Courses that include experiential learning through project work/field work/internship during last five years

Extract of affiliating University Curriculum having project work / field work / internship

1. Bengali
2. Botany
3. Education
4. Geography
5. History
6. Zoology

Bengali

Extract from Bankura University Syllabus

BANKURA UNIVERSITY
DEPARTMENT OF BENGALI



MASTER OF ARTS
BENGALI
(Effective from Academic Year 2019-20)

PROGRAMME BROCHURE

This course will give scope enough to the students to get familiar with old and medieval Bengali texts along with an understanding of the literary genres, contribution of individual authors and the philosophical-aesthetic paradigm of the time.

একক-১ : হাজার বছরের পুরাণ বাঙ্গালা ভাষায় বৌদ্ধগান ও দোহা : (কা আ তরুবর, ভবণই গহণ গম্ভীর বেগেঁ বাহী, সোনে ভরিতী করূণা নাবী, নগর বাহিরিরেঁ ডোম্বী তোহোরি কুড়িয়া, উঁচা উঁচা পাবত তঁহি বসই সবরী বালী, টালত ঘর মোর নাহি পড়বেষী) - হরপ্রসাদ শাস্ত্রী (বঙ্গীয় সাহিত্য পরিষৎ)

একক-২ : শ্রীকৃষ্ণকীর্ত্তন – বসন্ত রঞ্জন রায় সম্পাদিত (জন্ম খন্ড, নৌকা খন্ড, বংশী খন্ড, রাধা বিরহ)

একক-৩ : চণ্ডীমঙ্গল(আখেটিক খণ্ড) – মুকুন্দ চক্রবর্তী (রবিরঞ্জন চট্টোপাধ্যায় সম্পাদিত)

একক-৪ : বৈষ্ণব পদাবলী - সুকুমার সেন সম্পাদিত (সই কেবা শুনাইল শ্যাম নাম, কুলমরিয়াদ কপাট উদঘাটলুঁ, নন্দ নন্দন চন্দ চন্দন, আমার শপতি লাগে, কি কহব রে সখি আনন্দ ওর, শুনলহুঁ মাথুর চলব মুরারি)

কোর কোর্স : ১০৫ **প্রাচীন ও মধ্যযুগের বাংলা সাহিত্যের আর্থ-সামাজিক-রাজনৈতিক-ধর্মীয় পটভূমি**

(E1=40, E2=10, E1+E2=50, Class: 4 hrs./Week, Credit = 4)

Objectives:

Literature can't be separated from various social, political, economic & religious background. That is why, it is highly essential to introduce students with the background (socio historical and economical) of Bengali Literature. This course has been designed to fulfil the motto. The course introduces the students to the political and economic history of Bengal from 9th/10th century to present time.

Course learning outcomes:

The course will enable the students to historicize and contextualize a particular text so that they can comprehend the complexity which made the production of that particular text possible.

একক-১ বাংলার আর্থ-সামাজিক-রাজনৈতিক-ধর্মীয় ইতিহাস : দশম-দ্বাদশ শতাব্দী

একক-২: বাংলার আর্থ-সামাজিক-রাজনৈতিক-ধর্মীয় ইতিহাস : ত্রয়োদশ-পঞ্চদশ শতাব্দী

একক-৩: বাংলার আর্থ-সামাজিক-রাজনৈতিক-ধর্মীয় ইতিহাস : ষোড়শ শতাব্দী

একক-৪: বাংলার আর্থ-সামাজিক-রাজনৈতিক-ধর্মীয় ইতিহাস : সপ্তদশ-অষ্টাদশ শতাব্দী

Paper Code: 106CF **COMPULSORY FOUNDATION COURSE**

(E1=50, Credit = 1)

Communicative Skill and Personality Development

বাঁকুড়া বিশ্ববিদ্যালয়

বাংলা বিভাগ

সান্মানিক স্নাতক পাঠক্রম

(২০১৭-২০১৮ শিক্ষাবর্ষ থেকে প্রযোজ্য হবে)

মোট নম্বর: ১৩০০

মোট সেমেস্টার ০৬

সেমেস্টার ১

(I.A-10, ESE-40, TOTAL-50)

AHBNG-101C-1 বাংলা সাহিত্যের ঐতিহ্য

একক ১ : চর্যাগীতি (পদ সংখ্যা – ১,২,৫,৬,৮,১০,২০,২৬,২৮,৩৩,৪০)

একক ২ : শ্রীকৃষ্ণকীর্ত্তন (জন্মখন্ড, নৌকাখন্ড, বংশীখন্ড ও রাধাবিরহ) – বড়ু চণ্ডীদাস

একক ৩ : অন্নদামঙ্গল (অন্নদার ভবানন্দভবনে যাত্রা পর্যন্ত) – ভারতচন্দ্র রায়

একক ৪ : হুতোম প্যাঁচার নকশা (চড়ক বারোইয়ারী, হুজুক, মিউটিনি, পাদ্রী লং ও নীলদর্পণ বুজরুকি, ভূত নাবানো, দূর্গোৎসব) – কালীপ্রসন্ন সিংহ

AHBNG-102C-2 সংস্কৃত ও ইংরাজি সাহিত্যের ইতিহাস, ছন্দ-অলঙ্কার

একক ১ : সংস্কৃত সাহিত্যের ইতিহাস : কালিদাস, বাণভট্ট, ভাস, শূদ্রক

একক ২ : ইংরাজি সাহিত্যের ইতিহাস : চসার, ওয়াডর্সওয়ার্থ, শেলী, কিটস, স্কট, বার্নাড শ, এলিয়ট

একক ৩ : ছন্দ : অক্ষরবৃত্ত, মাত্রাবৃত্ত, স্বরবৃত্ত, ছড়ার ছন্দ, গদ্য ছন্দ সম্পর্কিত ধারণা

একক ৪ : অলঙ্কার : অনুপ্রাস, যমক, শ্লেষ, বক্রোক্তি, উপমা, রূপক, উৎপ্রেক্ষা, ব্যতিরেক, ব্যাজস্তুতি, অর্থান্তরন্যাস, বিরোধাভাস অলঙ্কার সম্পর্কিত ধারণা

AHBNG-103-GE-1 বাংলা সাহিত্যের ইতিহাস

একক ১ : বাংলা সাহিত্যের জন্মলগ্নের ইতিহাস, তুর্কি আক্রমণ

একক ২ : i) পদাবলী সাহিত্যের ইতিহাস : বিদ্যাপতি, চণ্ডীদাস, জ্ঞানদাস, গোবিন্দদাস

ii. চৈতন্যজীবনী : বৃন্দাবন দাস, লোচন দাস, কৃষ্ণদাস কবিরাজ

একক ৩ : অনুবাদ সাহিত্য : রামায়ণ - কৃত্তিবাস, মহাভারত - কাশীরাম দাস, ভাগবত – মালাধর বসু

একক ৪ : মঙ্গলকাব্য : মনসামঙ্গল – বিজয় গুপ্ত ও নারায়ণদেব, চণ্ডীমঙ্গল – মুকুন্দ চক্রবর্তী, ধর্মমঙ্গল – ঘনরাম চক্রবর্তী

AHBNG-104A-ECC-1 - Environmental Studies

সেমেস্টার - ২

(IA-10, ESE-40, TOTAL-50)

AHBNG - 201C-3 **বাংলা সাহিত্যের ইতিহাস (প্রাচীন ও মধ্যযুগ)**

একক ১ : বাংলা সাহিত্যের জন্মলগ্নের ইতিহাস, তুর্কি আক্রমণ

একক ২ : i) পদাবলী সাহিত্যের ইতিহাস : বিদ্যাপতি, চণ্ডীদাস, জ্ঞানদাস, গোবিন্দদাস

ii. চৈতন্যজীবনী : বৃন্দাবন দাস, লোচন দাস, কৃষ্ণদাস কবিরাজ

একক ৩ : অনুবাদ সাহিত্য : কৃত্তিবাসী রামায়ণ, জগদ্রামী-রামায়ণ, কাশীদাসী মহাভারত, মালাধর বসুর শ্রীকৃষ্ণবিজয়

একক ৪ : মঙ্গলকাব্য : মনসামঙ্গল – বিজয় গুপ্ত ও নারায়ণদেব, চণ্ডীমঙ্গল – মুকুন্দ চক্রবর্তী, ধর্মমঙ্গল– ঘনরাম চক্রবর্তী

AHBNG - 202C-4 বাংলা সাহিত্যে অতিপ্রাকৃত ও কল্পবিজ্ঞান কেন্দ্রিক আখ্যান ও গোয়েন্দা কাহিনি

একক ১ : রবীন্দ্রনাথের অতিপ্রাকৃত গল্প : মণিহারা, ক্ষুধিত পাষাণ, কঙ্কাল, নিশীথে

একক ২ : সব ভূতুড়ে (পেনেটিতে, ভূতুরে গল্প, ভয়, সত্যি নয় এবং অশরীরী) : লীলা মজুমদার

একক ৩ : ভূতুড়ে ঘড়ি : শীর্ষেন্দু মুখোপাধ্যায়

একক ৪ : বাংলা প্রবন্ধ : প্রবন্ধ সাহিত্যের সাধারণ পরিচয় (রামমোহন, বিদ্যাসাগর, বঙ্কিমচন্দ্র)

AHBNG – 203-GE-2 বাংলা সাহিত্যের ইতিহাস (আধুনিক যুগ)

একক ১ : কাব্যসাহিত্যের ইতিহাস : ঈশ্বর গুপ্ত, মধুসূদন, বিহারীলাল, রবীন্দ্রনাথ, জীবনানন্দ দাশ

একক ২ : গদ্যসাহিত্যের ইতিহাস : রামমোহন, বিদ্যাসাগর, বঙ্কিমচন্দ্র, রবীন্দ্রনাথ

একক ৩ : কথা-সাহিত্যের ইতিহাস :

i)উপন্যাস সাহিত্যের ইতিহাস : প্যারীচাঁদ মিত্র ,বঙ্কিমচন্দ্র, রবীন্দ্রনাথ, তারাশঙ্কর

ii)গল্প সাহিত্যের ইতিহাস : রবীন্দ্রনাথ, শরৎচন্দ্র, মানিক, বিভূতিভূষণ

একক ৪ : নাট্যসাহিত্যের ইতিহাস : মধুসূদন, দীনবন্ধু, গিরিশচন্দ্র, দ্বিজেন্দ্রলাল, বিজন ভট্টাচার্য

ACSHP–204A-ECC-2-MIL বাংলা সাহিত্যের সাধারণ পরিচয়

একক ১ : নৈবেদ্য : চিত্ত যেথা ভয় শূন্য, বৈরাগ্য সাধনে মুক্তি, শক্তি দম্ভ স্বার্থ লোভ

একক ২ : গল্পগুচ্ছ রবীন্দ্রনাথ ঠাকুর : পোস্টমাস্টার, সুভা, ছুটি

একক ৩ : বাংলা ধ্বনিতত্ত্ব : স্বরধ্বনির বর্গীকরণ ও ব্যঞ্জনধ্বনির বর্গীকরণ

একক ৪ : বাংলা রূপতত্ত্ব : পদ-প্রকরণ

সেমেস্টার – ৩

(IA-10, ESE-40, TOTAL-50)

AHBNG - 301C-5 বাংলা সংস্কৃতি চর্চা

একক ১ : ইতিহাস ও সংস্কৃতি – সুনীতিকুমার চট্টোপাধ্যায়

একক ২ : সংস্কৃতির গোড়ার কথা – গোপাল হালদার

একক ৩ : রবিবারের বাঙালি (প্রথম দশটি (১০) প্রবন্ধ পাঠ্য) -রবিরঞ্জন চট্টোপাধ্যায়

একক ৪ : লোকঐতিহ্যের দর্পণে (১. জাদু নির্ভর লোকজীবন ২. বাঙালি জীবনে ট্যাবু ৩. বাংলার লোকঐতিহ্যে মানবদেহ ৪. লোকঐতিহ্যের রূপান্তর) -মানস মজুমদার

AHBNG - 302C-6 **বাংলা সাহিত্যের ইতিহাস (আধুনিক যুগ)**

একক ১ : কাব্যসাহিত্যের ইতিহাস : ঈশ্বর গুপ্ত, রঙ্গলাল বন্দ্যোপাধ্যায়, মধুসূদন দত্ত, হেমচন্দ্র বন্দ্যোপাধ্যায়, নবীনচন্দ্র সেন, বিহারীলাল চক্রবর্তী, রবীন্দ্রনাথ ঠাকুর, জীবনানন্দ দাশ, সুধীন্দ্রনাথ দত্ত, বিষ্ণু দে, প্রেমেন্দ্র মিত্র, বুদ্ধদেব বসু, নজরুল ইসলাম, সুকান্ত ভট্টাচার্য, সুভাষ মুখোপাধ্যায়, নীরেন্দ্রনাথ চক্রবর্তী

একক ২ : গদ্যসাহিত্যের ইতিহাস : ফোর্ট উইলিয়ম কলেজের লেখকগোষ্ঠী ও শ্রীরামপুর মিশনের অবদান, রামমোহন রায়, বিদ্যাসাগর, অক্ষয়কুমার দত্ত, বঙ্কিমচন্দ্র চট্টোপাধ্যায়, রবীন্দ্রনাথ ঠাকুর, স্বামী বিবেকানন্দ, প্রমথ চৌধুরী

একক ৩ : কথাসাহিত্যের ইতিহাস (উপন্যাস ও ছোটগল্প) : প্যারীচাঁদ মিত্র ,বঙ্কিমচন্দ্র চট্টোপাধ্যায়, শরৎচন্দ্র চট্টোপাধ্যায়, রবীন্দ্রনাথ ঠাকুর, ত্রৈলোক্যনাথ মুখোপাধ্যায়, পরশুরাম, দ্বিজেন্দ্রনাথ ঠাকুর, জগদীশ গুপ্ত, শৈলজানন্দ মুখোপাধ্যায়, তারাশঙ্কর বন্দ্যোপাধ্যায়, মানিক বন্দ্যোপাধ্যায়, বিভূতিভূষণ বন্দ্যোপাধ্যায়, সুবোধ ঘোষ

