തിനുള്ള പ്രാധാന്യം വിശദീകരിക്കുക.

34) എം. ടി. വാസുദേവൻനായരുടെ തിരക്കഥകളുടെ സവിശേഷതകൾ 'വൈശാലി' മുൻനിർത്തി ചർച്ച ചെയ്യുക.

35) ''ഒന്നിലധികം രംഗവ്യാഖ്യാനങ്ങൾക്ക് ഇടനൽകുന്ന നാടകമാണ് കറുത്ത ദൈവത്തെത്തേടി''. നിരൂപിക്കുക. **(2×15=30 Marks)**

(Pages : 3)

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Reg. No. : .....

Name : .....

Third Semester B.A./B.Sc. Degree Examination, January 2019
First Degree Programme under CBCSS
ENGLISH (Language Course)
EN 1311.1/EN 1311.3 : Writing and Presentation Skills
(Common for B.A./B.Sc. (Language Course VI) & Career Related 2 (a)
(Language Course V)
(2015 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

I. Answer **all** questions, **each** in a word or sentence :

A) Rewrite the following sentences, correcting the errors, if any.

1) Egg and bacon are my breakfast.
2) She asked whether she can take it.
3) The moon as well as the sun give light.
4) My brother brought some furnitures yesterday.
5) Nasim likes fishing, diving and to swim.

B) Write **one** synonym **each** for the following words.

6) narrow
7) noble
8) nature
9) offer
10) answer.

(1×10=10 Marks)

II. Answer **any eight**, **each** in a short paragraph **not** exceeding **50** words.

11) Define writing.
12) What is 'note-making' ?
13) Explain 'mind mapping'.
14) Why is 'planning' important in writing ?

P.T.O.

15) How does revision help in writing good passages ?

16) What is the importance of preparing the first draft ?

17) How does 'Googling' help in the process of writing ?

18) Why is creating an outline an important step in writing ?

19) What is the significance of collecting information ?

20) What are the various stages of writing that enable a writer to create an ideal piece of writing ?

21) Why is research a significant step in the process of writing ?

22) "Deciding on the topic and defining the purpose play a major role in writing". Explain.

(8×2=16 Marks)

III. Answer **any six** as directed.

23) You have lost your mobile. Write an e-mail to the service provider requesting them to block the SIM card.

24) Write a précis of the following passage reducing it to **one third** of its length :

Overpopulation is today a very serious problem in many countries of the world and this includes India. It is closely related to other problems such as food and water shortage, unemployment, overcrowding and lack of basic facilities. Many governments have tried to solve the problem in different ways. Unfortunately, some of the measures adopted are rather extreme and these have not really been effective in reducing the population in the countries concerned. Thus, it is seen that sterilizing by force, having laws restricting the number of children a married couple may have and making larger families a punishable offence are methods that anger people and defeat the purpose altogether. On the contrary, educating people and spreading the message of a small family, improving the conditions of women, especially in rural areas and making them aware of the advantages of having fewer children and offering tax rebates and other incentives have proved effective in many parts of the world and in our country as well.

25) Prepare a report on the various activities conducted by the National Service Scheme unit of your college, highlighting three major activities undertaken last year – traffic rules awareness campaign, blood donation camp and book exhibition.

26) Draft a letter of complaint to the owner of a footwear store, regarding the damage to the pair of shoes you bought from that store a week ago.

27) Prepare a questionnaire to evaluate the quality of the water supply system in your locality.

28) What are the points to be remembered while preparing slides for a presentation ?

29) Prepare a cover letter and a resume for the post of an English teacher in a school.

30) What are the tips for writing effective survey questions ?

31) Prepare a presentation (including 10 slides) on the topic 'Pollution'.

(6×4=24 Marks)

IV. Answer **any two** as directed.

32) Write an essay on "Terrorism as a global threat".

33) "An increased awareness and careful observance of the landmarks in the process of writing make writing hassle-free". Explain.

34) Imagine that you are the secretary of the arts club in your college. Write a report on the activities of the club. The report is to be published in the college magazine.

35) You have ordered fifty copies of a book from ABC Publishing Company. When the order was delivered, you found that the package had only forty-five copies of the book. Write a letter of complaint to the manager of the company requesting her to supply the missing copies. **(2×15=30 Marks)**

(Pages : 2) F – 3893

Reg. No. : .....

Name : .....

Third Semester B.A./B.Sc. Degree Examination, January 2019
First Degree Programme Under CBCSS
Language Course (Additional Language – III – Hindi)
HN 1311.1 : POETRY AND GRAMMAR
(2017 Admission)

Time : 3 Hours Max. Marks : 8

I. **एक** या **दो** वाक्यों में उत्तर लिखिए । **1** से **10** के सभी प्रश्नों के उत्तर अनिवारी है । **(1×10=10 Marks**

1) सुरसागर किसकी रचना है ?
2) कबीरदास क्यों पहले गुरु का चरण–स्पर्श करना चाहते हैं ?
3) तुलसीदास के अनुसार सबसे बड़ा धन कौन–सा धन हैं ?
4) छायावाद के सुकुमार कवि कौन है ?
5) कस्तुरी मृग किसकी खोज में वन में भटकता है ?
6) नागार्जुन का वास्तविक नाम क्या है ?
7) ''उड चल हारिल'' किसकी रचना है ?
8) 'मोटा आदमी' इसमें विशेष्य कौन सा शब्द है ?
9) पुरुषवाचक सर्वनाम की परिभाषा दीजिए ।
10) क्रिया की परिभाषा क्या है ?

II. किन्हीं **आठ** प्रश्नों के उत्तर **दो** या **तीन** वाक्यों में लिखिए : **(2×8=16 Mark**

11) तुलसीदास के अनुसार साधु किस पेड़ की तरह होना चाहिए और क्यों ?
12) यशोधरा के अनुसार क्षत्रिय धर्म निभाने केलिए स्त्रियाँ क्या करती हैं ?
13) कवयत्रि के अनुसार स्त्रियों को कैसे देखा और सुना गया ?
14) जाति की निस्सारता के बारे में कबीरदास ने क्या कहा है ?
15) हर बार प्लेट में मछली को देखने पर कवि को क्या लगता है ?
16) ''हुआ न यह भी भाग्य अभागा
किस पर विफल गर्व अब जागा ?'' – इन पंक्तियों का मतलब क्या है ?

17) ''सुख-दुख शीर्षक कविता मीन कवि ने सुख एवं दुख की तुलना किन-किन से की है ?

18) '' मुरझाए फूल'' को देखकर कवि क्यों ऐसा कहता है कि

''विश्व में हे फूल तू सब के हृदय भाता रहा,
दान कर सर्वस्व भी तू हाय हर्षाता रहा । ''

19) कवि के अनुसार नदी जब अकड़कर स्वयं समेट गयी तो क्या हुआ ?

20) संख्यावाचक विशेषण एवं परिमाणवाचक विशेषण में क्या अंतर है ?

21) लिंग बदलिए-लुहार, सिंह, पुरुष, बंदर

22) सर्वनाम किसे कहते हैं ?

III. किन्हीं **छः** प्रश्नों के उत्तर लिखिए : (6×4=24

23) ''मछली'' कविता का सारांश लिखिए ।

24) 'उजाला' कविता में व्यक्त व्यंग्य को समझाइए ।

25) 'सुख-दुख' कविता में कवि के दार्शनिक विचार क्या है ?

26) पठित दोहों के आधार पर ईश्वर एवं गुरु के बारे में कबीरदास के मत को व्यक्त कीजिए ।

27) तुलसीदास किस जगह जाने से मना करता है ? क्यों ?

28) 'सखी वे मुझ से कहकर जाते' कविता में यशोधरा सिद्धार्थ के जाने से क्यों दुखी है ?

29) संज्ञा किसे कहते हैं ? उसके कितने भेद हैं ?

30) ''निसि दिन बरसत नैन हमारे'' पद के आधार पर गोपिकाओं के विरह का चित्रण करें ।

31) बडा हुआ तो क्या हुआ, जैसे पेड खजूर ।
पंथी को छाया नहीं, फल लागै अति दूर ।।

IV. किन्हीं **दो** प्रश्नों के उत्तर लिखिए । (15×2=30

32) यशोदा कृष्ण को पालने में कैसे झूलाती है ? वर्णन कीजिए ।

33) 'वह फिर जाग उठी' कविता में चित्रित नदी की जीवन गाथा का वर्णन कीजिए ।

34) भिक्षुक कविता का सारांश लिखकर विशेषताओं पर प्रकाश डालिए ।

35) कारक की परिभाषा देकर भेदों को समझाइए ।

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Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
First Degree Programme under CBCSS
HISTORY
Core Course – III
HY 1341 : Evolution of Early Indian Society and Culture
(2013 Admission Onwards)

Time : 3 Hours Max. Marks : 80

PART – A

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

1. Who were also called as quartzite men ?
2. Which was the first Indus site excavated under the supervision of Daya Ram Sahini in 1921 ?
3. The 'Battle of Ten kings' was fought on the banks of which river ?
4. Name the tribal assembly existed during the Vedic age.
5. Which Brahmana contains the theory of 'Divine Origin of Kingship' ?
6. Which place has been identified as Kaveripattanam ?
7. Who was the author of 'Mrichchakatika' ?
8. Who was the most devoted and constant companion of Buddha ?
9. Which was the literary academy of Tamil Scholars held under the royal patronage ?
10. In which age the temple of Goddess Kannaki was erected ? **(10×1=10 Marks)**

P.T.O.

PART – B

Answer **any eight** of the following in **one** paragraph. **Each** question carries **2** marks.

11. Piklihal.
12. Homosapiens.
13. Lapislazuli.
14. Microliths.
15. Indus script.
16. Ajanta paintings.
17. Silappadikaram and Manimekalai.
18. Secular literature.
19. Painted Greyware.
20. Gangetic plains.
21. NBPW.
22. Indo-Aryan.

(8×2=16 Marks)

PART – C

Answer **any six** of the following in **not** more than **120** words **each**. **Each** question carries **4** marks.

23. Discuss the importance of chalcolithic culture.
24. Discuss the important neolithic settlements in South India.
25. The OCP people may have been the junior contemporaries of the Harappans. Explain.
26. Write a note on the crafts and technologies of the Harappans.
27. Write a note on tribal assemblies.

28. Discuss the doctrines of Jainism.

29. Discuss the features of Gupta Art and Architecture.

30. Explain the different phases in the palaeolithic age.

31. Write a note on Vaishnavism and Saivism. **(6×4=24 Marks)**

PART – D

Answer **any two** of the following. **Each** question carries **15** marks.

32. Discuss the significance of Mauryan Rule.

OR

33. What were the features of town planning in the Indus Valley civilization.

34. Explain the material conditions of India during the second urbanization.

OR

35. Briefly describe the Tinai concept. **(2×15=30 Marks)**

(Pages : 2)

F – 3910

Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
First Degree Programme Under CBCSS
ECONOMICS
Foundation Course : II
EC 1321 : Informatics
(2013 & 2014 Admn.)

Time : 3 Hours

Max. Marks : 80

SECTION – I

Answer **all** questions in **one** word to maximum **two** sentences. **Each** question carries **one** mark.

1. Computer
2. CPU
3. Mouse
4. WAN
5. Regression
6. Spread sheets
7. UPS
8. Motherboard
9. RAM
10. System software.

(10×1=10 Marks)

SECTION – II

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

11. Explain the basic structure of a computer.
12. Point out the major input devices of a computer.
13. Give a note on LINUX operating system.
14. What is computer hacking ?

P.T.O.

15. What is virtual memory ?
16. What do you mean by control unit ?
17. Write a short note on LAN.
18. What are search engines ?
19. Point out the major functions of operating systems.
20. What are the different types of digital divide ?
21. What is a workbook ?
22. What do you mean by plagiarism ? **(8×2=16 Marks)**

SECTION – III

Answer **any six** questions not exceeding **120** words. **Each** question carries **4** marks.

23. What are computer viruses ?
24. Point out the various remedies for computer hacking.
25. Give a short note on the social and ethical issues of information technology.
26. What are virtual classrooms ?
27. Explain NICNET.
28. What is marginal cost and marginal revenue ?
29. What do you mean by the graphical representation of the data ?
30. What are the statistical functions of Excel ?
31. Give a note on e-waste. **(6×4=24 Marks)**

SECTION – IV

Answer **any two** questions **not** exceeding **four** pages. **Each** question carries **15** marks.

32. Write an essay on digital divide.
33. What is ergonomics ? What are the health issues related with the use of computers ?
34. What do you mean by INFLIBNET and what are its objectives ?
35. What is Intellectual Patent Rights (IPR) ? What are its major components ? Give a brief account of the patent act in India. **(2×15=30 Marks)**

(Pages : 3) **F – 3911**

Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
First Degree Programme under CBCSS
ECONOMICS
Core Course – III
EC 1341 : Basic Tools for Economics – I
(2013 Admn. and 2014 Admn.)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **all** questions in **one** word to maximum of **two** sentences. **Each** question carries **one** mark.

1. Exogenous variable
2. Multivariate functions
3. Demand curve
4. Slope of equation
5. Simple growth rate
6. The order of a matrix
7. Determinants
8. Limits
9. Derivative
10. Integration.

(10×1=10 Marks)

P.T.O.

SECTION – B

Answer **any eight** questions **not** exceeding **one** paragraph. **Each** question carries **two** marks.

11. Distinguish between discrete variable and continuous variable.

12. What is logarithmic functions ?

13. Define and illustrate the quadratic equation.

14. What is meant by equality of two matrices ? Give examples.

15. What is break-even point ?

16. Solve the quadratic equation $X^2 - 10X + 9 = 0$.

17. Find the limit of $\lim_{x \to 1} 5X^3 - 3X^2 + X + 5$.

18. Write a note on homogenous function.

19. Define and illustrate hyperbola.

20. Illustrate and explain the union of two sets.

21. What are the conditions of Maxima and Minima ?

22. Define integration and discuss the rules of integration. **(8×2=16 Mark**

SECTION – C

Answer **any six** questions **not** exceeding **120** words. **Each** question carries **four** marks.

23. Distinguish between equation and identity with examples.

24. Give a detailed explanation of growth rate, simple and compound growth rate.

25. What is meant by function ? Discuss different types of function used in economics.

26. Solve the simultaneous equations

$7x - 4y - 20z = 0$

$10x - 13y - 14z = 0$

$3x + 4y - 9z = 11.$

27. Find the first order derivative $Z = X^3 + 9XY + 2X^2 + 4Y^2 + 5XY^2 + Y^2$.

28. Prove that matrix multiplication is associative.

29. If $X = 100 + 10Q - Q^2$, find the marginal productivity of X when input $Q = 3$.

30. The total revenue is $R = 35 - x^2$, find the output(x) when total revenue is maximum.

31. Find partial derivative with respect to X and Y of the function $Z = 4X^3 + 2XY + 2Y^3$. **(6×4=24 Marks)**

SECTION – D

Answer **any two** questions **not** exceeding **four** pages. **Each** question carries **fifteen** marks.

32. Solve the following equation with Crammer's rule

    $3X + 2Y + Z = 6$

    $2X - 3Y + 3Z = 2$

    $X + Y + Z = 3$

33. Illustrate the concepts of economic analysis in which the differentiation and integrations can be applied.

34. Explain the method of Lagrange's multiplier and its utility in optimization.

35. Explain the concept and relation between total cost, average cost and marginal cost. The cost is given as $C = X(X^2 - 5)$. Find the marginal cost when the production is 4 units. **(2×15=30 Marks)**

(Pages : 2) **F – 3915**

Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
First Degree Programme Under CBCSS
Complementary Course
PS 1331 : PUBLIC ADMINISTRATION
(Common for Philosophy, Economics, History, English, Islamic History, Sociology)
(2013-2016 Admissions)

Time : 3 Hours Max. Marks : 80

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

1) Contingency fund of India.
2) Personnel Administration.
3) Budget.
4) Informal Training.
5) Co-ordination.
6) Committed Bureaucracy.
7) Government Corporations.
8) Line Agency.
9) Conduct.
10) Mass Media.

(10×1=10 Marks)

II. Answer **any eight** questions in **one** paragraph. **Each** question carries **2** marks.

11) What is meant by Delegation?
12) Find out the objectives of Financial Administration.
13) Describe the functions of Staff Agencies.
14) Comment on Independent Regulatory Commission.

P.T.O.

15) Examine the significance of discipline in an organization.

16) Differentiate public administration and private administration.

17) Briefly explains the importance of Public Relations in Public Administration.

18) Write a note on Public Corporations.

19) Examine the concept of Good Governance.

20) Bring out the importance of Public Policy.

21) Explain the role of District Collector in revenue administration.

