

Backward Class Youth Relief Committee's
Bhiwapur Mahavidyalaya, Bhiwapur

Dist - Nagpur, Maharashtra 441201

CRITERION - I

Curricular Planning and Implementation

**1.3.2 Number of Students undertaking project work/field
work/internship**

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ

आजीवन अध्ययन व विस्तार विभाग नवीन प्रकल्प आणि प्रोत्साहनपर गुणांसंबंधी

माहिती पत्रक आणि + मार्गदर्शक संहिता



राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ

स्टेटल प्रोव्हिडेंट शासन शिक्षण विभागाची अधिसूचना क्रमांक ५१३ दिनांक १ ऑगस्ट, १९२३ द्वारा स्थापित व महाराष्ट्र सार्वजनिक विद्यापीठ अधिनियम, २०१६ (सन २०१७ वा महाराष्ट्र अधिनियम क्रमांक ६) द्वारा संचालित राज्य विद्यापीठ



आजीवन अध्ययन व विस्तार विभाग

गुरु नानक भवन, अंबाझरी वळणमार्ग, विद्यापीठ परिसर, नागपूर - ४४० ०३३ दूरध्वनी : २५३०८६०
ई-मेल : doll_rtmnu@gmail.com

प्रति,

विस्तार सेवा कार्यात सहभागी महाविद्यालयांचे सन्माननीय प्राचार्य
आणि विद्यापीठाच्या शैक्षणिक विभागाचे सन्माननीय विभागप्रमुख.

क.आअवि/२४७/१९

दिनांक : ०५/०२/२०१९

विषय : उन्नती प्रकल्प अहवाल आणि राष्ट्रसंत संस्कार प्रकल्प लेखांचा मूल्यमापन कार्यक्रम.
(सत्र २०१८-२०१९)

महोदय/महोदया,

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठाच्या आजीवन अध्ययन आणि विस्तार विभागांतर्गत प्रकल्पांत सत्र २०१८-२०१९ मध्ये सहभागी विद्यार्थ्यांचे उन्नती प्रकल्पाचे केस स्टडी रिपोर्ट आणि राष्ट्रसंत संस्कार प्रकल्पाचे लेख/निबंध एकत्रित तयार झाले असतील. या प्रकल्प अहवालांच्या व लेखांच्या मूल्यमापनाचा कार्यक्रम १ मार्च २०१९ पासून विद्यापीठ स्तरावर विविध ठिकाणी आयोजित करण्यात येत आहे. मूल्यमापन अनुभवी व ज्येष्ठ विषयतज्ज्ञांमार्फत केले जाणार आहे. मूल्यमापन कार्यक्रमाचे सविस्तर वेळापत्रक सोबत जोडले आहे.

आपणास विनंती आहे की, आपल्या महाविद्यालयातील विद्यार्थ्यांनी तयार केलेले उन्नती प्रकल्प अहवाल आणि राष्ट्रसंत संस्कार प्रकल्पाचे लेख/निबंध नमूद केलेल्या तारखेस मूल्यमापन स्थळी न चुकता पाठवावेत.

केस स्टडी अहवाल व लेख/निबंध आणतांना पुढील सूचनांचे पालन करून विभागास सहकार्य करावे.

- महाविद्यालयातील कार्यक्रम अधिकाऱ्यांनी विद्यार्थ्यांचे प्रकल्प अहवाल व लेख नजरेखालून घालतांना वहावावर लाल पेननी कोणतीही खूण करू नये. त्यावर केवळ उत्कृष्ट, उत्तम, साधारण यापैकी केवळ एक शेर नमूद करून त्यावर स्वाक्षरी करावी.
- प्रत्येक विद्यार्थ्यांच्या प्रकल्प अहवालांवर/लेखांवर महाविद्यालयाच्या मा. प्राचार्यांची स्वाक्षरी असणे अनिवार्य आहे. त्याकरीता कार्यक्रम अधिकाऱ्यांनी पुढाकार घ्यावा.
- सोबत जोडलेल्या मूल्यमापन प्रपत्रामध्ये उन्नती व संस्कार प्रकल्पात सहभागी विद्यार्थ्यांची नावे लिहून त्यांच्या नावासमोर २ पैकी गुण द्यावेत. प्रकल्प अहवालांचे व लेखांचे वर्गीकरण वर्गानिहाय आणि विषयनिहाय करून त्याप्रमाणे त्यांचे गट लावण्यात यावेत. उदा. बी.ए. प्रथम, बी.कॉम प्रथम, बी.एस.सी. प्रथम, एम. ए. प्रथम (इतिहास), एम. ए. प्रथम (सामाजशास्त्र), याप्रमाणे. प्रकल्पामध्ये सहभागी विद्यार्थ्यांचीच नावे मूल्यमापन प्रपत्रामध्ये असावीत. सोबत उन्नती प्रकल्प/राष्ट्रसंत संस्कार प्रकल्प अशी दोन स्वतंत्र प्रपत्रे जोडली आहेत. सदर प्रपत्रांच्या आवश्यक तेवढ्या झेरॉक्स प्रती काढून घेण्यात याव्यात. प्रपत्रावर महाविद्यालयाच्या कार्यक्रम अधिकाऱ्यांनी स्वाक्षरी करू नये. मूल्यमापनांती त्यावर विषयतज्ज्ञांची स्वाक्षरी राहिल.
- मूल्यमापन करण्यासाठी सोबत जोडलेल्या वेळापत्रकानुसार आपल्या महाविद्यालयाच्या नावासमोर नमूद केलेल्या तारखेस नियोजित स्थळी आणि नियोजित वेळी प्रकल्प अहवाल व लेख पाठविण्यात यावे.
- मूल्यमापन झाल्यानंतर प्रोत्साहनपर गुणांची यादी त्याचवेळेस संबंधित कार्यक्रम अधिकारी अथवा प्रकल्प अहवालांचे व लेखांचे गट घेऊन येणाऱ्या जबाबदार व्यक्तीकडे सोपविण्यात येईल.
- प्रकल्प अहवाल मूल्यमापन स्थळी घेऊन येणाऱ्या व्यक्तींना आजीवन अध्ययन आणि विस्तार विभागाकडून कोणताही प्रवास खर्च दिला जाणार नाही. सदर प्रवास खर्च महाविद्यालयाद्वारे वहन करण्यात यावा.
- राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठाच्या परीक्षा विभागाकडून प्रोत्साहनपर गुणांचे (Incentive Marks) परिपत्रक आणि विद्यार्थ्यांचे आसन क्रमांक (Roll No) महाविद्यालयांना प्राप्त होताच मूल्यमापन समितीकडून विद्यार्थ्यांना मिळालेले प्रोत्साहनपर गुण त्यांच्या नावासमोर (Adult Education) च्या रकाण्यात नमूद करून सदर प्रपत्र प्राचार्य आणि कार्यक्रम अधिकाऱ्यांच्या स्वाक्षरीसह मा. परीक्षा नियंत्रक, राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर यांच्याकडे त्वरित पाठविण्यात यावे. ही विनंती.

सहकार्याच्या अपेक्षेत.

सहप्र: वेळापत्रक व मूल्यमापन प्रपत्र

टीप: मूल्यमापन वेळापत्रक मागील बाजूस दिले आहे.

आपला विनीत

(डॉ. मोहन काशीकर)

संचालक

आजीवन अध्ययन आणि विस्तार विभाग

उन्नती प्रकल्प अहवाल आणि राष्ट्रसंत संस्कार प्रकल्प अहवाल मूल्यमापन कार्यक्रम

सत्र २०१८ - २०१९

नागपूर ग्रामीण:

मूल्यमापन स्थळ : आजीवन अध्ययन आणि विस्तार विभाग, गुरुनानक भवन,

विद्यापीठ परिसर अमरावती मार्ग, नागपूर-४४००३३.

दूरध्वनी क्र.०७१२-२५३०८६०/९१३००८२७८१/९५५२१३००६९/९९२३५७९०१०

Nagpur District: Date : 6th March, 2019 Time 10 a.m. to 2 p.m.

1	RAM GANESH GADKARI KALA VANIJYA COLLEGE, SAWANER
2	COLLEGE OF SOCIAL WORK, KAMPTEE
3	SARASWATI MAHILA MAHAVIDYALAYA, SAONER
4	JYOTIRAO FULE COLLEGE OF SOCIAL WORK, UMRER
5	SHRI SAIPRASAD, COLLEGE OF ARTS, SALVA TAQ. MAUDA, DIST. NAGPUR
6	MUKUNDRAJ SWAMI MAHAVIDYALAYA, PACHAKHEDI, TAH. KUHI.
7	TAI GOWALKAR SCIENCE COLLEGE, RAMTEK
8	MAHILA KALA MAHAVIDYALAYA, UMRER
9	BHIWAPUR MAHAVIDYALAYA, BHIWAPUR
10	R.B.VYAS COLLEGE, KONDHALI
11	VIDYASAGAR KALA MAHAVIDYALAYA, KHAIRI BIJEWADA-RAMTEK

Nagpur District: Date : 7th March, 2019 Time 10 a.m. to 2 p.m.

12	VIDYABHARATI ART, COMMERCE & SCIENCE COLLEGE, KATOL
13	INDIRA GANDHI ARTS, COMMERCE COLLEGE, KALMESHWAR
14	LATE GOVINDRAO WANJARI COLLEGE OF EDUCATION , BORKHEDI, BUTIBORI
15	SHRI NARENDRA TIDKE ARTS & COMMERECE COLLEGE, RAMTEK
16	RANI LAXMIBAI MAHILA MAHAVIDYALAYA, SAWARGAON
17	NAGAR PARISHAD SHIVAJI COLLEGE, MOWAD
18	MAHATMA GANDHI ARTS, COMMERCE COLLEGE, PARSHIWANI
19	KALA VANIJYA MAHAVIDYALAYA, PATANSAWANGI
20	SHARADCHANDRA ARTS COMM.COLLEGE, BUTIBORI, NAGPUR
21	RANI INDIRABAI BHOSALE MAHAVIDYALAYA, KUHI
22	SHRI PANDHARINATH COLLEGE, NARKHED
23	LET. DR. HARIBHAU ADAMANE COLLEGE, SAONER



राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ
आजीवन अध्ययन व विस्तार विभाग
नवीन प्रकल्प आणि प्रोत्साहनपर गुणांसंबंधी

माहिती पत्रक
आणि
मार्गदर्शक संहिता

नवीन प्रकल्प
उन्नती - सहयोग - सक्षम - संस्कार

२०१८-१९

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ
आजीवन अध्ययन व विस्तार विभाग

महाविद्यालयांनी कार्यान्वित करावयाच्या

प्रकल्पांची मार्गदर्शिका

२०१८-२०१९

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठातील पूर्वीच्या निरंतर, प्रौढ शिक्षण आणि विस्तार विभागाचे नाव आता बदलले आहे. महाराष्ट्र सार्वजनिक विद्यापीठ अधिनियम-२०१६ (म्हणजे नवीन विद्यापीठ कायदा) नुसार आता या विभागाचे नाव आजीवन अध्ययन आणि विस्तार विभाग असे झाले आहे. हा बदल लागू होऊनही आता वर्षभराहून अधिक काळ झाला आहे. या अधिनियमातील कलम-४६ नुसार विद्यापीठात विस्तार सेवा कार्याला गती देण्यासाठी आजीवन अध्ययन व विस्तार मंडळ (Board of Lifelong Learning and Extension) स्थापित करण्यात आले आहे. या मंडळाद्वारे आजीवन अध्ययन व विस्तार विभागाच्या माध्यमातून विद्यापीठ आणि महाविद्यालयांमधून विस्तार सेवा कार्यक्रम कार्यान्वित करावयाचे आहेत.

महाराष्ट्र सार्वजनिक विद्यापीठ अधिनियम २०१६ मध्ये नमूद विद्यापीठांच्या उद्दिष्टांचा मागोवा घेतल्यास काही उद्दिष्टांची पूर्ती करण्यासाठी विस्तार सेवा उपक्रमांशिवाय अन्य दुसरा पर्याय नाही, असे दिसते. विद्यापीठाला भारताच्या सविधनात नमूद केलेले स्वातंत्र्य, धर्मनिरपेक्षता, समता, व सामाजिक न्याय यांचे संवर्धन करून सर्वोत्तम मूलतत्वे व मूल्ये यांची राष्ट्रीय विकासाच्या दृष्टीने जोपासना करून सामाजिक, आर्थिक परिवर्तनाची प्रेरक शक्ती म्हणून कार्य करावयाचे आहे. सामाजिक सलोखा, सहजीवन, एकात्मिक मानवता आणि गरिबातल्या गरिबाची उन्नती करण्यासाठी समाजात अनुकूल वातावरण निर्माण करण्यासाठी विद्यापीठाला चालना द्यावयाची आहे.