একক ৪ : নাট্যসাহিত্যের ইতিহাস : মধুসূদন দত্ত, দীনবন্ধু মিত্র, অমৃতলাল বসু, গিরিশচন্দ্র ঘোষ, দ্বিজেন্দ্রলাল রায়, রবীন্দ্রনাথ ঠাকুর, বিজন ভট্টাচার্য, মন্মথ রায়, তুলসী লাহিড়ী, উৎপল দত্ত

AHBNG - 303C-7 **ভাষাবিজ্ঞান (বর্ণনামূলক ভাষাবিজ্ঞান)**

একক ১ : বাংলা ধ্বনির উচ্চারণ স্থান ও বাগযন্ত্রের বর্ণনা

একক ২ : ধ্বনি পরিবর্তনের কারণ ও ধ্বনি পরিবর্তনের ধারা

একক ৩ : বাংলা রূপতত্ত্ব

একক ৪ : বাংলা শব্দভাণ্ডার ও বাংলা শব্দার্থ পরিবর্তনের ধারা

AHBNG – 304-GE-3 **ভাষার ইতিহাস (ঐতিহাসিক ভাষাবিজ্ঞান)**

একক ১ : প্রাচীন ভারতীয় আর্যভাষা (কালগত বিস্তার ও বৈশিষ্ট্য)

একক ২ : মধ্য ভারতীয় আর্যভাষা (কালগত বিস্তার ও বৈশিষ্ট্য)

একক ৩ : নব্য-ভারতীয় আর্যভাষা (কালগত বিস্তার ও বৈশিষ্ট্য)

একক ৪ : বাংলা উপভাষার পরিচয়

AHBNG – 305-SEC-1 **ব্যবহারিক বাংলা ও অনুবাদ চর্চা**

একক ১ : বানান সংস্কার (পঃ বঃ বাংলা আকাদেমির বানান বিধি)

একক ২ : যতিচিহ্ন, পাদটীকা, তথ্যসূত্র প্রণয়ন বিধি

একক ৩ : অনুবাদ চর্চা : অনুবাদের শৈলী, অনুবাদ চর্চার সমস্যা

একক ৪ : বাংলা অনুবাদ চর্চার পরিচয় - বুদ্ধদেব বসু: ১. স্তোত্র ২. হেমন্ত ৩. এক শব

অলোকরঞ্জন দাশগুপ্ত : ১. বনের দেবতা ২. নিয়তির গান : হাইপেরিঅন ৩. পৃথিবী যদিও

*অলোকরঞ্জন দাশগুপ্ত ও শঙ্খ ঘোষ সম্পাদিত 'সপ্তসিন্ধু দশদিগন্ত' (দে'জ পাবলিশার্স) গ্রন্থটি থেকে কবিতাগুলি গৃহীত হয়েছে।

সেমেস্টার : ৪

(I.A-10,ESE-40,TOTAL-50)

AHBNG–401C- 8 **বাংলা লোকঐতিহ্য ও লোকসংস্কৃতি**

একক ১ : লোকসাহিত্যের সংজ্ঞা ও বাংলা লোকসংস্কৃতির পরিচয়

একক ২ : বাংলা চারুকলা চর্চার ঐতিহ্য : পটশিল্প, দেয়াল চিত্র, কয়েকজন চিত্রশিল্পী (অবনীন্দ্রনাথ ঠাকুর, নন্দলাল বসু, গগনেন্দ্রনাথ ঠাকুর, যামিনী রায়, রামকিঙ্কর বেইজ)

একক ৩ : বাংলা লোকগানের ঐতিহ্য : বাউল গান, ভাদু, টুসু, ঝুমুর, ভাটিয়ালি গান

একক ৪ : বাংলা লৌকিক সাহিত্য ও সাহিত্যিক :ক) ছড়া, ধাঁধা, প্রবাদ খ)চারণ কবি বৈদ্যনাথের-এর কবিতা।

AHBNG–402C-9 উনিশ ও বিশ শতকের কাব্য ও নাটক

একক ১ : মেঘনাদবধ কাব্য (১ম, ৪র্থ এবং ৯ম সর্গ) : মধুসূদন দত্ত

একক ২ : নির্বাচিত বাংলা কবিতা

আত্মবিলাপ - মধুসূদন দত্ত

চম্পা – সত্যেন্দ্রনাথ দত্ত

বাবরের প্রার্থনা – শঙ্খ ঘোষ

আন্তিগোনে মঞ্চ : কলকাতা – অলোকরঞ্জন দাশগুপ্ত

অবনী বাড়ি আছো – শক্তি চট্টোপাধ্যায়

একক ৩ : সধবার একাদশী : দীনবন্ধু মিত্র

একক ৪ :বিভাব: শম্ভু মিত্র

AHBNG–403C-10 বাংলা জীবনীসাহিত্যের ধারা

একক ১ : রবীন্দ্র জীবনকথা : প্রভাতকুমার মুখোপাধ্যায় (১-৫, ১২৪-১৪৩, ১৬০-১৬১ সংখ্যা পাঠ্য)

একক ২ : জীবনস্মৃতি : রবীন্দ্রনাথ ঠাকুর

একক ৩ : আপনকথা : অবনীন্দ্রনাথ ঠাকুর

একক ৪ : আত্মকথা : প্রমথ চৌধুরী

AHBNG–404-GE–4 রবীন্দ্র-সাহিত্য

একক ১ : সঞ্চয়িতা : মেঘদূত, বাঁশি, মুক্তি, সাধারণ মেয়ে

একক ২ : গল্পগুচ্ছ : দেনাপাওনা, নষ্টনীড়, বদনাম, গুপ্তধন

একক ৩ : যোগাযোগ

একক ৪ : কালের যাত্রা

AHBNG – 405-SEC – 2 বাংলা রচনাশক্তির নৈপুণ্য

একক ১ : প্রতিবেদন রচনা

একক ২ : পত্র রচনা : ব্যক্তিগত ও ব্যবহারিক

একক ৩ : প্রুফ সংশোধন

একক ৪ : কাল্পনিক সাক্ষাৎকার রচনা

সেমেস্টার : ৫

(I.A-10,ESE-40,TOTAL-50)

AHBNG–501C-11 সাহিত্যতত্ত্ব

একক ১ : প্রাচীন ভারতীয় সাহিত্যতত্ত্ব : ধ্বনিবাদ, রসবাদ, রীতিবাদ

Botany

Extract from The University of Burdwan Syllabus

6. Quantitative estimation of dissolved oxygen due to photosynthesis by Winkler's method.
7. Effect of sodium azide on water uptake by plants.
8. Bioassay of IAA by wheat coleoptile test.

Biochemistry 25 marks

1. Quantitative estimation of amino acids by spectrophotometric method using ninhydrin reagent.
2. Quantitative estimation of protein by spectrophotometric method using folin-Ciocalteau reagent.
3. Quantitative estimation of carbohydrate by spectrophotometric method using Anthrone reagent.
4. Determination of Acid value of fat sample.
5. Determination of total titratable acidity of cell sap.
6. Preparation of a standard curve for IAA and determination of unknown concentration of IAA.
7. Preparation of a standard curve for phenolic compound and determination of the concentrations of unknown phenolic compound.
8. Spectrophotometric estimation of reducing sugar by 3, 5,- dinitrosalicylic acid (DNS).

Bot/General/Prac/(405)- FM- 50

Ecology **Marks 25**

1. Determination of species area curve by Quadrat method.
2. Determination of density, frequency and basal cover of species.
3. Determination of association index of species.
4. Determination of index of similarity / dissimilarity between two communities.
5. Estimation of organic matter content of soil.
6. Determination of total soluble salts of soil / water.
7. Some field tests for the determination of soil texture.
8. Determination of nutrient content of soil by kit- method.
9. Colorimetric determination of nitrogen and phosphorus of soil.
10. Determination of dissolved oxygen in unpolluted and polluted water.
11. Determination of biodiversity in a plant community.

Plant Breeding Biometry Molecular Biology **Marks: 25**

Practical

1. Vegetative propagation: Layering, cutting, inarching, grafting, T-budding.
2. Weathering of micropropagules.
3. Isolation of chlorophyll mutants following irradiation and / or with chemical mutagens (Demonstration).
4. Diallel-breeding analysis
5. Genotype-Environment Interaction, Correlation coefficient.
6. Different techniques of emasculation and hybridization in self and cross pollinated plants.
7. Yield component analysis.
8. Isolation of plant nuclear DNA and protein and their spectrophotometric analysis (Demonstration).

Bot/Diss/(406)

Dissertation of Special Paper(S): **FM: 50**

Botany

Extract from Bankura University Syllabus

BOT – 204 C (TH) / Core course

Credit-3 **Taxonomy of Angiosperms (Theory)** **45L**

1. Taxonomy and systematics -concept, objectives and significance

2. Plant nomenclature-ICN, Principles, rules, recommendation and appendices, type concept, rules of priority, effective and valid publication, rejection of names. Taxonomic Hierarchy-definition, concept of species, genus, family and other categories.

3. Angiosperm classification: - Phenetic versus Phylogenetic systems, Cladistics in taxonomy; classification, relative merits and demerits of major system of classifications-Bentham and Hooker, Takhtajan, Cronquiest and APG-III (2009).

4. Biosystematics- methods, categories and relation with traditional taxonomy.

5. Role of Botanic garden and Herbaria in taxonomic study; Botanical Survey of India, its contribution and functions.

6. Taxonomic literatures- types, definition and Examples.

7. Salient features, floral diversity, diversity of families and phylogeny of the following orders- Ranales, Centrospermae, Amentiferae, Tubiflorae, Helobieae and Glumiflorae.

8. Principle of Phytogeography:-Static and dynamic concepts. Continental drift theory and endemism. Invasion and introductions. Local plant diversity and its Socio-economic importance.

BOT – 204 C (PR) / Core course

Credit-1 **Taxonomy of Angiosperms (Practical)** **30L**

1. *Study of about 10 wild taxa representing different families and identification to species level.*
2. *Study of flora of any forest patch of West Bengal.*
3. *Construction of Taxonomic keys.*
4. *As a part of botanical tours, student must observe and record of the flora of vegetation types of the study area and submit a report at the time of practical examination.*
5. *Formation of Phenogram and Cladogram.*
6. *Study of some micromolecular data in plant taxonomy like Betalins, Glucosinolates, Flavonoids, Terpenoids and Alkaloids.*
7. *Part of practical- student should submit minimum 50 Herbarium specimens or image of soft copies of 30 plants of common wild taxa.*

Rauwalfia – Rauwalfia serpentine , Cascara – Rhamnus purshiana , Nayan tara - Catharanthus roseus., Kuchila – Strychnos nux- vomica).

2. *Study of unorganized drugs - grains, resins, latex, oils etc.*
3. *Routine phytochemical tests for identification of certain secondary metabolites (alkaloids, tannins, terpenes, steroids, antroquinones, ellagic acid, gallic acid, glucosinolates etc.).*
4. *The fluorescence characteristics of powdered drug samples treated with inorganic acids and solvents under ordinary light and UV light.*
5. *Total antioxidants capacity of some edible parts of some medicinal plants.*
6. *Excursion to acquaint with the drug plants and ethnic specimens.*

BOT 304 EA (TH) / Elective Course Major

Credit – 3 **Taxonomy of Angiosperms and Biosystematics (Theory)** **45 L**

1. Circumscription and Phylogeny of Dilleniidae, Hamamelidae, Caryophyllidae, Rosidae, Asteridae; Alismatidae, Arecidae, Commelinidae, Zingiberidae and Liliidae sensu Cronquist (1988).

2. Taxonomy of Parasitic, Saprophytic and Insectivorous plants and their specializations.

3. Centres of origin and diversity of cultivated plants.

4. Evolution and differentiation of species - Abrupt and gradual speciation; Isolating mechanism- Geographical, ecological, seasonal, temporal, mechanical and ethological.

BOT 304 EA (PR) / Elective Course Major

Credit – 1 **Taxonomy of Angiosperms and Biosystematics (Practical)** **30 L**

i. *Study of the representative species selected from the Subclasses mentioned in the Theory Syllabus*

ii. *2. Study of exomorphic features of plants*

iii. *Excursions should be arranged to study different vegetations*

BOT 403 I. A.

Educational Excursion to industries and Laboratories for knowledge on Bioinstrumentation, Tutorial, Library work (Participation – 10 marks, Report – 30 marks, Viva – 10 marks) evaluated by the (Supervisor – 10 marks, All Faculties - 40 marks)

BOT 404 EA (TH) / Elective Course Major

Credit – 3 **Taxonomy of Angiosperms and Biosystematics (Theory)** **45 L**

1. Biosystematics principles, practices, limitations and scope; phenotypic plasticity

2. Endemism, Definition, Different theories regarding endemism; Distribution of endemic plant families in the southern hemisphere of the globe.

3. Taxonomic Evidences: - Morphology, Anatomy, Palynology, Embryology, Cytology, Phytochemistry, Nucleic acid hybridization as a tool in taxonomy

Molecular markers in Plant Systematics and phylogenetic analysis: Nuclear ribosomal DNA, Chloroplast DNA and Mitochondrial DNA; DNA Barcoding, Computer application and GIS.

BOT 404 EA (PR) / Elective Course Major

Credit – 3 **Taxonomy of Angiosperms and Biosystematics (Practical)** **30 L**

1. Phytography as per the pattern followed in the recent Floras.

2. Application of ICN rules in solving nomenclatural Problems.

3. Application of objective taxonomy (Phenetics and Cladistics) in resolving form relationship and phylogenetic relationship using.
4. Study of local vegetation by biological spectrum.
5. Excursions should be arranged to study different vegetations

Education

Extract from Bankura University Syllabus

CBCS SYLLABUS

FOR

THREE YEARS UNDER-GRADUATE COURSE

IN

EDUCATION (HONOURS)

(*w.e.f. 2017*)

BANKURA UNIVERSITY

BANKURA

WEST BENGAL

PIN 722155

SEMESTER-IV

Course Title: Project Work

Course Code: AHEDN/405/SEC-2B

Contact Hours per week: 2
Examination Duration: 2 hours

Maximum Marks: 50
Internal: 10
ESE: 40

Course Objectives:

After completion the course the learners will be able to:

2. Conduct project and report on this.

Course Contents:

The project work will have to be completed according to following steps and be submitted:

1. Identification of the problem/topic
2. Writing the Objectives/questions/hypotheses (wherever possible).
3. Field identification – scope and delimitations.
4. Nature of information /data required- their sources.
5. Collection and organisation of data, analysing and drawing inferences.
6. Reporting.