22) Explain the objectives of performance appraisal. **(8×2=16 Marks)**

III. Short essay, answer **any six** questions. **Each** question carries **4** marks.

23) Trace the evolution of Public Administration.

24) Write briefly on the different types of training.

25) Explain the features of Development Administration.

26) Discuss the Bases of Departmental Organization called as 4P's.

27) Bureaucracy all over the world is facing a series of challenges. Comment.

28) Explain the stages in the enactment of budget in the Parliament of India.

29) Explain the features of New Public Administration.

30) Write a short note on the functions of Chief Executive in Public Administration.

31) Differentiate integral view and managerial view. **(6×4=24 Marks)**

IV. Write an essay on **any** of the **two** questions. **Each** question carries **15** Marks.

32) Describe the features of a good public policy and bring out the factors responsible for the formulation of Public Policy.

33) Discuss the general principles of organization.

34) Explain the scope of Public Administration and analyze the importance of the role of Public Administration in the modern state.

35) Write an essay on the different methods of recruitment and find out the problems of recruitment. **(2×15=30 Marks)**

(Pages : 4) **F – 3961**

Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
First Degree Programme Under CBCSS
Complementary Course for Economics
MM 1331.5 : MATHEMATICS FOR ECONOMICS – III
(2013 Admission Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – I

All the **first ten** questions are **compulsory**. They carry **1** mark **each**.

1. Find $\int\left(f'(x)(f(x))^n\right)dx$ if $f(x) = x^2$.

2. Find an anti derivative of $f(x) = e^{2x}$.

3. Find the function f(x) for which $f'(x) = x^2 - 2$ and $f(1) = \frac{4}{3}$.

4. Evaluate $\int_0^{e-1} \frac{dx}{1+x}$.

5. If $\int_{-1}^{1} f(x)dx = 5$ and $\int_{1}^{4} f(x)dx = -2$ then find $\int_{-1}^{4} f(x)dx$.

6. Evaluate $\int \frac{x+1}{\sqrt{x^2+2x+3}}dx$.

7. The marginal revenue function for the monopolistic producer is $MR(x) = 10 - 4x$. Find the total revenue function.

8. Find the sum of the series $1 - \frac{1}{3} + \frac{1}{9} - \frac{1}{27} + \ldots$

P.T.O.

9. The sum of n terms of the series is $\frac{n(n+2)}{3n^2+4}$. Find the sum to infinity of the series.

10. Find the Maclaurin's series expansion of the function $f(x) = \frac{1}{1+x}$.

SECTION – II

Answer **any 8** questions from among the questions **11** to **22**. These questions carry **2** marks **each**.

11. Integrate with respect to x

    a) $\frac{x}{\sqrt[3]{x^2+1}}$ b) $\frac{\log x}{x}$

12. Evaluate $\int \frac{x^2+ax+b}{ax+b}\,dx$.

13. Using integration by parts find $\int xe^{2x}dx$.

14. Graph the integrand and use areas to evaluate the integral $\int_{-2}^{1} |x|\,dx$.

15. The marginal cost function of a firm is given by $MC = 3000e^{0.3x} + 50$, when x is quantity produced. If fixed cost is Rs. 80,000, find the total cost function of the firm.

16. If the marginal revenue of output x is $p_m = a - bx$, find the total revenue function and hence deduce the demand function.

17. Find the sum to infinity of the series $1+\frac{4}{7}+\frac{4.6}{7.14}+\frac{4.6.8}{7.14.21}+\ldots$.

18. Sum to infinity the series $\sum_{1}^{\infty}\frac{1}{(n+2)!}$.

19. Find the Taylor series for $f(x) = \frac{1}{x}$ about x = 1.

20. Show that $\log 10 = 3\log 2 + \frac{1}{4} - \frac{1}{2}\frac{1}{4^2} + \frac{1}{3}\frac{1}{4^3} - \ldots$

21. Write the series whose sum of n terms is $5 - \frac{5}{n+1}$. Find the sum to infinity of the series.

22. Find the Maclaurin's series for $\tan^{-1}x$.

SECTION – III

Answer **any 6** questions from among the questions **23** to **31**. These questions carry **4** marks **each**.

23. Evaluate $\int \frac{xe^x}{(x+1)^2} dx$.

24. Evaluate $\int_0^1 \frac{1-x}{1+x} dx$.

25. Marginal revenue function of a firm is $\frac{ab}{b-x} - c$. Prove that the demand law is $p = \frac{a}{b-x} - c$.

26. Calculate the present value of an annuity of Rs. 30,000 per annum, assumed to be payable continuously for 10 years, at the rate of interest of 8% per annum compounded continuously.

27. The investment flow is given by $I(t) = 3t^{1/2}$ crore of rupees per year. Find the capital growth equation from the given rate of capital formation if in the initial stock the capital is 20 crores of rupees.

28. Show that the sum to infinity of the series $\frac{1.2}{1!} + \frac{2.3}{2!} + \frac{3.4}{3!} + \ldots$ is 3e.

29. Find the fraction corresponding to the repeating decimal 0.232323... by expressing it as an infinite geometric series.

30. Use Trapezoidal Rule with n = 2 to estimate $\int_0^2 \frac{dx}{x^2+3x+10} dx$.

31. Show that $\log\left(\frac{n+1}{n}\right) = 2\left(\frac{1}{(2n+1)} + \frac{1}{3(2n+1)^3} + \frac{1}{5(2n+1)^5} + \ldots\right)$.

SECTION – IV

Answer **any 2** questions from among the questions **32** to **35**. These questions carry **15** marks **each**.

32. The cost of a truck engine overhaul is Rs. A and the operating costs are at rate of Rs. a + bx per km, where the engine has run x kms since the last overhaul. If the engine is overhauled at M km, find the total cost function.

33. Explain Domar's model of public debt and national income.

34. Find the sum to infinity of the series $\frac{1}{4} + \frac{1.3}{4.6} + \frac{1.3.5}{4.6.8} + \ldots$

35. Find an approximate value of log5 by calculating $\int_0^5 \frac{dx}{4x+5}$, by Simpson's rule of integration.

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Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
First Degree Programme under CBCSS
Complementary Course VI : PL 1332 : ECO PHILOSOPHY
(2014 Admission – 2016 Admission)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **all** questions in **one** word or to **a** maximum of **two** sentences. **Each** question carries **1** mark.

1. Eco-philosophy.
2. Ecosystem.
3. Sustainability.
4. Deontology.
5. Environmental Ethics.
6. Eco-feminism.
7. World Nature Conservation Day.
8. Deep-Ecology.
9. Biotic components of ecosystem.
10. Biodiversity.

SECTION – B

Answer **any 8** questions in a paragraph **each**. **Each** question carries **2** marks.

11. Define Vasudaivakudumbakam.
12. Elucidate biosphere.
13. What are Environmental impacts of industrial agriculture ?
14. Explain ecologism.

P.T.O.

15. Write a note on ecological conservation.
16. Summarize Arne Naess's view on shallow ecology.
17. What are the basic intuitions of deep ecology ?
18. How can we restore and preserve nature ?
19. Describe virtue ethics.
20. Examine the significance of Land Ethics.
21. Evaluate holistic approach to environmental ethics.
22. Distinguish Biotic and abiotic components of ecosystem.

SECTION – C

Answer **any 6** questions in **120** words **each**. **Each** question carries **4** marks.

23. Write a note on Indian Concept of nature.
24. What are the main problems of ecophilosophy ?
25. Elucidate the concept of ecocentrism.
26. Write contemporary perspectives of ecological justice.
27. Explain the concept of sustainable living.
28. Evaluate intergenerational justice.
29. Distinguish between anthropocentrism and non-anthropocentrism.
30. Bring out the difference between individual consequentialist and individual deontologist approaches.
31. Describe multiple roots of deep ecology.

SECTION – D

Answer **any 2** questions about **600** words **each**. **Each** question carries **15** marks.

32. Evaluate the philosophical aspects of environmental ethics.
33. Ecophilosophy : beyond sustainability and environment – Comment in your point of view.
34. Examine the various concepts of ecofeminism.
35. How can develop ecophilosophy by presenting a spectrum of positions that have been initiate to characterize the relationship between humans and their environment ?

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Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
First Degree Programme Under CBCSS
Economics
Foundation Course – II
EC – 1321 : INFORMATICS
(2015 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – I

Answer **all** questions in **one** word to maximum **two** sentences. **Each** question carries **one** mark.

1. Modem
2. Open source software
3. Web browser
4. HTML
5. Spread sheets
6. Hard copy
7. SPSS
8. Computer Network
9. Digital divide
10. PowerPoint.

(10×1=10 Marks)

P.T.O.

SECTION – II

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

11. Explain the major functions of ALU.

12. Explain the IP address associated with internet.

13. What are the main features of system software ?

14. Point out the main basics of word processor.

15. What are web browsers ?

16. What are the main functions of CPU ?

17. Mention the important characteristics of a computer.

18. What are computer networks ?

19. Explain briefly WAN.

20. Point out the major output devices of a computer.

21. What is an e-mail and explain its working ?

22. What are the different types of operating systems ? **(8×2=16 Marks)**

SECTION – III

Answer **any six** questions **not** exceeding **120** words. **Each** question carries **4** marks.

23. Explain workstation and its major types.

24. What are cyber crimes ?

25. Point out the main methods to defend the attack of computer virus.

26. Briefly explain ergonomics.

27. What are the different kinds of printers ?

28. Explain the functions of SPSS.

29. What are the major business uses of Internet ?

30. Explain the functions of INFLIBNET.

31. Give a detailed note on cyber laws. **(6×4=24 Marks)**

SECTION – IV

Answer **any two** questions **not** exceeding **four** pages. **Each** question carries **15** marks.

32. Write an essay on different computer networks.

33. Briefly explain different application software

34. Write an essay on the management of e-waste.

35. What is Internet and explain the main facilities available on the internet ?

(2×15=30 Marks)

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Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019

First Degree Programme under CBCSS

ECONOMICS

Core Course – III

EC 1341 : Micro Economics – II

(2015 Admission Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – I

Answer **all** questions. **Each** question carries **1** mark.

1. Oligopoly.
2. Risk.
3. Pareto Optimality.
4. Subsistence wage.
5. Kinked demand curve.
6. Marginal physical product.
7. Liquidity trap.
8. Linear programming.
9. Real wage.
10. Breakeven point.

(10×1=10 Marks)

SECTION – II

Answer **any eight** questions **not** exceeding **one** paragraph. **Each** question carries **two** marks.

11. What do you mean by transfer earnings ?
12. Explain collective bargaining.
13. Explain feasible region.
14. Explain the concept of expected utility.

P.T.O.

15. What is compensation principle ?
16. Explain Welfare economics.
17. Explain Bentham's criterion.
18. Explain Quasi Rent.
19. Explain the logic behind the backward bending supply curve of labour.
20. Explain price discrimination.
21. Explain cardinalist criterion of social welfare.
22. Explain marginal productivity theory of distribution. **(8×2=16 Marks)**

SECTION – III

Answer **any six** questions **not** exceeding **120** words. **Each** question carries **4** marks.

23. What is St. Petersburg Paradox ?
24. Explain Kaldor-Hicks compensation principle.
25. Explain innovation theory of profit.
26. What is Neumann-Morgenstern concept of utility index ?
27. Describe classical theory of interest.
28. State and explain the conditions of Pareto optimality.
29. Explain the features of perfect competition.
30. Examine the features of oligopoly market.
31. Explain Scitovsky Paradox. **(6×4=24 Marks)**

SECTION – IV

Answer **any two** questions **not** exceeding **four** pages. **Each** question carries **15** marks.

32. Explain the linear programming technique to solve the problem of constrained optimization.
33. Analyze the equilibrium condition of a firm under monopoly in the short and long run.
34. Critically discuss Ricardo's theory of Rent.
35. Profit is the reward of uncertainty bearing. Discuss. **(2×15=30 Marks)**

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(Pages : 2) F – 3997

Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
First Degree Programme Under CBCSS
PL1332 : ECO PHILOSOPHY
Complementary Course
(2017 Admn.)

Time : 3 Hours Max. Marks : 80

PART – A
(Very Short Notes)

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

1. Ernst Haeckel
2. Land Ethic
3. Rta
4. Vandhana Siva
5. Techne
6. Silent spring
7. Biotic citizen
8. Environment
9. Holism
10. Ecosophy.

(10×1=10 Marks)

PART – B
(Short Answer questions)

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

11. What is Biodiversity ?
12. Define the term Ecology.
13. Define anthropocentricism.
14. What is 'light green' ecology ?
15. Explain the technical term Ecosophy.

P.T.O.

16. Give an introduction to ecophilosophy.
17. What is ecosystem ?
18. Explain the concept of food chain.
19. What is ecologism ?
20. Examine the Indian concepts of Jiva and ajiva.
21. Explain the Geographical and technical focus of decentralisation in advanced countries.
22. Define the concept of Deep ecology. **(8×2=16 Marks)**

PART – C

Answer **any six** question in about **120** words **each**. **Each** question carries **4** marks.

23. Explain the concept of Vasudaiva Kudumbakam.
24. Examine the scope of environmental ethics.
25. What is environmentalism ?
26. Examine Taylors view of biocentric ethics.
27. Explain eco-feminism.
28. Explain Arne Naes's Popular sense of Deep ecology.
29. What is eco-centricism ?
30. Enumerate five kinds of argument against anthropocentricism.
31. Explain 'biotic pyramid' of Aldo Leopold. **(6×4=24 Marks)**

PART – D

Answer **any two** questions in about **600** words **each**. **Each** question carries **15** marks.

32. Write an essay on the distinction between shallow and deep ecology.
33. Briefly sketch various philosophical approaches to environmental ethics.
34. Examine the concept of sustainable development and inter-generative justice.
35. Write an essay about Indian concepts of nature/world views with respect to ecological studies and ecological resistance movement. **(2×15=30 Marks)**

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(Pages : 2) **F – 4000**

Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
First Degree Programme Under CBCSS
Complementary Course
PS 1331 : PUBLIC ADMINISTRATION
(Common for Philosophy, Economics, History, English, Islamic History, Sociology)
(2017 Admission)

Time : 3 Hours Max. Marks : 80

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

1) Delegation
2) Finance Bill
3) Public Administration
4) Co-ordination
5) Merit Bureaucracy
6) Right to Information Act
7) Luther Gullick
8) Discipline
9) Surplus Budget
10) Personnel Administration.

(10×1=10 Marks)

II. Answer **any eight** questions in **one** paragraph. **Each** question carries **2** marks.

11) Write a note on Unity of Command.
12) What do you mean by performance appraisal ?
13) Explain the concept of Good Governance.
14) Describe the functions of Staff Agencies.
15) Examine the relationship between Political Science and Public Administration.
16) Write a brief note on the methods of recruitment.

P.T.O.

17) What is meant by Span of Control ?
18) Find out the objectives of Financial Administration.
19) Differentiate Centralization and Decentralization.
20) Find out the major defects against the functioning of modern bureaucracy.
21) Explain the different types of Corporations.
22) What are the major landmarks in the emergence of New Public Administration ?

(8×2=16 Marks)

III. Short Essay, Answer **any six** questions. **Each** question carries **4** marks.

23) Differentiate Public Administration and Private Administration.
24) What are the differences between line agency and auxiliary agency ?
25) Describe the role of the District Collector.
26) Evaluate the importance of Public Administration.
27) Explain the functions of the chief executive in Public Administration.
28) Explain the features of hierarchy.
29) Explain the features of New Public Administration.
30) Give a brief account of UPSC.
31) Discuss the different kinds of training.

(6×4=24 Marks)

IV. Essay, Answer **any two**. **Each** question carries **15** marks.

32) Write an essay on the Nature and Scope of Public Administration.
33) Define the term Recruitment and comment on the problems in securing the right and competent persons for administration.
34) Comment on Departments and examine the Bases of Departmental Organization called as 4P's by Luther Gullick.
35) Discuss the budgetary process in India.

(2×15=30 Marks)

(Pages : 3) F – 4010

Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
First Degree Programme under CBCSS
COMPLEMENTARY COURSE FOR MATHEMATICS
PY 1331.1 : Optics, Magnetism and Electricity
(2013 Admission Onwards)

Time : 3 Hours Max. Marks : 80

PART – A

Answer **all** questions. Answer should **not** exceed **two** sentences. **Each** question carries **1** mark.

1. Define the phenomenon of interference of light.
2. Explain what is meant by optical path.
3. Define the term Band width of an interference pattern.
4. Explain the conditions for constructive and destructive interference.
5. Explain the construction of a plane grating.
6. Explain population inversion and how it is achieved.
7. Mention any two applications of laser.
8. Explain the term stimulated emission.
9. Define the term magnetic permeability.
10. What is the peak value of alternating current ?

PART – B

Answer **any 8** questions. Answer should **not** exceed **one** small paragraph. **Each** question carries **2** marks.