उच्च शिक्षणाची त्रिवेणी

विद्यापीठ अनुदान आयोगाने उच्च शिक्षणाची शिकविणे (Teaching), संशोधन (Research) व विस्तार सेवा (Extension Services) अशी तीन आवर्तने स्वीकारली आहेत. या तीन मुख्य घटकांवर देशातील उच्चशिक्षण पध्दती आज कार्यरत असून विद्यापीठे व महाविद्यालये त्या दिशेने कार्यरत आहेत. महाविद्यालयांमध्ये प्रवेशित विद्यार्थ्यांना अभ्यासक्रम शिकविण्याचे वा अध्यापनाचे काम अध्यापक नियमितपणे करतात. त्याचबरोबर अध्यापक संशोधनाचे कार्यदेखील पार पाडतात. सर्वच विद्यापीठे व महाविद्यालयांमध्ये ही दोन्ही कार्ये सातत्याने सुरू असतात. परंतु उच्चशिक्षणाचे तिसरे आवर्तन म्हणून मान्य असलेल्या विस्तार सेवा कार्यात मात्र सर्वच अध्यापक व विद्यार्थी सहभागी होत नाहीत. विद्यापीठे आणि महाविद्यालये समाजविकासाच्या प्रक्रियेत प्रेरक असावीत, अशी अपेक्षा केली जाते. अर्थातच ही अपेक्षा विस्तार सेवा कार्यक्रमांच्या नियोजनपूर्वक आयोजनातूनच खात्रीलायकरित्या पूर्ण होऊ शकते.

विद्यापीठांना स्थानिक, प्रादेशिक व राष्ट्रीय विकासाच्या समस्यांमध्ये जवळून सहभागी होऊन ज्ञान आणि कौशल्य यांचा लाभ व्यक्ती व समाज यांच्या विकासासाठी उपलब्ध करून द्यावयाचा आहे. तसेच एक सजग व वस्तुनिष्ठ समीक्षक म्हणून विद्यापीठांना आपली जबाबदारी पार पाडावयाची आहे. समाजातील दुर्बल घटकातील व्यक्तींमध्ये आत्मसन्मान व प्रतिष्ठेची निर्मिती करणे व ती वाढविण्याचे कार्यदेखील विद्यापीठांना करावयाचे आहे.

विस्तार कार्यातून सामाजिक सहभाग:

विद्यापीठासमोर अधिनियमामधून ठेवलेली उद्दिष्टे पार पाडण्यासाठी विस्तार सेवा उपक्रमांपुरता विचार केल्यास विद्यापीठांना आपले कर्तव्य म्हणून अभ्यासक्रमांमध्ये विस्तार सेवांची तरतूद करावी लागेल. विस्तार सेवा कार्यान्वयनासाठी व्यवस्था निर्माण करावी लागेल.

विस्तार सेवांविषयी महत्वाचे म्हणजे व्यवहार्य असेल अशा बाबतीत विद्यापीठ विभाग, महाविद्यालयांमध्ये विद्यार्थ्यांच्या अभ्यासक्रमांचा एक भाग म्हणून विद्यार्थ्यांना सहभागी करून राज्य व राष्ट्रीय विकासविषयक योजनांचे मूल्यमापन, विविध विकासविषयक योजनांची पाहणी व त्यांच्याशी संबंधित असलेली आकडेवारी, आधार सामुग्री व इतर तपशील यांचे संकलन इत्यादी कार्ये विद्यापीठाला करावयाचे आहे.

आपल्या विद्यापीठाचा विचार करता विस्तार सेवा कार्ये करण्यासाठी आजीवन अध्ययन व विस्तार विभाग आणि राष्ट्रीय सेवा योजना विभाग कार्यरत आहेत. या विभागांच्या माध्यमातून संलग्नित महाविद्यालये तसेच विद्यापीठाचे शैक्षणिक विभाग यामधून लोककल्याणार्थ विस्तार सेवा उपक्रमांचे आयोजन सातत्याने होत आहे.

विद्यापीठाचे मा. कुलगुरू या मंडळाचे अध्यक्ष आहेत. विभागाच्या नामबदलाबरोबरच विभागाच्या कामांतही बरेच बदल सुचविण्यात आले आहेत. आजीवन अध्ययन व विस्तार विभागाच्या माध्यमातून आता ही बदललेली उद्दिष्टे पार पाडावयाची आहेत.

उद्दिष्टे:

- १) महाविद्यालयीन अध्ययनक्रमात कौशल्यविकास अभ्यासक्रमांची/उपक्रमांची अंमलबजावणी करणे
- २) ज्येष्ठ नागरिकांना सर्वस्तरीय सहयोग करणे
- ३) केंद्र व राज्याच्या विविध शासकीय योजनांसंबंधी लाभार्थ्यांना माहिती, मार्गदर्शन व समन्वयन करणे

उपरोक्त उद्दिष्टांना अनुसरून नवीन उपक्रम आयोजित करण्याचे मंडळाने आता ठरविले आहे.

गेल्या काही वर्षांपासून महाविद्यालयांमध्ये विभागाचे लोकसंख्या शिक्षण मंडळ तसेच महिला अध्ययन व सेवा केंद्र हे उपक्रम राबविले जात आहेत. या उपक्रमांतील सहभागी विद्यार्थी विद्यापीठाच्या माहिती संकलन प्रकल्पात आणि राष्ट्रसंत संस्कार प्रकल्पात सहभागी होत असत. आता नवीन बदलांनुसार प्रत्येक महाविद्यालयात 'आजीवन अध्ययन व विकास केंद्र' स्थापन करावयाचे आहे. या केंद्रांतर्गत विभागाचे पुढील चार प्रकल्प कार्यान्वित करायचे आहेत.

हे चार प्रकल्प पुढील प्रमाणे:

- १) उन्नती : कल्याणकारी शासकीय योजना माहिती, मार्गदर्शन व समन्वयन प्रकल्प
- २) सहयोग: ज्येष्ठ नागरिक सहयोग प्रकल्प
- ३) सक्षम : कौशल्य विकास प्रकल्प
- ४) संस्कार: राष्ट्रसंत संस्कार प्रकल्प

यापुढे उन्नती, सहयोग आणि सक्षम हे तीन प्रकल्प लोकसंख्या शिक्षण मंडळ आणि महिला अध्ययन व सेवा केंद्र या उपक्रमांची जागा घेतील. वरील तीन प्रकल्पांत सहभागी होणाऱ्या विद्यार्थ्यांना विभागाच्या प्रोत्साहनपर गुणांसाठीच्या दोन प्रकल्पांचा लाभ घेता येईल. ते प्रकल्प असे आहेत:

१) 'उन्नती' प्रकल्प यापुढे माहिती संकलन प्रकल्पाची जागा घेईल. 'उन्नती' प्रकल्पांतर्गत कल्याणकारी शासकीय योजनांची माहिती, मार्गदर्शन व समन्वयनाचे काम सहभागी विद्यार्थ्यांला करावे लागेल. हा लाभार्थीकेंद्रित प्रकल्प आहे. सदर योजनांच्या लाभार्थ्यांशी तसेच प्रकल्पाची अंमलबजावणी करणाऱ्या स्थानिक स्वराज्य संस्था कार्यालयाशी संवाद व समन्वय साधून हा प्रकल्प तडीस नेता येईल. त्यावर आधारित एक व्यक्ती-अध्ययन अहवाल (Case Study Report) विद्यार्थ्यांला तयार करावा लागेल. या संबंधीची सविस्तर माहिती प्रकल्पाच्या सोबतच दिली आहे. या व्यक्ती अध्ययन अहवालांचे (Case Study Report) मूल्यमापन करूनच ६ पैकी प्रोत्साहनपर गुण दिले जातील.

२) 'संस्कार' हा राष्ट्रसंत संस्कार प्रकल्प पूर्वीप्रमाणेच कार्यरत राहिल. या अंतर्गत राष्ट्रसंतांच्या संस्कारक्षम साहित्यावर आधारित १२०० शब्दमयदिचा स्वहस्ताक्षरातील लेख सहभागी विद्यार्थ्यांला सादर करावा लागेल. त्याचे मूल्यमापन केल्यावर २ पैकी प्रोत्साहनपर गुण दिले जातील.

या व्यतिरिक्त 'सहयोग' आणि 'सक्षम' या दोन नवीन प्रकल्पांचीही या वर्षीपासून विभाग नव्यानेच सुरुवात करित आहे. या प्रकल्पांचीही सविस्तर माहिती सोबतच्या प्रकल्प मार्गदर्शिकेत दिली आहे.

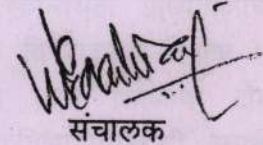
उपरोक्त चारही प्रकल्पांच्या सफल कार्यान्वयनासाठी प्रत्येक महाविद्यालयात प्राचार्यांच्या अध्यक्षतेखाली एक कार्यान्वयन समिती नेमावयाची असून त्याची रचना पुढीलप्रमाणे असेल:

१. प्राचार्य	-	अध्यक्ष
२. समन्वयक प्राध्यापक	-	सदस्य(सचिव) - श्री
३. प्रकल्पशः ३ सहसमन्वयक प्राध्यापक	-	सदस्य - नंदनवार सर
४. प्रकल्पशः ३ विद्यार्थी प्रमुख	-	सदस्य - वाशेकर सर
५. एक उद्योजक	-	सदस्य - काठबोद्ये सर
६. एक प्रतिष्ठित ज्येष्ठ नागरिक	-	सदस्य - पद्माकरजी अग्रवाल
७. गट विकास अधिकारी	-	सदस्य
८. एक सामाजिक कार्यकर्ता	-	सदस्य - दिक्षीपजी गुप्ता
९. एक माध्यम प्रतिनिधी	-	सदस्य - अरुंध मिरे

महाविद्यालयातील आजीवन अध्ययन व विस्तार सेवा केंद्र हे सामाजिक सहयोगाचे व एकात्मिक विकासाचे एक केंद्र व्हावे, ही अपेक्षा आहे. या दृष्टीनेच उपरोक्त सर्व उपक्रमांची रचना केली आहे. या प्रकल्पांमुळे महाविद्यालय व समाज यात एक संवादाचा सेतू निर्माण होईल. सहभागी विद्यार्थी विकासदूत म्हणून कार्यरत होतील तर समन्वयक प्राध्यापक विकासदर्शी!

नव्या सर्व प्रकल्पांसाठी आपल्या सहकार्याची अपेक्षा आणि आपल्या केंद्राला हार्दिक शुभेच्छा.

३ ऑक्टोबर, २०१८


संचालक

Dr. Suram
Environmental Science



राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ

(सेंट्रल प्रोव्हिन्सेस शासन, शिक्षण विभागाची अधिसूचना क्रमांक ५१३ दिनांक १ ऑगस्ट, १९२३ द्वारा स्थापित व
महाराष्ट्र विद्यापीठ अधिनियम, १९९४ द्वारा संचालित राज्य विद्यापीठ)

निकाल विभाग

परीक्षा भवन, एल.आय.टी. परिसर, अमरावती रोड, नागपूर - ४४००३३ ☎०७१२-२५३४२८०

क्र./प.नि./नि.वि./२०११/०२

दिनांक:- २ जानेवारी २०१२

प्रति,

- १ रा.तु.म.ना. विद्यापीठातील सर्व शैक्षणिक विभागाचे विभाग प्रमुख
- २ रा.तु.म.ना. विद्यापीठाद्वारा संचालित महाविद्यालयाचे प्राचार्य/संचालक
- ३ रा.तु.म.ना. विद्यापीठातील संलग्नित सर्व महाविद्यालयाचे प्राचार्य/संचालक

विषय :- पर्यावरण शास्त्र विषयाचे गुण/श्रेणी पाठविण्याबाबत.

महोदय/महोदया,

आपणास कळविण्यात येते की, विद्यापीठाद्वारे निर्गमित निर्देश क्र. १०/२०१० नुसार पदव्युत्तर अभ्यासक्रमातील द्वितीय वर्षाला पर्यावरण शास्त्र हा विषय अनिवार्य करण्यात आला आहे. ज्या अभ्यासक्रमात पर्यावरण शास्त्र हा एक विषय आहे तिथे आवश्यक नाही.