Or

Visit to a place of educational importance and writing a report (within 2000 words) on the following and be submitted:

1. Selection of place
2. Educational Importance of the place
3. Planning for visit
4. Documenting and noting down the visit with important features
5. Concluding remarks

Note : The project may either be a theoretical critical study or an empirical study

CBCS SYLLABUS

FOR

THREE YEARS UNDER-GRADUATE COURSE

IN

EDUCATION (PROGRAMME)

(*w.e.f. 2017*)

BANKURA UNIVERSITY

BANKURA

WEST BENGAL

PIN 722155

SEMESTER-IV

Course Title: Project Work

Course Code: AP/EDN/404/SEC-2

Contact Hours per week: 2
Examination Duration: 2 hours

Maximum Marks: 50
Internal: 10
ESE: 40

Course Objectives:

After completion the course the learners will be able to:

1. Conduct Tour and report on this.

Course Contents:

Visit to a place of educational importance and writing a report (within 2000 words) on the following:

1. Selection of place
2. Educational Importance of the place
3. Planning for visit
4. Documenting and noting down the visit with important features
5. Concluding remarks

Geography

Extract from The University of Burdwan Syllabus

PAPER-VIII (PRACTICAL)

APPLIED GEOGRAPHICAL TECHNIQUES AND FIELD REPORT

Full Marks: 100 **Examination Time: 6 hours**

Number of periods to be assigned for each of the Units: 20 (for Units 1, 2 and 4) & 30 (for Unit 3)

1.0 ANALYSIS OF GEOLOGICAL MAPS [20 MARKS]

1.1 Construction of Geological Section of Horizontal, Uniclinal, Folded and Faulted Structures Along with Igneous Intrusions and Line of Unconformity
1.2 Succession and Relation with Rock Groups
1.3 Topography and its Relation with Underlying Structures
1.4 Interpretation of Geological History

2.0 ANALYSIS OF CLIMATIC DATA AND MAPS [20 MARKS]

2.1 Rainfall Dispersion Diagram
2.2 Construction of Station Model (Indian Context)
2.3 Preparation of Synoptic Chart and Interpretation (Indian Context)
2.4 Interpretation of Daily Weather Maps Prepared by Indian Meteorological Department

3.0 COMPUTER APPLICATION, REMOTE SENSING AND GIS [30 MARKS]

3.1 Data Entry: Arrangement into Ascending and Descending Order; Cartograms Using Excel: Bar, Pie, Line Graph and Doughnut Chart
3.2 Calculation of Central Tendency and Standard Deviation Using Fomula
3.3 Bivariate Techniques: Scatter Diagram and Fitting of Trend Lines
3.4 Basic Concepts of Remote Sensing, GIS and GPS
3.5 Location of a Place Using GPS; Georeferencing of Scanned Maps and Images (Using Software)
3.6 Principles of Preparing and Interpretation of Standard FCC of Images; Digital Classification and Extraction of Physiographic and Cultural Features (Using Software)

4.0 FIELD REPORT ON EITHER A RURAL MOUZA OR AT LEAST ONE WARD OF AN URBAN AREA TO BE CONDUCTED DURING FIELD EXCURSION

[HAND WRITTEN REPORT: 10 MARKS, VIVA-VOCE: 5 MARKS, QUESTION-ANSWER (WRITTEN): 5, TOTAL 20 MARKS]

4.1.1 ***Guidelines for field report on rural mouza***

The following methods are to be followed before the preparation of field report:

(a) Plot-to-Plot Land Use Survey
(b) Collection of Socio-Economic and Physical Data
(c) Classification and Tabulation of Data
(d) Preparation of Land Use Map on Cadastral Plan
(e) Preparation of Maps and Diagrams showing Physiography, Drainage, Soil, Forest, Settlement, Irrigation, Cropping Pattern, Demographic Characteristics *etc.*
(f) Interrrelation and Analysis of Data, Maps and Diagrams

The Report is to be Prepared under the following sections:

(a) Introduction: Objective, Extent and Space Relations, Sources of Information, Methodology *etc.*

(b) Physical Components: Lithology, Drainage, Surface Condition, Slope, Climate, Soil Vegetation, *etc.*

(c) Population: Number, FMR, Literacy, Occupational Structure, Ethnic and Religious Composition, Language, Mobility, Media Exposure, Per Capita Income *etc.*

Geography

Extract from Bankura University Syllabus

3.14 SHGEO/602/C-14P: Research Methodology and Field Work

Research Methodology and Field Work

6 Credits

Unit 1: Research Methodology

3.14.1 Research in Geography: Meaning, types and significance

3.14.2 Literature Review and formulation of research design

3.14.3 Defining research problem, objectives and hypothesis. Research materials and methods

3.14.4 Techniques of writing scientific reports: Preparing notes, references, bibliography, abstract and keywords

Unit 2: Field Work

1. Fieldwork in Geographical studies –Selection of study area and objectives. Pre-field preparations
2. Field Enquiry Techniques and Tools: Observation (participant, non-participant), questionnaires (open, closed, structured, non-structured). Interview with special reference to focused group discussions.
3. Field Techniques and Tools: Landscape survey using transects and quadrants, constructing a sketch, photo and video recording.
4. Preparation of inventory from field data. Post-field tasks.

Reference Books

- Creswell J., 1994: Research Design: Qualitative and Quantitative Approaches Sage Publications.
- Dikshit, R. D. 2003: The Art and Science of Geography: Integrated Readings. Prentice-Hall of India, New Delhi.
- Evans M., 1988: "Participant Observation: The Researcher as Research Tool" in Qualitative Methods in Human Geography, eds. J. Eyles and D. Smith, Polity.
- Mukherjee, Neela 2002. Participatory Learning and Action: with 100 Field Methods. Concept Publs. Co., New Delhi

- Robinson A., 1998: "Thinking Straight and Writing That Way", in Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioural Sciences, eds. by F. Pryczak and R. Bruce Pryczak, Publishing: Los Angeles.
- Special Issue on "Doing Fieldwork" The Geographical Review 91:1-2 (2001).
- Stoddard R. H., 1982: Field Techniques and Research Methods in Geography, Kendall/Hunt.
- Wolcott, H. 1995. The Art of Fieldwork. Alta Mira Press, Walnut Creek, CA
- Beaumont, J.R. and Williams, S.W. 1983. Project Work in the Geography Curriculum. Croom Helm, London. 332p.

History

Extract from Bankura University Syllabus

Skill Enhancement Course (SEC) (2)
Semester III

UG/HIST/304 SEC- 1: Archives and Museum

Module I. Types of archives and museum: Understanding the traditions of preser India Collection policies, ethicsand procedures. Collection: field exploration, excavation,purchase, gift and bequests, loans and deposits,exchanges, treasure tr confiscation andothers documentation: accessioning, indexing,cataloguing, digita documentation and de-accessioning. Preservation: curatorial care, preventive conservation,chemical preservation and restoration.

Module II. Museum: Presentation and Exhibition**.**

Module III. Museums, Archives and Society**:** Education and communication, Ou activities.

Suggested Readings:

Saloni Mathur, India By Design: Colonial History and Cultural Display, University of California, 2007

Sengupta, S. Experiencing History Through Archives. Delhi: Munshiram Manoharlal.2004. Guha, Thakurta, Tapati, Monuments, Objects, Histories: Institution of Art in Colonial Colonial India, New York, 2004_Kathpalia, Y. P. Conservation and Restoration of Archive Materials.UNESCO, 1973

houdhary, R.D. Museums of India and their maladies. Calcutta: Agam Kala. 1988 Nair, S.M. Bio-Deterioration of Museum Materials. 2011

Agrawal, O.P., Essentials of Conservation and Museology, Delhi.

Semester IV

UG/HIST/405 SEC-2: Understanding Popular Culture

Module I: Introduction: Defining popular culture and understanding it historicall

23:31 ...1.8KB/s 53

Done Export focus

Module-I: Historiographical Trends
Module-II: Education in Early and Medieval Times; Formal & Informal
Module-:III Colonial Period: Socio-Religious Reforms; Women & Education for femal
Western Medical Education.
Module-IV: Role of School and Colleges in Colonial and Post Colonial Period.
Module-V: Contours of Female Literacy since 1950.
Module-VI: Present Scenario: Education as a Tool of Empowerment.

Suggested Readings:

Aparna Basu, Growth of Education and Political Development in India, 1898-1920,19
Aparna Basu, Bharati Ray, Women Struggle, A History of the All India Women's
2002
Ram Nath Sharma Rajender Nath Sharma, History of Education in India, Atlantic
1996
Radha Kumar, A History of Doing Usha Sharma, Women Education in Modern India

1. Skill Enhancement Course IV- An Introduction to Archaeology:

Module-I: Definition & Components
Module-II: Historiographical Trends
Module-III: Research Methodologies
Module-IV: Definition of Historical Sites & Explorations
Module-V: Field Work & Tools of research
Module-VI: Documentation, Codification, Classification, Analysis of findings and public

Suggested Readings:

John.A. Bintliff, A Companion to Archaeology
D.R. Chakrabarti, A History of Indian Archaeology: From the Beginning to 1947,New
Manohar, 1988
M. Hall & WS.W. Silliman, Historical Archaeology, USA, Blackwell, 2006
Mathew Johnson, Archaeological Theory: An Introduction, Blackwell Publishing, Nev
2010 Published Works by ASI

Kumkum Sangari & Sudesh Vaid, Recasting Women, Essay in Colonial History, Ka
Reprint, 2006

Sushila Kaushik, Panchayati Raj in Action: Challenges to Women's Role, Delhi, 199
Nivedita Menon, Gender & Politics in India, New Delhi, OUP, 1999 Women i
change over the last half century in reporting on women & Gender Issues in Indian
Shri Venkatram,2003.

4. Skill Enhancement Course III- Documentation & Visual Culture:-

I. Conceptual Framework
II. Visual Culture: Colonial & Post-Colonial Contexts
III. Politics of Documentation
IV. Methods of Documentation: Photographs, Films, Videos and digital
V. Fieldwork, Internship and Training

Suggested Readings:

Gayatri Sinha, ed, Art & Visual Culture in India: 1857-2007
Geeta Kapoor, When was Modernism-Essays on Cultural Practices in India, D
Publications, 2000 Publications by Sarai, CSDS, Rajpur Road, Delhi

Act. Negotiations for Independence and Popular Movements.
Partition: Riots and Rehabilitation.

Module II: **Making of the Republic The Constituent Assembly;**
Drafting of the Constitution Integration of Princely States

Module III: Indian Democracy at Work 1950- 1970s Language, Region,Caste and Religion Electoral Politics and the Changing Party System; Regional Experiences India and the World; Non Aligned Movement.

Module IV: Economy Society and Culture 1950-1970s
The Land Question, Planned Economy, Industry and Labour Science And EducationThe Women's Question: Movements and Legislation Cultural Trends: Institutions and Ideas, Literature, Media, Arts.

Suggested Readings:
Bipan Chandra, et al (ed) India after Independence, New Delhi: Penguin Books, 1999
Appadurai, Domestic Roots of India's Foreign Policy 1947-1972. New Delhi: Oxford University Press,
1979. Rajni Kothari, Politics in India, New Delhi: Orient Longman, 1970.
Joya Chatterji, The Spoils of Partition: Bengal and India, 1947-67,Cambridge: Cambridge University Press, 2007.
Sunil Khilnani, The Idea of India, Penguin Books, New Delhi, 2004

3. DSC IID:- From Some Other Discipline.

4. Skill Enhancement Course II- Museum& Archives in India:-

I. Definitions
II. History of setting up of Museum and Archives: Some case studies
III. Field Work; Studying of structures & Functions
III. Training & Employment

Suggested Readings:
G.Edson & Dean David, Handbook for Museum, London, Routledge, 1986
John Ridener, From Folders to Post Modernism: A Concise History of Archival Theory, 2009

SEM-V

1.DSE IA (Discipline Specific Elective)- History of Modern Europe (c. 1870 to c. 1945)

Module I: Imperial Expansion- Bismarck's Diplomacy and a new balance of Power; Kaiser William II and *Welt politic;* New Course in the German Foreign Policy; the Eastern Question in Late Nineteenth Century and the Balkan Wars (1912-13); Colonial Rivalries and the Outbreak of the First World War.
Module-II: The Crisis of Feudalism in Russia and Experiments in Socialism: Emancipation of serfs. Russian Populism and Social Democracy. Revolution of 1905; the Bolshevik Revolution of 1917. Programme of Socialist Construction.
Module III: First World War and its Aftermath- Emergence of Two Armed Camps; the Peace Settlement of 1919; the League of Nations.
Module IV: Crisis in Europe:Fascism and Nazism- Rise of Fascism in Italy; Rise of Nazism in Germany; World Economic Depression; the Crisis of Inter-War European Order.
Module V: Outbreak of the Second World War-Germany's Aggressive Foreign Policy; the War Economy; Spanish Civil War; Mussolini's Foreign Policy and Abyssinian Crisis; Formation of the Rome-Berlin-Tokyo Axis.
Module VI: Second World War and the Quest for Peace- Outbreak of the Second World War; Course of the War; Evolution of the UNO, Cold War politics

Suggested Readings:

23:34 1.2KB/s

F. Hutchins, Spontaneous Revolution.
V.C. Joshi (ed.), Rammohan Roy and the process of Modernis
in India.
J.Krishnamurti, Women in Colonial India.