11. Derive an expression for the root mean square value of an alternating current.

P.T.O.

12. Write down the comparison between series and parallel resonant circuits.

13. Explain the term Wattless current.

14. Mention four properties of ferromagnetic material.

15. Discuss the term magnetisation.

16. Discuss the terms with one example
    i) Antiferromagnetism
    ii) Ferrimagnetism

17. Write a note on the colours of thin films.

18. How Fresnel's diffraction differs from Fraunhoffer diffraction ?

19. Write down any four applications of Optic fibres.

20. Explain the principle of optic fibre.

21. What are non-reflecting films ?

22. Define the terms :
    i) Acceptance angle
    ii) Numerical aperture.

PART – C

Answer **any 6** questions. **Each** question carries **4** marks.

23. What is the highest order of spectrum, which may be observed with monochromatic light of wave length 5890A° by means of a diffraction grating with 6000 lines/cm ?

24. What should be the minimum number of lines in a grating which will just resolve in the second order of the spectral lines whose wave length are 5894A° and 5900A° ?

25. In Fraunhoffer diffraction pattern due to a narrow slit a screen is placed 2 m away from the lens to obtain the pattern. If the slit width is 0.2 mm and the first minima lie 5 mm on either sides of the central maximum, find the wavelength of light.

26. A parallel beam of light ($\lambda = 5890 \times 10^{-8}$ cm) is incident on a thin glass plate ($\mu = 1.5$) such that the angle of refraction into the plate is 60°. Calculate the smallest thickness of the glass plate which will appear dark by reflection.

27. In Newton's ring experiment, the diameter of 15th ring was found to be 0.590 cm and that of the 5th ring was 0.336 cm. If the radius of the plano-convex lens is 100 cm, calculate the wavelength of light used.

28. Monochromatic light emitted by a broad source of wavelength 5800A° falls normally on two glass plates enclosing a wedge shaped air film. The plates touch at one end and are separated at a point 15 cms from that end by a wire of diameter 0.05 mm. Find the fringe width.

29. Two layer of glass are placed on top of each other. The light ray travels from the glass of refractive index 1.5 to the glass of refractive index 1.45. Find the critical angle for total internal reflection.

30. Estimate the numerical aperture when the core has a refractive index 1.48 and relative refractive index is 2%. Also calculate the critical angle.

31. A circuit consists of a non-inductive resistance of 50 ohms, an inductance of 0.3 henry and a resistance of 2 ohms and a capacitor of 40 micro-farad in series and is supplied with 200 volts at 50 Hz. Find the impedance.

PART – D

Answer **any 2** questions. **Each** question carries **15** marks.

32. Describe an experiment to determine the wavelength of light by Newton's method.

33. Describe the phenomenon of Fresnel diffraction at a straight edge and obtain expression for intensity maxima and minima.

34. Explain step index fibre communication and graded index fibre communication and mention advantages of optic fibre communication over any other system.

35. Give an account of Langevin's theory of diamagnetism.

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(Pages : 3) **F – 4014**

Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
First Degree Programme under CBCSS
COMPLEMENTARY COURSE FOR PHYSICS
CH 1331.1 : Physical and Inorganic Chemistry
(2013 Admission – 2016 Admission)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **all** questions :

Answer in **one** word to maximum of **two** sentences :

Each question carries **one** mark.

1. The average distance travelled by a gas molecule between successive collisions is called _____
2. The temperature change in degrees experienced by a gas in expansion per unit pressure drop at constant enthalpy is called _____
3. The number of atoms per unit cell in a fcc lattice is _____
4. An imaginary line about which rotation through a certain angle brings a crystal into an equivalent orientation.
5. Write the name of a tool to measure nano structure.
6. A metal refined by Van Arkel method.
7. Give the relation between Kp and Kc.
8. Write Henderson equation.
9. Give an example for basic buffer.
10. Give an example for Lewis acid.

P.T.O.

SECTION – B

Short answer type (Not to exceed **one** paragraph) :

Answer **any 8** questions from the following :

Each question carries **two** marks.

11. Define Joule Thomson effect.
12. Define collision frequency.
13. What is miller indices ?
14. What is the effect of temperature on the ionic product of water ?
15. What is calcination ?
16. What is AFM ?
17. Give two applications of liquid crystals.
18. What is co-precipitation ?
19. Define Boyle temperature.
20. Mention two ores of thorium.
21. Give the reduced equation of state.
22. The diffraction of a crystal with X-rays of wave length 2.9×10^{-10} m gives a first order diffraction at 27°8'. What is the distance between the lattice planes ?

SECTION – C

Short essay (**Not** to exceed **120** words) :

Answer **any 6** questions from the following :

Each question carries **four** marks.

23. Distinguish isotropy and anisotropy in solids.
24. Discuss the different types of unit cells of Bravais lattices.
25. Explain Le Chatelier's Principle taking the example $2SO_2 + O_2 \rightarrow 2SO_3$.

26. Explain the applications of nanomaterials as vehicles in medical field.

27. Discuss Linde's process for the liquefaction of gases.

28. Derive the expression for the Henderson equation for an acidic buffer.

29. Discuss how the pH of the solution can be determined potentiometrically.

30. What is law of corresponding states ?

31. What is zone refining ?

SECTION – D

Answer **any 2** questions from the following :

Each question carries **fifteen** marks.

32. a) Discuss the Maxwell's distribution of molecular velocities.
    b) Calculate the average and RMS velocity of O_2 molecules at 25°C.

33. a) Explain the single crystal method for the study of crystals.
    b) Explain the crystal structure of NaCl.

34. a) Derive the Van't Hoff reaction isotherm.
    b) Discuss the methods for the preparation of nanoparticles.

35. a) Give the general principles of extraction of metals.
    b) Discuss the metallurgy of Nickel.

(Pages : 3) **F – 4019**

Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
First Degree Programme under CBCSS
Complementary Course for Chemistry and Polymer Chemistry
PY 1331.2 : OPTICS, MAGNETISM AND ELECTRICITY
(2013 Admission Onwards)

Time : 3 Hours Max. Marks : 80

PART – A

Answer **all** questions, **each** carries **1** mark.

1. What is meant by interference ?
2. Can the light from two separate sources be coherent ?
3. What is dispersive power of a grating ?
4. What is Fraunhofer diffraction ?
5. What is meant by polarisation of light ?
6. Explain optical axis.
7. What is optical pumping in Laser ?
8. What is an optical fibre ?
9. What are paramagnetic materials ? Give one example.
10. Why the core of a transformer made of laminated sheets ? **(10×1=10 Marks)**

P.T.O.

PART – B

Answer **any 8** questions. **Each** should **not** exceed **one** small paragraph. **Each** question carries **2** marks.

11. Why a soap bubble in bright sunlight is beautiful coloured ?
12. How Newton's rings are formed ?
13. Distinguish between grating and prism spectra.
14. Distinguish between interference bands and diffraction bands.
15. Explain the double refraction in calcite crystal.
16. Explain how circularly polarized light can be produced.
17. List out the applications of Lasers.
18. Distinguish between step index fibre and graded index fibre.
19. What is a choke coil ? Give some of its uses.
20. What are the advantages of ac over dc ?
21. Why diamagnetism is independent of temperature ?
22. Explain the term relative permeability. **(8×2=16 Marks)**

PART – C

Answer **any 6** questions, **each** carries **4** marks.

23. In a Newton's rings system, the radius of curvature of the lower face of lens is 1 m. Calculate the diameter of the 10^{th} bright fringe, if the wavelength of light used is 59×10^{-8} m.
24. A parallel beam of sodium light ($\lambda = 589 \times10^{-9}$ m) is incident on a thin glass plate (n = 1) such that the angle of refraction into the plate is 60°. Calculate the thickness of the plate which will make it appear dark by reflection.
25. A plane transmission grating has 6000 lines per centimeter. Find the angular separation of 504 nm and 501.6 nm of helium in the second order spectrum.

26. In Fraunhoffer diffraction due to a narrow slit a screen is placed 2 m away from the lens to obtain the pattern. If the slit width is 0.2 mm and the first minima lie 5 mm on either side of the central maximum, find the wavelength of the light.

27. If μ_o = 1.658 and μ_E = 1.486 for calcite crystal plate of thickness 8×10^{-7} m when sodium light is used. Calculate the wavelength of light.

28. Calculate the specific rotation for sugar solution using the following data.
    Length of the tube = 20 cm
    Volume of the tube = 120 cm^3
    Quantity of sugar dissolved = 6 g
    Angle of rotation of the analyser for restoring equal intensity = 6.6°.

29. An ac voltage of peak value 283 V and frequency 50 Hz is applied to a series LCR circuit in which L = 25.48 Mh, C = 796 μF and R = 3 Ω. Find the Impedance of the circuit.

30. A bar magnet place with its axis at 30° with a uniform magnetic field of 0.25 T experiences a torque of magnitude equal to 4.5×10^{-2} J. What is the magnitude of magnetic moment of the magnet ?

31. A solenoid of 2000 turns and area of cross section 1.6×10^{-4} 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 ? **(6×4=24 Marks)**

PART – D

Answer **any two** questions, **each** question carries **15** marks.

32. Discuss the analytical theory of Young's double slit experiment. Derive an expression for bandwidth.

33. Explain the theory of diffraction at a straight edge and draw the intensity distribution curve.

34. How can plane polarized light be produced by reflection ? State Brewster's law. Show that reflected and refracted rays are at right angles during polarization by reflection.

35. On the basis of modern electron theory, briefly explain diamagnetism and paramagnetism. **(2×15=30 Marks)**

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(Pages : 3) **F – 4020**

Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
First Degree Programme Under CBCSS
Chemistry
Core Course – II
CH 1341 – INORGANIC CHEMISTRY – II
(2013 Admission-2016 Admission)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **all** questions. Answer in **one** word to maximum of **two** sentences. **Each** question carries **one** mark.

1. Define lattice energy.
2. What is the dipole moment of CO_2 ? Why ?
3. What is the hybridisation of B in BCl_3 ?
4. Define Radioactivity.
5. Give Born-Lande equation and explain the terms.
6. Define mass defect.
7. Give the self ionization in SO_2.
8. Mention the applications of XRD.
9. What are nanostructures ?
10. What are SWNTs and MWNTs ?

(10×1=10 Marks)

P.T.O.

SECTION – B

Short answer type. (**Not** to exceed **one** paragraph). Answer **any 8** questions from the following. **Each** question carries **two** marks.

11. Why PCl_5 is more reactive than PCl_3 ?
12. Distinguish between sigma bond and pi bond.
13. Illustrate how a coordinate bond is formed.
14. What is Van der Waals force ?
15. How will you distinguish three types of radiations ?
16. What is meant by artificial transmutation ? Give one example.
17. Mention any two advantages of using liquid ammonia as a solvent.
18. Explain levelling effect.
19. Describe basic principle of TG.
20. What is AFM ? Explain.
21. What is Lycurgus cup ?
22. What are fullerenes ? Give an example. **(8×2=16 Marks)**

SECTION – C

Short essay (**Not** to exceed **120** words). Answer **any 6** questions from the following. **Each** question carries **four** marks.

23. Depict the orbital overlap diagrams of bonds in O_2 and N_2.
24. Compare VB and MO theory.
25. Explain the covalent character of an ionic bond.
26. Describe the theory of Rock dating.
27. The amount of ^{14}C present in an old piece of wood is found to be one-sixth of that present in a fresh piece of wood. Calculate the age of the wood. Half-life of ^{14}C = 5668 years.

28. Write a note on reactions in non-aqueous solvents.

29. Distinguish between SEM and TEM.

30. Explain colloidal precipitation and co-precipitation.

31. Discuss nanosystems in nature. **(6×4=24 Marks)**

SECTION – D

Long essay. Answer **any 2** questions from the following. **Each** question carries **fifteen** marks.

32. What is Born-Haber cycle ? Discuss with respect to NaCl and mention its applications.

33. Discuss principle, instrumentation and application of various thermal methods.

34. Describe various properties of nanoparticles with examples.

35. a) Write a short note on Neutron activation analysis.

    b) Explain the classification of solvents. **(2×15=30 Marks)**

(Pages : 4)

F – 4049

Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
First Degree Programme under CBCSS
Complementary Course for Mathematics
ST1331.1 : PROBABILITY, DISTRIBUTION AND THEORY OF ESTIMATION
(2014 Admn. Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions, **each** carrying **1** mark.

1. What is the relation between mean and variance of binomial distribution ?
2. State reproductive property of Ψ^2 distribution.
3. Name the discrete distribution for which mean and variance have the same value.
4. State the condition for which poisson distribution is a limiting case of the binomial distribution.
5. Define the term statistic.
6. Give an example of an estimator which is unbiased and consistent.
7. What is the relation between student's t and F distribution ?
8. What is a point estimate ?
9. State desirable properties of a good estimator.
10. What is the reciprocal property of F distribution.

(10×1=10 Marks)

P.T.O.

SECTION – B

Answer **any 8** questions, **each** carrying **2** marks.

11. What is meant by lack of memory property ? Mention any distribution which possess this property.

12. In five tossings of a fair coin, find the chance of getting 3 heads ?

13. With the usual notations find p for a binomial variate X, if n = 6 and $9P(X = 4) = P(X = 2)$.

14. Show that $\frac{1}{n}\sum_{i=1}^{n} X_i^2$ is unbiased for $\mu^2 + 1$ in the case of a normal population $N(\mu, 1)$.

15. What are the properties of MLE ?

16. A symmetric die is thrown 600 times. Find the lower bound for the probability of getting 80 to 120 sixes.

17. Examine sufficiency of $\sum_{i=1}^{n} X_i^2$ for σ^2 in the $N(0, \sigma^2)$ distribution.

18. Given the frequency function.

$$f(x, \theta) = \frac{e^{-x^2/2\theta^2}}{\theta\sqrt{2\pi}}, -\infty < x < \infty$$

find the maximum likelihood estimator for θ.

19. Find the mode of a binomial distribution with $p = \frac{1}{2}$ and $n = 7$.

20. Let X be a random variable with $E(X) = 3$ and $V(X) = 2$. Find 'h' such that

$P\{|x - 3| < h\} \geq 0.99$.

21. Let X_i be independent random variables assuming values 'i' and '–i' with equal probabilities whether WLLN hold for $\{X_n\}$.

22. State Lindberg – Levy central limit theorem.

(8×2=16 Marks)

SECTION – C

Answer **any 6** questions, **each** carrying **4** marks.

23. State and prove Chebychev's inequality.

24. Let $\{X_k\}$ be mutually independent and identically distributed random variables with mean μ and finite variance, if $S_n = X_1 + X_2 + ... + X_n$, prove that the law of large numbers does not hold for the sequence $\{S_n\}$.

25. If X and Y are independent poisson random variable. Find the conditional distribution of $(X/X+Y)$.

26. Define consistency of an estimator. And show that t_n is consistent for θ if

    $E(t_n) \to \theta$ and $V(t_n) \to 0$ as $n \to \infty$.

27. A random sample $(X_1, X_2, X_3, X_4, X_5)$ is drawn from a normal population with unknown mean μ and variance σ^2. The following estimators are prepared :

$$T_1 = \frac{\sum_{i=1}^{5} X_i}{5}, \quad T_2 = \frac{X_1 + X_2}{2} + X_3, \quad T_3 = \frac{2X_1 + X_2 + 3X_3}{3}$$

    Are T_1, T_2 and T_3 are unbiased ? Also find the most efficient estimator among them.

28. If X_1, X_2 and X_3 are independent observations from a univariate normal population with mean 0 and unit variance. Find the sampling distribution of

    1) $u = \dfrac{\sqrt{2}\, X_3}{\sqrt{X_1^2 + X_2^2}}$

    2) $v = \dfrac{3X_4^2}{X_1^2 + X_2^2 + X_3^2}$

29. Obtain the 95% confidence interval for the mean of a normal population $N(\mu, \sigma)$ when σ known.

30. Explicate poisson distribution and its properties.

31. What is Fisher-Neymann factorization criteria on sufficiency. **(6×4=24 Marks)**

SECTION – D

Answer **any 2** questions, **each** carries **15** marks.

32. Find the MLE for random sampling from a normal population N (μ, σ^2) for :
    i) Population mean μ when the population variance σ^2 is known.
    ii) Population variance σ^2 when the population mean μ is known.
    iii) The simultaneous estimation of both the population mean and variance.

33. a) What do you mean by confidence level ?
    b) For a sample of 10 observations $\overline{X_1} = 6$ and $n_1 s_1^2 = 0.64$. For another sample of 10 observations $\overline{X_2} = 5.7$ and $n_2 s_2^2 = 0.24$. Assuming that the two samples come from normal population with the same variance σ^2 (unknown). Prepare a 95% confidence interval for $(\mu_1 - \mu_2)$.