उपरोक्त निर्देशानुसार महाविद्यालयात प्रवेश घेणारे किंवा बहिःशाल विद्यार्थी अशा सर्वांना हा विषय आवश्यक आहे. विद्यार्थ्यांनी काही कारणास्तव परीक्षा दिली नसेल किंवा अनुत्तीर्ण झाला असेल तर त्या विद्यार्थ्यांना तृतीय वर्षाला ही परीक्षा देणे आवश्यक आहे, ज्या विद्यार्थ्यांची गुण/श्रेणी प्राप्त होणार नाही अशा सर्व विद्यार्थ्यांचे निकाल थांबविण्यात येतील म्हणून महाविद्यालयांनी सर्व विद्यार्थ्यांची द्वितीय वर्षाला पर्यावरण शास्त्र विषयाची परीक्षा घेऊन प्रत्येक विद्यार्थ्यांचे रु. २०/- प्रति विद्यार्थी प्रमाणे परीक्षा शुल्क विद्यापीठात भरून गुण/श्रेणी तालिका पावती सह निकाल विभागात परीक्षा सुरू झाल्यापासुन आठ दिवसाच्या आत सादर करावे आणि पर्यावरण शास्त्र परीक्षेच्या गुण/श्रेणी तालिकेचा नमूना संबंधीत परीक्षेच्या विभागाकडून घेण्यात यावा. गुण/श्रेणी तालिकेचा तक्ता घेतांना महाविद्यालयातील सर्व विद्यार्थ्यांचे आसन क्रमांक आले किंवा नाही याची खात्री करून



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR

DIRECTION NO. 2 OF 2010

DIRECTION REGARDING THE COMPULSORY COURSE WITH ENVIRONMENTAL STUDIES

(Issued under section 14(8) of the Maharashtra Universities Act, 1994)

WHEREAS, the Maharashtra Universities Act XXXV of 1994 (hereinafter referred to as the Act) has come into force with effect from 22nd July, 1994 and has been amended from time to time.

AND

WHEREAS, the various communications from the Government of India vide communication No. 11018/1/2001 - CPA (Vol. IV) dated 22nd December, 2003 with respect to Hon'ble Supreme Court judgment No. 1030/91 PII/ dated 22nd December, 2003 and Letter No. 10/ADG/SUM/2004/441 dated 29th April, 2004 directed the university to include compulsory course on Environmental Studies at the University level.

AND

WHEREAS, the University Grants Communication, New Delhi vide its D.O. No. F.13-1/2000(EA/EN/V/COS-1) dated 16th April, 2004 directed the university to implement the six months model syllabus as compulsory course of Environmental Studies for the under-graduate courses in all streams of higher education.

AND

WHEREAS, the Hon'ble Vice-Chancellor, R.T.M. Nagpur University, Nagpur has constituted a committee under the Chairmanship of Prof. A. R. Kulkarni for adopting the syllabus of University Grants Communication with necessary changes if required.

AND

WHEREAS, the said committee has accordingly framed the syllabus in its meeting held on 25th July, 2006 and submitted the same on 28th July, 2007. The same syllabus was further placed in all the Board of Studies of different faculties under the compulsory mandate of Supreme Court. The same was accepted on behalf of Academic & Management Council under Section 14(7) by the Hon'ble Vice-Chancellor on dated 30-9-2006

AND

Backward Class Youth Relief Committee's
Bhiwapur Mahavidyalaya, Bhiwapur

Dist - Nagpur, Maharashtra 441201

CRITERION - I

Curricular Planning and Implementation

**1.3.2 Number of Students undertaking project work/field
work/internship**

पर्यावरण शास्त्र विषयाचे गुण/श्रेणी मार्गदर्शिका

(2)

WHEREAS, the action of 14(7) was ratified by the Academic Council vide its item No. 337 dated 19th/20th July, 2007 and the same was notified being urgent item vide notification no.2 dated 27th February, 2007 along with syllabus for implementation from the session 2007-08.

AND

WHEREAS, it is expedient to provide an Ordinance for the purpose of establishing and executing this course for implementation in the university. The process to promulgate the Ordinance would be an time consuming process which would prevent its implementation from the academic session 2007-2008. It is felt expedient to issue the direction as an inter immediate legislation during the pendency period upto Ordinance formation.

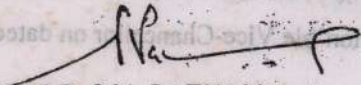
Now, therefore I Dr. S.N. Pathan, Vice-Chancellor of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of powers vested under section 14(8) of the Maharashtra University Act 1994 to issue the following Direction:

1. This course will be called as compulsory course of Six months duration in Environmental Studies at under-graduate level of all branches and faculties of higher education under this university and will be taught in second year and can be cleared in the third year in case the students remains absent or fails to clear the course in its first attempt.

"Provided that the provision of this direction will not be applicable to those course in which the subject Environmental has been included as subject of study and examination such as B.Sc. (Environmental Science) and all other similar cases at U.G. level."

2. This direction will come into force with effect from the academic year 2007-2008
3. The Principal would appoint Coordinator and Assistant Coordinator as per need to coordinate the teaching of the course, appoint contributory teachers, if necessary; At the end of the course, the college would conduct the examination. It will appoint paper setters and examiners. The final grades of candidates should be informed to the university. The expenditure for all the required manpower be met from the remaining amount of fees.
4. Qualifications of a Teacher: A teacher in any subject possessing knowledge to teach the "Course on Environmental Studies" shall be eligible.
5. The course should be taught in second year and can be cleared the third year in case the students remains absent or fails to clear the course.
6. This course is also compulsory for external students. In case of external students, they can enroll themselves in any college for this course and can complete the course.
7. The relevant guidelines regarding the scheme of examination (Annexure-A) and fees structure (Annexure-B) enclosed herewith the Direction. The Direction-No. 10 of 2008 hereby stand repealed,

Nagpur
Date:: 6.2.2010


DR. S.N. PATHAN
VICE-CHANCELLOR

Annexure-A Scheme of Examination/Gradation

1. The candidate will have to pass in the examination of this course in order to obtain degree certificate from the University as per the following scheme of examinations.

A) The theory question paper would carry 75 marks – 50 for objective type questions covering various aspects of the syllabus (50 questions, each of one mark) and 25 marks for one essay type question.)

At the end of the course the student would be evaluated for 100 marks with distribution as below –

Field note book	-	25
Objective Questions	-	50
Essay type question	-	25
Passing marks	-	<u>40</u>

The result would be declared in grades –

Grade-0: above 75; A-61-75; B-51-60; C-40-50

OR

B) In view of the above entire course the students in terms of batches of 20 students each may be assigned a project work encompassing Community People's Bio-diversity Registrar(PBR) of any Gram Panchayat as per the format of Bio-diversity Authority of India under the guidance of a teacher. The PBR should be evaluated for 100 marks.

ANNEXURE – B FEE STRUCTURE

A fee of Rs. 100/- per student be charged and its utilization is as follows: Rs. 20/- will be sent to the university and Rs. 16/- to Principal to be utilized for infrastructure and administrative expenses pertinent to the course as approved by the University vide Notification No. N/Acad./1668 dated 16th July, 2007.



Rashtrasant Tukadoji Maharaj Nagpur University

Formerly known as Nagpur University

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[Back](#)

(FACULTY OF SCIENCE & TECHNOLOGY)

FOURTH SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE (B.SC.), SUMMER 2023

Student Name : SIYA RAVINDRA GIRI

Mother's Name : SHALINI

Exam Category : REGULAR

College : (396) BHIWAPUR MAHAVIDYALAYA, BHIWAPUR, DIST NAGPUR

Roll No. : 542702

Enrol.No. : 2021016600747486

Center No. : 396

Date : 26/08/2023

P/L : 674/7

Medium: ENGLISH

SR NO	SUBJECT	MARKS						MARKS OBTAINED						RMK	
		---MAXIMUM---			TOTAL	--MINIMUM--			TH		TOTAL	IA	TH+IA		PR
		TH	IA	PR	MARKS	TH+IA	PR	TH1	TH2	TOTAL	IA1:IA2	TOTAL	TOTAL	TOTAL	TOTAL
1	CHEMISTRY	100	20	30	150	48	12	08	19	27	10 :10	20	47	23	071*
2	PHYSICS	100	20	30	150	48	12	25	33	58	10 :10	20	78	25	103
3	MATHEMATICS	120	30	--	150	60	--	47	22	69	15 :15	30	99	--	099

PARTICULARS	MARKS OBTAINED (IN FIGURE)	OUT OF	MARKS OBTAINED (IN WORDS)	RESULT	GRAND TOTAL
				REMARKS	DIVISION
GRAND TOTAL	273*	450	TWO HUNDRED SEVENTY THREE	PASS BY GRACE	
INCENTIVE MARKS		GRADE (E/S)	A		

(This statement is subject to corrections, if any)

TH=Theory University, PU=Practical University, IA=Theory Internal, PI=Practical Internal, RMK=Exemption Remark,

Controller of Examinations

Print Date:-20-08-2023 20:32:27

Disclaimer

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Rajawade Sanshodhan Mandal Nagpur University
Formerly known as Nagpur University

www.rtmnuresults.org

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(FACULTY OF SCIENCE & TECHNOLOGY)
FOURTH SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE (B.SC.), SUMMER 2023

Student Name : NAMOSHREE SUSHIL CHAUDHARI Roll No. : 542684 Date : 26/08/2023
Mother's Name : KALPANA Enrol.No. : 2021016600747513 P/L : 672/5
Exam Category : REGULAR Center No. : 396 Medium: ENGLISH
College : (396) BHIWAPUR MAHAVIDYALAYA, BHIWAPUR, DIST NAGPUR

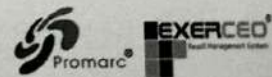
SR NO	SUBJECT	MARKS						MARKS OBTAINED						RMK
		--MAXIMUM--			TOTAL	--MINIMUM--			TH	IA		TH+IA	PR	
		TH	IA	PR	MARKS	TH+IA	PR	TH1:TH2	TOTAL	IA1:IA2	TOTAL	TOTAL	TOTAL	MARKS
1	CHEMISTRY	100	20	30	150	48	12	13 :10	23	10 :10	20	43	23	071*
2	PHYSICS	100	20	30	150	48	12	22 :32	54	10 :10	20	74	25	099
3	MATHEMATICS	120	30	--	150	60	--	46 :14	60	15 :15	30	90	--	090

PARTICULARS	MARKS OBTAINED (IN FIGURE)	OUT OF	MARKS OBTAINED (IN WORDS)	RESULT	GRAND TOTAL
				REMARKS	DIVISION
GRAND TOTAL	260*	450	TWO HUNDRED SIXTY	PASS BY GRACE	
INCENTIVE MARKS	GRADE (E/S)	B*			

(This statement is subject to corrections, if any) Controller of Examinations
TH=Theory University, PU=Practical University, IA=Theory Internal, PI=Practical Internal, RMK=Exemption Remark,

nt Date:-06-03-2024 12:28:56

Disclaimer
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Backward Class Youth Relief Committee's
Bhiwapur Mahavidyalaya, Bhiwapur

Dist - Nagpur, Maharashtra 441201

CRITERION - I

Curricular Planning and Implementation

**1.3.2 Number of Students undertaking project work/field
work/internship**

Syllabus of Botany, Zoology and B. VOC

B. Sc. SEMESTER- I
PAPER-II
(Fungi, Plant-Pathology, Lichens, Bryophyta and Mushroom Cultivation)

Unit-I: Fungi:

1. **Fungi:** General characteristics, Classification (Alexopoulos, 1996), Economic importance.
2. Life history of *Albugo*, *Mucor*, *Puccinia* and *Cercospora*.

Unit-II: Plant Pathology and Lichens:

1. **Plant-Pathology:** Host, Pathogen, Symptoms, Causes and control of diseases: Leaf curl of Papaya, Citrus canker and red rot of Sugarcane
2. **Lichens:** Introduction, Types, Reproduction and Economic importance.

Unit-III: Bryophyta:

1. **Bryophyta:** General Characteristics, Classification (Proskauer, 1957), Economic importance.
2. Life history of *Marchantia*, *Anthoceros* and *Funaria*.

Unit-IV: Skill Development: Mushroom Cultivation:

1. **Introduction:** Nutritional and medicinal value of edible mushroom; Poisonous mushroom. Edible mushroom: *Volvariella volvacea*, *Plerotuscitrino pileatus*, *Agaricus bisporus*.
2. **Technology of Mushroom cultivation: Infrastructure:** Mushroom unit (Thatched house); **Tools:** Polythene bags, vessels, inoculation hook, inoculation loop, low cost stove, sieves, culture rack, water sprayer, tray, medium.
3. **Techniques:** Substrate, preparation of medium and spawn, sterilization, multiplication, bed preparation (Paddy-straw, sugarcane trash, banana leaves)

- Note:**
1. Developmental stages are not expected
 2. Short excursion tour/visit to biofertilizer laboratory or Mushroom cultivation center is expected

BOTANY PRACTICAL EXAMINATION
B. Sc.
SEMESTER-I

TIME: FIVE HOURS

MAX. MARKS:30

- Q. 1: Gram stain the given **bacterial** strain/stain the **Cyanobacterial** material (A) and identify giving reasons. 04 M
- Q. 2: Identify the given **Algal** material (B). Prepare temporary mount and write identifying characters. 04 M
- Q. 3: Identify the given **Fungal** material (C). Prepare temporary mount and write identifying characters. 04 M
- Q. 4: Identify the given **Bryophytic** material (D). Prepare temporary mount and write identifying characters. 04 M
- Q. 5: **Spotting:** 06 M
(E) Virus/Bacteria (F) Algae/Fungi/Bryophyte (G) Plant pathology
(H) Lichen (I) Biofertilizers (J) Mushroom cultivation
- Q. 6: **Viva-voce.** 03 M
- Q. 7: **Practical Record and Excursion report.** 05 M
-

B. Sc. SEMESTER-II
PAPER-II
(Morphology of Angiosperms and Floriculture)

Unit-I: Vegetative Morphology:

1. **Root:** Tap root and adventitious root, modification of root for storage and respiration
2. **Stem:** Shape, surface, and nature. Branching (Monopodial and Sympodial), Modification of stem (Runner, Rhizome, Tuber, Bulb)
3. **Leaf:** Typical leaf, Types (Simple and Compound), Types of phyllotaxy, Venation, Modification of leaf (Tendrils, Phyllode)

Unit-II: Reproductive Morphology:

1. **Inflorescence:** Definition, Racemose, Cymose and Special types
2. **Flower:** Definition, Structure of Typical flower, Variation in thalamus (Androphore, Gynophore and Gynandrophore)
3. **Calyx and Corolla:** Cohesion, Forms of corolla and aestivation.
4. **Androecium:** Parts, Cohesion, Adhesion and Fixation.