Paul Brass, The Politics of India Since Independence, Cambri
Cambridge University Press, 1994. Ram Chandra Guha, India
Gandhi: The History of the World's Largest Democracy, New
Picador, 2007
Bipan Chandra, et al (ed) India after Independence, New Del
Penguin Books, 1999

3. DSC IIC:- From Some Other Discipline.

4. Skill Enhancement Course I- Historical Tourism: Theory & P

Historical Tourism: Theory &Practice

I. Defining Heritage - Art &Architecture in India: An overview: -Fiel
historical sites & Museums

II. Understanding Built Heritage: -Stupa Architecture -Temple Archite
Architecture, Forts, Palaces, Mosques -Colonial Architecture -Prese

III. Field Work: Visit to site &Conducting of research

IV. **Modalities of conducting tourism**

Suggested Readings:

Sunil Kumar, The Present in Delhi's Past, Delhi, Gyan Publishi
Howard, Heritage: Management, Interpretation, Identity, and Londo
V.S Agarwal, Indian Art, Varanasi, Prithvi Prakasahan, 1972
Percy Brown, Indian Architecture, Bombay, D. B. Taraporevala Son
James Harle, The Art & Architecture of the Indian Subcontine
Penguin, 1988
S.K.Bhowmik, Heritage Management: Care, Understanding & Ap
Heritage, Jaipur, 2004.

Zoology

Extract from The University of Burdwan Syllabus

The University of Burdwan

Syllabus for B.Sc. Honours

(1+1+1 Pattern)

in

Zoology

Click below to view

- Syllabus with effect from 2014-2015 onward
- Syllabus (Old)

PRACTICAL PAPERS

Paper – XI : Practical Paper

100 Marks : Time: 6 hours

[Questions are to be set with Three experiments : A) Micro measurement and Drawing (15 marks), B) Estimation of DO/free CO_2(15 marks), C) Determination of Soil pH (10 marks); Identification with reasons of any Four Pests and any Four Fishes (8X5=40 marks); Laboratory Note Book (5 marks); Brief presentation of Field-based Study/Review work (15 marks)]

Group - A: Ecology :

1. Use of Micrometers and Camera Lucida (Prism-type) in measuring and drawing of Zooplankton.
2. Quantitative estimation of Dissolved O_2 (Winkler's method) and Free CO_2 (APHA method) of natural water by titrimetric methods.
3. Determination of soil pH using pH meter.

Group - B: Applied Zoology:

1. Identification of ectoparasites and pests (up to Order and Generic characters*): Menopon , Pediculus, Xenopsylla, Scirpophaga , Leptocorisa , Nilaparvata , Apion, Spodoptera, Sitophilus, Tribolium*.

2. Identification of fish (up to Sub-Class and Species characters): *Cirrhinus mrigala , Labeo bata , Labeo rohita , Labeo calbasu, Catla catla , Channa stratus, Mystus vittatus, Pampus argenteus, Harpadon nehereus, Notopterus notopterus.*

Group - C: Field-based Study/ Review Work :

1. Zoology Honours students should complete a Field-based study OR a Review work OR a Term paper on a particular topic within the first two-year tenure of their degree course. If the candidate choose project work, this may be a group work, involving not more than 4 students.

2. Laboratory Note Book must be prepared on day-to-day basis and should be signed by the concerned teacher immediately after the laboratory work. The Laboratory Note Book should contain all the items in the syllabus and must be submitted on the day of examination.

SYLLABUS FOR
THREE-YEAR DEGREE COURSE
IN ZOOLOGY GENERAL

(With effect from the session 2014 - 2015)

THE UNIVERSITY OF BURDWAN

BURDWAN, 713104

WEST BENGAL

PRACTICAL

(Marks : 100 :: Time : 5 Hours)

P A P E R III

DISTRIBUTION OF MARKS

1. One Nonchordate Dissection		15
2. One Chordate Dissection		15
3. One Preparation /Mounting		06
4. Identification (6 items) with reasons	6x5 =	30
5. Spot identification (6 items)	6x2 =	12
6. Submission of Field Report		06
7. Laboratory Note Book		06
8. Viva-voce		10

PRACTICAL COURSE

1. **Nonchordate Dissections :**

i. Earthworm	:	Nervous system,
ii. Cockroach	:	Digestive system, Female reproductive system, Male reproductive system(excluding Vas deferens).

2. **Chordate Dissections :**

i. Carp	:	Brain, IXth & Xth cranial nerves.

3. **Preparation / Mounting / Staining**

i. Earthworm	:	Seta.
ii. Cockroach	:	Mouthparts.
iii. Honey bee	:	Pollen basket.
iv. Fish	:	Cycloid & Ctenoid scale.

4. **Identification with reasons of the following :**

a) *Amoeba, Paramoecium, Scypha, Obelia, Pennatula, Nereis,* Earthworm, *Hirudo, Hippa, Balanus, Squilla, Lepisma, Buthus, Cimex, Pediculus, Chiton, Patella, Lamellidens, Loligo, Mytilus, Ophiura, Antedon.*

b) *Ascidia, Branchiostoma, Scoliodon, Torpedo, Hippocampus, Heteropneustes,Clarias, Syngnathus, Rana, Rhacophorus, Draco, Typhlops, Naja, Ptyas, Vipera, Psittacula, Passer, Alcedo, Pteropus, Funambulus, Suncus.*

c) Bones:

i) Skull: Toad, Pigeon, Guinea pig.

ii) Vertebrae, Girdles: Toad, Pigeon, Guinea pig.

iii) Limb Bones: Toad

e**) Histological Slides:**

T. S. of Small intestine, Section of Liver, Kidney, Lung, Testis and Ovary of Rat

5. **Spot Identifications**

To be selected from the list given in Item 4.

6. **Submission of Field Reports: (any One)**

Visit to any One of the following:

i) Any Pond, Beach, Forest-ecosystem.

ii) Zoo garden.

iii) National museum.

iv) Apiculture centre or Cattle farm or Poultry farm or Sericulture station or Fish hatchery.

7. **Laboratory Note Book** must be prepared on day-to-day basis and should be signed by the concerned teacher immediately after the laboratory work. The Laboratory Note Book should contain all the items in the syllabus and must be submitted on the day of examination.

Zoology

Extract from Bankura University Syllabus

REVISED CBCS

SYLLABUS FOR

THREE YEARS UNDER-GRADUATE COURSE

IN

Zoology (HONOURS)

(*w.e.f. 2018-19)*

BANKURA UNIVERSITY

BANKURA

WEST BENGAL

PIN 722155

3.4 Core P2 - Perspectives in Ecology Lab **2 Credits**

Perspectives in Ecology

Practicals

1. Determination of population density in a natural/hypothetical community by quadrate method and calculation of Shannon-Weiner diversity index for the same community

2. Study of an aquatic ecosystem: Zooplankton, Measurement of turbidity/penetration of light, determination of pH, and Dissolved Oxygen content (Winkler's method), Chemical Oxygen Demand and free CO_2

3. Report on a visit to National Park/Biodiversity Park/Wild life sanctuary

4. Submission of Laboratory Note Book

Distribution of Marks:

	Full marks: 15
1. Experiment (from Item no. 1):	5
2. Experiment (from Item no. 2; pH or free O_2 or free CO_2 estimation)	5 (2+3)*
3. Report on Excursion:	3
4. Submission of Laboratory note book:	2

***Note**

Q 2. Principle: 2 marks and result: 3 marks

Suggested Reading

Desharnais Robert, Jeffrey Bell (2001) 'Ecology Student Lab Manual, Biology Labs', Benjamin Cummings

Darrell S Vodopich,(2009), 'Ecology Lab Manual', McGraw-Hill Higher Education

Sinha, J.K. , Chatterjee, A.K. and P. Chattopadhyay (2015) Advanced Practical Zoology, Books & Allied (P) Ltd

3.6 Core P3 - Non-Chordates II **2 Credits**

Non-Chordates II: Coelomates

Practicals

1. Identification of following specimens:

a. Aphrodite, Nereis, Heteronereis, Sabella, Serpula, Chaetopterus, Pheretima, Hirudinaria

b. Carcinoscorpius, Palamnaeus, Palaemon, Daphnia, Balanus, Sacculina, Cancer, Eupagurus, Scolopendra, Peripatus

c. Chiton, Dentalium, Pila, Doris, Unio, Pinctada, Sepia, Octopus, Nautilus, Asterias, Ophiura, Echinus, Cucumaria and Antedon

2. Identification of T.S. through pharynx, gizzard, and typhlosolar intestine of earthworm
3. Dissection, drawing and labelling of digestive system and septal nephridia of earthworm
4. a. Mounting of mouth parts of *Periplaneta*
   b. Dissection: digestive system and nervous system of *Periplaneta*
5. Submission of a Project Report on life cycle stages of any insect.
6. Submission of Laboratory Note Book

Distribution of Marks

Full marks: 15

1. Identification with reasons (any three):	7 [3+3+1]*
(Two from Item No. 1 and one from Item no.2.)	
2. Dissection (any one) (From Item no. 3 or 4):	4{2+1+1]*
3. Submission of a project report along with the life cycle stages of any insect (Item no. 5)	2
4. Submission of laboratory note book:	2

***Note:**

Q1. For Item (1), Sc. name:1 mark and Reasons: 2 marks. For Item (2) 1 mark is allotted for both identification and characters.

Q2. Dissection :2 marks ; drawing and labelling : 1 mark each

Suggested Reading

Ghosh, K.C. and Manna, B. (2015): Practical Zoology, New Central Book Agency, Kolkata

Poddar T. K., S. Mukherjee & S. K. Das (2002) An Advanced Laboratory Manual of Zoology, Laxmi Publications

Sinha, J.K. , Chatterjee, A.K. and P. Chattopadhyay (2015) Advanced Practical Zoology, Books & Allied (P) Ltd

4CBCS SYLLABUS

FOR

THREE YEARS UNDER-GRADUATE COURSE

IN

B.Sc General Degree Course (*w.e.f. 2017-18*)

BANKURA UNIVERSITY

BANKURA

WEST BENGAL

PIN 722155

Unit 4: Ecosystem

1. Types of ecosystem with an example, Food chain: Detritus and grazing food chains, Linear and Y-shaped food chains, Food web, Energy flow through the ecosystem, Ecological pyramids and Ecological efficiencies

2. Nitrogen cycle

3. Human modified forest ecosystem

Unit 5: Applied Ecology

1. Wildlife Conservation (in-situ and ex-situ conservation)

2. Management strategies for tiger conservation;

3.4 Core P2 - Ecology Lab **2 Credits**

Ecology Lab

List of Practical

1. Study of an aquatic ecosystem: Phytoplankton and zooplankton.

2. Measurement of area, temperature, turbidity/penetration of light, determination of pH, and Dissolved Oxygen content (Winkler's method), Chemical Oxygen Demand and free CO2

3. Report on a visit to National Park/Biodiversity Park/Wild life sanctuary

3.5 Core T3 – Invertebrate II

Invertebrate II

Unit 1: Introduction **4 Credits**

Evolution of coelom

Unit 2: Annelida

1. Classification up to classes with examples.

2. Excretion through nephridia.

Unit 3: Arthropoda

1. Classification up to classes with examples.

2. Respiration in prawn and cockroach.

RAMANANDA COLLEGE

ESTD - 1945

BISHNUPUR * BANKURA

Pin – 722122, West Bengal

UGC Recognized & State Government Aided Constituent College

Under the Bankura University

(Accredited by NAAC at 'B' Level)

E-mail :principal@ramanandacollege.org
principalramananda@gmail.com
Website: www.ramanandacollege.org

Tel.: (03244) 252059
Tele Fax: (03244) 254427
Mobile No. - +916297976619

Courses that include experiential learning through project work/field work/internship during last five years

Program name	Program code	Name of the Course that include experiential learning through project work/field work/internship	Course code	Year of offering
Zoology (Honours)	ZOOH	Visit to agricultural/sericulture/fishery /poultry farm/Marine or forest ecosystem	XII th. Paper	2015-16
Geography (Honours)	GEOH	APPLIED GEOGRAPHICAL TECHNIQUES AND FIELD REPORT	Paper viii	2015-16
Zoology (Honours)	ZOOH	Visit to agricultural/sericulture/fishery /poultry farm/Marine or forest ecosystem	III rd Paper	2016-17
M.Sc Botany	BOTG PG	Plant Ecology, Plant Systematics and Plant Diversity	EducationGeography	2016-17
Zoology (Honours)	ZOOH	Visit to agricultural/sericulture/fishery /poultry farm/Marine or forest ecosystem	P3-Non Chordates-II Lab	2017-18
M.Sc Botany	BOTG PG	Taxonomy of Angiosperm	BOT 204 C	2017-18
Geography (Honours)	GEOH	APPLIED GEOGRAPHICAL TECHNIQUES AND FIELD REPORT	Paper viii	2017-18
Zoology (Programme)	ZOOG	Ecosystem	Core P2 Perspective in Ecology Lab	2017-18
Education (Honours) & Education (Programme)	EDCH & EDCG	Psychological Testing, B. Project Work & Development of Education in India, B. Guidance and Counselling	40215 AH/EDN/405/SEC-2 & 40210 AP/EDN/404/SEC-2	2018 - 19
History (Honours & Programme)	HISH & HISP	Archives and Museum Historical Tourism Theory & Practice	AHHST/304SEC-1 & APHST/305SEC-1	2018-19
M.Sc Botany	BOTG PG	Taxonomy of Angiosperms and Biosystematics, Microbiology	BOT 304 EA, BOT 304 EB	2018-19
M.Sc Botany	BOTG PG	Educational Excursion and Field work Internal Assignment	BOT 403 IA	2018-19
Geography (Honours)	GEOH	APPLIED GEOGRAPHICAL TECHNIQUES AND FIELD REPORT	Paper viii	2018-19
Zoology (Programme)	ZOOG	Ecosystem	Core p2 Ecology Lab	2018-19
History (Honours & Programme)	HISH & HISP	Archives and Museum Historical Tourism Theory & Practice	AHHST/304SEC-1 & APHST/305SEC-1	2019-20