34. If $X_1, X_2, \ldots, X_n$ are independent observations from N (0, σ^2). What is the dsbn of $Y = \frac{\sum X_i^2}{\sigma^2}$? Derive the distribution and state the mean, variance and useful properties.

35. i) Explain Cramer – Rao inequality.
    ii) A random sample of size n is taken from $f(x) = \theta e^{-\theta x}$, $n > 0$. Find the UMVUE of $1/\theta$.

(2×15=30 Marks)

(Pages : 3) **F – 4050**

Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
First Degree Programme Under CBCSS
Mathematics
Core Course – 2
MM 1341 : ALGEBRA AND CALCULUS – 1
(2014 Admission Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – I

All the **first ten** questions are **compulsory**. They carry **one** mark **each**.

1. Define characteristic of a ring.
2. Does Z_p, the ring of integers modulo p a field ? Justify.
3. Define an integral domain.
4. Show that a commutative ring with the cancellation property (under multiplication) has no zero divisors.
5. Suppose that a and b belong to an integral domain. If $a^5 = b^5$ and $a^3 = b^3$ prove that a = b.
6. What is Euler Phi-function ?
7. The set Z of integers with operation being multiplication is a group. True or False. Justify.
8. What are the distinct equivalence classes in Z/nZ ?
9. Find a unit vector $\bar{u}$ in the direction of the vector from $P_1(1, 0, 1)$ and $P_2(3, 2, 0)$.
10. Does the cross product commutative ? Justify. **(10×1=10 Marks)**

P.T.O.

SECTION – II

Answer **any 8** questions from among the questions **11** to **22**. These questions carry **2** marks **each**.

11. Mention two properties of ring homomorphism.
12. Prove that cancellation laws hold in a group.
13. Show that $(b \times c) \times (c \times a) = [abc]c$.
14. Prove that Ker ϕ is a subring of a ring R.
15. Give an example of a ring homomorphism with the operations.
16. Find the Spherical co-ordinate equation for the sphere $x^2 + (y - 1)^2 + z^2 = 1$.
17. Show that the vectors $a - 2b + 3c$, $-2a + 3b - 4c$, $a - 3b + 5c$ lie in the same plane.
18. A force of 6 newtons is applied in the direction of the vector $\bar{v} = 2i + 2j - 2k$. Express the force F as a product of its magnitude and direction.
19. Find the area of a triangle with vertices P(4, 2, 0), Q(1, 3, 0) and R(1, 1, 3).
20. Find the equation of the plane through (– 3, 0, 7) and perpendicular to $\bar{n} = 5i + 2j - k$.
21. Find the angle between the planes $3x - 2y - 6z = 10$ and $4x - y + 8z = 12$.
22. Identify and sketch the quadratic surface $x^2 + y^2 = z^2$. **(8×2=16 Marks)**

SECTION – III

Answer **any 6** questions from among the questions **23** to **31**. These questions carry **4** marks **each**.

23. Prove that finite integral domain is a field.
24. Define zero divisors. State and prove one property of zero divisors.
25. If P is a prime, then prove that Z_p has no divisors of zero.
26. Find all solutions of the congruence $12x \equiv 27 \pmod{18}$.

27. State and prove the general equation of the plane.

28. Find the equation of the plane through the points $P_1(1, 2, -1)$, $P_2(2, 3, 1)$ and $P_3(3, -1, 2)$.

29. A directed line makes angles of 60° and 45° with the x-axis and y-axis respectively. Find the angle which the line makes with the z-axis.

30. If L1 : $x = 1 + 4t$, $y = 5 - 4t$, $z = -1 + 5t$ and L2 : $x = 2 + 8t$, $y = 4 - 3t$, $z = 5 + t$. Then show that the lines L1 and L2 are skew. Find the distance between the lines.

31. Find the length of the normal from the origin to the plane $2x + 6y - 3z + 21 = 0$.

(6×4=24 Marks)

SECTION – IV

Answer **any 2** questions from among the questions **32** to **35**. These questions carry **15** marks.

32. State and prove Chinese Remainder theorem.

33. i) Prove that the set G_n of nonzero elements of Z_n that are not zero divisors form a group under multiplication modulo n.

    ii) Give an example of a ring having elements a and b such that $ab = 0$ but neither a nor b is zero.

34. Define a ring. Verify that $\{a + b\sqrt{2} \mid a, b \in Z\}$ with usual addition and multiplication is a commutative ring with unity. Check whether it is a field.

35. A) Describe the surface :

    i) $z = (x - 1)^2 + (y + 2)^2 + 3$

    ii) $4x^2 + 4y^2 + z^2 + 8y - 4z = -4$

    B) Identify the surfaces :

    a) $3x^2 - 4y^2 + 12z^2 + 12 = 0$

    b) $4x^2 - 4y + z^2 = 0$.

(2×15=30 Marks)

(Pages : 3) F – 4085

Reg. No. : .....

Name : .....

Third Semester B.Com. Degree Examination, January 2019
First Degree Programme under CBCSS
CO 1361.1 (2013 Adm. Onwards)/CC 1342 (2013 Adm.)
FINANCIAL MANAGEMENT
(Common for Commerce/Commerce with Computer Application)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **all** questions in **a** sentence or maximum of **two** sentences. **Each** question carries **one** mark.

1. Define finance function.
2. What is factoring ?
3. Discuss cushion working capital.
4. What do you mean by pre-emptive right ?
5. Describe scrip dividend.
6. Explain optimum capital structure.
7. What is line of credit ?
8. Briefly explain ADR.
9. Define EOQ.
10. Explain the term capital gearing. (10×1=10 Marks)

P.T.O.

SECTION – B

Answer **any eight** questions, **not** exceed **one** paragraph **each**. **Each** question carries **2** marks.

11. "Financial leverage is a double edged sword." – Elucidate.
12. What do you mean by arbitrage ?
13. Explain the concept of time value of money. What are its relevance in financial decision making ?
14. State the advantages of using equity capital.
15. Discuss delinquency cost with examples.
16. Describe ABC analysis.
17. Write a note on aging of inventory.
18. X Ltd. issues debenture of Rs. 10,00,000 and realized Rs. 9,80,000 after paying 2% commission to brokers. The debentures are redeemable at the end of 10^{th} year. The rate of tax is 30%. Compute cost of debt.
19. Explain the differences between capital structure and capitalization.
20. What is payback period ? Explain its limitations.
21. Enumerate the benefits of cash budget.
22. Explain the consequences of excess working capital. **(8×2=16 Marks)**

SECTION – C

Answer **any six** questions, **not** exceeding **120** words. **Each** question carries **4** marks.

23. Describe the short term source of finance.
24. Explain the methods of estimating working capital requirements.
25. What is meant by weighted average cost of capital ? Explain its computation, importance and limitation.
26. What are the internal factors affecting dividend decision ?

27. Discuss the techniques used in cash management.

28. Discuss the external factors determining capital structure.

29. Explain the steps in capital budgeting.

30. B Ltd. has annual sales of Rs. 25,00,000, variable costs Rs. 15,00,000, fixed cost Rs. 5,00,000. It has 12% debentures of Rs. 20,00,000. Calculate composite leverage.

31. The capitalization rate of X Ltd. is 15% and its current market value is estimated as Rs. 80,00,000 at the rate of Rs. 100 per share. The company proposes to declare dividend Rs. 5 per share at the end of the financial year. The company expects earnings of Rs. 25,00,000 and intends to start a new project of Rs. 40,00,000. You are required to prove that dividend payment has no effect on the total value of the company, as suggested by MM theory. **(6×4=24 Marks)**

SECTION – D

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

32. What are the factors determining working capital requirements ?

33. Explain the different capital structure theories.

34. Discuss various techniques used for inventory management.

35. A company has to select one of the following two project :

	Project A	Project B
Cost	11,000	10,000
Cash inflows :		
Year 1	6,000	1,000
Year 2	2,000	1,000
Year 3	1,000	2,000
Year 4	5,000	10,000

Using the Internal Rate of Return method suggests which project is preferable. **(2×15=30 Marks)**

(Pages : 3) **F – 4051**

Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
First Degree Programme Under CBCSS
Complementary Course for Physics
MM – 1331.1 : MATHEMATICS – III
Differential Equations, Theory of Equations and Theory of Matrices
(2014 Admission Onwards)

Time : 3 Hours Max. Marks : 80

All the **10** questions are **compulsory**. **Each** question carries **1** mark.

1. Write the 6th degree polynomial equation having roots $\sqrt{2}$, $i\sqrt{2}$ and $i\sqrt{3}$.
2. Solve the equation $x^5 - 16x = 0$.
3. Find the smallest interval with integer end points containing the positive root of the equation $x^2 - 3 = 0$.
4. If $f(-1) = 1$ and $f(1) = -1$, is there a root for the equation $f(x) = 0$ in $(-1, 1)$?
5. Solve the initial value problem $\frac{dy}{dt} - y = 0;\ y(0) = \pi$.
6. Solve $\frac{d^2y}{dx^2} + \frac{dy}{dx} - 6y = 0$.
7. Find the particular integral of $\frac{d^2y}{dx^2} - 5\frac{dy}{dx} + 6y = e^{5x}$.
8. Find the rank of the matrix $\begin{bmatrix} 0 & 2 & 0 & 0 \\ -1 & 0 & 0 & 0 \\ 0 & 0 & 0 & -3 \end{bmatrix}$.
9. Find A^3 if A is the matrix $\begin{bmatrix} \cos\theta & \sin\theta \\ -\sin\theta & \cos\theta \end{bmatrix}$.
10. Find the eigenvalues of the matrix $\begin{bmatrix} 0 & 2 & 0 \\ 0 & 0 & 3 \\ -5 & 0 & 0 \end{bmatrix}$.

P.T.O.

Answer **any 8** questions from among the questions from **11** to **22**. **Each** question carries **2** marks.

11. Find the condition that the roots of the equation $x^3 - px^2 + qx - r = 0$ are in arithmetic progression.

12. Solve the equation $x^3 + x^2 + x + 1 = 0$.

13. Transform the equation $x^3 + 3x^2 + 5x + 1 = 0$ into an equation lacking the second term.

14. If α, β, γ are the roots of the polynomial equation $f(x) = 0$, prove that $f'(x) = \left(\frac{1}{x-\alpha} + \frac{1}{x-\beta} + \frac{1}{x-\gamma}\right) f(x)$.

15. Find the general solution of $e^x y' - y^2 = 0$.

16. Solve $y' + y - x = 0$.

17. Solve $xy' + y = x^4 y^4$.

18. Solve $y'' + 2y' + 5y = 0$.

19. Solve that inverse of an orthogonal matrix is orthogonal.

20. If $A = \begin{bmatrix} 2 & 1 \\ 1 & 2 \end{bmatrix}$, show that $A^2 - 4A + 3I = 0$.

21. Find the eigenvalues of the matrix $\begin{bmatrix} 3 & 4 \\ 5 & 2 \end{bmatrix}$.

22. Find the rank of the matrix $\begin{bmatrix} 0 & 1 & 2 \\ 4 & 0 & 2 \\ 2 & 1 & 3 \end{bmatrix}$.

Answer **any 6** questions from among the questions from **23** to **31**. **Each** question carries **4** marks.

23. Solve $x^4 + x^3 + 33x^2 + 61x - 14 = 0$, given $2 + \sqrt{3}$ is a root.

24. Using Newton-Raphson method, find a root of the equation $x^3 + x - 1 = 0$ correct to 6 decimal places ($x_0 = 1$).

25. Using Descarte's rule of signs, show that the equation $12x^7 - x^4 + 10x^3 - 28 = 0$ has at least four imaginary roots.

26. Find the orthogonal trajectories of the family of parabolas $y = cx^2$.

27. Solve $(y - 2x^3)dx - x(1 - xy)dy = 0$.

28. Solve $y'' - 13y + 12y = e^{-2x}$.

29. Solve $x^2y' + 2xy - \sin x = 0$.

30. Test for consistency and solve $x + y + z = 3$, $x + 2y + 3z = 4$, $x + 4y + 9z = 6$.

31. Show that the eigenvalues of a real symmetric matrix are real.

Answer **any 2** questions from among the questions from **32** to **35**. **Each** question carries **15** marks.

32. Show that the equation $x^4 - 10x^3 + 23x^2 - 6x - 15 = 0$ can be transformed into a reciprocal equation by diminishing its roots by 2. Hence solve the given equation.

33. Solve the equation $x^3 - 3x^2 + 12x + 16 = 0$ using Cardan's method.

34. a) Solve $y'' + 16y = e^{-3x} - \cos 4x$.

    b) Solve the initial value problem $x^2y' - y^2y' - 2xy = 0$, $y(1) = 1$.

35. Is the matrix $\begin{bmatrix} 2 & -2 & 1 \\ -1 & 3 & -1 \\ 2 & -4 & 3 \end{bmatrix}$ diagonalizables ? If yes, find the diagonal equivalent.

(Pages : 4) **F – 4053**

Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
First Degree Programme under CBCSS
COMPLEMENTARY COURSE FOR CHEMISTRY AND POLYMER CHEMISTRY
MM 1331.2 : Mathematics – III (Vector Analysis and Theory of Equations)
(2014 Admission Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – 1

Answer **all** questions. **Each** question carries **1** mark :

1. State the remainder theorem of polynomials.
2. Find the number of real roots of the equation $x^3 + x^2 + x + 1 = 0$.
3. If $f(x) = (x + 4)^2 \phi(x)$ and $\phi(x)$ is not divisible by $(x + 4)$, find the multiplicity of -4.
4. If α, β, γ are the roots of the equation $2x^3 - x^2 + 3x - 1 = 0$ find the equation whose roots are $-\alpha, -\beta, -\gamma$.
5. If α, β, γ are the roots of the equation $x^2 + 3x + 4 = 0$, find the equation whose roots are $1/\alpha$, $1/\beta$ and $1/\gamma$.
6. Find the domain of $\vec{r}(t)$ if $\vec{r}(t) = t^2\vec{i} - 2t\vec{j}$. Also find $\vec{r}(t_0)$ if $t_0 = 1$.
7. Find $\lim_{t \to \pi/4} \left(\cos t\vec{i} + \sin t\vec{j}\right)$.
8. Find $\vec{r}'(t)$ if $\vec{r}(t) = e^t\vec{i} - (te^t)\vec{j}$ at $t = 0$.
9. Find divergence of $\vec{F}$ if $\vec{F}(x, y, z) = x^2y\vec{i} + 2y^3z\vec{j} + 3z\vec{k}$.
10. Find $\int_0^1 \left(t^2\vec{i} + t^3\vec{j}\right) dt$.

P.T.O.

SECTION – 2

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

11. Show that the equation $x^5 - 2x^2 + 7 = 0$ has at least two imaginary roots.

12. If 1, 2, 3 are the roots of the cubic equation $f(x) = 0$, find $f(x)$ and hence find the equation whose roots are 1, 1/2 and 1/3.

13. If 1 and 3 are the roots of $g(x) = 0$, find $g(x)$ and hence find the equation whose roots are 1/2 and 3/2.

14. Solve $4x^3 - 24x^2 + 23x + 18 = 0$ whose roots are in arithmetic progression.

15. Determine whether $\vec{r}(t) = (3\sin 2t)\vec{i} - (2t)\vec{j}$ is continuous at $t = 0$. Justify the answer.

16. Find $\vec{y}(t)$ if $\vec{y'}(t) = \cos t\vec{i} + \sin t\vec{j}$ and $\vec{y(0)} = \vec{i} - \vec{j}$.

17. Prove that a circle has a constant radius of curvature.

18. Find the velocity and speed of a particle moving along the curve $\vec{r}(t) = e^t \sin t\vec{i} + e^t \cos t\vec{j} + t\vec{k}$ at $t = \pi/2$.

19. Find the divergence and curl of the vector field $\vec{F}(x, y, z) = x^2\vec{i} - 2\vec{j} + yz\vec{k}$.

20. If $\vec{r} = x\vec{i} + y\vec{j} + z\vec{k}$, show that :

    a) $\nabla\|\vec{r}\| = \dfrac{\vec{r}}{\|\vec{r}\|}$

    b) $\nabla\dfrac{1}{\|\vec{r}\|} = \dfrac{\vec{r}}{\|\vec{r}\|^3}$.

21. Evaluate $\int_C -ydx + xdy$ along the parabolic path C : $y^2 = 3x$ joining (3, 3) to (0, 0).

22. Let $\vec{F}(x, y) = e^y\vec{i} + xe^y\vec{j}$, prove that $\vec{F}$ is a conservative field in the entire plane.

SECTION – 3

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

23. If α, β, γ are the roots of the equation $8x^3 - 4x^2 + 6x - 1 = 0$, find the equation whose roots are $\alpha + 1/2$, $\beta + 1/2$ and $\gamma + 1/2$.