Unit-III: Carpel and Fruit:

1. **Gynoecium:** Parts, Cohesion, Adhesion and Placentation.
2. **Fruit:** Definition, Pericarp, Types of fruits: Simple (Dehiscent, Schizocarpic, Dry Indehiscent, Fleshy Indehiscent); Aggregate (Etaerio) fruits, Composite Fruits (Sorosis and Syconus).

Unit-IV: Skill Development: Floriculture:

1. **Floriculture:** Definition, commercial aspects.
2. **Methods of cultivation of:** Important cut flowers such as Carnation, Asters, Gerbera, Dahlia, Marigold with reference to soil type, sowing pattern, weather condition, irrigation regime, fertilizers and harvesting.
3. Diseases and control measures.

List of practical: Paper-II:

1. Study of different root modifications
2. Study of nature of branching and modification of stem
3. Study of leaf: Types (Simple & Compound), Phyllotaxy, Venation and Modifications.
4. Inflorescence: Types mentioned in theory.
5. Flower: Parts, calyx, corolla, androecium, gynoecium, variation in thalamus.
6. Fruits: Study of different types of fruits
7. Identification and commercial aspect of cut flowers mentioned in theory.

Note: 1. Developmental stages are not expected

2. Short excursion tour/visit to soil testing laboratory or Polyhouse is expected

SM-E

BOTANY PRACTICAL EXAMINATION
B. Sc.
SEMESTER-II

TIME: FIVE HOURS

MAX. MARKS: 30

- | | | |
|---|------------------|----------------|
| Q. 1: Identify the given Pteridophytic material (A). Prepare temporary mount and write identifying characters. | 04 M | |
| Q. 2: Identify the given Gymnospermic material (B). Prepare temporary mount and write identifying characters. | 04 M | |
| Q. 3: To study the physical or chemical properties (any two) of given soil sample (C) | 03 M | |
| Q. 4: Describe the given leaf material (D). | 03 M | |
| Q. 5: Describe the given flower (E). | 03 M | |
| Q. 6: Spotting: — — — — — | 05 M | |
| (F) Palaeobotany | (G) Pteridophyta | (H) Gymnosperm |
| (I) Fruit | (J) Floriculture | |
| Q. 7: Viva-voce. | 03 M | |
| Q. 8: Practical Record and Excursion report. | 05 M | |

Suggested Readings: B. Sc. Semester-II

B. Sc. SEMESTER-III
PAPER-II
(Angiosperm Anatomy and Horticulture)

Unit-I: Anatomy:

1. **Tissue:** Definition, Characteristics of Meristematic tissue; Classification of meristems (based on origin and position).
2. **Simple Permanent Tissue and their functions:** Parenchyma, Collenchyma, and Sclerenchyma
3. **Complex Permanent Tissue and their functions:** Xylem and Phloem
4. **Apical meristem of root and shoot:** Apical cell theory, Histogen theory, Tunica-Corpus theory, Newman's theory
5. **Cambium:** Structure, Types and functions.

Unit-II: Primary and Secondary Growth in stem and root:

1. **Types of vascular bundles:** Radial, Conjoint, Concentric.
2. **Normal Primary structure of root:** Dicot (*Sunflower*) and Monocot (*Maize*)
3. **Normal Primary structure of stem:** Dicot (*Sunflower*) and Monocot (*Maize*)
4. **Normal secondary growth in dicot stem:** *Sunflower*
5. **Anomalous Secondary growth in:** Dicot stem (*Bignonia*) and Monocot stem (*Dracaena*)

Unit-III: Periderm, growth rings, Sap-heartwood, leaf anatomy:

1. **Growth rings:** Spring wood and winter wood
2. Sap wood, Heart wood, Tyloses
3. **Periderm:** Composition, functions and Structures associated with periderm (Lenticel, Bark, Commercial cork)
4. **Anatomy of leaf:** Dicot (*Nerium*) and Monocot (*Maize*)
5. Senescence and Abscission.

Unit-IV: Skill Development: Horticulture

1. **Horticulture:** Definition and scope; importance of horticulture, water requirement and irrigation, nutrient management.
2. Methods of propagation of following horticultural crops (propagation by seeds, vegetative propagation, propagation through specialized organs): *Rose, Chrysanthemum, Crotons, Mango, Citrus, Guava, Liliun.*
3. Technique of Bonsai preparation.

List of Practical: Paper-II:

1. Study of simple and complex tissue from permanent micro-preparation.
2. Study of different types of vascular bundles.
3. Study of internal structure of dicot and monocot roots with the help of temporary micro-preparation.
4. Anatomy of dicot and monocot stem with the help of temporary or double stained permanent micro-preparation.
5. Anatomy of normal and anomalous secondary growth in stem with the help of double stained permanent micro-preparation.
6. Study of internal structure of dicot (*Nerium*) and monocot leaf (*Maize*) with the help of temporary micro-preparation.
7. Study of various horticultural crops mentioned in syllabus.

Note: 1. Developmental stages are not expected

2. Short excursion tour is expected

Signature

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BOTANY PRACTICAL EXAMINATION
B. Sc.
SEMESTER-III

TIME: FIVE HOURS

MAX. MARKS: 30

- Q. 1: Describe in technical language the given **Angiospermic** material (A). Classify and identify the family giving reasons. 05 M
- Q. 2: Calculate percent germination of **pollen grains** in given material (B). 03 M
- Q. 3: Prepare temporary mount of the given **root/leaf** material (C) and identify giving diagnostic characters. 04M
- Q. 4: Prepare double stained permanent mount of the given **stem** material (D). Identify giving diagnostic characters. 05 M
- Q. 5: **Spotting:** 05 M
- | | | |
|-------------------------|-------------------------|------------|
| (E) Fossil angiosperms | (F) Embryology | (G) Tissue |
| (H) Popular house plant | (I) Horticultural plant | |
- Q. 6: Viva-voce. 03 M
- Q. 7: Practical Record and Excursion report. 05 M
-

**B. Sc. SEMESTER-IV
PAPER-II
(Genetics, Molecular Biology and Plant Nursery)**

Unit-I: Genetics: (Mendelism, Linkage and crossing over).

1. **Mendelism:** Basic terminology, Law of segregation and law of independent assortment.
2. **Interaction of genes:** Allelic: Incomplete dominance (1:2:1); Non-allelic: Complementary factors (9:7) and Dominant epistasis (12:3:1).
3. **Linkage:** Definition, Theory of linkage: Coupling and Repulsion, Types: Complete and Incomplete linkage
4. **Crossing over:** Definition, Breakage and reunion theory, significance of crossing over.

Unit-II: Genetics: (Mutation)

1. **Mutation:** Definition, Types: Spontaneous and induced mutation, Physical and Chemical mutagens, applications of induced mutations.
2. **Chromosomal aberrations:** Deficiency, Duplications, Inversion and Translocation
3. **Variation in chromosome number:** Aneuploidy (Nullisomics, Monosomics, Trisomics and Tetrasomics), Euploidy (Autopolyploidy, Allopolyploidy); Significance.
4. **DNA Damage and Repair:** Photoreactivation and Excision Repair

Unit-III: Molecular biology

1. **DNA:** Structure of DNA (Watson and Crick's model), Replication of DNA: Semiconservative method of DNA replication,
2. **RNA:** Types, Clover leaf model of t-RNA
3. **Concept of gene:** Classical: Cistron, Muton and Recon
4. **Genetic code:** Definition and characteristics
5. **Protein synthesis:** Transcription and Translation
6. **Regulation of gene action:** Lac-Operon model

Unit-IV: Skill Development: Plant nursery

1. **Nursery:** Definition and Role or objective; nursery infrastructure
2. **Planning and seasonal activities:** Preparation of nursery beds, Planting: direct seeding and transplant, Air layering, Budding, Grafting, cutting, rooting medium, hardening of plant
3. **Nursery management:** Routine garden operations, soil sterilization, seed sowing, pricking, planting and transplanting, shading, stopping or pinching, defoliation, wintering, mulching and topiary.

List of Practical: Paper-II:

1. To prove Mendel's law of segregation with the help of colored beads.
2. To prove Mendel's law of independent assortment with the help of colored beads.
3. To work out the type of gene interaction mentioned in theory from given data.
4. To study different methods of vegetative propagation (Air layering, cutting, budding and grafting)
5. To study the method of soil sterilization for plant nursery.

Note: 1. Developmental stages are not expected,
2. Short excursion tour/visit to Nursery is expected



BOTANY PRACTICAL EXAMINATION

**B. Sc.
SEMESTER-IV**

TIME: FIVE HOURS

MAX. MARKS: 30

- Q. 1: To prepare semi-permanent squash/smear of the given plant material (A), identify stage/s of cell division. 04 M
- Q. 2: To solve given problem of Biostatistics from the given data (B). 03 M
- Q. 3: To determine seed viability of the given seeds (C) and report the finding. 03M
- Q. 4: To prove Mendel's law of inheritance by using colored beads (D) and apply Chi-Square test. 04 M
- Q. 5: To work out the type of gene interaction from the given data (E). 04 M
- Q. 6: Spotting: 04 M
- (F) Cell organelle (G) Cell division -
- (H) Tools used in nursery (I) Method of vegetative propagation.
- Q. 7: Viva-voce. 03 M
- Q. 8: Practical Record and Excursion report. 05 M
-

Unit-I: Plant and environment:

1. **Ecology:** Definition, branches and significance.
2. **Climatic factors:** Atmospheric (Gaseous composition); Effect of Light and Temperature on vegetation
3. **Edaphic factors:** Pedogenesis, Soil profile, Soil micro-organisms.
4. **Physiographic factors:** Biotic factors: Interaction between plants and animals and humans and interaction between plants growing in a community.

Unit-II: Ecosystem:

1. **Ecosystem:** Definition, types; Components: Biotic and abiotic components, Food chain, Food web, Ecological pyramids.
2. **Autecology:** Definition, Importance, Ecads, Ecotypes: Characteristics and importance, Growth curve.
3. **Synecology:** Definition, Study of community: Quantitative characteristics: Frequency, Density, Abundance; Qualitative characteristics: Life forms, Raunkier's Biological Spectrum and Synthetic characteristics: Presence, fidelity and dominance.

Unit-III: Plant Succession and adaptations:

1. **Plant Succession:** Definition, Causes of succession, Hydrosere, Xerosere
2. **Plant Adaptations:** Morphological and anatomical adaptations of Hydrophyte (*Hydrilla*, *Nymphaea*), Xerophyte (*Casuarina*, *Nerium*), Halophyte and Epiphyte (*Vanda*).
3. **Biogeochemical cycles:** Nitrogen and Phosphorous

Unit-IV: Skill development: Organic farming:

1. **Organic farming:** Definition, concept, advantages and disadvantages, green manure and organic fertilizers.
2. **Methods:** Recycling of biodegradable kitchen, agricultural and industrial waste.
3. **Methods of:** Preparation of Bio-compost, preparation of vermicompost and its type, isolation and inoculum production of VAM.
4. **Organic manure:** Effect of organic manures on growth and yield productivity of various crop plants.

List of Practical: Paper-II:

1. To determine frequency, density and abundance of community by quadrat method.
2. To determine homogeneity of vegetation by Raunkier's frequency diagram.
3. To determine the minimum number of quadrates required for reliable estimate of biomass in grasslands.
4. To study the frequency of herbaceous species in grassland and to compare the frequency distribution with Raunkier's standard frequency diagram.
5. To measure the above ground plant biomass in a grassland.
6. To study soil profile at different locations of nearby area.
7. To estimate transparency, pH and temperature of different water bodies.
8. To estimate salinity of different water samples.

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9. To study the morphological and anatomical characteristics of hydrophyte, xerophyte, halophytes and epiphyte with reference to ecological adaptations.
10. Collection and identification of various organic manures.
11. To study the methodology of preparation of vermi-compost.