RAMANANDA COLLEGE ESTD.-1945 (BANKURA) BISHNUPUR

RAMANANDA COLLEGE

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Tele Fax: (03244) 254427
Mobile No. - +916297976619

B.A Bengali & M.A. Bengali	BEGH & PG BNG	'প্রাচীন ও মধ্যযুগের কিছু সাহিত্যিক, ঐতিহাসিক, ধর্মীয় ও সাংস্কৃতিক স্থান পর্যবেক্ষণ এর মাধ্যমে সেই সময়কার ইতিহাসচর্চা' (Study Of History Of Literature Of Old And Medieval Age By Visiting Some Literary, Religious, Historical And Cultural Space Of Old And Medieval Age).	AHBNG -201C-3, AHBNG -401C-8, PG 105	2019-20
M.Sc Botany	BOTG PG	Mycology, Plant Pathology	BOT 102 C	2019-20
Geography (Honours)	GEOH	Research Methodology and Field Work Lab	SHGEO/602/C-14P	2019-20

RAMANANDA COLLEGE ESTD.-1945 (BANKURA) BISHNUPUR

Document showing the experimental learning through project work/field work/internship

2015-16

Zoology

RAMANANDA COLLEGE

Report on Field Work / Excursion / Project Work (Last Academic Year)

1. Name of the Department: **ZOOLOGY**
2. Period of Excursion / Field Work / Project Work: **19th. February – 25th. February, 2016**
3. No. of Teacher participants with name: **02 (Dr. Paresh Chandra Pal & Mr. Prakash Kumar Santra)**
4. No. of Non-teaching participants with name: **NIL**
5. No. of student participants: **21(Twenty one) 2nd. Year Honours (B.U)**
6. Place(s) visited: **Vishakapattanam (AP) and its surrounding areas.**
7. Title of the Field Work / Project Work: **Educational Tour to VSKP**
8. Objectives: **To study the animals in captive condition, behavior and feeding habits. Other objectives are Effective Learning, Personal Development, Social and Historical knowledge, Critical Thinking, Effective Communication etc.**
9. Methodology (2 – 3 Sentences):1) **Observation by Photo copies.**
   2) To study the animals in natural and semi natural conditions.
   3) Change of behavior and movements
10. Data collection (2 – 3 Sentences): Movement and items of food provided to the animals present inside the Zoological Park. Photographs are taken for different animals like Tiger, Lion, Nilgai, Giraffe, Deer, Antelopes, Snakes, Tortoise and Birds etc.
11. Major findings (4 – 5 Sentences): Nocturnal birds like Owls, aquatic bird like Stork, Peacock and Pea-hens,Ostrich. Reptiles like Snakes, lizards and Tortoise. Mammals like Sloth bear, spotted deer, Monkeys, Deer, Tiger, Lion etc..
12. Outcome (4 – 5 Sentences):
    - Enhances the Curriculum. One of the biggest advantages to field trips is students allow to have a real-world experience. ...
    - New **Learning Environment**. Field trips also allow the students to learn outside of the classroom. ...
    - **Team Building**.
    - Planning.
    - Liability.
13. Conclusion (4 – 5 Sentences): Vishakapattanam is one of the most popular excursion spot for the students of Zoology. Indira Gandhi Zoological Park, VUDA Park, Fishing harbor, Fish aquarium and Bora Cave are situated in the surrounding areas of VSKP. The **excursion** should not be taken as a pleasure **trip**, though it is a sort of an enjoyable activity. College-authorized, teacher-planned, curriculum-integrated **excursion** can provide the most concrete and the most real learning experience.
14. Funding agency: **Amount Rs.5000/- spent from Ramananda College.**
15. Comments / Suggestions: **Financial grand regarding educational tour should be increased. It would be appreciated to allow the tour programme in different states regularly.**

Visit to Vishakapattanam and its surrounding areas from 19.02.2016 -25.02.2016




















Visit to Vishakapattanam and its surrounding arreas from 19.02.2016-25.02.2016 with 2nd. Year Honours students (BU) under the supervision of Dr. Paresh Chandra Pal and Prof. Prakash Kumar Santra.




21.02.2016


21.02.2016


21.02.2016


21.02.2016


21.02.2016













2016-17

Zoology

RAMANANDA COLLEGE

Report on Field Work / Excursion / Project Work (2016-17 Academic Year)

1. Name of the Department: Zoology
2. Period of Excursion / Field Work / Project Work : 30/11/2016 to 7/12/2016
3. No. of Teacher participants with name: 02
4. No. of Non-teaching participants with name: Nil
5. No. of student participants: 15
6. Place(s) visited: Rajaji National Park, Haridwar,
7. Title of the Field Work / Project Work: Study of the forest ecosystem of a National park
8. Objectives: to study the animals in their natural habitat and in the Himalayan foothill ecosystem.
9. Methodology (2 – 3 Sentences): Quadrate sampling, photography, jungle safari.
10. Data collection (2 – 3 Sentences): photography, animal call hearing and record (wherever possible), spotting, plant identification.
11. Major findings (4 – 5 Sentences): tiger pugmark, a good interaction between man and animals.
12. Outcome (4 – 5 Sentences): The basic knowledge about a forest ecosystem and exposure to a National Park.
13. Conclusion (4 – 5 Sentences): A much needed part of education for Zoology students.
14. Funding agency: Partly funded by the college.
15. Comments / Suggestions:

RAMANANDA COLLEGE



Group photo: Rajaji National Park. 30.11.16 - 7.12.16

RAMANANDA COLLEGE

Report on Field Work / Excursion / Project Work (2017-18 Academic Year)

16. Name of the Department: Zoology
17. Period of Excursion / Field Work / Project Work : 28/10/2017 to 02/11/2017
18. No. of Teacher participants with name: 02
19. No. of Non-teaching participants with name: 01
20. No. of student participants: 16
21. Place(s) visited: Gorumara National Park, West Bengal. Chapramari Wildlife Sanctuary, West Bengal.
22. Title of the Field Work / Project Work: Study of the forest ecosystem of a National park
23. Objectives: to study the animals in their natural habitat and in the Himalayan foothill ecosystem.
24. Methodology (2 – 3 Sentences): Quadrate sampling, photography, jungle safari.
25. Data collection (2 – 3 Sentences): photography, animal call hearing and record (wherever possible), spotting, plant identification.
26. Major findings (4 – 5 Sentences): Rhino spotting, study of natural ecosystem of animals.
27. Outcome (4 – 5 Sentences): The basic knowledge about a forest ecosystem and exposure to a National Park.
28. Conclusion (4 – 5 Sentences): A much needed part of education for Zoology students.
29. Funding agency: Partly funded by the college.
30. Comments / Suggestions:

RAMANANDA COLLEGE



The team: Gorumara National Park 28.10.17 - 2.11.17

CERTIFICATE FROM THE SUPERVISOR

This to certify that Mr./Ms. Sadananda Kumbhakar, bearing roll no. 17SH/210/0097 and registration no. 20160103 2289 of 2016-17 of Part-III, Zoology hons, Ramananda College, Bishnupur has joined the excursion to **Gorumara National Park, West Bengal** organized by the Department of Zoology under my guidance and supervision.

I wish her/him every success in life.

Date: 20/05/2019

ANINDITA BAR

Anindita Bar

Asst. Prof. of Zoology

Ramananda college, Bishnupur,Bankura.

RAMANANDA COLLEGE
Department of Zoology
BISHNUPUR, BANKURA

EXAMINED
DEPARTMENT OF ZOOLOGY
MUC WOMEN'S COLLEGE
BURDWAN

Scanned with CamScanner

Botany

RAMANANDA COLLEGE

BISHNUPUR * BANKURA

Pin – 722122, West Bengal

UGC Recognized & State Government Aided Institution

Affiliated to Bankura University

(Accredited by NAAC at B Level)

Tel: (03244)252059

Tele Fax: (03244) 254427

Ref. No: **Date:**

Department of Botany (UG and PG)

TO WHOM IT MAY CONCERN

An educational tour for field study of the Semester 2nd (PG) students is being held by the Department of Botany, Ramananda College from 14.12 .2016 to 16.12.2016 at Sundarban area under the guidance of the Departmental Teachers Dr. Ajit Kumar Datta and Dr. Shyamal Kanti Mailick. Plant Ecology, Plant Systematics and Plant diversity are the main focus of this Tour. Any sort of help in this regard is kindly solicited.

Ghorai 13/12/2016

Principal

(Dr.Swapna Ghorai)

Principal
Ramananda College
Bishnupur, Bankura



Botany Excursion -14.12.16 - 16.12.16 at Sundarbon


Botany Excursion -14.12.16 - 16.12.16 at
Sundarbon


Botany Excursion -14.12.16 - 16.12.16 at
Sundarbon

2017-18

Zoology

Report on Field Work / Excursion

Name of the Department: **ZOOLOGY**
Period of Excursion / Field Work: **15.02.2018**
No. of Teacher participants with name: **02 (Dr. Paresh Chandra Pal & Mr. Prakash Kumar Santra)**
No. of Non-teaching participants with name: **NIL**
No. of student participants: **06 (2nd. SEM Honours)**
Place(s) visited: **Sericulture Station, Bishnupur**
Title of the Project: **Visit of Sericulture farm at Bishnupur**.
Objectives: To study the culture method and life cycle of silk moths **.**
Methodology (2 – 3 Sentences):1) Observation by Photo copies.
2) To study the silk worms in natural and semi natural conditions.
3) Culture method and feeding behavior.

Data collection (2 – 3 Sentences):
Photographs of different types of silk worms, *insitu* and *exsitu* culture methods, feeding behavior of the worms and the processing of silk from cocoon through dry and wet method.

Major findings (4 – 5 Sentences):
Different strains of Moriculture , Mulbery silk moth types of voltinism, Different types of cocoons and their conservation, Rearing of silk through reeling process.
Conclusion (4 – 5 Sentences):
Bishnupur sericulture farm is one of the old sericulture farm in West Bengal. It was established in 1922-23. Due to lack of supervision and funding from the govt. its dignity is diminished day by day. This sericulture farm build with nearly 48 acre land but most of the parts are unused due to lack of funding and labour.

Amount Spent: Rs. 300/-
Funding agency: Self financed

Comments / Suggestions:
Financial grand regarding educational tour should be increased. It would be appreciated to allow the tour programme in other states.

Field Survey at Sericulture Station, Bishnupur on 15.02.2018



Sericulture farm visit at Bishnupur on 15.02.2018 with 2nd. SEM honours students under the guidance of Dr. Paresh Chandra Pal and Prof. Prakash Kumar Santra.

Report on Field Work / Excursion

Name of the Department: **ZOOLOGY**
Period of Excursion / Field Work: **20.02.2018**
No. of Teacher participants with name: **02 (Dr. Paresh Chandra Pal & Mr. Prakash Kumar Santra)**
No. of Non-teaching participants with name: **NIL**
No. of student participants: **09 (1st. SEM Honours)**
Place(s) visited: **Bardhaman Zoological Park, Burdwan**
Title of the Project: **Visit of Animals in *exsitu* at Zoological Park**
Objectives: To study the animals in captive condition, behavior and feeding habits**.**
Methodology (2 – 3 Sentences):1) Observation by Photo copies.
2) To study the animals in semi natural condition
3) Change of behavior and movements

Data collection (2 – 3 Sentences):
Crocodile: Its movement and item of foods. Peacock –they are different in colour and size. Spotted deer- difference of spots on body surface and horns.

Major findings (4 – 5 Sentences):
Nocturnal birds like Owls, aquatic bird like Stork, Peacock and Pea-hens. Reptiles like Snakes and lizards. Mammals like Sloth bear, spotted deer, Monkeys.

Conclusion (4 – 5 Sentences):
Most of the animals remain restless and their physique is lean and thin. Lack of proper food and habitat, growth is poor. Normal temperature is very high during summer season. Due to hazards of abiotic factors the captive animals are in miserable condition.

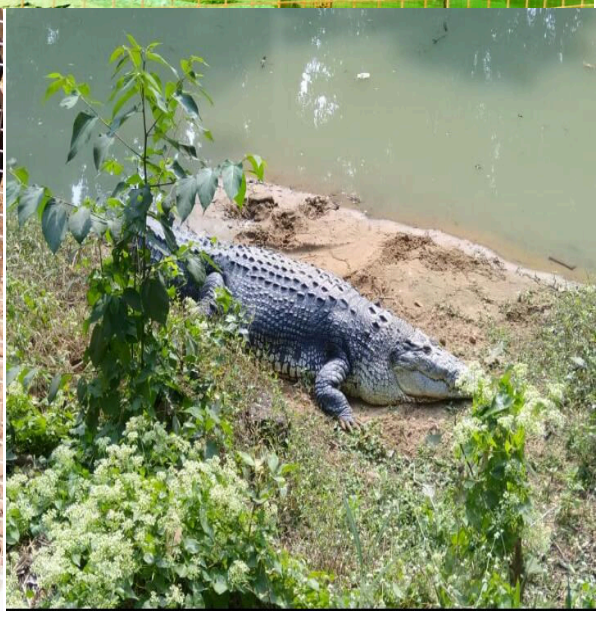
Amount Spent: Rs. 1200/-
Funding agency: Ramananda College, Bishnupur

Comments / Suggestions:
Financial grand regarding educational tour should be increased. It would be appreciated to allow the tour programme in other states.

Field visit to Burdwan Zoological Park on 20.02.2018





Field visit at Burdwan Zoological Park on 20.02.2018 with 1st. SEM Honours students under the guidance of Dr. Paresh Chandra Pal and Prof. Prakash Kumar Santra

Report on Field Work / Excursion

Name of the Department: **ZOOLOGY**
Period of Excursion / Field Work: **16.11.2017**
No. of Teacher participants with name: **02 (Dr. Paresh Chandra Pal & Mr. Prakash Kumar Santra)**
No. of Non-teaching participants with name: **NIL**
No. of student participants: **33 (2nd. Year General, B.U)**
Place(s) visited: **Sericulture Station, Bishnupur**
Title of the Project: **Visit of Sericulture farm at Bishnupur**.
Objectives: To study the culture method and life cycle of silk moths **.**
Methodology (2 – 3 Sentences):1) Observation by Photo copies.
2) To study the silk worms in natural and semi natural conditions.
3) Culture method and feeding behavior.