24. Find a real root of the equation $f(x) = x^3 - 2x - 5 = 0$ using bisection method, correct to four decimal places.

25. Solve the equation $x^3 - 5x + 3 = 0$, by Newton-Raphson method, correct to three decimal places.

26. Using the vector equation of the ellipse $\frac{x^2}{a^2} + \frac{x^2}{b^2} = 1$, find the curvature at the end points of the major and minor axes.

27. Suppose that a particle moves through 3-space so that its position vector at time t is $\vec{r}(t) = e^{-t}\vec{i} + e^{t}\vec{j}$. Find :

    i) the scalar tangential and normal components of acceleration at time t

    ii) the scalar tangential and normal components of acceleration at time t = 0

    iii) the vector tangential and normal components of acceleration at time t = 0.

28. Prove that div(curl $\vec{F}$) = 0, where $\vec{F}$ is a vector point function.

29. Find the work done by the force field $\vec{F}(x, y, z) = xy\vec{i} + yz\vec{j} + zx\vec{k}$, on a particle that moves along the curve $\vec{r}(t) = t\vec{i} + t^2\vec{j} + t^3\vec{k}$, $0 \le t \le 1$.

30. Let $\vec{F}(x, y) = 3y^2\vec{i} + 6xy\vec{j}$.

    a) Show that $\vec{F}$ is a conservative vector field in the entire x-y plane.

    b) Find the scalar potential ϕ.

31. State divergence theorem. Using the theorem, find the outward flux of the vector field $\vec{F}(x, y, z) = z\vec{k}$ across the sphere $x^2 + y^2 + z^2 = a^2$.

SECTION – 4

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

32. Solve $x^4 - 2x^3 + 3x^2 + 4x - 1 = 0$, given that the product of two roots is unity.

33. Explain the Newton-Raphson method for finding the solution of the equation $f(x) = 0$. Solve the equation $x^3 + 3x^2 - 3 = 0$, by Newton-Raphson method, correct to three decimal places.

34. A shell fired from a cannon has a muzzle speed of 320 ft/s. The barrel makes angle 45° with the horizontal, the barrel opening is assumed to be at the ground level. Find :

    a) The parametric equations for the shell's trajectory

    b) Maximum height reached

    c) The horizontal distance travelled

    d) Speed of the shell at the point of impact with the ground.

35. State Gauss's divergence theorem. Verify the theorem for the vector field $\vec{F}(x, y, z) = (x^2 - yz)\,\vec{i} + (y^2 - zx)\,\vec{j} + (z^2 - xy)\vec{k}$ over the parallelopiped $0 \le x \le a, 0 \le y \le b, 0 \le z \le c$.

(Pages : 3) **F – 4067**

Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
First Degree Programme under CBCSS
COMPLEMENTARY COURSE FOR PHYSICS
CH 1331.1 : Physical Chemistry – II
(2017 Admission)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **all** questions. **Each** question carries **1** mark.

1. What is RMS velocity ?
2. Explain the term anisotropy.
3. How many atoms are there in a BCC structure ?
4. If the standard reduction potential of Zn/Zn^{2+} and Cu/Cu^{2+} electrodes are – 0.76V and + 0.34 V respectively, for the cell obtained by coupling these, the standard EMF would be _____
5. What is a galvanic cell ?
6. What is Beer Lambert's law.
7. Explain the term quantum yield.
8. What is the unit of rate constant of a second order reaction ?
9. What is improper axis of symmetry ?
10. Explain the term chemiluminescence.

(10x1=10 Marks)

SECTION – B

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

11. Explain the significance of van-der Waals constants.

P.T.O.

12. Explain the terms :
    a) Collision frequency
    b) Mean free path.
13. Define Miller indices. For the intercepts x, y and z with values of 3, 1 and 2 respectively, find the Miller indices.
14. Draw the diagram of 211 crystal plane.
15. Explain conductometric titration involving strong acid and strong base.
16. Explain reference electrode with an example.
17. Explain the term photosensitization.
18. Outline intermediate compound formation theory of catalysis.
19. Derive integrated rate equation for a first order reaction.
20. Enumerate the factors influencing the rate of reaction.
21. XeF_4 is a square planar molecule. How many proper rotation axes does the molecule have ?
22. When it is said that two symmetry operations A and B commute ?

(8×2=16 Marks)

SECTION – C

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

23. State and explain :
    a) Grotthuss-Draper law
    b) Stark-Einstein law.
24. Explain Michaelis-Menten mechanism of enzyme catalysis.
25. Explain the reasons for the deviation of real gases from ideality.
26. Explain the structure of NaCl crystal.
27. Explain Hittorfs method to determine transport number.
28. What are fuel cells ? Discuss H_2-O_2 fuel cell.

29. Explain H_2-Cl_2 photochemical reaction.

30. What is Arrhenius equation. Explain the terms in the equation.

31. Determine the point group of BF_3 molecule. **(6×4=24 Marks)**

SECTION – D

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

32. a) Explain concentration cells without transference. **8**

    b) Discuss Potentiometric titration. **7**

33. a) Explain Joul Thomson effect. Explain Claude's process of liquefaction of gasses. **10**

    b) Silver crystallizes in face centered cubic structure. The edge length of unit cell is 408.7 pm. Calculate the density of silver. (Ag = 108g/mol). **5**

34. a) What are various types of catalysis ? Explain with examples. **5**

    b) Explain the terms Fluorescence and phosphorescence. **5**

    c) For a first order reaction when log k was plotted against 1/T a straight line with a slope of – 6000 was obtained. Calculate the activation energy of the reaction. **5**

35. i) Construct group multiplication table for C_2v point group. **8**

    ii) Explain collision theory of reaction rates. **7**

(2×15=30 Marks)

(Pages : 3) **F – 4085**

Reg. No. : .....

Name : .....

Third Semester B.Com. Degree Examination, January 2019
First Degree Programme under CBCSS
CO 1361.1 (2013 Adm. Onwards)/CC 1342 (2013 Adm.)
FINANCIAL MANAGEMENT
(Common for Commerce/Commerce with Computer Application)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **all** questions in **a** sentence or maximum of **two** sentences. **Each** question carries **one** mark.

1. Define finance function.
2. What is factoring ?
3. Discuss cushion working capital.
4. What do you mean by pre-emptive right ?
5. Describe scrip dividend.
6. Explain optimum capital structure.
7. What is line of credit ?
8. Briefly explain ADR.
9. Define EOQ.
10. Explain the term capital gearing.

(10×1=10 Marks)

P.T.O.

SECTION – B

Answer **any eight** questions, **not** exceed **one** paragraph **each**. **Each** question carries **2** marks.

11. "Financial leverage is a double edged sword." – Elucidate.
12. What do you mean by arbitrage ?
13. Explain the concept of time value of money. What are its relevance in financial decision making ?
14. State the advantages of using equity capital.
15. Discuss delinquency cost with examples.
16. Describe ABC analysis.
17. Write a note on aging of inventory.
18. X Ltd. issues debenture of Rs. 10,00,000 and realized Rs. 9,80,000 after paying 2% commission to brokers. The debentures are redeemable at the end of 10^{th} year. The rate of tax is 30%. Compute cost of debt.
19. Explain the differences between capital structure and capitalization.
20. What is payback period ? Explain its limitations.
21. Enumerate the benefits of cash budget.
22. Explain the consequences of excess working capital. **(8×2=16 Marks)**

SECTION – C

Answer **any six** questions, **not** exceeding **120** words. **Each** question carries **4** marks.

23. Describe the short term source of finance.
24. Explain the methods of estimating working capital requirements.
25. What is meant by weighted average cost of capital ? Explain its computation, importance and limitation.
26. What are the internal factors affecting dividend decision ?

27. Discuss the techniques used in cash management.

28. Discuss the external factors determining capital structure.

29. Explain the steps in capital budgeting.

30. B Ltd. has annual sales of Rs. 25,00,000, variable costs Rs. 15,00,000, fixed cost Rs. 5,00,000. It has 12% debentures of Rs. 20,00,000. Calculate composite leverage.

31. The capitalization rate of X Ltd. is 15% and its current market value is estimated as Rs. 80,00,000 at the rate of Rs. 100 per share. The company proposes to declare dividend Rs. 5 per share at the end of the financial year. The company expects earnings of Rs. 25,00,000 and intends to start a new project of Rs. 40,00,000. You are required to prove that dividend payment has no effect on the total value of the company, as suggested by MM theory. **(6×4=24 Marks)**

SECTION – D

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

32. What are the factors determining working capital requirements ?

33. Explain the different capital structure theories.

34. Discuss various techniques used for inventory management.

35. A company has to select one of the following two project :

	Project A	Project B
Cost	11,000	10,000
Cash inflows :		
Year 1	6,000	1,000
Year 2	2,000	1,000
Year 3	1,000	2,000
Year 4	5,000	10,000

Using the Internal Rate of Return method suggests which project is preferable.

(2×15=30 Marks)

(Pages : 3) F – 4090

Reg. No. : .....

Name : .....

Third Semester B.Com. Degree Examination, January 2019
(First Degree Programme Under CBCSS)
Complementary Course : CO 1331/CX 1331
INFORMATION TECHNOLOGY IN BUSINESS
(Common for Commerce/Commerce and Tax Procedure and Practice)
(2014 Admn. Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – A

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

1. What is e-commerce ?
2. What do you mean by Office automation ?
3. What is intranet ?
4. How can IP address be used ?
5. What is FTP ?
6. List any two benefits of e-governance.
7. What is video conferencing ?
8. What do you mean by domain name ?
9. What is Usenet ?
10. Name any two top level domain names. **(10×1=10 Marks)**

P.T.O.

SECTION – B

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

11. Describe Internet Relay Chat.
12. List the commonly used internet protocols.
13. What do you mean by e-mail address ?
14. What are the drawbacks of EDI ?
15. Distinguish between Telnet and Gopher.
16. What is WWW ?
17. List the benefits of B2C e-commerce.
18. What do you mean by Desktop publishing ?
19. Describe FTP.
20. What is G2B e-governance ?
21. What are the Limitations of e-commerce ?
22. What are the characteristics of internet ? **(8×2=16 Marks)**

SECTION – C

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

23. Distinguish between G2C and G2B interactions of e-governance.
24. Explain B2E e-commerce.
25. Explain how EDI reduce lead times and stockholding.
26. Explain Payment management in the context of B2B e-commerce.
27. Discuss applications of IT in product development and product improvement.
28. Discuss the advantages of internet.

29. What are the modes of e-banking ?

30. Distinguish between debit and credit cards.

31. Discuss the process of credit card operation. **(6×4=24 Marks)**

SECTION – D

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

32. Explain EDI and its benefits.

33. Describe the different types of Interactions in e-governance.

34. What are the limitations and challenges of e-commerce ?

35. Discuss the business models of e-commerce. **(2×15=30 Marks)**

(Pages : 2) F – 4091

Reg. No. : .....

Name : .....

Third Semester B.Com. Degree Examination, January 2019
First Degree Programme under CBCSS
Core Course : CO 1341/CC 1342
ENTREPRENEURSHIP DEVELOPMENT
(Common for Commerce/Commerce with Computer Application)
(2014 Adm. Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – A

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

1. Who is a Portfolio entrepreneur ?
2. What is a small enterprise ?
3. Expand TREAD.
4. What is the role of NAYE ?
5. What is Stationary layout ?
6. What is Seed Capital ?
7. State the barriers to Entrepreneurship.
8. What are Ancillary units ?
9. What do you mean by incentive ?
10. What is Factory Design ?

(10×1=10 Marks)

SECTION – B

Answer **any 8** questions in **not** exceeding **one** paragraph **each**. **Each** carries **2** marks.

11. What is Rehabilitation Allowance ?
12. What is social cost benefit analysis ?
13. Explain Innovation.
14. State two objectives of TRYSEM.
15. What is Feasibility Report ?

P.T.O.

16. Classify entrepreneurs on the basis of technology.
17. What is STEP project ?
18. What is Break Even Analysis?
19. What is Need for Achievement ?
20. What is the primary objective of setting up NSIC ?
21. What is Single Window Scheme ?
22. What is the importance of Project Evaluation ? **(8×2=16 Marks)**

SECTION – C

Answer **any 6** questions in **not** exceeding **120** words **each**. **Each** carries **4** marks.

23. Explain feasibility analysis.
24. What is Project Report ? Explain the importance of Project Report.
25. Explain the role of entrepreneur in Economic development.
26. What are the major responsibilities of SIDCO ?
27. Enumerate the advantages of industrial estate.
28. What is Factory Design ? What are the factors affecting Factory design ?
29. What is Project Management ? Explain its various phases.
30. Explain the functions performed by DICs in the development of industries of a district.
31. What are the different types of risk involved in Entrepreneurship ?

(6×4=24 Marks)

SECTION – D

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

32. What are the objectives of MSMEs ? What are the important problems faced by MSMEs ?
33. Define Entrepreneur. Explain the functions of an entrepreneur.
34. Explain briefly the procedure of setting up of a small scale industrial unit.
35. Define women entrepreneurship. Discuss the problems and the remedies to solve the problems of women entrepreneurs in India. **(2×15=30 Marks)**

(Pages : 3) F – 4092

Reg. No. : .....

Name : .....

Third Semester B.Com. Degree Examination, January 2019
First Degree Programme Under CBCSS
Core Course : CO 1342/CC 1343
COMPANY ADMINISTRATION
(Common for Commerce/Commerce with Computer Application)
(2014 Admn. Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – A

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

1. Define Dormant Company.
2. What is share certificate ?
3. Who is a Resident Director ?
4. What is Extra Ordinary general meeting ?
5. What do you mean by Quorum for Meetings ?
6. What is CSR ?
7. What is Dematerialization ?
8. What is Employees Stock Option Scheme ?
9. What is Surrender of Shares ?
10. What do you mean by Perpetual Succession ? **(10×1=10 Marks)**

P.T.O.

SECTION – B

Answer **any 8** questions in **not** exceeding **one** paragraph **each**. **Each** question carries **2** marks.

11. Define Prospectus.
12. What is a private company ?
13. What is Special Resolution ?
14. What is Penalty ?
15. Who are the persons entitled to receive Notice ?
16. Who is a Key Managerial Personnel ?
17. What do you mean by Transmission of Shares ?
18. What are Sweat Equity Shares ?
19. Who is a Promoter ?
20. What is Book Building ?
21. What is Corporate Governance ?
22. What is Pre-incorporation Contract ? **(8×2=16 Marks**

SECTION – C

Answer **any 6** questions in **not** exceeding **120** words **each**. **Each** question carries **4** marks.

23. What are the circumstances in which company may be wound up by Tribunal ?
24. What are the essential characteristics of a company ?
25. Explain the Doctrine of ultra vires.
26. What is one person company ? What are its benefits ?
27. Explain the four types of committees to be constituted by the board.

28. Explain the powers and duties of Company Liquidator in voluntary winding up.

29. What are the feature of valid forfeiture of shares ?

30. What is buy back of shares ? What are its advantages ?

31. Explain the duties of a Director. **(6×4=24 Marks)**

SECTION – D

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

32. Define 'Company'. Explain the different kinds of Company.

33. What is Allotment of shares ? Explain the procedure of allotment of Shares.

34. Explain the phases in the formation of a company.

35. What is Memorandum of Association ? State the difference between Memorandum of Association and Articles of Association. **(2×15=30 Marks)**

F – 4093

(Pages : 7)

Reg. No. : .....

Name : .....

Third Semester B.Com. Degree Examination, January 2019

First Degree Programme under CBCSS

Core Course : CO 1343/CC 1344

ADVANCED FINANCIAL ACCOUNTING

(Common for Commerce/Commerce with Computer Application)

(2014 Admn. Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

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

1. Who is a Delcredere Agent ?
2. Define the term Departmental Accounting.
3. Explain the term unrealized profit.
4. What do you mean by independent branch ?
5. Define partnership.
6. What do you mean by Abnormal loss ?
7. Explain the term Inter Departmental Transfer.
8. Define the term Capital Account.
9. What do you mean by Dissolution ?
10. Define a Foreign Branch.

(10×1=10 Marks)

SECTION – B

Answer **any 8** questions in **not** exceeding **one** paragraph **each**. **Each** question carries **2** marks.

11. Write a short note on account sales.
12. Give a note on realization account.
13. Explain the term Goods in transit.

P.T.O.

14. Write down the features of Partnership.
15. Explain the Caution Money.
16. Write a short note on Garner Vs. Murray Principle.
17. Explain the advantages of Departmental accounting.
18. Differentiate between a Branch and a Department.
19. Write a short note on Stock and Debtors system.
20. Explain the term branch accounting.
21. How do you treat Inter Departmental transfer of goods at Market price ?
22. Explain the term Joint Bank Account.