Note: 1. Developmental stages are not expected,
2. Short excursion tour/ visit to Organic farm is expected

**BOTANY PRACTICAL EXAMINATION
SEMESTER-V**

TIME: FIVE HOURS

MAX. MARKS: 30

- | | |
|---|--------------|
| Q. 1: To perform the given major physiology experiment (A) and report the findings. | 05 M |
| Q. 2: To perform the given minor physiology experiment (B) and report the findings. | 03 M |
| Q. 3: To perform the given ecological experiment (C) and report the finding. | 05 M |
| Q. 4: To study morphological and anatomical characteristics of the given plant material (D), with reference to ecological adaptations. | 05 M |
| Q. 5: Spotting: | 04 M |
| (G) Plant physiology | (F) Ecology |
| (I) Hydroponics | (H) Manures. |
| Q. 6: Viva-voce. | 03 M |
| Q. 7: Practical Record and Excursion report. | 05 M |

B. Sc. SEMESTER-VI
PAPER-II

(Phytogeography, Utilization of Plants, Techniques and Pharmacognosy)

Unit-I: Phytogeography, Pollution, Natural resources:

1. **Phytogeography:** Principles of phytogeography, Distribution (Wides, Endemics, Dis-continuous species); Climatic regions of India, Phytogeographic regions of India (Chatterjee, 1962) (Name, Distribution area, Typical Vegetation)
2. **Environmental pollution:** Causes and Control measures of Agriculture pollution and Noise pollution
3. **Natural Resources:** Renewable and Non-renewable resources, factors for their depletion
4. **Conservation strategies:** Conservation of forest and water resources.

Unit-II: Utilization of plants and Ethnobotany:

1. **Utilization of plants:** Morphology, Utilization and important chemical constituents of the plants: Food (Wheat), Oil (Groundnut), Fiber (Cotton), Spices (Clove), Beverages (Coffee), Medicinal (*Adhatoda vassica*), and Rubber.
2. **Ethnobotany:** Definition, Brief history, branches and importance of Ethnobotany.
3. **Plants of ethnobotanical importance:** Vegetable, Fruits, Seeds, Medicinal and Narcotics (Two plants each with reference to family, parts used and tribal areas)

Unit-III: Microscopy and Techniques:

1. **Microscopy:** Principle, types and application of microscope (Light, Fluorescent, SEM and TEM).
2. **Techniques:** Principle, types and application of Centrifugation, Electrophoresis (SDS-PAGE and Agarose), Spectroscopy (UV-Vis), Chromatography (Paper and Thin layer Chromatography (TLC))

Unit-IV: Skill development: Pharmacognosy:

1. **Pharmacognosy:** Definition and scope, Drug adulteration: Types; methods of drug evaluation: Biological testing of herbal drugs, phytochemical screening tests for secondary metabolites (Alkaloids and Flavonoids)
2. **Pharmacological plants:** Biological source, staining, diagnosis, micro-chemical tests, chemical constituents, preparation and uses of drug extracted from the plants: *Datura* leaf, *Vinca rosea*, *Plantago ovata* (Isapgol) seeds, *Linum usitatissimum* (Linseed) seeds, *Elettaria cardamomum* fruit, *Coriandrum sativum* fruit, *Eugenia caryophyllus* (Clove) flower-bud, *Rauwolfia serpentina* root, *Zingiber officinale* (Ginger) rhizome.

Note: 1. Developmental stages are not expected,
2. Short excursion tour is expected

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BOTANY PRACTICAL EXAMINATION
SEMESTER-VI

TIME: FIVE HOURS

MAX. MARKS: 30

- Q. 1: To perform the given **biochemical experiment (A)** and report the findings. 03 M
- Q. 2: To perform the given **micro-chemical test (B)** and report the findings. 03 M
- Q. 3: To extract and prepare the **herbal product (C)** from the given plant material. 04M
- Q. 4: Write about the **morphology and utilization** of the given plant material **(D)**. 03 M
- Q. 5: To prepare **crude drug extract** from the given plant material **(E)** and mention its use. 04 M
- Q. 6: Spotting: 05 M
- (F) Biotechnology (Instrument) (G) Genetic engineering (Tool) - (H) Herbal plant
- (I) Ethnobotany (J) Plant used in Pharmacognosy
- Q. 7: Viva-voce. 03 M
- Q. 8: Practical Record and Excursion report. 05 M

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Semester – I

PRACTICAL – I (Based on Paper – I and II)

Section A : Life and Diversity of Animals – Nonchordates (Protozoa to Annelida)

& Section B : Environmental Biology

Section A : Life and Diversity of Animals – Nonchordates (Protozoa to Annelida)

1. Study of museum specimens (Classification of animals up to orders)

- I. Protozoa (Slides) : *Paramoecium*, *Euglena*, *Amoeba*, *Plasmodium vivax*
- II. Porifera: *Sycon*, *Leucosolenia*, *Hyalonema*, *Euplectella*, *Spongilla*
- III. Coelenterata : *Obelia*, *Aurelia*, *Tubipora*, *Fungia*, *Adamsia*
- IV. Platyhelminthes : *Planaria*, *Fasciola*, *Taenia*
- V. Aschelminthes : *Ascaris*, *Drancunculus*, *Ancylostoma*, *Wuchereria*
- VI. Annelida : *Aphrodite*, *Nereis*, *Chaetopteurs*, *Tubifix*, *Hirudinaria*

2. Study of permanent slides

Enatmoeba, *Giardia*, Sponge gemmules, Sponge spicules, V.S. *Sycon*, T.S. *Sycon*, *Obelia* medusa, Miracidium, Redia and Cercaria larvae of *Fasciola*, T.S. male and female *Ascaris*, Scolex of *Taenia*, Mature and gravid proglottids of *Taenia solium*, T.S. of Leech through crop pockets, Trochophore larva

3. Dissection

Digestive, nervous and reproductive system of Earthworm

4. Mounting

Spicules and gemmules of Sponge, *Obelia* colony, *Nereis* parapodia, Jaws of Leech, Nephridia of Leech.

Section B: Environmental Biology

1. Estimation of dissolved oxygen of water
2. Estimation of free CO₂ of water
3. Estimation of pH of water sample
4. Estimation of total hardness of water
5. Study of pond ecosystem - Producers, consumers and decomposers
6. Quantitative analysis of plankton

Visit to a National park and Sanctuary

Distribution of Marks –

Total Marks 30

i.	Identification and Comment on Spots (4 Museum specimens + 1 Env. bio. spot + 3 slides)	08
ii.	Dissection -	08
iii.	Environmental biology experiment	04
iv.	Permanent stained preparation	03
v.	Submission of certified practical record	03
vi.	Submission of Slides & tour diary	02
vii.	Viva voce	02

Section A: General Mammalian Physiology – I

1. Detection of action of salivary amylase on starch
2. Detection of carbohydrates, proteins and Lipids
3. Detection of Vitamin A and Vitamin C
4. Measurement of lung capacity
5. Preparation Haemin crystal
6. Total count of WBC and RBC
7. **Study of histological slides of Mammal** – T.S. salivary gland, T.S. stomach, T.S. intestine, T.S. pancreas, T.S. liver and T.S. lung

Section B : Applied Zoology –I (Aquaculture and Economic Entomology)**Aquaculture:**

1. **Collection and identification of fishes**
 - a. Freshwater edible fishes – catla, rohu, mrigal, grass carp, silver carp, *Cyprinus carpio*, *Ophiocephalous*, *Clariaus*, *Heteropneustes*, *Wallago*, *Mystus*,
 - b. Aquarium fishes – Gold fish, Molly, Sword tail, Kissing *Gourami*
2. **Dissection:**
 - a. Digestive, reproductive and brain with pituitary of culturable fishes
 - b. Gonosomatic index
3. **Fabrication and setting up of aquarium**
4. **Mounting:** Scales of fishes, zooplankton

Economic Entomology:

1. **Study of Insect Pest**
 - a. Agriculture pest – Grasshopper, Red Cotton bug, Gram pod borer, Cotton pink bollworm, Cotton spotted bollworm
 - b. Medical pest – House fly, Mosquito, *Pediculus humanus*
 - c. Veterinary pest – Stable fly, Dog tick, Bird lice
 - d. Stored grain pest – Stored grain weevil, Flour moth
 - e. Useful insects – Honeybee, Silk moth, Lac insect, Dragon fly, Lady bird beetle
2. **Mounting** : Mouth parts, Legs, wings of any insects and sting of Honeybee
3. **Visit to** – Fish farm, Apiculture, Sericulture, Agricultural educational centre, Sea shore and Lake

Distribution of Marks**Total Marks 30**

i. Physiology experiment	05
ii. Identification and comment on spots (2 from Mammalian histology, 3 from Aquaculture and 3 from Economic Entomology)	08
iii. Dissection of fish / Gonosomatic index	05
iv. Permanent stained preparation	02
v. Submission, collection and study tour report	02
vi. Submission of certified practical record	03
vii. Viva voce	05

(Section A: General Mammalian Physiology – II and Section B: Applied Zoology – II ,
Biotechniques, Microtechnique, Biotechnology, Bioinformatics and Biostatistics)

Section A : General Mammalian Physiology – II

1. Detection of urea, albumin, sugar and creatin in urine
2. Sperm count in a given semen sample
3. **Dissection:** Endocrine glands of Culturable fishes
4. **Study of histological slides of Mammal** – T.S. kidney, pituitary, thyroid, adrenal, testis, ovary; uterus, placenta, medulated and non medulated nerve fibre, smooth and striated muscle

Section B : Applied Zoology – II (Biotechniques, Microtechnique, Biotechnology, Bioinformatics and Biostatistics)

1. Separation of amino acids by paper chromatography
2. Separation of proteins by electrophoresis technique
3. Block preparation and section cutting
4. Double staining method (H-E)
5. Demonstration of carbohydrates, proteins and lipids by histochemical methods
6. Determination of mean, mode, median from a given biostatistical data and/or graphical representation of the data using computers

7. Use of internet for survey of literature using protein and nucleotide databases(NCBI)
8. Use of softwares like Microsoft offices
9. **Visit to Biotechnology centre to study working principles of different instruments**

Distribution of Marks	Total Marks 30
I. Physiology experiment	05
II. Identification and comments on spots (Mammalian histology 3 spots)	03
III. Microtechnique - Section cutting, spreading and H-E staining of given slide	03
IV. Dissection of fish	05
V. Analysis of given biostatistical data	02
VI. Retrieval of specific literature from given information	02
VII. Submission of slides and study tour report	02
VIII. Submission of certified practical record	03
IX. Viva voce	05

APPENDIX 'A'
Teaching & Examination Scheme
DIPLOMA (ONE YEAR), ADVANCE DIPLOMA (TWO YEARS), BACHLOR OF VOCATION (B. Voc)
(THREE YEARS DEGREE COURSE – SEMESTER PATTERN)

B. Voc. (Semester I)

A] General Education Component Credits: 12

Sr. No.	Subject	Credits	Teaching Scheme Hrs / Week			Examination scheme								
			Theory Period	Pr Period	Total Periods	Theory					Practical			
						Duration Hrs	Max Th.	Max IA	Total	Min Pass	Du Hrs	Max Mar Pr.	Min Pass Mar.	Total Marks Th.Pr.IA
1.	English and Communicative English –I	4	4	-	4	3	70	30	100	40	-	-	-	100
2.	Soft Skill Development –I	4	4	-	4	3	70	30	100	40	-	-	-	100
3.	Aptitude development –I	4	4	-	4	3	70	30	100	40	-	-	-	100
	Total	12	12	-	12	-	210	90	300	120	-	-	-	300

B] Skill Development Component Credits: 18

Sr. No.	Theory Paper/ Practical	Subjects	Teaching Scheme(Hrs/Week)			Credits	Examination Scheme					
			Th	Pr.	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks	
								External Marks (Th)	Internal Marks (IA)		Th.	Pr.
1	I	Paper - I	4	-	4	4	3	70	30	100	40	-
2	II	Paper - II	4	-	4	4	3	70	30	100	40	-
3	Practical-I /Workshops –I /Labs-I/ Internship-I	Practical based on Paper I of skill development	-	5	5	4	6	70	30	100	-	40
4	Practical-II- Workshops –II /Labs-II / Internship-II	Practical based on Paper II of skill development	-	5	5	4	6	70	30	100	-	40
5	Field Work / Industrial Visit / Production (Report writing/ Presentation)	-	-	-	-	2	-	-	50	50	-	20
	Total		8	10	18	18	-	280	170	450	80	100

Note:

1. Th = Theory; Pr = Practical; WS=Workshops/ LB=labs/ PR=Production/FW=Field Work/INT=Internship IA = Internal Assessment.
2. Minimum marks for passing will be 40% of the total marks allotted to that paper / practical.

3 Credit Calculations

One credit would mean equivalent of 15 periods of 60 minutes each, for Theory & Practical's.