Data collection (2 – 3 Sentences):
Photographs of different types of silk worms, *insitu* and *exsitu* culture methods, feeding behavior of the worms and the processing of silk from cocoon through dry and wet method.

Major findings (4 – 5 Sentences):
Different strains of Moriculture , Mulbery silk moth types of voltinism, Different types of cocoons and their conservation, Rearing of silk through reeling process.
Conclusion (4 – 5 Sentences):
Bishnupur sericulture farm is one of the old sericulture farm in West Bengal. It was established in 1922-23. Due to lack of supervision and funding from the govt. its dignity is diminished day by day. This sericulture farm build with nearly 48 acre land but most of the parts are unused due to lack of funding and labour.

Amount Spent: Rs. 400/-
Funding agency: Self financed

Comments / Suggestions:
Financial grand regarding educational tour should be increased. It would be appreciated to allow the tour programme in other states.

Visit to Sericulture farm at Bishnupur on 16.11.2017








Sericulture farm visit at Bishnupur on 16.11.2017 with 2nd. year General students under the guidance of Dr. Paresh Chandra Pal and Prof. Prakash Kumar Santra.

Botany

RAMANANDA COLLEGE

Report on Field Work / Excursion / Project Work (Last Academic Year)

1. Name of the Department: Botany
2. Period of Excursion / Field Work / Project Work : 16.02.2018
3. No. of Teacher participants with name: Two Teacher participants (Dr. Shyamal Kanti Mallick, Dr. Sabyasachi Chatterjee)
4. No. of Non-teaching participants with name: Nil
5. No. of student participants: Fourteen (14)
6. Place(s) visited: Acharya Jagadish Chandra Bose Indian Botanic Garden, Shibpur, Howrah
7. Title of the Field Work / Project Work: Educational Excursion to Indian Botanic Garden, Shibpur
8. Objectives: i) To develop knowledge about different natural and exotic plant species and their uses. ii) To develop idea about *ex situ* conservation of exotic species amongst the participants ii) To develop knowledge about the functions of a herbarium iv) To learn how to prepare a herbarium specimens and the process of arrangement v) To develop Knowledge about the nomenclatural types.
9. Methodology: The students were visited the whole area of the historical garden and observed plant diversity in the garden under the guidance of the concerned teachers along with one official taxonomist. Two Scientist from Indian Botanic Garden presented lectures on history of the garden, ethnic use of many plants and also demonstrated how to prepare herbarium specimen.
10. Data collection: Students observed different plant species like the great Banyan tree Ficus *benghalensis*. They also observed so many other natural and exotic species like *Hyphaene thebaca*, *Lodoicea maldivica*, *Victoria amazonica, Porana paniculata, Madhuca indica, Elettaria cardamomum* and different types of Bamboos and orchids. They took photographs of plants and different products made from plants, Herbarium specimens etc. The students noted the important aspects of Botanic Garden.
11. Major findings: The students acquired knowledge on Herbarium and plant diversity. They also observed the famous big banyan tree along with other plants.
12. Outcome: The students acquired knowledge on herbarium and herbarium specimens, type specimens, plant diversity and *ex-situ* conservation of exotic species.

RAMANANDA COLLEGE

13. Conclusion: The students enjoyed this short excursion very much and they gained knowledge on *ex-situ* conservation and preparation and maintenance of herbarium. It was indeed memorable for them.
14. Funding agency: A part of total expenditure funded by the Ramananda College authority.
15. Comments / Suggestions: Every Botany students should visit Acharya Jagadish Chandra Bose Indian Botanic Garden and CNH, Shibpur, Howrah during their study.



[Fig:1-*Victoria amazonica*]



[Fig:2- Seminar hall]

Excursion Team, Department of Botany Ramanada College, Bishnupur, Bankura 16.02.2018 Semester 4		
01	Dr. Shyamal K Mallick (M, 51)	Teacher
02	Dr. Sabyasachi Chatterjee (M, 41)	Teacher
03	Mistu Karmakar (F, 23)	Student
04	Ranjini Panja (F, 22)	Student
05	Bingshati Singha Mahapatra (F, 22)	Student
06	Ayan Mandal (M, 22)	Student
07	Taniya Khatun (F, 22)	Student
08	Sonai Hazra (F, 22)	Student
09	Pritish Mitra (M, 22)	Student
10	Antara Chatterjee (F, 22)	Student
11	Sk Md Parvej (M, 22)	Student
12	Tulu Ghosh (F, 23)	Student
13	Bulu Ghosh (F, 23)	Student
14	Asmita Mondal (M, 22)	Student
15	Soumik Chatterjee (M, 22)	Student
16	Shubharthi Majila	Student

2018-19

Education

RAMANANDA COLLEGE

Report on Field Work / Excursion / Project Work (Last Academic Year 2018-2019)

1.Name of the Department: Education Department

2.Period of Excursion / Field Work : 12/04/2019

3.No. of Teacher participants with name: Kakali Bhandari, Anirban Mandal, Subarata Acharyya, Rimap Dey

4.No. of Non-teaching participants with name: Nil

5.No. of student participants: 68

6.Place(s) visited: Bishnupur

7.Title of the Project: Bishnupur Reconnoitre.

8.Objectives: 1) Effective 2) Personal Development 3) Deepen Social and Historical Knowledge 4) Respect for Culture etc.

9.Methodology (2 – 3 Sentences): Historical and Survey Methodology.

10.Data collection (2 – 3 Sentences): Different type of art and culture and different type of temples establishment .

11.Major findings (4 – 5 Sentences): The place, Bishnupur is attached with different type of art and culture. Through visiting this place in our inner mind we have felt value in different culture and we might feel unity even in different culture.

12. Outcome: The students will able to develop the knowledge as well as skill. And it also improves the creativity of students and it also helps in developing in one's character in society

13. Conclusion (4 – 5 Sentences): We came to know regarding temple on which era it had been built. Bishnupur is not only the tourist place for West Bengal but also it had been made a

centre place in field of tourism in India. The value of this place in field of economic, political, spiritual is really valuable in history of India.

14.Funding agency: College.

15.Comments / Suggestions: Our collage had helped us full in all field so that we had completed this educational tour as well as the students had participated actively .

RAMANANDA COLLEGE

BISHNUPUR * BANKURA
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Tel.: (03244) 252059
Tele Fax.: (03244) 254427
Mobile No. - +916297976619
E-mail.: principal@ramanandacollege.org
Website : www.ramanandacollege.org

Date – 10/04/2018

To whom it may Concern

This is to inform that **Department of Education** Sem IV (Hons+Programme) Ramananda college, Bishnupur, Bankura are going to an Educational Excursion to different temples of Bishnupur on…12/04/2018.. Under the guidance of Prof. Subrata Acharyya, Prof Anirban Mandal, Prof. Kakali Bhandari, Prof. Rimpa Dey. A total of 56 students attending the same.

Any sort of corporation if needed will be highly solicited.

RAMANANDA COLLEGE ESTD.-1945 (BANKURA) BISHNUPUR

10/4/18

(Dr. Swapna Ghorai)
Principal
Ramananda College
Bishnupur, Bankura

Principal
Ramananda College,
Bishnupur, Bankura


Educational excursion
RAMANANDA COLLEGE
BISHNUPUR :: BANKURA
DEPARTMENT OF EDUCATION


Educational excursion
RAMANANDA COLLEGE
BISHNUPUR :: BANKURA
Educational excursion
DEPARTMENT OF EDUCATION

History

Report on Field Work / Excursion (1st May, 2018 – 30th April, 2019)

1.Name of the Department: **History**

2.Period of Excursion / Field Work: **29.11.2018**

3.No. of Teacher participants with name: **Bishnupada Malik, Marinal Kanti Dhank, Purnendu Bhattarcharya, Tapas Nandi & Atasi Jana (Part Time Teacher P.Ed)**

4.No. of Non-teaching participants with name: **Basudeb Dey**

5.No. of student participants: **58**

6.Place(s) visited**: National Museum, Kolkata & Victoria Memorial**

7.Title of the Project: **EDUCATION THROUGH OBJECTS**

8.Objectives: **Larne History through informal education.**

9.Methodology: **Observation and Interview**

10.Data collection: **Different types of coin in different age, Buddhist art & architecture, Mummy of Egypt were collected.**

11.Major findings: **Type of Museum, Tradition of Preservation, curatorial care, Preventive conservation, chemical Preservation & Exhibition**

12.Outcome: The students developed practical experiences about different types of coin in different age, Buddhist art & architecture, Mummy of Egypt.

13.Conclusion: **The visitors not only look at the objects and admire and enjoy them, but also learn from them and pass them to the succeeding generation. In a Museum, art objects which are most rare, most beautiful and most antique can be seen and studied freely.**

14.Funding agency: **College. Rs. 5000/-(Five Thousand). Rest amount has collected from the Subscription of Students & Teachers. (**Amount Spent: **Rs.32724/-(Thirty two thousand seven hundred twenty four only)**

15.Comments / Suggestions: **It may be Compulsory for all Students and a proposed Subscription fee may be collected in admission / enrollment time. Financial grand regarding educational tour should be increased.**


History Excursion -19.11.2018 at
National Museum, Kolkata & Victoria
Memorial



History Excursion -19.11.2018 at National Museum, Kolkata & Victoria Memorial

Botany

RAMANANDA COLLEGE

Report on Field Work / Excursion / Project Work (2018-19)

1. Name of the Department: Botany (UG and PG)
2. Period of Excursion / Field Work / Project Work : 26.09.18 – 30.09.18
3. No. of Teacher participants with name: 04, Dr. Asish Mandal, Dr. Shyamal K Mallick, Dr. Sabyasachi Chatterjee,
4. No. of Non-teaching participants with name: -
5. No. of student participants: 14
6. Place(s) visited: Dooars Forest Areas,Tea garden and Tea processing centre, Lava and Kalimpong
7. Title of the Field Work / Project Work: Studying Plant Community at Foot of the Himalaya
8. Objectives: The objective of the study was to explore the diversity and ecological distribution of plant populations in forest area of Dooars (Jalpaiguri and Darjeeling Districts). The second objective was to know how the people are involved in tea cultivation and how tea is processed for commercialization.
9. Methodology (2 – 3 Sentences): Quadrat method of plant community study done at road side areas. People living in this forest area are asked different questions regarding their dependence on forest products. Tea garden and processing centre were visited. Personnel were asked regarding tea cultivation and production.
10. Data collection (2 – 3 Sentences): The plant habitat conditions and occurrence frequency were recorded during the field study. Sampling was done by using quadrats. 10m×10m sized quadrats for ground herbaceous vegetation. Deep forest areas were avoided. Quantitative assessment was carried out to study the plant community structure and plant diversity particularly by the side of human habitats. Thorough study not done because of the presence of wild animal including elephant, gour, leopards, snakes. Only observation and taking photography were done. Soil, rocks were collected and examined ,in the laboratory

    Thorough questionnaire about tea cultivation and processing was taken from the skilled technical personnel.

11. Major findings (4 – 5 Sentences): Species diversity richness was found. The climax vegetation is made by *Shorea robasta* trees and some places it is Tectona grandis. In the higher altitude *Cryptomeria japonica* were found.

Cultivated land for tea were found and the shelter tree process of cultivation, watering, leaves collection by labours and processing machines were observed.

12. Outcome (4 – 5 Sentences): The type of natural vegetation was observed. The students themselves studied and got experiences regarding tea. Comparative vegetation differences between foot hill regions of the Himalaya and Bankura district were realized
13. Conclusion (4 – 5 Sentences): It is an experience to get the taxonomic and ecological knowledge for the students of Master Degree. The distributional pattern of vegetation in this important geographical hot spot was understood. The students came to know how the people living in the forest area interact with wild animals. The students experience regarding tea production is also important in this regard
14. Funding agency: Self approach by the teacher and students with the kind permission of the College authority. A part of the expenditure for the teachers was paid by the college. Students expended their own.
15. Comments / Suggestions: Thorough study with plant Photographs and herberia shall be kept stored that helps the students of Botany to get knowledge about floral distribution.

RAMANANDA COLLEGE

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Tel: (03244)252059

Tele Fax: (03244) 254427

Ref. No: **Date:**

Department of Botany (UG and PG)

To
The Inspector-in-Charge
Bishnupur Police Station,
Bishnupur
Bankura

Respected Sir,

This is to inform that the PG students of the Department of Botany of Ramananda College, Bishnupur, Bankura are going to **Dooars** and its adjoining areas including **Lava** and **Kalimpong** on and from **26.09.2018 to 30.09.2018** for a botanical excursion under the guidance of three of the departmental teachers: **Dr. Asish Mandal** (Head of the Department) **Dr. Shyamal Kanti Mallick**, and **Dr. Sabyasachi Chatterjee**. Total **17 persons** (03 teachers and 14 students) are attending the excursion. **Maa Durga Tourism** agency (Prop. Nimai Chand Vadra, Vill + Post: Hatgram, P.S. Indpur, Dist.: Bankura, Phone: 9749836376) is arranging the tour.

During this educational tour possible co-operation and assistance (if required) for the aforementioned persons is earnestly expected.

The list of the teachers and students are given below.