(8×2=16 Marks)

SECTION – C

Answer **any six** questions in **not** exceeding **120** words **each**. **Each** question carries **4** marks.

23. Differentiate between joint venture and consignment.
24. Explain the differences between dissolution of Partnership and Firm.
25. Explain the different types of dependent branches.
26. Give the differences between Joint Venture and Partnership.
27. A, B and C entered a Joint Venture agreement and according to it, A is to supervise the overall working of the venture and keep the necessary accounts. He is entitled to a commission of 5% on sales for his service. Each venturer contributes Rs. 10,000. A purchased goods for Rs. 20,000, and supplied goods worth Rs. 5,000 from his stock. C also supplied goods of the value of Rs. 4,000 from his stock. A paid Rs. 3,000 for expenses in connection with his joint Venture. A sold goods for Rs. 40,000. Unsold goods amounts to Rs. 3,000 were taken over by B. A settled the accounts of B and C by bank draft. The ventures share profit and losses equally. Prepare joint venture account.

28. Mr. Anand of Kolkata sends goods to his agent Mr. B at Mumbai on Consignment basis. The agents sends the reports regarding sales and collection of debts by his every month. He is entitled to a commission of 10% on cash collected from debtors and a further sum of Rs. 15,000 per quarter towards expenses. During the half year ended 30th June 2008, goods invoiced by Mr. Anand were purchased by him for Rs. 11,00,000. Freight, insurance and other expenses amounts to Rs. 1,10,000. During the same period sales were made by the agent amounting to Rs. 13,00,000. Debts collected were 10,80,000 and discount allowed to debtors amounts to Rs. 10,000. The agent remitted to Anand Rs. 9,50,000.

    Included in the consignment to the agent was one lot of goods partly damaged in transit. Anand received Rs. 19,000 from the insurance company towards claim. As on 30th June 2008, the agent was having certain goods in stock and the original purchase price of such stock (Paid by Anand) was Rs. 2,50,000.

    Prepare Consignment account in the books of Anand.

29. From the following details of a XYZ Ltd., which has a branch at Cochin to which the goods were invoiced at cost plus 25%. Following are the details of the branch for the year 2015.

Stock on 1-1-2015	11,000	Debtors on 1-1-2015	100
Petty cash on 1-1-2015	100	Cash sales	2,650
Credit sales	23,950	Bad debts	550
Goods sent to branch at invoice price	20,000		
Cash received from debtors	21,000		
Goods returned to HO at invoice price	300		
Returns by customers	500		

    Cheques sent to branch for - rent – 600, wages – 200, salary – 900, Stock on 31-12-2015 – 13,000, Debtors on 31-12-2015 – 2000, Petty cash on 31-12-2015 – 75.

    Prepare Branch Trading and P & L a/c for the year 2015.

30. ABC Ltd. has two departments, Textiles and Readymade. For the last so many years Readymade Dept. get all its requirements of cloth from Textiles Dept. by way of transfer at its usual selling price. The following figures relate to the year ending 31-12-2015.

	Textiles	Readymade
Stock (1-1-2015)	30,000	40,000
Purchases	4,00,000	20,000
Sales	8,00,000	3,60,000
Manufacturing expenses	–	60,000
Transfer from Textiles to Readymade Dept.	2,00,000	2,00,000
Stock (31-12-2015)	30,000	70,000

General expenses of the business is Rs. 40,000. Stock of readymade Dept. Consist of 90% clothes received from Textiles Dept. Textiles Dept. earns a gross profit of 50% on sales in the year ending 31-12-15.

Prepare departmental trading A/c and General P/L A/c.

31. X, Y and Z are in partnership sharing profit and losses equally. Their capital accounts are : X Rs. 3,000, Y Rs. 2,000 and Z Rs. 300 (Dr). They dissolved the firm and a loss of Rs. 1,800 is incurred after meeting all expenses and outside liabilities. Z is insolvent and is unable to contribute anything towards his deficiency.

Show the partners' capital account as per Garner Vs. Murray principle.

(6×4=24 Marks)

SECTION – D

Answer **any two** questions in **not** exceeding **4** pages **each**. **Each** question carries **15** marks.

32. Explain the different modes of Dissolution of a partnership firm in detail.

33. The following is the balance sheet of a firm as on 31-12-2012, when D has become insolvent.

Balance Sheet

Sundry Creditor	10,000	Sundry assets	50,000
General Reserve	10,000	C's Capital A/c	10,000
A's capital A/c	30,000	D's capital A/c	10,000
B's capital A/c	20,000		
	70,000		**70,000**

The assets realized Rs. 40,000. Creditors were paid in full. Partners share profit and losses equally. You are required to close the books of the firm applying Garner vs. Murray rule.

34. PQR Ltd. has two departments - P and Q. Dept. P sells goods to Dept. Q at normal selling price. From the following particulars prepare Departmental Trading and P/L A/c for the year ended 31.3.2015 and also ascertain the Net profit to be transferred to Balance Sheet.

	Dept. P	**Dept. Q**
Opening stock	50,000	Nil
Purchases	28,00,000	3,00,000
Goods from P	–	8,00,000

Wages	3,50,000	2,00,000
Travelling expenses	20,000	1,60,000
Closing stock at cost to the department	8,00,000	2,09,000
Sales	30,00,000	20,00,000
Printing and stationary	30,000	25,000

The following expenses incurred for both the departments, were not apportioned between the departments.

a) Salaries – 3,30,000

b) Advertisement expenses 1,20,000

c) General expenses 5,00,000

d) Depreciation is to be charged @ 30% on the machinery value – 96,000.

The advertisement expenses of the departments are to be apportioned in the turnover ratio. Salaries and Depreciation are apportioned in the ratio of 2 : 1 and 1 : 3 respectively. General expenses are to be apportioned in the ratio of 3:1

35. X Ltd. Mumbai has opened a Branch at Chennai on 1st July 2014. The goods were invoiced at selling price which was 125% of the cost price of HO.

From the following particulars, show the necessary ledger accounts in the books of HO for the year ended 30th June 2015.

Goods sent to branch (at cost to H O)		1,00,000
Sales –	Cash	30,000
	Credit	74,000

Cash received from debtors			50,000
Cheques sent to branch for –	Rent	4,000	
	Salaries	6,000	
	Miscellaneous	1,000	11,000
Discount allowed			3,000
Returns from customers			1,000
Goods spoiled written off (invoice price)			5,000
Stock (on 30-6-2015 at invoice price)			15,000

(2×15=30 Marks)

(Pages : 3) F – 4095

Reg. No. : .....

Name : .....

Third Semester B.Com. Degree Examination, January 2019
First Degree Programme under CBCSS
English – (Language Course – III)
EN 1311.2 WRITING AND PRESENTATION SKILLS
(2015 Admission Onwards)

Time : 3 Hours Max. Marks : 80

I. Answer **all** questions, **each** in **a word** or **sentence**.

A) Rewrite the following sentences, correcting the errors if any.

1) A lot of water has flown down the mountains.
2) The sun is rising everyday.
3) Can you discriminate the differences in their shades ?
4) Its very warm in parts of Europe now.
5) Dr. Narayanan is an authority about Kerala history.

B) Write one synonym each for the following words.

6) incite
7) defend
8) grave
9) answer
10) omit.

(1×10 =10 Marks)

II. Answer **any eight**, **each** in a short paragraph **not** exceeding **50** words.

11) How does information technology influence the scope of writing ?
12) What are the features of a good report ?
13) Differentiate between academic and creative writing.
14) What is netiquette ?
15) Write a note on visual aids in presentation.

P.T.O.

16) What is the basic format of an email ?

17) What are the differences between an essay and a report ?

18) Define collocation.

19) Explain note making.

20) What are the features of a good precis ?

21) How do you analyse your audience while preparing a presentation ?

22) What is blogging ?

(8×2 =16 Marks)

III. Answer **any 6** as directed .

23) You lost your Adhar Card while travelling. Write a letter to the Circle Inspector reporting the loss and requesting for help.

24) Write a precis of the following passage, reducing it to one third of its length.

Researchers once thought young children had no concern for the well-being of others a logical conclusion if you have seen a toddler's tantrums. But recent findings show that babies feel empathy long before their first birthday. Maayan Davidov, a psychologist at Hebrew University of Jerusalem, and her colleagues have conducted some of these studies, analyzing the behaviour of children as they witness somebody in distress a crying child, an experimenter , or their own mother pretending to be hurt. Even before six months of age, many infants respond to such stimuli with facial expressions reflecting concern; some also exhibit caring gestures. Eighteen-month-olds often translate their empathy into such positive social behaviour as giving a hug or a toy to comfort a hurt child.

25) You are travelling to Chennai. Your Co-passenger is a celebrity. Write an imaginary conversation with him/her.

26) Prepare a questionnaire for conducting a survey among the senior citizens of your locality regarding the difficulties they face.

16) What is the basic format of an email ?

17) What are the differences between an essay and a report ?

18) Define collocation.

19) Explain note making.

20) What are the features of a good precis ?

21) How do you analyse your audience while preparing a presentation ?

22) What is blogging ?

(8×2 =16 Marks)

III. Answer **any 6** as directed .

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25) You are travelling to Chennai. Your Co-passenger is a celebrity. Write an imaginary conversation with him/her.

26) Prepare a questionnaire for conducting a survey among the senior citizens of your locality regarding the difficulties they face.

27) You are the reporter of the Times of India. Prepare a report on the recent flood havoc in your District.

28) Why is 'revising and editing' important in writing?

29) Write a note on 'group presentation'.

30) What are the different methods of essay-writing ?

31) Write an email to a travel agent giving details of a proposed excursion and requesting for their response. **(6×4 =24 Marks)**

IV. Answer **any two** as directed.

32) Write an essay on "The Influence of Social Media on the Youth'.

33) You are the leader of the Adventure Club. Prepare a report on the club's activities.

34) Create content for 15-20 slides on "Physical fitness".

35) You are the manager of a bank. Following a complaint that a customer's cash was wrongly credited to another account, you realise the error. Write a letter of apology to the customer. **(2×15=30 Marks)**

(Pages : 3) F – 4115

Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
Career Related First Degree Programme Under CBCSS
MALAYALAM AND MASS COMMUNICATION
Core Course
MX 1342 : ദലിതെഴുത്ത്, പെണ്ണെഴുത്ത്, സിദ്ധാന്തവും ആവിഷ്കാരവും
(2014 Admission Onwards)

Time : 3 Hours Max. Marks : 80

I. **ഒരു** വാക്കിലോ **രണ്ട്** വാക്യത്തിലോ ഉത്തരമെഴുതുക.

1) 'വന്നല' എന്ന നോവലിന്റെ കർത്താവാര് ?

2) അയ്യങ്കാളി സ്ഥാപിച്ച സാമൂഹ്യപരിഷ്കരണ പ്രസ്ഥാനമേത് ?

3) Sexual Politics അഥവാ ലൈംഗിക രാഷ്ട്രീയം എന്ന കൃതി രചിച്ചതാര് ?

4) പെണ്ണെഴുത്ത് എന്ന പദം ആദ്യമായി പ്രയോഗിച്ചതാര് ? ഏതു കൃതിയിൽ ?

5) അന്നമയത്തിങ്കൽ നിന്നിട്ടല്ലേ
അന്നമയമൊക്കെയുണ്ടായത് – ഏതു കവിതയിലെ വരികൾ ?

6) 'പെരിയോർ' എന്നറിയപ്പെട്ട സാമൂഹിക പരിഷ്കർത്താവ് ?

7) ആനന്ദസഭയുടെ സ്ഥാപകനാര് ?

8) അംബേദ്കറിനെ ദലിത് സാഹിത്യ പിതാവായി വിശേഷിപ്പിച്ച നിരൂപകനാര് ?

9) ചങ്ങമ്പുഴയുടെ രമണനിലെ സ്ത്രീ നിന്ദയെ തുറന്നു വിമർശിക്കുന്ന കെ. സരസ്വതിയമ്മയുടെ കഥയേത് ?

10) 'നീർമാതളം പൂത്തകാലം' എന്ന കൃതി എഴുതിയതാര് ? **(10×1=10 മാർക്ക്)**

P.T.O.

II. **അരപ്പുറത്തിൽ** കവിയാതെ **8** ചോദ്യത്തിന് ഉത്തരമെഴുതുക.

11) ദലിത് സാഹിത്യം.

12) സ്ത്രീവാദ വിമർശനം.

13) ''യാഥാർത്ഥ്യം ഇതാണെങ്കിൽ ഈ ജീവിതം ശരിയല്ല. ഇതിൽ നിന്നും വിടുതൽ നേടുന്നതായിരിക്കും ഉത്തമം'' – ആരുടെ വാക്കുകൾ ? എന്തുകൊണ്ട് ?

14) ''അങ്ങേരു ചെയ്തത് നല്ലൊരു കാര്യമാണെന്നാണ് ഞാൻ പറയുന്നത് '' – വിശദമാക്കുക.

15) ''എങ്ങിനെയറിയും നീ വന്ധ്യയാമെന്നാത്മാവിൻ
ത്തിങ്ങിന വാത്സല്യത്തെ'' – വിശദമാക്കുക.

16) ''അശുദ്ധമായി കറക്കപ്പെടുന്നു
അകിട് ഒട്ടുംവരെ കടിച്ച് വലിക്കപ്പെടുന്നു'' – പരാമർശത്തിന്റെ സമകാലിക പ്രസക്തി വിശദീകരിക്കുക.

17) ''തെളിയാത്ത വസ്ത്രമുടുത്തു ഗാത്രേ
ചളിയുള്ളവരെയകറ്റും പോലെ'' – സാരസ്യം വ്യക്തമാക്കുക.

18) ദേവസ്സിക്കുപറ്റിയ അമളി എന്ത് ?

19) ''നിങ്ങളെയൊക്കെ സമ്മതമുണ്ടെങ്കി, ഓന്റെ കരണക്കുറ്റിക്ക് ഒരു വീക്ക് വെച്ചു കൊടുക്കാം'' – ആരുടെ വാക്കുകൾ ? ഇങ്ങനെ പറയാനുള്ള കാരണമെന്ത് ?

20) 'അടുക്കളയിലെ തേഞ്ഞുതീരുന്ന വീട്ടുപകരണമാണ് ഞാൻ' എന്ന് പറയാൻ കവയത്രിയെ പ്രേരിപ്പിക്കുന്ന സംഗതികൾ സംഗ്രഹിക്കുക.

21) 'പെൺപള്ളിക്കൂടത്തിന്റെ തരക്കേടുകളായി' വിലാസിനിക്ക് തോന്നിയ തെന്തെല്ലാം ?

22) 'ഇത്രയും സുരക്ഷാമുന്നറിയിപ്പുകൾ തന്നിട്ടും ഈ നേരത്ത് ഒരു സ്ത്രീയെയും കൊണ്ട്..... പിടിച്ച് ലോക്കപ്പിലിടുകയാണ് വേണ്ടത്' – ആരുടെ വാക്കുകൾ ? ഈ താക്കീതിന്റെ സാഹചര്യമെന്ത് ? **(8×2=16 മാർക്ക്**

III. **ഒരു പുറത്തിൽ** കവിയാതെ **6** ചോദ്യത്തിന് ഉത്തരമെഴുതുക.

23) അടിച്ചമർത്തപ്പെട്ട ജനതയുടെ ആത്മവീര്യത്തിന്റെ അടയാളം കൂടിയാണ് പാലുവം പെണ്ണിനെത്തേടി എന്ന നാടൻപാട്ട്. വിലയിരുത്തുക.

24) സമൂഹത്തിന്റെ സദാചാരനാട്യങ്ങളെ തുറന്നു കാണിക്കുന്ന കഥയാണ് പ്രേതഭാഷണം – വിലയിരുത്തുക.

25) പുതുക്രിസ്ത്യാനിയേയും കടവാതിലിനെയും താരതമ്യപ്പെടുത്തുന്നതിന്റെ ഔചിത്യം പരിശോധിക്കുക.

26) ദലിത് സാഹിത്യം രൂപപ്പെട്ടു വന്ന സാമൂഹിക സാഹിത്യ പശ്ചാത്തലം വിവരിക്കുക.

27) ഫെമിനിസത്തിന്റെ വിവിധ ധാരകളെ പരിചയപ്പെടുത്തുക.

28) 'സർവ്വേ ഓഫ് ഇന്ത്യ' എന്ന കവിതയിലൂടെ അവതരിപ്പിക്കുന്ന സമകാലിക സാമൂഹിക പശ്ചാത്തലം വിശകലനം ചെയ്യുക.

29) ജാതിക്കുമ്മി മുന്നോട്ടുവയ്ക്കുന്ന നവോത്ഥാന ദർശനത്തെ പരിശോധിക്കുക.