For internship/ Field work, the Credit Weightage for equivalent hours shall be 50% of that for lectures.

The strength of Batch of Practical /Workshop / internship / Field visit / production for Under Graduates classes shall be 16 with an additional; of

APPENDIX 'A'
Teaching & Examination Scheme
DIPLOMA (ONE YEAR), ADVANCE DIPLOMA (TWO YEARS), BACHLOR OF VOCATION (B. Voc)
(THREE YEARS DEGREE COURSE – SEMESTER PATTERN)

B. Voc. (Semester II)

A] General Education Component Credits: 12

Sr. No.	Subject	Credits	Teaching Scheme Hrs / Week			Examination scheme									
			Theory Period	Pr. Period	Total Periods	Theory					Practical				
						Du Hrs	Max Th.	Max IA	Total	Min Pass	Du Hrs	Max Mar Pr.	Min Pass Mar.		
1.	English and Communicative English –II	4	4	-	4	3	70	30	100	40	-	-	-	100	
2.	Soft Skill Development – II	4	4	-	4	3	70	30	100	40	-	-	-	100	
3.	Aptitude development – II	4	4	-	4	3	70	30	100	40	-	-	-	100	
Total		12	12	-	12	-	210	90	300	120	-	-	-	300	

B] Skill Development Component Credits: 18

Sr. No.	Theory Paper/ Practical	Subjects	Teaching Scheme(Hrs/Week)			Credits	Examination Scheme					
			Th	Pr.	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks	
								External Marks (Th)	Internal Marks (IA)		Th.	Pr.
1	I	Paper - I	4	-	4	4	3	70	30	100	40	-
2	II	Paper - II	4	-	4	4	3	70	30	100	40	-
3	Practical-I- Workshops –I /labs-I / Internship-I	Practical based on Paper I of skill development	-	5	5	4	6	70	30	100	-	40
4	Practical-II- Workshops –II / Labs-II / Internship-II	Practical based on Paper II of skill development	-	5	5	4	6	70	30	100	-	40
5	Field Work / Industrial Visit / Production (Report writing/ Presentation)	-	-	-	-	2	-	-	50	50	-	20
Total			8	10	18	18	-	280	170	450	80	100

Note:

1. Th = Theory; Pr = Practical; WS=Workshops/ LB=labs/ PR=Production/FW=Field Work/INT=Internship IA = Internal Assessment.

2. Minimum marks for passing will be 40% of the total marks allotted to that paper / practical.

3 Credit Calculations

One credit would mean equivalent of 15 periods of 60 minutes each, for Theory & Practical's.

For internship/ Field work, the Credit Weightage for equivalent hours shall be 50% of that for lectures.

APPENDIX 'A'
Teaching & Examination Scheme
DIPLOMA (ONE YEAR), ADVANCE DIPLOMA (TWO YEARS), BACHLOR OF VOCATION (B. Voc)
(THREE YEARS DEGREE COURSE – SEMESTER PATTERN)
B. Voc. (Semester III)

A] General Education Component Credits: 12

Sr. No.	Subject	Credits	Teaching Scheme Hrs / Week			Examination scheme								
			Theory Period	Pr Period	Total Periods	Theory					Practical			
						Du Hrs	Max Th.	Max IA	Total	Min Pass	Du Hrs	Max Mar Pr.	Min Pass Mar.	
1.	English and Communicative English –III	4	4	-	4	3	70	30	100	40	-	-	-	100
2.	Soft Skill Development – III	4	4	-	4	3	70	30	100	40	-	-	-	100
3.	Aptitude development – III	4	4	-	4	3	70	30	100	40	-	-	-	100
Total		12	12	-	12	-	210	90	300	120	-	-	-	300

B] Skill Development Component Credits: 18

Sr. No.	Theory Paper/ Practical	Subjects	Teaching Scheme(Hrs/Week)			Credits	Examination Scheme					
			Th	Pr.	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks	
								External Marks (Th)	Internal Marks (IA)		Th.	Pr.
1	I	Paper - I	4	-	4	4	3	70	30	100	40	-
2	II	Paper - II	4	-	4	4	3	70	30	100	40	-
3	Practical-I- Workshops –I /Labs-I / Internship-I	Practical based on Paper I of skill development	-	5	5	4	6	70	30	100	-	40
4	Practical-II- Workshops –II /Labs-II / Internship-II	Practical based on Paper II of skill development	-	5	5	4	6	70	30	100	-	40
5	Field Work / Industrial Visit / Production (Report writing/ Presentation)	-	-	-	-	2	-	-	50	50	-	20
Total			8	10	18	18	-	280	170	450	80	100

Note:

1. Th = Theory; Pr = Practical; WS=Workshops/ LB=labs/ PR=Production/FW=Field Work/INT=Internship IA = Internal Assessment.
 2. Minimum marks for passing will be 40% of the total marks allotted to that paper / practical.

3 Credit Calculations

One credit would mean equivalent of 15 periods of 60 minutes each, for Theory & Practical's.

For internship/ Field work, the Credit Weightage for equivalent hours shall be 50% of that for lectures.

The strength of Batch of Practical /Workshop / internship / Field visit / production for Under Graduates classes shall be 16 with an additional; of

APPENDIX 'A'
Teaching & Examination Scheme
DIPLOMA (ONE YEAR), ADVANCE DIPLOMA (TWO YEARS), BACHLOR OF VOCATION (B. Voc)
(THREE YEARS DEGREE COURSE – SEMESTER PATTERN)

B. Voc. (Semester IV)

A] General Education Component Credits: 12

Sr. No.	Subject	Teaching Scheme Hrs / Week				Examination scheme									
		Credits	Theory Period	Pr Period	Total Periods	Theory					Practical				
Du Hrs	Max Th.					Max IA	Total	Min Pass	Du Hrs	Max Mar Pr.	Min Pass Mar.				
1.	English and Communicative English –IV	4	4	-	4	3	70	30	100	40	-	-	-	100	
2.	Soft Skill Development – IV	4	4	-	4	3	70	30	100	40	-	-	-	100	
3.	Aptitude development – IV	4	4	-	4	3	70	30	100	40	-	-	-	100	
Total		12	12	-	12	-	210	90	300	120	-	-	-	300	

B] Skill Development Component Credits: 18

Sr. No.	Theory Paper/ Practical	Subjects	Teaching Scheme(Hrs/Week)			Credits	Examination Scheme					
			Th	Pr.	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks	
								External Marks (Th)	Internal Marks (IA)		Th.	Pr.
1	I	Paper - I	4	-	4	4	3	70	30	100	40	-
2	II	Paper - II	4	-	4	4	3	70	30	100	40	-
3	Practical-I-workshops –I /Labs-I / Internship-I	Practical based on Paper I of skill development	-	5	5	4	6	70	30	100	-	40
4	Practical-II-Workshops –II /Labs-II / Internship-II	Practical based on Paper II of skill development	-	5	5	4	6	70	30	100	-	40
5	Field Work / Industrial Visit / Production (Report writing/ Presentation)	-	-	-	-	2	-	-	50	50	-	20
Total			8	10	18	18	-	280	170	450	80	100

Note:

1. Th = Theory; Pr = Practical; WS=Workshops/ LB=labs/ PR=Production/FW=Field Work/INT=Internship IA = Internal Assessment.

2. Minimum marks for passing will be 40% of the total marks allotted to that paper / practical.

3 Credit Calculations

One credit would mean equivalent of 15 periods of 60 minutes each, for Theory & Practical's.

For internship/ Field work, the Credit Weightage for equivalent hours shall be 50% of that for lectures.

The strength of Batch of Practical /Workshop / internship / Field visit / production for Under Graduates classes shall be 16 with an additional; of 10% with the permission of Hon'ble Vice-Chancellor.

APPENDIX 'A'
Teaching & Examination Scheme
DIPLOMA (ONE YEAR), ADVANCE DIPLOMA (TWO YEARS), BACHLOR OF VOCATION (B. Voc)
(THREE YEARS DEGREE COURSE – SEMESTER PATTERN)
B. Voc. (Semester V)

A] General Education Component Credits: 12

Sr. No.	Subject	Credits	Teaching Scheme Hrs / Week			Examination scheme								
			Theory Period	Pr Period	Total Periods	Theory					Practical			
						Du Hrs	Max Th.	Max IA	Total	Min Pass	Du Hrs	Max Mar Pr.	Min Pass Mar.	
1.	English and Communicative English –V	4	4	-	4	3	70	30	100	40	-	-	-	100
2.	Soft Skill Development – V	4	4	-	4	3	70	30	100	40	-	-	-	100
3.	Aptitude development – V	4	4	-	4	3	70	30	100	40	-	-	-	100
	Total	12	12	-	12	-	210	90	300	120	-	-	-	300

B] Skill Development Component Credits: 18

Sr. No.	Theory Paper/ Practical	Subjects	Teaching Scheme(Hrs/Week)			Credits	Examination Scheme					
			Th	Pr.	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks	
								External Marks (Th)	Internal Marks (IA)		Th.	Pr.
1	I	Paper - I	4	-	4	4	3	70	30	100	40	-
2	II	Paper - II	4	-	4	4	3	70	30	100	40	-
3	Practical-I- Workshops –I /Labs-I / Internship-I	Practical based on Paper I of skill development	-	5	5	4	6	70	30	100	-	40
4	Practical-II- Workshops –II /Labs-II / Internship-II	Practical based on Paper II of skill development	-	5	5	4	6	70	30	100	-	40
5	Field Work / Industrial Visit / Production (Report writing/ Presentation)	-	-	-	-	2	-	-	50	50	-	20
		Total	8	10	18	18	-	280	170	450	80	100

Note:

1. Th = Theory; Pr = Practical; WS=Workshops/ LB=labs/ PR=Production/FW=Field Work/INT=Internship IA = Internal Assessment.
2. Minimum marks for passing will be 40% of the total marks allotted to that paper / practical.

3 Credit Calculations

One credit would mean equivalent of 15 periods of 60 minutes each, for Theory & Practical's.

For internship/ Field work, the Credit Weightage for equivalent hours shall be 50% of that for lectures.

The strength of Batch of Practical /Workshop / internship / Field visit / production for Under Graduates classes shall be 16 with an additional; of 10% with the permission of Hon'ble Vice-Chancellor.



APPENDIX 'A'
Teaching & Examination Scheme
DIPLOMA (ONE YEAR), ADVANCE DIPLOMA (TWO YEARS), BACHLOR OF VOCATION (B. Voc)
(THREE YEARS DEGREE COURSE – SEMESTER PATTERN)
B. Voc. (Semester VI)

A] General Education Component Credits: 12

Sr. No.	Subject	Credits	Teaching Scheme Hrs / Week			Examination scheme								
			Theory Period	Pr Period	Total Periods	Theory					Practical			
						Du Hrs	Max Th.	Max IA	Total	Min Pass	Du Hrs	Max Mar Pr.	Min Pass Mar.	
1.	Applied Computer Skills- I	4	4	-	4	3	70	30	100	40	-	-	-	100
2.	Applied Computer Skills- II	4	4	-	4	3	70	30	100	40	-	-	-	100
3.	Applied Computer Skills- III	4	4	-	4	3	70	30	100	40	-	-	-	100
	Total	12	12	-	12	-	210	90	300	120	-	-	-	300

B] Skill Development Component Credits: 18

*** Industry Based Project**

Sr. No.	Subjects	Examination Scheme				
		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks
			External Marks	Internal Marks		
1	Project Work / Stage Production	3	200	100	300	120
2	Project Seminar / Film Production	3	100	50	150	60
	Total	-	300	150	450	180

Note:

1. Th = Theory; Pr = Practical; WS=Workshops/ LB=labs/ PR=Production/FW=Field Work/INT=Internship IA = Internal Assessment.

2. Minimum marks for passing will be 40% of the total marks allotted to that paper / practical.

3 Credit Calculations

One credit would mean equivalent of 15 periods of 60 minutes each, for Theory & Practical's.

For internship/ Field work, the Credit Weightage for equivalent hours shall be 50% of that for lectures.

The strength of Batch of Practical /Workshop / internship / Field visit / production for Under Graduates classes shall be 16 with an additional; of 10% with the permission of Hon'ble Vice-Chancellor.

Backward Class Youth Relief Committee's
Bhiwapur Mahavidyalaya, Bhiwapur

Dist - Nagpur, Maharashtra 441201

CRITERION - I

Curricular Planning and Implementation

**1.3.2 Number of Students undertaking project work/field
work/internship**

Project work/Field work/Internship



Date: 09/09/2023

Certificate

This is to certify that following students of Bhiwapur Mahavidyalaya has undergone the on work training experience in the department of Finance & Accounting from 1st April 2023 to 15th May 2023.

1. Mr. Mithun Borsare
2. Mr. Manish Gajbhiye
3. Mr. Chetan Lande
4. Mr. Ashish Bhoyar
5. Mr. Aniket Dupare

We wish them the best in all their future endeavours.