Thanking you

Yours sincerely

Principal,
Ramananda College,
Bishnupur, Bankur

Principal
Ramananda College
Bishnupur, Bankura

Excursion Team, Department of botany Ramanada College, Bishnupur, Bankura (26.09.2018 to 30.09.2018)		
01	Dr. Asish Mandal (M, 47) 9434242741	Teacher (Head of the department)
02	Dr. Shyamal K Mallick (M, 51)	Teacher
03	Dr. Sabyasachi Chatterjee (M, 41)	Teacher
04	Soumik Chatterjee (M, 22)	Student
05	Mistu Karmakar (F, 23)	Student
06	Ranjini Panja (F, 22)	Student
07	Bingshati Singha Mahapatra (F, 22)	Student
08	Ayan Mandal (M, 22)	Student
09	Taniya Khatun (F, 22)	Student
10	Sonai Hazra (F, 22)	Student
11	Pritish Mitra (M, 22)	Student
12	Antara Chatterjee (F, 22)	Student
13	Subhas Bangal (M, 22)	Student
14	Sk Md Parvej (M, 22)	Student
15	Tulu Ghosh (F, 23)	Student
16	Bulu Ghosh (F, 23)	Student
17	Asmita Mondal (M, 22)	Student
Tour Agency: Maa Durga Tourism (Prop. Nimai Chand Vadra, Vill + Post: Hatgram, P.S. Indpur, Dist.: Bankura. Phone: 9749836376)		

RAMANANDA COLLEGE

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Tel: (03244)252059

Tele Fax: (03244) 254427

Ref. No: Date:

PG Department of Botany

To
The Inspector-in-Charge
Kranti Outpost.
Jalpaiguri

Respected Sir,

This is to inform you that the students of the PG Department of Botany of Ramananda College, Bishnupur, Bankura are going to **Dooars** and its adjoining areas including **Lava** and **Kalimpong** on and from **26.09.2018 to 30.09.2018** for a botanical excursion under the guidance of three of the departmental teachers: **Dr. Asish Mandal** (Head of the Department) **Dr. Shyamal Kanti Mallick**, and **Dr. Sabyasachi Chatterjee**. Total **17 persons** (03 teachers and 14 students) are attending the excursion. **Maa Durga Tourism** agency (Prop. Nimai Chand Vadra, Vill + Post: Hatgram, P.S. Indpur, Dist.: Bankura, Phone: 9749836376) is arranging the tour.

During this educational tour possible co-operation and assistance (if required) for the aforementioned persons is earnestly expected.

The list of the teachers and students are given below.

Thanking you

Yours sincerely

5/9/18

Principal,
Ramananda College,
Bishnupur, Bankur

Principal
Ramananda College
Bishnupur, Bankura

RAMANANDA COLLEGE ESTD. – 1945 (BANKURA) BISHNUPUR

Excursion Team, Department of botany Ramanada College, Bishnupur, Bankura (26.09.2018 to 30.09.2018)		
01	Dr. Asish Mandal (M, 47)	Teacher (Head of the department)
02	Dr. Shyamal K Mallick (M, 51)	Teacher
03	Dr. Sabyasachi Chatterjee (M, 41)	Teacher
04	Soumik Chatterjee (M, 22)	Student
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08	Ayan Mandal (M, 22)	Student
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16	Bulu Ghosh (F, 23)	Student
17	Asmita Mondal (M, 22)	Student
Tour Agency: Maa Durga Tourism (Prop. Nimai Chand Vadra, Vill + Post: Hatgram, P.S. Indpur, Dist.: Bankura Phone: 9749836376)		

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Tel: (03244)252059

Tele Fax: (03244) 254427

Ref. No: **Date:**

Department of Botany (UG and PG)

To
The General Manager
Chaopheli Tea Processing Centre
Chaopheli, Kalimpong

Respected Sir,

This is to inform that the **PG students of the Department of Botany of Ramananda College, Bishnupur, Bankura** are going for an educational tour to Dooars and its adjoining areas on and from 26.09.2018 to 30.09.2018 with three of the departmental teachers.

During this educational tour they want to visit your tea processing centre to get practical knowledge regarding the botanical and microbial aspect of tea fermenting and processing (probable date of visit will be 27.09.2018).

I shall be very grateful, if you kindly allow them to take entry into your esteemed centre and help them to understand the procedure of tea processing in detail.

The list of the teachers and students are given below.

Thanking you.

Yours sincerely
5/9/18
Principal,
Ramananda College,
Bishnupur, Bankur

Principal
Ramananda College
Bishnupur, Bankura

RAMANANDA COLLEGE ESTD. – 1945 (BANKURA) BISHNUPUR

Excursion Team, Department of botany Ramanada College, Bishnupur, Bankura (26.09.2018 to 30.09.2018)		
01	Dr. Asish Mandal (M, 47)	Teacher (Head of the department).
02	Dr. Shyamal K Mallick (M, 51)	Teacher
03	Dr. Sabyasachi Chatterjee (M, 41)	Teacher
04	Soumik Chatterjee (M, 22)	Student
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Ref. No: **Date:**

PG Department of Botany

To
The Inspector-in-Charge
Kranti Outpost,
Jalpaiguri

Respected Sir,

This is to inform you that the students of the PG Department of Botany of Ramananda College, Bishnupur, Bankura are going to **Dooars** and its adjoining areas including **Lava** and **Kalimpong** on and from **26.09.2018 to 30.09.2018** for a botanical excursion under the guidance of three of the departmental teachers: **Dr. Asish Mandal** (Head of the Department) **Dr. Shyamal Kanti Mallick**, and **Dr. Sabyasachi Chatterjee**. Total **17 persons** (03 teachers and 14 students) are attending the excursion. **Maa Durga Tourism** agency (Prop. Nimai Chand Vadra, Vill + Post: Hatgram, P.S. Indpur, Dist.: Bankura, Phone: 9749836376) is arranging the tour.

During this educational tour possible co-operation and assistance (if required) for the aforementioned persons is earnestly expected.

The list of the teachers and students are given below.

Thanking you

Yours sincerely

5/9/18

Principal,
Ramananda College,
Bishnupur, Bankur

Principal
Ramananda College
Bishnupur, Bankura

RAMANANDA COLLEGE ESTD. – 1945 (BANKURA) BISHNUPUR

Excursion Team, Department of botany Ramanada College, Bishnupur, Bankura (26.09.2018 to 30.09.2018)		
01	Dr. Asish Mandal (M, 47)	Teacher (Head of the department)
02	Dr. Shyamal K Mallick (M, 51)	Teacher
03	Dr. Sabyasachi Chatterjee (M, 41)	Teacher
04	Soumik Chatterjee (M, 22)	Student
05	Mistu Karmakar (F, 23)	Student
06	Ranjini Panja (F, 22)	Student
07	Bingshati Singha Mahapatra (F, 22)	Student
08	Ayan Mandal (M, 22)	Student
09	Taniya Khatun (F, 22)	Student
10	Sonai Hazra (F, 22)	Student
11	Pritish Mitra (M, 22)	Student
12	Antara Chatterjee (F, 22)	Student
13	Subhas Bangal (M, 22)	Student
14	Sk Md Parvej (M, 22)	Student
15	Tulu Ghosh (F, 23)	Student
16	Bulu Ghosh (F, 23)	Student
17	Asmita Mondal (M, 22)	Student
Tour Agency: Maa Durga Tourism (Prop. Nimai Chand Vadra, Vill + Post: Hatgram, P.S. Indpur, Dist.: Bankura Phone: 9749836376)		

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Tele Fax: (03244) 254427

Ref. No: Date:

Department of Botany (UG and PG)

Notice

This is to inform to all concerned of the Department of Botany that a Botanical Excursion is scheduled to occur at the last week of September, 2018 Students have to submit their name (with age) with Rs 1500/- within this week positively to the concerned teachers.

Place of journey: Lava, Duars, Kalimpong.

Cost of the excursion (per head): ₹ 4100/-

Probable dates of journey: 26/09/18 – 30/09/18

Teachers: Dr. Azish Mandal
Dr. Shyamal K. Mallick
Dr. Sabyasachi Chatterjee.

23/8/18
Head of the Department

23/8/18
Principal,
Ramananda College,
Bishnupur, Bankura

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Principal
Ramananda College
Bishnupur, Bankura



Botany Excursion -26.09.18 to 30.09.18 at Dooars Forest Areas,Tea garden and Tea processing centre, Lava and Kalimpong



Botany Excursion -26.09.18 to 30.09.18 at Dooars Forest Areas, Tea garden and Tea processing centre, Lava and Kalimpong

RAMANANDA COLLEGE

Report on Field Work / Excursion / Project Work (2018-19)

1. Name of the Department: Botany (UG and PG)
2. Period of Excursion / Field Work / Project Work : 24.04.19
3. No. of Teacher participants with name: 04, Dr. Asish Mandal, Dr. Shyamal K Mallick, Dr. Sabyasachi Chatterjee, Mr. Soumen Mahanta
4. No. of Non-teaching participants with name: -
5. No. of student participants: 15
6. Place(s) visited: Joypur forest regions
7. Title of the Field Work / Project Work: Studying Plant Community
8. Objectives: The objective of the study was to explore the diversity and ecological distribution of plant populations and the interaction of human population in forest area of Joypur, Bankura district.
9. Methodology (2 – 3 Sentences): Quadrat method of plant community study done at road side and deep forest areas. People living in this forest area are asked different questions regarding their dependence on forest products
10. Data collection (2 – 3 Sentences): The plant habitat conditions and occurrence frequency were recorded during the field study. Sampling was done by using quadrats. 10ft×10 ft sized quadrats for ground herbaceous vegetation, 20ft×20ft for shrubs and 40ft×40ft size for trees were used.
11. Major findings (4 – 5 Sentences): The increase in anthropogenic activity and growth of human population surrounding the forest area of has resulted in degradation of forest and plant diversity. Quantitative assessment was carried out to study the plant community structure and plant diversity of this area – particularly the village side boundaries. 40 species were found on the roadside, where ground vegetation predominates. Inside the forest the same area showed only 14 species. The climax vegetation is made by *Shorea robasta* trees. The other trees are *Delbergia sisso, Diospyros melanoxylon, Zyzyphus mouritiana, Perocarpus marsupium, Premna latifolia, Albizia procera.* Shrubs are *Holarrhenna antidisentrica, Clerodendrum infortunetum, Lantana camara, Eupatorium odoratum.* The forest ground is covered by several herbs. The density of forest plants is high showing high regenerative power.

12. Outcome (4 – 5 Sentences): This is a systematic study of distributed plants in the forest areas. The students themselves studied and got experiences.
13. Conclusion (4 – 5 Sentences): It is an experience to get the taxonomic and ecological knowledge for the students of Master Degree. The students came to know how the nature is involved in the economy of the forest people. This interaction between the plant community and the human community is focused although a more thorough study is required.
14. Funding agency: Self approach by the teacher and students with the kind permission of the College authority. The total expenditure (for the teachers only) paid by the college was Rs. 715/- (Rs Seven hundred and fifteen only). Students expended their own.
15. Comments / Suggestions: This interaction between the plant community and the human community is focused although a more thorough study is required.

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Date: 22.04.2019

TO WHOM IT MAY CONCERN

An educational tour for field study of the Semster 4 (PG) students is being held by the Department of Botany Ramananda College on 24.04.2019 at Joypur Forest area under the guidance of four of the Departmental Teachers Dr. Asish Mandal, Dr. Shyamal Kanti Mallick, Dr. Sabyasachi Chatterjee and Mr. Soumen Mahanta. Pant Ecology, Plant Systematics and Silviculture are the main focuses in this field study. Any sort of help is kindly solicited in this regard.

22/4/19

Principal
Ramananda College
Bishnupur, Bankura

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Principal
Ramananda College
Bishnupur, Bankura.


Botany Excursion - 24.04.2019

Zoology

Report on Field Work / Excursion

Name of the Department: **ZOOLOGY**
Period of Excursion / Field Work: **18.04.2019**
No. of Teacher participants with name: **02 (Dr. Paresh Chandra Pal & Mr. Prakash Kumar Santra)**
No. of Non-teaching participants with name: **NIL**
No. of student participants: **33 (2nd. SEM Programme)**
Place(s) visited: **Surulia Mini Zoo; Purulia**
Title of the Project: **Visit of Animals in *exsitu* at Mini Zoo**.
Objectives: To study the animals in captive condition, behavior and feeding habits**.**
Methodology (2 – 3 Sentences):1) Observation by Photo copies.
2) To study the animals in semi natural condition
3) Change of behavior and movements

Data collection (2 – 3 Sentences):
Sloth bear: Its movement and item of foods. Monkeys and Langul –they are different in colour and size. Spotted deer- difference of spots on body surface and horns.

Major findings (4 – 5 Sentences):
Nocturnal birds like Owls, aquatic bird like Stork, Peacock and Pea-hens. Reptiles like Snakes and lizards. Mammals like Sloth bear, spotted deer, Monkeys.

Conclusion (4 – 5 Sentences):
Most of the animals remain restless and their physique is lean and thin. Lack of proper food and habitat, growth is poor. Normal temperature is very high during summer season. Due to hazards of abiotic factors the captive animals are in miserable condition.

Amount Spent: Rs. 2200/-
Funding agency: Ramananda College, Bishnupur

Comments / Suggestions:
Financial grand regarding educational tour should be increased. It would be appreciated to allow the tour programme in other states.

Signature of the Head with seal

Visit to Surulia Mini Zoo, Purulia on 18.04.2019



Black Bear (Ursus thibetanus)



Monkey (Macaca sinica)



Stork (Leptoptilos javanicus)



Indian eagle –owl (Bubo bengalensis)

Visit to Surulia mini Zoo, Purulia on 18.04.2019 with 2nd. SEM Prog. students under the guidance of Dr. Paresh Chandra Pal and Prof. Prakash Kumar Santra.

2019-20

History

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Report on Excursion of Last Academic Year 2019-2020

Name of the Department: History

Period of Excursion / Field Work: 06-03-20 to 07-03-20

No. of Teacher participants with name: Bishnupada Malik, Dr.Marinal Kanti Dhank, Ajit Debnath, Purnendu Bhattarcharya,

No. of Non-teaching participants with name: Basudeb Dey, Mridula Rajak

No. of student participants: 46

Place(s) visited: Murshidabad

Title of the Project: Role of Murshidabad Hazarduari Palace Museum in Cultural and Heritage Tourism

Objectives: The main objectives of this study are1) Find out the main cultural heritage components of Murshidabad Hazarduari Palace Museum 2) Find out the tourist carrying capacity 3) Main problems of Hazarduari Palace Museum 4) Govt. initiatives to develop this area as cultural heritage centre

Methodology: As the study concentrates on the possibilities of tourism development in Lalbagh region, Survey method has been adopted in the study to collect the primary data. Documentation of survey results in Murshidabad Hazarduari Palace Museum by response of 100 tourists, 10 industry representation, and of policy makers collected through after the field work. The secondary data is to be collected from the public sources like- District gazette, Journals, Books, Thesis, Magazine, Newspaper, and Literature

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Major findings: Gallery and exhibition Planning-This is the only museum of Murshidabad district where historical materials keep protected properly; but there, we think, many planning should be executed. • Periodic maintenance of Objects-Due to shortage of funding, periodic maintenance is executed after 1 year or more time. • Developing museum Publication-This is not noticeable.