30) 'മുറ്റമടിക്കുമ്പോൾ' എന്ന കവിതയ്ക്ക് ഒരാസ്വാദനം തയ്യാറാക്കുക.

31) സ്ത്രൈണ ഭാവങ്ങളുടെ ആത്മാവിഷ്കാരങ്ങളാണ് മാധവിക്കുട്ടിയുടെ ആത്മ കഥകൾ – വിശകലനം ചെയ്യുക. **(6×4=24 മാർക്ക്)**

IV. **മൂന്നുപുറത്തിൽ** കവിയാതെ **രണ്ടെണ്ണ**ത്തിന് ഉത്തരമെഴുതുക.

32) 'ആദിവാസി ജീവിതത്തിന്റെ നേർച്ചിത്രണമാണ് നാരായന്റെ നോവലുകൾ' – ഊരാളിക്കുടിയെ മുൻനിർത്തി പരിശോധിക്കുക.

33) കീഴാളസ്വത്വത്തെ തിരിച്ചറിയുന്ന രചനകളാണ് ടി. കെ. സി. വടുതല, സി. അയ്യപ്പൻ എന്നിവരുടേത് – വിശകലനം ചെയ്യുക.

34) മലയാള കവിതകളിലെ സ്ത്രീപക്ഷ സമീപനം ചർച്ച ചെയ്യുക.

35) ഫെമിനിസ്റ്റ് കാലഘട്ടത്തിന്റെ കലഹവും രോഷവും സരസ്വതിയമ്മയുടെ രചന കളെ മൂർച്ചയുള്ളതാക്കുന്നു – 'പെൺബുദ്ധി' എന്ന കഥയെ ആധാരമാക്കി ഈ അഭിപ്രായം വിശകലനം ചെയ്യുക. **(2×15=30 മാർക്ക്)**

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Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
Career Related First Degree Programme Under CBCSS
MALAYALAM AND MASS COMMUNICATION
Complementary Course – III
MX 1331 : വിവർത്തന താരതമ്യ പഠനം
(2014 Admission Onwards)

Time : 3 Hours Max. Marks : 80

I. **ഒരു** വാക്കിലോ **ഒറ്റ** വാചകത്തിലോ ഉത്തരമെഴുതുക.

1) ഏറ്റവും കൂടുതൽ ഭാഷകളിലേക്ക് വിവർത്തനം ചെയ്യപ്പെട്ട ഗ്രന്ഥം ഏത് ?

2) 'All that glitters is not gold' – മലയാളത്തിലേക്ക് പരിഭാഷപ്പെടുത്തുക.

3) ബംഗാളി ഭാഷയിൽ നിന്നു മലയാളത്തിലേക്ക് ഏറ്റവും കൂടുതൽ വിവർത്തനം ചെയ്ത കൃതി ഏതാണ് ?

4) സി. എൻ. ശ്രീകണ്ഠൻ നായർ രചിച്ച രാമായണകഥാധിഷ്ഠിതമായ നാടകത്രയത്തിന്റെ പേരെഴുതുക.

5) തകഴി രചിച്ച നാടകം ഏതാണ് ?

6) ബാലചന്ദ്രൻ ചുള്ളിക്കാടിന്റെ ആത്മകഥാപരമായ രചനയുടെ പേരെന്ത് ?

7) വിവർത്തന വിചാരം എന്ന പുസ്തകം രചിച്ചതാര് ?

8) Towards Translation as a Science എന്ന ഗ്രന്ഥത്തിന്റെ രചയിതാവാര് ?

9) Earned Leave എന്നതിന്റെ മലയാളപരിഭാഷ എഴുതുക. –

10) തർജ്ജമ എന്നത് ഏത് ഭാഷയിലെ പദമാണ് ? **(10×1=10 മാർക്ക്)**

P.T.O.

II. **ഒരു** ഖണ്ഡികയിൽ കവിയാതെ **എട്ടു** ചോദ്യത്തിന് ഉത്തരം എഴുതുക.

11) പരോക്ഷവിവർത്തനം എന്നാലെന്ത് ?

12) വിവർത്തനം ഒരു കലയാണെന്നു പറയാനുള്ള കാരണമെന്ത് ?

13) ഏതാനും വിവർത്തനോപകരണങ്ങളെക്കുറിച്ച് വിവരിക്കുക.

14) 'നിലാവിന്റെ നാട്ടിൽ' എന്ന കഥയുടെ വിവർത്തനത്തിന്റെ പ്രത്യേകതകൾ എന്തെല്ലാം ?

15) ലിപ്യന്തരണം (Transliteration) എന്നാലെന്ത് ?

16) പ്രസംഗം തർജ്ജുമ ചെയ്ത് ഫലിപ്പിക്കുന്നത് ദുഷ്കരമായ കാര്യമാണെന്നു പറയുന്നതെന്തുകൊണ്ട് ?

17) ആശയവിവർത്തനത്തിന്റെ പ്രത്യേകതകൾ എഴുതുക.

മലയാളത്തിലേക്ക് വിവർത്തനം ചെയ്യുക.

18) a) Silent cat will break the pot.

b) To forgive is better than to take revenge.

19) a) Complaint Petition

b) Waste land

c) Cry in the wilderness

d) Tit for tat. –

20) Once upon a time there lived a little weaver, by name Victor Prince, but because his head was big, his legs thin and he was altogether small, and weak, and ridiculous, his neighbours called him Vicky – Little Vicky the Weaver.

21) **ഇംഗ്ലീഷിലേക്ക്** പരിഭാഷപ്പെടുത്തുക.

a) ആകാശഗംഗ

b) മുടിചൂടാമന്നൻ

c) വായിൽ വെള്ളിക്കരണ്ടിയുമായി ജനിക്കുക

d) പ്രപഞ്ച വിജ്ഞാനം -

22) ദ്വിഭാഷി (Interpreter) യുടെ കടമകൾ എന്തെല്ലാം ? **(8×2=16 മാർക്ക്)**

III. **ഒരു** പുറത്തിൽ കവിയാതെ ഏതെങ്കിലും **ആറു** ചോദ്യത്തിന് ഉത്തരം എഴുതുക.

23) പദാനുപദ വിവർത്തനം (Word for word translation) സാഹിത്യത്തിൽ പരിഹാസ്യമായിത്തീരും എന്നു പറയാൻ കാരണമെന്ത് ?

24) ഭരണഭാഷാ വിവർത്തനത്തിൽ നേരിടുന്ന പ്രശ്നങ്ങൾ എഴുതുക.

25) ഉത്തമനായ വിവർത്തകനുണ്ടായിരിക്കേണ്ട ഗുണങ്ങൾ എന്തെല്ലാം ?

26) 'അഗ്നിച്ചിറകുകൾ' എന്ന കൃതിയെ പരിചയപ്പെടുത്തുക.

27) വിവർത്തനകൃതികൾ വായിക്കുന്നതുകൊണ്ടുള്ള നേട്ടങ്ങൾ വിവരിക്കുക.

മലയാളത്തിലേക്ക് മൊഴിമാറ്റുക.

28) My father travels on the late evening train standing among silent commuters in the yellow light, suburbs slide past his unseeing eyes. His shirt and pants are soggy and his black raincoat stained with mud and his bag stuffed with books. Is falling apart ?

29) The Old Man and the Sea is the story of an epic struggle between an old, seasoned fisherman on one side and the sea on the other. This story presents life as a battle against the unconquerable forces of nature and shows how there is victory even in defeat. It is an exciting but tragic adventure story.

ഇംഗ്ലീഷിലേക്ക് പരിഭാഷപ്പെടുത്തുക.

30) പാലക്കാട്ടു നിന്ന് കോയമ്പത്തൂർ നിരത്തിലൂടെ കഞ്ചിക്കോട്ടെത്തി. അവിടെ നിന്ന് മൺതാരയിലൂടെ ചുര പ്രദേശങ്ങളിലേക്ക് തിരിഞ്ഞു. പരുക്കനായ വാടക ജീപ്പിനു പോലും സഞ്ചരിക്കാൻ പറ്റിയതായിരുന്നില്ല ആ വെട്ടുവഴി. എങ്കിലും ഈ യാത്രയിൽ, പത്തുവർഷത്തിനുശേഷം ഉള്ള രണ്ടാമത്തെ യാത്രയായിരുന്നു ഇത്, തെയ്യു ? ആരേയും പഴി പറഞ്ഞില്ല.

31) ഇന്ത്യയുടെ നഷ്ടപ്പെട്ട പ്രഭാവം വീണ്ടെടുക്കുകയാണ് നവോത്ഥാനത്തിന്റെ മാർഗ്ഗം എന്നുള്ള ഒരു ബോധം ഇവിടെ നിലവിലുണ്ടായിരുന്നു. നഷ്ടപ്പെടുന്നവരുടെ ബോധം. അതിൽ നിന്നാണ് ചരിത്രനോവലുകളുടെ ആവിർഭാവം. ഇന്ത്യയുടെ പൗരാണികബോധത്തെ പാശ്ചാത്യർ ഇല്ലാതാക്കിയതാണെന്നും അതു വീണ്ടെടുക്കാവുന്നതാണെന്നുമുള്ള ക്ഷാത്രബോധം നമ്മുടെ നവോത്ഥാനത്തിന്റെ പ്രബലമായ ഒരു ധാരയാണ്. ഗോഖലയുടെയും തിലകന്റെയും ദേശീയവാദത്തെ നിരീക്ഷിച്ചാൽ ഇക്കാര്യം വ്യക്തമാകും.

(6×4=24 മാർക്ക്)

IV. **മൂന്നു** പുറത്തിൽ കവിയാതെ ഏതെങ്കിലും **രണ്ടു** ചോദ്യത്തിന് ഉത്തരം എഴുതുക.

32) ''വിവർത്തനത്തിൽ നഷ്ടപ്പെടുന്നതെന്തോ അതാണു കവിത'' – 'എവിടെ ജോൺ' എന്ന കവിതയുടെ വിവർത്തനത്തെ ആസ്പദമാക്കി പരിശോധിക്കുക.

33) നാടകവിവർത്തനത്തിന്റെ പ്രശ്നങ്ങൾ കാഞ്ചന സീതയുടെ വിവർത്തനത്തെ മുൻനിർത്തി വിശകലനം ചെയ്യുക.

34) മാധ്യമരംഗത്തെ വിവർത്തനങ്ങളെക്കുറിച്ച് ഉപന്യസിക്കുക.

35) സർഗ്ഗാത്മക കൃതികൾ വിവർത്തനം ചെയ്യുമ്പോൾ നേരിടേണ്ടി വരുന്ന പ്രശ്നങ്ങൾ എന്തെല്ലാം ? ചെമ്മീൻ വിവർത്തനത്തെ അടിസ്ഥാനമാക്കി ചർച്ച ചെയ്യുക.

(2×15=30 മാർക്ക്)

(Pages : 2) **F – 4117**

Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
(Career Related First Degree Programme Under CBCSS)
Group 2(a)
Malayalam and Mass Communication
Vocational Course – III
MX – 1371 : REPORTING
(2014 Admission Onwards)

Time : 3 Hours Max. Marks : 80

I. Answer the following in **one/two** words or in **one/two** sentences.

1) Deadline
2) Chief reporter
3) Source
4) Dateline
5) Press release
6) Staccato
7) Intro
8) Freebie
9) Roundup
10) Freelancer.

(10×1=10 Marks)

II. Answer **any eight** questions, **each** in about **60** words.

11) What is meet-the-press ?
12) What is advertorial ?
13) Define off-the-record.
14) What is quotation lead ?
15) Exclusive.

P.T.O.

16) The statesman.

17) Interview features.

18) What is hard news ?

19) Timeliness.

20) Beat.

21) What is crime reporting ?

22) Editorial.

(8×2=16 Marks)

III. Answer **any six** questions, **each** in about **120** words.

23) What is a news bureau ? Explain.

24) Write about freedom of the press.

25) Explain story structure.

26) What is paid news ?

27) What is personality interview ?

28) Explain investigative journalism.

29) PTI.

30) What is the role of legal reporter ?

31) Explain feature writing.

(6×4=24 Marks)

IV. Write long essays on **any two** of the following.

32) Skillful interviewing is the basis for all good reporting and writing. Elucidate.

33) Discuss the various sources from where you will get information for doing crime stories. Explain ways to ensure objectivity while sourcing news.

34) Explain different types of lead with one example each.

35) Explain in detail the elements of news value that news stories should possess.

(2×15=30 Marks)

(Pages : 2) **F – 4118**

Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
(Career Related First Degree Programme under CBCSS)
Group 2(a)
MALAYALAM AND MASS COMMUNICATION
Vocational Course – IV
MX 1372 : Editing
(2014 Admission Onwards)

Time : 3 Hours Max. Marks : 80

PART – A

I. Write answer in **one** or **two** sentences : **(1×10=10 Marks)**

1) _____ is the process writers use to catch errors.
2) _____ is the person who cleans the news copy.
3) _____ is one of the key components in news processing.
4) _____ is strictly followed in a news room.
5) A typical headline is _____ words in length.
6) _____ adds punch to the pictures.
7) It is essential to work on _____ when working with layouts.
8) _____ is one of the major principles of page layout.
9) _____ represents the view point of the newspaper.
10) _____ is one of the editing softwares.

PART – B

II. Write short notes on **eight** of the following **not** exceeding **one** paragraph. **(8×2=16 Marks)**

11) Deputy editor.
12) Chief news editor.
13) Press release.
14) Translation.

P.T.O.

15) Strap line.
16) Blurbs.
17) Newspaper.
18) Quark express.
19) Pagination.
20) News pages.
21) Features.
22) Adobe in design.

PART – C

III. Write short essay on **six** of the following **not** exceeding **120** words. **(6×4=24 Marks)**

23) What are the fundamental principles of news editing ?
24) Specify any eight editing marks you have studied and their functions.
25) List out the indispensable principles of translation.
26) Why is objectivity important in journalism ?
27) Explain the importance of visual quality of a newspaper.
28) What are different types of captions used in photo journalism ?
29) Explain the features of Indesign software.
30) Write a brief note on the key characteristics of feature writing.
31) Enlist the responsibilities of the key personnel in news desk.

PART – D

IV. Write essays on **any two** of the following : **(2×15=30 Marks)**

32) Explain what is news room and how does it work ? Discuss your answers with suitable diagrams.
33) Discuss the various types of newspaper headlines with illustrations you have studied.
34) Enumerate the conceptual model of a good layout.
35) Differentiate feature from column writing with examples.

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(Pages : 3) F – 4125

Reg. No. : .....

Name : .....

Third Semester B.A. Degree Examination, January 2019
Career Related First Degree Programme Under CBCSS
MALAYALAM AND MASS COMMUNICATION
Core Course – IV
MX 1341 : മലയാളകവിത പൂർവ്വഘട്ടം
(2015 Admission Onwards)

Time : 3 Hours Max. Marks : 80

I. **ഒരു** വാക്കിലോ **2** വാക്യത്തിലോ ഉത്തരമെഴുതുക.

1) ''പുതുമലയാണ്മതൻ മഹേശ്വരൻ'' എന്ന് എഴുത്തച്ഛനെ വിശേഷിപ്പിച്ചതാരാണ് ?

2) പാട്ടു പ്രസ്ഥാനത്തിൽപ്പെട്ട ആദ്യകൃതി.

3) ഭാഷാഭഗവദ്ഗീതയുടെ കർത്താവ് ആരാണ് ?

4) 'മലയാളത്തിലെ ശാകുന്തളം' എന്ന് നളചരിതത്തെ വിശേഷിപ്പിച്ചതാരാണ് ?

5) ആദ്യത്തെ മണിപ്രവാള ചമ്പു.

6) അദ്ധ്യാത്മരാമായണത്തിലെ ലക്ഷ്മണോപദേശത്തിന് തത്ത്വബോധിനി എന്ന വ്യാഖ്യാനം രചിച്ചതാരാണ് ?

7) ആദ്യത്തെ തുള്ളൽക്കൃതി ഏത് ?

8) വഞ്ചിപ്പാട്ടുവൃത്തം ഏത് ?

9) 'കവിമൃഗാവലി' ആരുടെ കാവ്യമാണ് ?

10) കൃഷ്ണഗാഥയിൽ ഉപയോഗിച്ചിരിക്കുന്ന പ്രധാന വൃത്തമേത് ? **(10×1=10 മാർക്ക്)**

P.T.O.

II. **അരപ്പുറത്തിൽ** കവിയാതെ **8** ചോദ്യങ്ങൾക്ക് ഉത്തരമെഴുതുക.

11) "ചിത്താനന്ദം വരുംമാറഖിലതനുമതാം
ചെന്നു ചേർന്നും നിറഞ്ഞു". വർണ്ണ്യവിഷയമെന്ത് ? വിശദമാക്കുക.