For

Ved Motors

Authorised Signatory

5, Rajat Tower, Indora Square, Kamptee Road, Nagpur 440 017
Tel.: 0712-2652222, 2654444, Mob.No.: 09326916819
Email : vedmotors01@gmail.com, Website: www.vedmotors.in

ROYAL ENFIELD



Date: 09/09/2023

Certificate

This is to certify that following students of Bhiwapur Mahavidyalaya has undergone the on work training experience in the department of Service from 1st April 2023 to 15th May 2023.

1. Mr. Pravin Mangar
2. Mr. Prajwal Kudegawe
3. Mr. Amit Bhoyar
4. Mr. Kiran Dhone
5. Mr. Ayush Shivankar

We wish them the best in all their future endeavours.

For

Ved Motors

Authorised Signatory

5, Rajat Tower, Indora Square, Kamptee Road, Nagpur 440 017
Tel.: 0712-2652222, 2654444, Mob.No.: 09326916819
Email : vedmotors01@gmail.com, Website: www.vedmotors.in

ROYAL ENFIELD

A PROJECT
ON
APPLICATIONS OF DERIVATIVE
SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE
AWARD OF DEGREE OF
BACHELOR OF SCIENCE
IN
MATHEMATICS



SUBMITTED BY

- | | |
|----------------------------|--------------------------|
| 1. NAJNEEN YASEEN KACHHI | 2. PRACHI VASANTA GEDAMI |
| 3. PRAJKTA GOWARDHAN TAMBE | 4. SWATI RAMESH NINAWA |
| 5. AMIT LAKHANLAL GUPTA | 6. PRANAY ARUN GHARAT |
| 7. ASAL BANDUJI PENDAM | |

UNDER THE GUIDANCE OF
DR. RAVIKANT MISHRA
Assistant Professor
DEPARTMENT OF MATHEMATICS
BHIWAPUR MAHAVIDYALAYA, BHIWAPUR

2022-2023

BHIWAPUR MAHAVIDYALAYA, BHIWAPUR

DEPARTMENT OF MATHEMATICS

DECLARATION

This Project work entitled “APPLICATIONS OF DERIVATIVE” is our own work carried out under the guidance of **Asst. Prof. Dr. Ravikant Mishra**, Department of Mathematics, Bhiwapur Mahavidyalaya, Bhiwapur, Nagpur.

This work in the same form or in any other form is not submitted by me or by anyone else for the award of any degree.

Students Name

1. NAJNEEN YASEEN KACHHI *NK Kacchi*
2. PRACHI VASANTA GEDAM *P.V. Gedam.*
3. PRAJKTA GOWARDHAN TAMBE *Prajeta.*
4. SWATI RAMESH NINAWA *Swati Ninawe*
5. AMIT LAKHANLAL GUPTA *Amit*
6. PRANAY ARUN GHARAT *Pranay*
7. ASAL BANDUJI PENDAM *Asalpendam*

Date: *04 MAY 2023*

Place: Bhiwapur

“Applications of Derivative”

Introduction

1.1 History

Newton and Leibniz quite Independently of one another were largely responsible for developing the ideas of Integral calculus to the point where hitherto Insurmountable problems could be solved by more or less routine methods. The successful accomplishments of these men were primarily due to the fact that they were able to fuse together the integral calculus with the second main branch of calculus, differential calculus.

Isaac Newton (1642-1727)



Gottfried Leibniz (1646-1716)



The central idea of differential calculus is the notation of derivative. Like the integral, the derivative originated from a problem in geometry the problem finding the tangent line at a point of a curve. Unlike the integral. However, the derivative evolved very late in the history of mathematics. The concept was not formulated until early in the 17 century when the French mathematician Pierre de Fermat, attempted to determine the maxima and minima of certain special functions.

1.2 Definition of Derivative:

We begin with a function f defined at least on some open interval (a, b) on the x -axis. Then we choose a fixed-point x in this interval and introduce the difference quotient

$$\frac{f(x + h) - f(x)}{h}$$

Where the number h , which may be positive or negative (but not zero), is such that $x + h$ also lies in (a, b) . The numerator of this quotient measures the change in the

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5. Application of Derivative in Mathematics:

Applications of Maxima and Minima: Optimization Problems:

We solve **optimization problems** of the following form: Find the values of the unknowns x, y, \dots maximizing (or minimizing) the value of the **objective function** f , subject to **certain constraints**. The constraints are equations and inequalities relating or restricting the variables x, y, \dots

To solve such a problem, we use the constraint equations to write all of the variables in terms of one chosen variable, substitute these into the objective function f , and then find extrema as above. (We use any constraint inequalities to determine the domain of the resulting function of one variable.) Specifically:

1. Identify the unknown(s):

These are usually the quantities asked for in the problem.

2. Identify the objective function. This is the quantity you are asked to maximize or minimize.

3. Identify the constraint(s).

These can be equations relating variables or inequalities expressing limitations on the values of variables.

4. State the optimization problem. This will have the form "Maximize [minimize] the objective function subject to the constraint(s)."

5. Eliminate extra variables.

If the objective function depends on several variables, solve the constraint equations to express all variables in terms of one particular variable. Substitute these expressions into the objective function to rewrite it as a function of a single variable. Substitute the expressions into any inequality constraints to help determine the domain of the objective function.

6. Find the absolute maximum (or minimum) of the objective function.

Example:

Here is a maximization problem

Objective Function



BCYRCs

BHIWAPUR MAHAVIDYALAYA

Bhiwapur, Dist- Nagpur (M.S.) India- 441201

A

PROJECT REPORT

ON

PREPERATION OF WATERPROOF DOSIMETERS FOR
OPTICALLY STIMULATED LUMINESCENCE DOSIMETRY

SUBMITTED TO

DEPARTMENT OF PHYSICS

SUBMITTED BY

STUDENTS OF B. Sc. III

- | | |
|---------------------|-------------------|
| 1. ADITYA SORDE | 2. ADITYA BANDE |
| 3. ANIKET KASE | 4. ANIKET DAHARE |
| 5. ASAL PENDAM | 6. VRUSHABH MOHOD |
| 7. LOKESH BHAJBHUJE | |

UNDER THE GUIDANCE OF

ASST. PROF. DR. YOGESH MORE

DEPARTMENT OF PHYSICS

BHIWAPUR MAHAVIDYALAYA, BHIWAPUR

2022-23

2022-23

DECLARATION

This Project work entitled "Preparation of Waterproof Dosimeters for Optically Stimulated Luminescence Dosimetry", is our own work carried out under the guidance of Asst. Prof. Dr. Yogesh More, Department of Physics, Bhiwapur Mahavidyalaya in Bachelor of Science, Bhiwapur Mahavidyalaya, Bhiwapur, Nagpur. This work in the same form or in any other form is not submitted by me or by anyone else for the award of any degree.

Signature:

1. ADITYA NARAYAN SORDE - *A. Sorde*
2. ADITYA RAVINDRA BANDE - *A. Bande*
3. ANIKET GAJRAJSINGH KASE - *A. Kase*
4. ANIKET RAMA DAHAKE - *R. Dahake*
5. ASAL BANDUJI PENDAM - *A. B. Pendam*
6. VRUSHABH DIWAKAR MOHOD - *V. D. Mohod*
7. LOKESH DNYANESHWAR BHAJBHUJE - *L. B. Bhujje*

Date: 4th May 2023

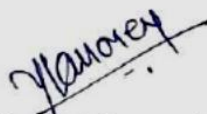
Place: Bhiwapur

CERTIFICATE

This is to certify that the Project work entitled “**Preparation of Waterproof Dosimeters for Optically Stimulated Luminescence Dosimetry**”, is the work done by students listed below and is submitted to Department of Physics, Bhiwapur Mahavidyalaya, Bhiwapur for the partial fulfilment of the requirements for the degree of Bachelor of Science in the subject Physics.

Name of the Students:

1. **ADITYA NARAYAN SORDE**
2. **ADITYA RAVINDRA BANDE**
3. **ANIKET GAJRAJSINGH KASE**
4. **ANIKET RAMA DAHAKE**
5. **ASAL BANDUJI PENDAM**
6. **VRUSHABH DIWAKAR MOHOD**
7. **LOKESH DNYANESHWAR BHAJBHUJE**


Project Supervisor

Asst. Prof. Dr. Yogesh More

Date: 4th May, 2023




Principal
Bhiwapur Mahavidyalaya
Bhiwapur

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1. Introduction

Optically stimulated luminescence (OSL) originally developed for geological/archaeological dating, has been found very useful for diverse applications in the field of radiation dosimetry. In the past decade there have been tremendous developments in the field of OSL dosimetry [1, 2]. There is a discernable paradigm shift in personnel dosimetry from thermoluminescence dosimeter based systems to OSL based dosimetry systems for monitoring of exposure of workers to ionizing radiation. This is primarily due to the attractive features of OSL mode of readout like multiple readouts, no need of thermal annealing which avoids problems like thermal quenching thermal stability of dosimeters, etc. Precise control of stimulation light intensity, wide dynamic dose range of linearity, high sensitivity, and the possibility of re-estimation of dose and remote dose measurement are the other advantages of OSL technique over the conventional thermoluminescence (TL) technique [3].

There is still a scarcity of OSL materials with demonstrated properties suited to dosimetry applications. Progress on the development of OSL materials with engineered properties has been slow and most research has focused on the

[1] L. Bøtter-Jensen, S.W.S.McKeever, A.G.Wintle, *Optically Stimulated Luminescence*, (2003), Elsevier Science B.V.

[2] S. W. S. McKeever. *Radiat. Prot. Dosim.* 100 (2002) 27.

[3] M.S.Kulkarni *International Journal of Luminescence and Applications* 2 (2012) 84.

pellets are allowed to dry by gently wiping and soaking water with help of tissue paper. The CW-OSL sensitivities for the pellets after soaking for different durations were measured by exposing them to 20 mGy. Results are presented in figures 4. It is seen from figures 4a and 4c, that after immersing in water, phosphor gets partially dissolved for both NaCl_{SCP} and NaF_{SCP} . The amount of dissolved phosphor goes on increasing monotonously. In 100 hours about 50 % of the phosphor is leached away for NaCl_{SCP} whereas only 5% leaching of phosphor was observed in NaF_{SCP} . However no such leaching is observed for NaCl_{DCP} and NaF_{DCP} pellets and weight remains constant. Difference in the OSL sensitivities follows similar trend (figure 4b and figure 4d). Both NaCl_{DCP} and NaF_{DCP} do not show any variation beyond the statistical errors in the measurements (about $\pm 3\%$). The OSL sensitivities for NaCl_{SCP} and NaF_{SCP} pellets go on monotonously decreasing with the leaching time. About 35% reduction of OSL sensitivity was observed for NaCl_{SCP} whereas for NaF_{SCP} , OSL sensitivity decreases by about 40% when compared with the OSL sensitivity of corresponding unsoaked pellets.

4 Conclusions

PL and TL properties of the phosphors are more or less similar to those reported in the literature. Both phosphors show good OSL signals as compared to commercial phosphor $\text{Al}_2\text{O}_3:\text{C}$. The OSL signal of $\text{NaCl}:\text{Cu}$ was about 16

times more intense when compared with $\text{Al}_2\text{O}_3:\text{C}$ whereas $\text{NaF}:\text{Ca,Cu}$ was found to be equally sensitive as $\text{Al}_2\text{O}_3:\text{C}$.

OSL dosimeters can be prepared from the hygroscopic materials like NaCl and NaF . Not only, that the prepared dosimeters are insensitive to moisture, but these can even be immersed in water and still the OSL sensitivity remains unaffected. Though here $\text{NaCl}:\text{Cu}$ and $\text{NaF}:\text{Ca,Cu}$ phosphors were taken as an example, the work can be extended to other hygroscopic and/or water soluble materials. Hygroscopic materials, hitherto considered as unsuitable for use as OSL phosphors, can be in the reckoning, if the other properties like sensitivity, etc. are adequate. This will be of help in finding new OSL materials.



**BHIWAPUR MAHAVIDYALAYA BHIWAPUR
DIST. NAGPUR**

**Project Report
on
Water Analysis Assessment for Degree Students**

**Submitted to
Department of Chemistry
Bhiwapur Mahavidyalaya, Bhiwapur**

Submitted by Student from B.SC-III

1.Rutuja Khawas	2. Kajal Dongarwar
3.Deepali Ivrate	4. Prajakta Fendar
5.Dhanshree Akhare	6. Poonam Selokar
7. Apurwa Borkute	

**UNDER THE GUIDANCE OF
ASST. PROF. DR. ASHWINI KADU**

DECLARATION

We, **Rutuja Khawas, Kajal Dongarwar, Deepali Ivrate, Prajakta Fendar, Dhanshree Akhare, Poonam Selokar, Apurva Borkute**, hereby declare that the project entitled **“Water Analysis Assessment for Degree Students”** is submitted to Department of Chemistry, Bhiwapur Mahavidyalaya is our own work which has not been submitted in any form to any organization for award degree.