Conclusion: According to survey, it is said that Murshidabad Hazarduari Palace Museum is only museum in Murshidabad district; which protects many culturally important elements that are the resource of cultural and heritage tourism. Every year many tourists from different places come here and enjoy it. So, ASI and also Central govt. should take appropriate management to take care of the beautiful museum for Sustainable Cultural Heritage Tourism. Also, local municipality should take responsibilities to clean the area and of course, local govt. tries to increase the consciousness about the importance of heritage and tourism

Amount Spent: Rs.53000/-(Fifty three thousand only)

Funding agency: College. Rs. 5000/-(Five Thousand). Rest amount has collected from the Subscription of Students & Teachers.

Comments / Suggestions: It may be Compulsory for all Honours Students and a proposed Subscription fee may be collect in the time of admission / enrolment. Financial support regarding educational tour should be increased from college.

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Teachers picture in front of Bhagirathi River



Group picture with teachers in front of KhatGola



Some of Our Girls Students



Hazarduari Palace

Bengali

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Report on Excursion of Last Academic Year 2019-2020

1. Name of the Department: BENGALI
2. Period of Excursion : ONE DAY (20.02.2020)
3. No. of Teacher participants with name: Dr. Kamala Das, Tamal Kumar Bandyopadhyay, Siddhartha Datta, Dr. Chandan Bangal(04)
4. No. of Non-teaching participants with name: NIL
5. No. of student participants: 33
6. Place(s) visited: Onda gram, Vutbagan Joydev Ashram, Siddheswar Mandir of Bahularah village, Math of Gokulananda Goswami, Temple of Radhaballava, The ancient vally of the Dwarkeswar river, Ekteswar Mandir of the outskirts of Bankura Town.
7. Title of the Field Work / Project Work: 'প্রাচীন ও মধ্যযুগের কিছু সাহিত্যিক, ঐতিহাসিক, ধর্মীয় ও সাংস্কৃতিক স্থান পর্যবেক্ষণ এর মাধ্যমে সেই সময়কার ইতিহাসচর্চা' (Study Of History Of Literature Of Old And Medieval Age By Visiting Some Literary, Religious, Historical And Cultural Space Of Old And Medieval Age).
8. Objectives: Through excursion, students get effective and powerful learning in the real world. In curriculums of Post Graduation in core course 101 named 'বাংলা সাহিত্যের ইতিহাস(আদিযুগ ও মধ্যযুগ) and in core course 105 named প্রাচীন ও মধ্যযুগের বাংলা সাহিত্যের আর্থ-সামাজিক-রাজনৈতিক -ধর্মীয় পটভূমি and under syllabus of course code AHBNG -201C-3 named 'বাংলা সাহিত্যের ইতিহাস(প্রাচীন ও মধ্যযুগ) and in course code AHBNG -401C-8 named- লোকঐতিহ্য ও লোকসংস্কৃতি which they learned theoretically got opportunity to learn practically beyond the ground of college and obviously in the ground of old historical places. It has been

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arranged to give them deeper knowledge about their materials of study which will help them to go through this practical experience for higher studies.

9. Methodology (2 – 3 Sentences):As methodology they choose the 'field work' and 'interaction with local and experienced men'. They observed Baishnavic and Jain sculptures , statues and temples in different places and got knowledge.
10. Data collection (2 – 3 Sentences): The students came to know that the famous poet Joydev of the 12th century took rest in a place named 'Vutbagan' near Onda village when he was on the way to Puri.Apart from this , they also collected many important data.
11. Major findings (4 – 5 Sentences): The students were astonished at knowing that the village 'Onda' was named after the well known 'Andhak Muni' of the 'Ramanaya'. The very old 'Siddheswar Temple'(built in the age of the Pal rules) situated at the village of 'Bohulara', five km away from Onda village, is a special model of Rekhdeul. When the village named 'Kataboni'(a famous Baishnav Pith) was washed away by flood of the Dwarakeswar river,the villagers went to Bahularah village and there they established a temple of Radhaballav like the temple of Kantabani temple. So it is very notable that Bahularah is such a place where Jain cult ,Sanatan Hindu cult and Baishnav cult reigned in different times.
12. Outcome (4 – 5 Sentences): They students felt interested in such activities for their higher studies. They found many pieces of information of different literary, religious, historical and cultural spaces of old and medieval age.

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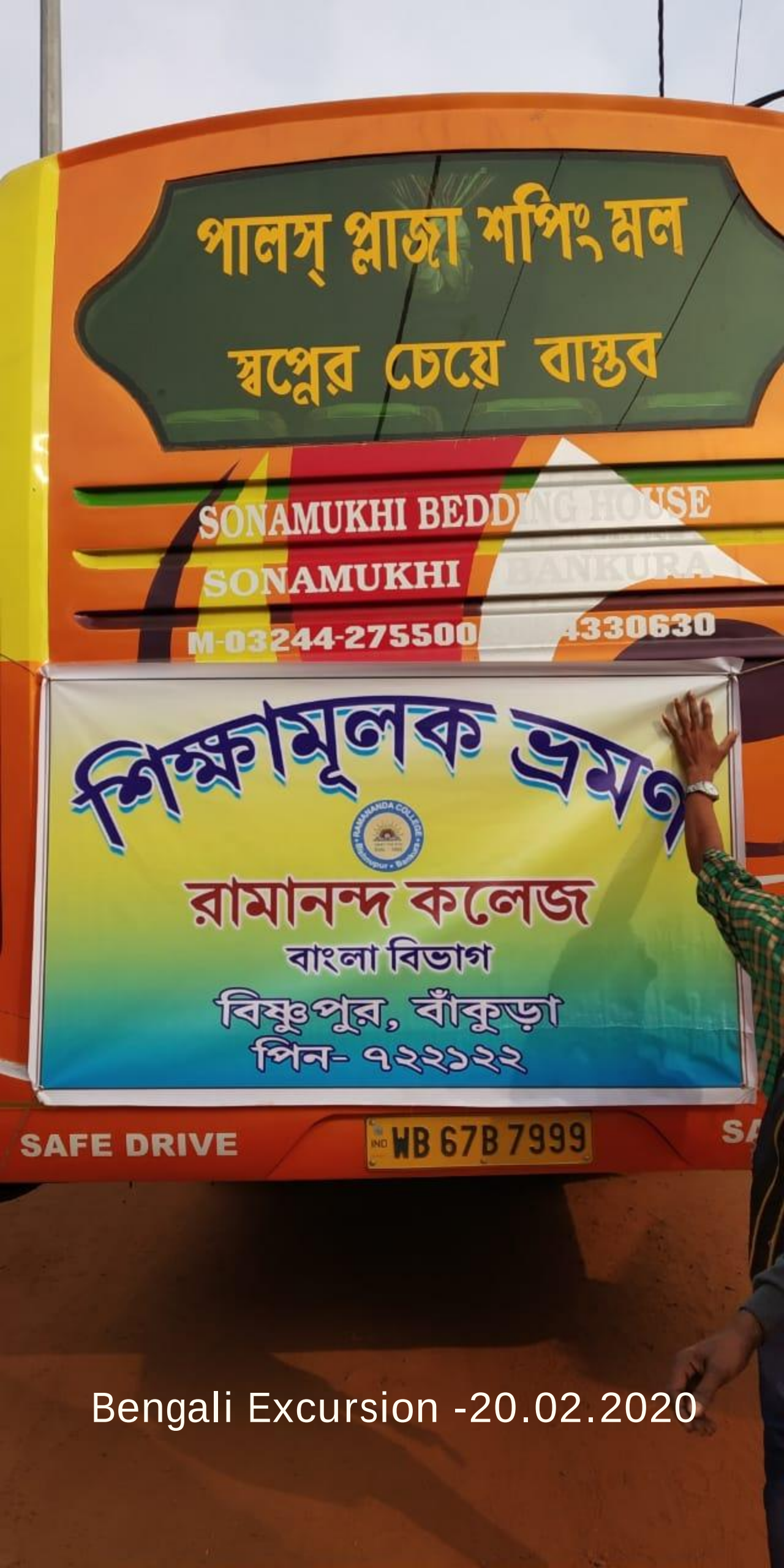
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13. Conclusion (4 – 5 Sentences): In conclusion it may be said that they were very excited at this excursion and were also energetic in their studies and eye-witness facts side by side. This excursion proves to be fruitful for the students.
14. Funding agency: RAMANANDA COLLEGE
15. Comments / Suggestions: This type of excursion/educational tour is very helpful for the students to absorb the actual learning through practical experience. We suggest to arrange such type of excursion every year.

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Bengali Excursion -20.02.2020



Bengali Excursion -20.02.2020

Botany

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Report on Field Work / Excursion / Project Work (Last Academic Year)

1. Name of the Department: Botany (UG and PG)
2. Period of Excursion / Field Work / Project Work : 23.08.19
3. No. of Teacher participants with name: Dr. Asish Mandal
4. No. of Non-teaching participants with name: -
5. No. of student participants: 13
6. Place(s) visited: Joypur forest regions (Taldangra forest visit cancelled due to heavy rain)
7. Title of the Field Work / Project Work: Studying Mushroom Diversity
8. Objectives: The objective of the study was to explore the diversity and ecological distribution of mushrooms in different forest areas of Bankura district.
9. Methodology (2 – 3 Sentences): After finding a colony or a single species of mushroom, the fruiting bodies were collected with the help of knife.
10. Data collection (2 – 3 Sentences): The habitat conditions and occurrence frequency were recorded during the field study. The samples were photographed using (Nikon D5300 camera), both in their natural habitats and with the reference of a scale, for identification. The samples were then taken in a container which was labelled and marked properly.
11. Major findings (4 – 5 Sentences): Species diversity richness and abundance of mushrooms in this forest area (wood depot) are as follows

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No of species (s)	**11**
Total number of individuals (N)	142
Simpson diversity index (1-D)	0.2998
Shannon diversity index (H)	0.74
Richness (S)	0.92
Evenness (e)	1.52

12. Outcome (4 – 5 Sentences): The present study is the first systematic study of mushrooms distributed in the forest areas. There is no documentation on any ethno-mycological knowledge of mushrooms till date.
13. Conclusion (4 – 5 Sentences): This is an important step towards producing a checklist of mushrooms in the forest areas of Bankura district. However, the list of macrofungi in this study provides baseline information needed for the assessment of changes in biological diversity of mushroom in the different forest areas of Bankura.
14. Funding agency: Self approach by the teacher and students with the kind permission of the College authority
15. Comments / Suggestions: There are a number of mushrooms whose economic importance is unknown. Future investigation is also needed in different seasons as well as in other different forest regions.

Arusti Mandal
24/8/19

Associate Professor & Head
Department of Botany
Ramananda College
Bishnupur, Bankura

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Botany Excursion -**23**.0**8**.20**19**


Botany Excursion -23.08.2019

Geography

RAMANANDA COLLEGE

Report on Field Work / Excursion / Project Work (Last Academic Year)

1. Name of the Department: GEOGRAPHY
2. Period of Excursion / Field Work / Project Work: 3rd March, 2020 to 8th March, 2020.
3. No. of Teacher participants with name: 03
    1. Sri Rajesh Kr. Guin
    2. Dr. Asmita Mukherjee
    3. Smt. Smita Banerjee
4. No. of Non-teaching participants with name: NA
5. No. of student participants: 12
6. Place(s) visited: Lataguri of Mal-bazar subdivision in Jalpaiguri district.
7. Title of the Field Work / Project Work: Field Report at Lataguri , Jalpaiguri, West Bengal, 2020.
8. Objectives: 1. To know the demography of the study area
    2. Socio-economic condition of the people residing there.
    3. problems and prospects.
9. Methodology (2 – 3 Sentences): Data were gathered through field survey and direct contact with the local people and authorized centres of the region. Surveys on the demography, agriculture, livestock, water management, education, culture, health, waste management, disaster management, transport were done in the area. Topographic map were collected from NATMO, Kolkata office, agricultural activities is collected from local villagers, information regarding transport system collected by random transport survey, religious and social festival information collected from the local people, health and education information was collected from the primary and high school and from local health centre.

10. Data collection (2 – 3 Sentences): (5th March) early morning one team headed towards village and started socio-economic and household survey. Another team worked on GPS, long and cross profile on a river named Dhoralla in the study area. A few members of our team went to collect some socio-economic data from Lataguri GP along with the teacher. The most interesting thing was Jungle Safari to see the wild life in Gorumara National Park.

11. Major findings (4 – 5 Sentences): There are several environmental, social and economic aspects in our study area which should be in focus for proper management of the village area. In spite of getting several attentions in the recent time, many area are not adequately developed. There is an urgent need for implementing sustainable management systems in the areas for the betterment of the socio-environmental structures.
12. Outcome (4 – 5 Sentences): 1. Adequate health services should be provided to the local people.

    2. For reducing water crisis in April-May micro-scale rain water harvesting should be introduced.

    3. Local tourism should be more developed by utilizing its unique ecological assets.
13. Conclusion (4 – 5 Sentences):
    1. Socio- economic environment of local agriculture is completely different than that of other part of Bengal. 2. Works was described as unskilled work and division of work was done on the basis of manual labour. 3. The importance of the plantation sectorin the national economy has given a new orientation to its future.
14. Funding agency: Ramananda College
15. Comments / Suggestions: There is no alternative of field survey to know the actual socio- economic condition of people of a particular region and the effect of environment on him.

Botany Excursion - 03.03.20 - 08.03.20



Botany Excursion - 03.03.20 - 08.03.20