12) നാടൻപാട്ടുകളിൽ പ്രതിഫലിക്കുന്ന സാമൂഹിക ജീവിതത്തെക്കുറിച്ച് കുറിപ്പെഴുതുക.

13) പൂന്താനം കൃതികളുടെ ജനകീയതയെക്കുറിച്ചെഴുതുക.

14) "സ്വാർത്ഥ പ്രത്യർത്ഥികളിലെവിടെ കാമുകാനാം വിവേകം" ഇങ്ങനെ പറയാൻ കാരണമെന്ത് ? വിശദമാക്കുക.

15) ഇരയിമ്മൻതമ്പിയുടെ ആട്ടക്കഥകളെ വിലയിരുത്തുക.

16) സീതാസ്വയംവരത്തിനെത്തിയ സാധാരണ ജനങ്ങളെ കവി പരിചയപ്പെടുത്തുന്നതെങ്ങനെ ?

17) "ഗഹനേ സന്താപങ്ങൾക്കു സഹനേ ശിഷ്യരല്ലയോ
ഹരിണപാളി, കരിവരാളി" – ആരുടെ ചിന്തയാണിത് ? വിശദമാക്കുക.

18) "ഹരിയെന്നാദിയൊരക്ഷരമവനുടെ
അരികേകൂടിപ്പോയിട്ടില്ല" – സൂചിതമെന്ത് ? വിശദീകരിക്കുക.

19) "അംഭോജാക്ഷികൾ മൗലിയാമിവൾ മണിപ്പോതംകടപ്പോളവും
ഗംഭീരാരവമോളവും ചുഴികളും കാറ്റും കുറച്ചീടണം" – ആരോടുള്ള അപേക്ഷയാണിത് ? വിശദമാക്കുക.

20) കിളിപ്പാട്ടുവൃത്തങ്ങൾ പരിചയപ്പെടുത്തുക.

21) കുചേലവൃത്തം വഞ്ചിപ്പാട്ടിനെ പരിചയപ്പെടുത്തുക.

22) വെണ്മണിക്കവിതകളുടെ സവിശേഷതകൾ എന്തെല്ലാം ? **(8×2=16 മാർ**

III. **ഒരു പുറത്തിൽ** കവിയാതെ **6** ചോദ്യങ്ങൾക്ക് ഉത്തരമെഴുതുക.

23) കൃഷ്ണഗാഥയുടെ ആഖ്യാനശൈലികൾ പരിചയപ്പെടുത്തുക.

24) ചമ്പുക്കളിലെ ഗദ്യത്തിന്റെ സവിശേഷത വിശദമാക്കുക.

25) മലയാളത്തിലെ മഹാകാവ്യപ്രസ്ഥാനത്തെക്കുറിച്ചു വിവരിക്കുക.

26) "വിശപ്പിന്റേയും വിയർപ്പിന്റേയും വിശ്വാസത്തിന്റേയും നൂലിഴകളാൽ തുന്നിയെടുത്ത സൗഹൃദത്തിന്റെ വർണ്ണസുചേലത്വം ഈ കുചേല കഥയ്ക്കുണ്ട്" എന്ന് കുചേല വൃത്തം വഞ്ചിപ്പാട്ടിനെ വിലയിരുത്തുന്നതിന്റെ സാധുത പരിശോധിക്കുക.

27) പച്ചമലയാള പ്രസ്ഥാനത്തിന്റെ സാഹിത്യസംഭാവനകൾ വിലയിരുത്തുക.

28) ഉണ്ണുനീലി സന്ദേശത്തിന്റെ സാഹിതീയമൂല്യം എന്ത് ?

29) നിരണം കവികൾ നടത്തിയ ഭാഷാപരിഷ്കരണം ചർച്ച ചെയ്യുക.

30) എഴുത്തച്ഛന്റെ തത്ത്വദർശനം ലക്ഷ്മണോപദേശത്തെ മുൻനിർത്തി പരിശോധിക്കുക.

31) മണിപ്രവാളത്തിന് ലീലാതിലകം നൽകുന്ന ലക്ഷണം സോദാഹരണം വിശദമാക്കുക. **(6×4=24 മാർക്ക്)**

IV. **മൂന്നുപുറ**ത്തിൽ കവിയാതെ ഉത്തരമെഴുതുക (**രണ്ടെണ്ണം**).

32) പാട്ടുപ്രസ്ഥാനത്തിന്റെ വികാസപരിണാമങ്ങൾ ചർച്ച ചെയ്യുക.

33) വെണ്മണിപ്രസ്ഥാനത്തിന്റെ സംഭാവനകൾ എന്തെല്ലാം ?

34) നവോത്ഥാനത്തിനുള്ള മാർഗ്ഗമായി ഭക്തി മാറുന്നതെങ്ങനെ ? പൂന്താനത്തിന്റേയും എഴുത്തച്ഛന്റേയും കാവ്യസംഭാവനകളെ മുൻനിർത്തി വിശദീകരിക്കുക.

35) രംഗസന്നിവേശത്തിലും പാത്രസൃഷ്ടിയിലും ഒരുത്തമനാടകത്തിന്റെ സർവ്വ ലക്ഷണങ്ങളും തികഞ്ഞിരിക്കുന്നു നളചരിതത്തിൽ. വിശദമാക്കുക.

(2×15=30 മാർക്ക്)

(Pages : 2) **F – 4140**

Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
(Career Related First Degree Programme under CBCSS)
Common for Group 2(a) : BOTANY AND BIOTECHNOLOGY
Group 2(b) Biotechnology (Multimajor)
Core Course V
BB 1341/BV 1341.1 : Angiosperm Anatomy and Reproductive Botany
(2013 Admission Onwards)

Time : 3 Hours Max. Marks : 80

I. Answer the following. (Answer **all** questions).

1) What is phellogen ?
2) Define meristem.
3) Name the outer wall of pollen grains.
4) What are bulliform cells ?
5) What are casparian strips ?
6) Define micropyle.
7) What are pits ?
8) What is entomophily ?
9) What is quiescent centre ?
10) Write down the composition of middle lamella. **(10×1=10 Marks)**

II. Short Answer questions. (Answer **any eight** of the following).

11) What are plasmodesmata ? Give any two functions.
12) Write down any two health hazards caused due to pollen grains.
13) What are lenticels ?
14) Write notes on any two mechanical tissues.
15) What is meant by microsporogenesis ?
16) Give two functions of stomata.

P.T.O.

17) Explain Tunica – Corpus theory.

18) What is triple fusion ?

19) What is the role of tyloses in the plant body ?

20) Write an account on annual rings.

21) What is tapetum ? Mention its function.

22) Mention the significance of pollination. **(8×2=16 Marks)**

III. Short Essay Questions. (Answer **any six** of the following).

23) Differentiate simple pit from bordered pit.

24) Write an account on the structure and formation of periderm.

25) Write notes on the Barriers of fertilization.

26) Explain the types of vasçular arrangements in plants using diagrams.

27) With the help of diagram, write down the structure of monocot embryo.

28) Compare dicot and monocot leaves.

29) Give a brief account on pollen viability test.

30) Explain the characteristics of monocot root.

31) Briefly describe the development of male gametophyte. **(6×4=24 Marks)**

IV. Essay Type. (Answer **any two** of the following).

32) Write an essay on the complex tissues in plants.

33) Describe the structure and development of *Allium* type embryo sac using sketches.

34) With the help of diagram explain the anomalous secondary structure in *Dracaena* stem.

35) Write an essay on the non-living inclusions in plants. **(2×15=30 Marks)**

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Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
(Career Related First Degree Programme under CBCSS)
Group 2(a) : BOTANY AND BIOTECHNOLOGY
Vocational Course – IV
BB 1371 : Protista and Animal Diversity
(2013 Admission Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **all** questions in **a** word or **one** of **two** sentences. **(1×10=10 Marks)**

1. What is an exoskeleton ?
2. What is haemocoel ?
3. Define metamerism.
4. Name a pathogenic protozoan and the disease it cause.
5. What is definitive host ?
6. Mention the scientific name of any two stored grain pests.
7. Name a cnidarian which resembles a terrestrial flowering plant.
8. What are the respiratory organs in insects ?
9. Name an egg lying mammal.
10. Name the protist which is able to metabolize cellulose.

SECTION – B

Answer **any 8** questions. Answers **not** to exceed **one** paragraph. **(2×8=16 Marks)**

11. Describe the feeding mechanism of *Paramecium*.

P.T.O.

12. Classify Phylum Platyhelminthes with examples.
13. What is the evolutionary significance of *Limulus* ?
14. Distinguish between prostomium and peristomium.
15. Assign the following animals to their respective Phyla.

    a) Star fish, b) Sepia, c) Cockroach, d) Fasciola

16. Mention any four characters of the Phylum Nematoda.
17. Explain alteration of generation.
18. Describe the salient features of phylum Parabasalia.
19. How sepia escapes from its predators ?
20. What is the common name of the following ?
    a) Penaeus
    b) Hirudinaria.
21. What are setae ? In which phylum it is present ?
22. Coral forming invertebrates belongs to which Phylum ?

SECTION – C

Answer **any 6** questions. Answers **not** to exceed **half** page. **(4×6=24 Marks)**

23. Describe the salient features of the Phylum Echinodermata.
24. Explain the three kingdom system of classification.
25. Write short notes on the following.
    a) Dentalium
    b) Star fish
    c) Nereis
    d) Scoliodon.

26. Classify Phylum Mollusca up to classes with examples.

27. Describe the salient features and adaptations of chiton.

28. Describe Aristotle's lantern.

29. Give an account on the flight adaptations of birds.

30. How do you identify a poisonous snake from a non-poisonous one ?

31. Explain the reproduction in paramecium.

SECTION – D

Answer **any 2** questions. Answers **not** to exceed **three** pages. **(15×2=30 Marks)**

32. Explain in detail the salient features and outline the classification of phylum arthropoda with general characteristics of each class along with suitable examples.

33. Explain the general features and classification of kingdom Protista with suitable examples.

34. Explain the nervous and digestive systems of cockroach with suitable diagram.

35. Describe the digestive system of a frog with labeled diagrams. } Out of syllabus.

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Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
(Career Related First Degree Programme Under CBCSS)
Group 2(a) : Botany and Biotechnology
Vocational Course – V
BB 1372 : ANIMAL PHYSIOLOGY AND ANATOMY
(2013 Admission Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – A

Very short answer type. Maximum **two** sentences. Answer **all.** **(10×1=10 Marks)**

1. Name the different organelles found in a human cell.
2. What is the function of ribosomes ?
3. Which are the vital organs in human body ?
4. Differentiate between suspension feeders and fluid feeders with examples.
5. Which are the different salivary glands ? Name the digestive enzyme present in saliva.
6. What is bronchitis ?
7. What is meant by systole and diastole ?
8. What is amenorrhea ?
9. What is blastula ?
10. What is a ganglion ?

P.T.O.

SECTION – B

Short answer questions. **Not** exceed in **one** paragraph. Answer **any eight.** **(8×2=16 Marks)**

11. What is rennin ?
12. What is fatty liver ?
13. Write a note on interstitial fluid.
14. What is von Willebrand disease ?
15. Write a brief note on human excretory products.
16. Which are the different layers of human skin ?
17. Write a note on scabies.
18. Write a note on the hormones secreted by thyroid gland.
19. What is Graves' disease ?
20. Which are the diseases caused by hypothyroidism ?
21. What is calcitonin ?
22. Write a note on the hormones produced by pancreas.

SECTION – C

Short essay. **Not** to exceed **120** words. Answer **any six.** **(6×4=24 Marks)**

23. Write a note on gastric digestion.
24. Write a note on neurotransmitters.
25. Write a note on blood groups.
26. Describe pulmonary respiration.
27. Describe oogenesis.
28. Write a note on formation of urine.
29. Write a brief note on invertebrate excretory organs.
30. Write a note on cranial nerves.
31. Write a brief note on invertebrate nervous system.

SECTION – D

Long essay. Answer **any two** questions. **(2×15=30 Marks)**

32. Describe human circulatory system with a suitable diagram.

33. Write an essay on different stages of human embryogenesis.

34. Describe the main bones of human skeletal system.

35. Describe the human digestive system with suitable diagram.

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Reg. No. : .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
Career Related First Degree Programme under CBCSS
2(a) – BOTANY AND BIOTECHNOLOGY
Complementary Course – I : BB 1331
Physiological Aspects in Biochemistry
(2014 Adm. Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – I

Answer **all** questions : **(1×10=10 Marks)**

1. State the importance of platelets.
2. Define anti-coagulants.
3. State the functions of Vitamin E.
4. What is detoxification ?
5. What is urea clearance ?
6. Write the functions of sodium.
7. What is chloride shift ?
8. Name the buffers in blood.
9. Define diabetes.
10. Name the hormones of female reproductive system.

P.T.O.

SECTION – II

Answer **any eight** questions : **(8×2=16 Marks)**

11. Write down the type of blood cells.
12. Name the bile pigments and state its importance.
13. Define bleeding time.
14. Draw the chemical name of Vitamin K.
15. Write the sources and functions of calcium.
16. What is conjugation ?
17. Name the test used to assess detoxification function of liver.
18. What is the renal threshold levels of glucose ?
19. Write about the partial pressure of gases.
20. What is respiratory acidosis ?
21. What is Hemophilia ?
22. State the functions of adrenalin.

SECTION – III

Answer **any six** questions : **(6×4=24 Marks**

23. Discuss the mechanism of bile pigment formation.
24. Describe hematopoesis.
25. Explain the chemical nature, sources and functions of Vitamin C.
26. Draw the structure of hephron.
27. Explain the transport of gases in blood.
28. Differentiate acidosis and alkalosis.

29. What is atherosclerosis and explain the process of plaque formation ?

30. Write the functions of thyroid hormone.

31. Write about oxytosin and vasopressin.

SECTION – IV

Answer **any two** questions : **(2×15=30 Marks)**

32. Explain in detail about blood coagulation and its factors.

33. Discuss the sources, chemical nature, functions and deficiency water soluble diseases of any two vitamins.

34. Describe the formation of urine.

35. Write the classification and functions of Endocrine system.

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Reg. No.: .....

Name : .....

Third Semester B.Sc. Degree Examination, January 2019
(Career Related First Degree Programme Under CBCSS)
Common for Group 2(a) Botany and Biotechnology and
Group 2(b) Biotechnology (Multimajor)
Core Course – V
BB 1342/BV 1342.1 : BRYOLOGY, PTERIDOLOGY, GYMNOSPERMS AND PALEOBOTANY
(2015 Admission Onwards)

Time : 3 Hours Max. Marks : 80

SECTION – A

Answer **all** questions in a word or **one** or **two** sentences. **Each** question carries **one** mark. Draw diagrams only if specified in the question.

Explain the following :

1. Elaters.
2. Synangium.
3. Manoxylic wood.
4. Paleobotany.
5. Coralloid root.
6. Plectostele.
7. Gemmae.
8. Pseudofossil.
9. Sporocarp.
10. Heterospory.

(10×1=10 Marks)

SECTION – B

Answer **any 8** questions. **Each** question carries **2** marks. Answer **not** to exceed **one** paragraph.

11. Give the systematic position of *Funaria*.
12. Mention the hydrophytic characters of *Equisetum*.

P.T.O.

13. Comment on the leaves of Pinus.
14. Explain the reproduction in Rhynia.
15. What are antheridiophores ?
16. Distinguish between Eusporangium and Leptosporangium.
17. Explain the fern characters of Cycas.
18. What is meant by Geologic time scale ?
19. Explain prothallus.
20. Distinguish between monoxylic and polyxylic wood.
21. Comment on the angiosperm characters of Gnetum.
22. Give a brief account on the economic importance of Pteridophytes.

(8×2=16 Marks)

SECTION – C

Answer **any 6** questions. **Each** question carries **4** marks. Answer **not** to exceed **120** words.

23. Describe the mode of vegetative reproduction in Riccia.
24. Write notes on male cone of Cycas.
25. Describe the external features of Marsilea.
26. What is Fossilization ? Mention different types of Fossils.
27. Give an illustrated account on the structure of Marchantia sporophyte.
28. Describe the external morphology of Equisetum.
29. Write notes on the economic importance of Pinus.
30. Briefly describe the external features of Lyginopteris.
31. Give the anatomical peculiarities of Cycas leaflet.

(6×4=24 Marks)

SECTION – D

Answer **any 2** questions. **Each** question carries **15** marks. Answer **not** to exceed **3** pages.

32. Explain in detail the stellar evolution in Pteridophytes.
33. Give an illustrated account on the structure and reproduction in Lepidodendron.
34. With the help of a neat labeled diagram describe the sporophyte of Funaria.
35. Write the classification of Gymnosperms and add a note on the diagnostic features of major classes.

(2×15=30 Marks)