Place: **Bhiwapur.**

Date: **04/05/2023**

Rm. Khawas

(Name)

Signature of the Student

Rongwar

Rvrate

Fendar

DAkhare

Selokar

A. Borkute.

CERTIFICATE

This is to certify that the project work entitled “Water Analysis Assessment for Degree Students” is the work done by student and submitted to Department of Chemistry, Bhiwapur Mahavidyalaya, Bhiwapur, Dist. Nagpur for the partial fulfilment of the requirements for the degree of Bachelor of Science in Chemistry.

Student's Name

1. Rutuja Khawas

2. Kajal Dongarwar


3. Deepali Ivate

4. Prajakta Fendar

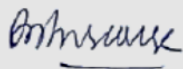
5. Dhanshree Akhare

6. Poonam Selokar

7. Apurwa Borkute


Head
Department Of Chemistry
Bhiwapur Mahavidyalaya, Bhiwapur
Dist. Nagpur (M.S.) 441 201




Principal
Bhiwapur Mahavidyalaya,
Bhiwapur

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INTRODUCTION

Sampling:

The physical and chemical characteristics of drinking water vary from top to bottom of depth of land, as well as with time as from morning to evening. It therefore becomes difficult to obtain a truly representative sample.

Source of sample:

Sample collected from. River water, Water. Lake Water.r Tube well and testing conducted 13th April. 2023



Fig.No.1 River water



Fig. No. 2 Lake water



Fig. No.3 Tube well Water

CONCLUSION

Sr.NO	PARAMETER	DESIRABLE LIMIT	MAXIMUM PERMISSIBLE LIMIT	OBSERVED VALUE
1	Color	5	25	-
2	Odour	Unobjectable	Unobjectable	-
3	Taste	Agreeable	Agreeable	Agreeable
4	Turbidity (NTU)	5	10	5.3
5	pH value	6.5 – 8.5	No relaxation	6.77
6	Total Hardness	300	600	577.5
7	Chlorides	250	1000	212.45

Survey Report
Subject: English

Survey Report

Date :- 25-8-2023

Place :- kinhalga Post :- vialihandi (Chhapra) Dist :- Nagpur
Nagpur state :- maharashtra Pin code :- 441201

Submitted by :- Tanuja Bhimao Dhanvijay

Assignment Given by :- Dr. Vinita S. Viegandham

Student's Research Project

1. Topic:- Survey of Kinhal

2. Highlights of My Village/Ward :- (वसिष्ठ)

- ① Chili
- ② Cotton
- ③ Soybean
- ④ Rice
- ⑤ Wheat
- ⑥ Goat

Number of Families

S.N	Name of the Family	Total NO of Family Members
1.	Baban Seloze	3
2.	Bhimrao Dhanvilay	4
3.	Raju Kuztkar	4
4.	Sanjay Kuztkar	6
5.	Kailas Mesharam	4
6.	Devidas Thombare	3
7.	Shrikam Jagtap	6
8.	Delip Thombare	6
9.	Dinesh Sahare	6
10.	Narash Yevale	4
11.	Juandas Lingayat	5
12.	Sumeastea Shende	4
13.	Mahastea Shende	5
14.	Ramchand Chahande	4
15.	Balsakar Kaware	6
16.	Mdhukar Seloze	4
Total		74

Education Completed Boys/Girls Total :-

1) Kaishama Mesharam

2) Sanket Mesharam

3) Suresh Mesharam

4) ~~Ashwin~~ Ashwini Mesharam

5) Samir Mesharam

6) Pravin Mdkam

7) Shybam Sahate

Boys/Girls Undergoing graduation Total :- 0

① Swati Thombaze

② Tanuja Dhanvijay

③ Shubhangi Sahare

④ Avinash Sahare

⑤ Adhitya Jagtap

⑥ Sandhesh Mesharam

① Total number of Primary School students :- 30

② Total no of girls :- 12

③ Total no of Children :- 18

④ Full time teaching staff including Headmaster :- 2

⑤ Establishment of Primary School :- 1935

① Population of kinhala village :- 201

② kinhala Total Men :- 89

③ Total women of kinhala Village :- 112

④ Total no houses :- 60

⑤ Establishment of Gram panchayat :- 1936

⑥ No of wards :- 2

⑦ Headman of the village :- Vithu lobhe

⑧ UPS Gram Panch :- Nitin Pandurang lobhe

⑨ Police Patil :- Lahu chavan

Members

① Sunita seloze

② ~~Latika~~ Lalita lingayat

③ Sharda chavan

④ Mayuzi lobhe

* There are 6 Members including Gram panch and UPS Gram Panch.

⑤ Water supply staff :- Sandip Bhagvan Mesharam

⑥ ~~Sameer~~ Shudhajan Mesh.

⑦ Computer Operator :- Sameer Shudhajan Mesharam

① Anganwadi No :- 1

Anganwadi Name :- Panchshila Nagare

Teachers Name :- Shital Prakash Nagare

Children aged 0 to 6 Years :- 19

MY Village

My Village name is kinhala My village is very clean and beautiful. Nature is full of beauty all around.

In front of every house in my village.

There is Angan and Tulshi Vrindavan. The people of my village are very loving and friendly. Their main occupation is peacekeeping and animal ~~hus~~ husbandry.

They are very honest and hard working. In my village there are various facilities like small big shops bhaji pal etc. My village has an anganwadi and primary school for children. The participation of the village in the development of the school is valuable my village is an ideal village. People of all castes live happily in my village.

They all treat each other with love and affection. They celebrate all festivals with festivity. Satisfaction of my village. They are always ready for overall development.

I like this village very much.

Survey Report
Subject: English

Survey Report

Date: _____

Place: Bhiwapur (Deghoda)

Submitted by :- _____

Assignment given by :- Dr. _____

Student's Research project

Bhiwapur (Deghoda) Ward 1.

★ Introduction :-

My full name is - Tejaswini Dipak Ghate
is holding ghu marketing project Bhiwapur
is a city here. There are many schools
and colleges in Bhiwapur where the
students who are studying today have
taken many educational benefits. The
business of Nastyu Kho is also done very
well. Also see Mahadev here. There are
a lot of 4 offs to take in Bhiwapur
District - Nagapur Bhiwapur has liquor
stores in every water filter center are
widely spread. Complete population of
Bhiwapur city kudwe kudwe - 124268 is

Topic Survey of :- Bhiwapur.

Population of Didhoda - 1450 Bhiwapur
(Didhoda). on this peth is Jnax indira
Nagar primary school Bhiwapur or
RAJIV Establishment - 1-7-1997

Headmaster - Ramesh Namaji Roge'sir

Teachers :- ① Ramesh Namaji Roge

② Jyoti Janshedhu

Square :- 4 (four)

Total Students :- 34

★ Anganwadi

Anganwadi Establishment :- 2009

Anganwadi Teacher :- Chandraprabha Uekude

Anganwadi Total Students :- 97

Disabled handicapped :- 8

Ashawakee (Bhiwapur) :- 124

Bhiwapur Anganwadis :- 15

Topic Survey of :- Bhiwarpur.....

Highlights of my

- There are flower shops in Bhiwarpur 20 per hour per customer.
- day and 2 in Bhiwarpur Vanya business is done on a large scale. 1-2 per There / fifty paise Also chilli
- Kontai is widely available in Bhiwarpur Consumers are benefiting from it a lot 100 to 2 per person per
- (day) Sewing machine business is seen in Bhiwarpur per kurti, dresses per- 150
- filter water center business in Bhiwarpur karan is RS. 20 per.

Topic Survey of :- Bhiwarpure....
Students of Popularity

①	dipali fulzale	
②	Rina bhivankar	
③	megha Sontakhe	
④	Nikhil Sontakhe	
⑤	Ragini Dhoke	
⑥	Dhoke	
⑦	Tannu Naghose	
⑧	Kalyani bagde	
⑨	Sahil Choudhary	(B.A)
⑩	Shital dhavane	(B.A)
⑪	Shabana P	(B.Sc)
⑫	Rohit mohadhalkar	(B.Sc)
⑬	- dhavane	
⑭	Rohit dhone	(B.A)
⑮	Aachal Sukdeve	

Total Students = 15

Topic Survey of: Bhiwape...
Students of Popularity

①	dipali fulzale	
②	Rina bhivankar	
③	megha Sontakhe	
④	Nikhil Sontakhe	
⑤	Ragini Dhoke	
⑥	Dhoke	
⑦	Tannu Naghose	
⑧	Kalyani bagde	
⑨	Sahil Choudhary	(B.A)
⑩	Shital dharene	(B.A)
⑪	Shabana P.	(B.Sc)
⑫	Rohit mohodhalkar	(B.Sc)
⑬	- dharene	
⑭	Rohit dhore	(B.A)
⑮	Aachal Sukdeve	

Total Students = 15

TOPIC Survey of :- Bhiwadpur.....

Number of families

S.N	Name of families	To. No. of family member.
(38)	Kisan Choudhary	2
(39)	Shakun Balpande	7
(40)	Baban Boedhare	3
(41)	Dilip Deware	3
(42)	Manohar gayakai	4
(43)	Chandras sawsakde	5
(44)	Ranjana majgwade	3
(45)	Vinod Kotte	4
(46)	BABAU-Syed	6
(47)	babuji nagose	7
(48)	sonjay naghose	4
(49)	sajit pathan	6
(50)	Jayas wankhede	4
(51)	Rajkumar wankhede	4
(52)	vanondana wankhede	1
(53)	Phulchan ghul	2
(54)	Nashamuv, Shake	15
(55)	Someshaware Deware	5
=55	Total family member.	= 246

Topic Survey of:- Bhiwapur.....

Number of families

S.N	Name of families	To.N. of family member
①	Hamed gaveli Dudhgore.	5
②	Amat mesham	4
③	asha maad	2
④	Raju Bagmar	5
⑤	Rukma Dahare	4
⑥	Peavan Naranware	5
⑦	Viman Tidke	8
⑧	Abzal Shake	4
⑨	Noire queesi	5
⑩	file Dudhpure	3
⑪	Seidhar Dharean	5
⑫	holding Spring	4
⑬	Sanita mamaware	3
⑭	Sushila nanneware	1
⑮	Loed Wagh	10
⑯	bhaskar mule	3
⑰	Diwakar Sampath Dekare	3
⑱	guredev Choudhary	2

Topic Survey of :- Bhiwape

Number of families

S.N	Name of families	To. No. of family member.
(19)	Bhagwan Choudhary	5
(20)	Ramakrishna Hedeau	4
(21)	Padurang mohadakar	4
(22)	Bhagji Thackeray	6
(23)	Sugdev Choudhary	6
(24)	Shalini Bagde	4
(25)	om queeshi	5
(26)	Nilkant mule	8
(27)	Aasaram Choudhary	9
(28)	Mandha Boeghate	5
(29)	Pandray Ninawe	4
(30)	yashwant khonde	7
(31)	Babybai Dhok	5
(32)	Suresh dhok	3
(33)	Nagende Admane	4
(34)	Dhateatu Bhatkar	1
(35)	Nagesh mulekar	4
(36)	dipak ghazat.	4
(37)	Apasana Pathan	1

Survey Report
Subject: English

Survey Report

Date - 25-8-2023

Place - Kakepale Post - Bhuyar, Tar - Pauri

Dist - Bhandara State - Maharashtra

PIN - 441910

Submitted by - Vaishnavi Bhimrao Bankar

Assignment Given by - D.V. Vinita, S
Virgandhram

Student Research Project :-

Bankar

Topic :- Survey of Kakepar
Highlights of my Village :- Kakepar Village is located in Pauni tehsil of Bhandara district in Maharashtra, India. It is situated 15 km away from sub-district headquarter Pauni (tehsildar office) and 52 km away from district headquarter Bhandara. As per 2009 stats Kakepar Village is also a gram Panchayat.

Pauni is nearest town to Kakepar for all major economic activities, which is approximately 15 km away.

- * Total Populatio of Taas Village is :- 683
- * Total Houses. is kakepar Village :- 198
- * Establishment of Gram Panchayat in Village :-
1968

* Total ~~wards~~ in kakepar Village :- 3

- * Name of wards - 1) Gandhi ward
2) Ambedkar ward
3) Tilak ward.

* Suptanch of kakepar Village :-

Kavita Ramrav Jambhule

* Deputy Suptanch of kakepar Village :-

Avinasha Bhagwan Nagpure

* secretary of kakepar Village :-

V. JG. Balchane

* Total members of kakepar Village :- 6

- 1) Sharada Maheshwar Malode
- 2) Shital Vinod Malode
- 3) Ashatai Mukunda Daut
- 4) Avinasha Gansham Shende
- 5) Ratiram Bakaram Godmare
- 6) Gita Balaji Malode

- * Kakepae Village Z.P. Digital Public School Established
ished = - 1961
- * Total Number of school students = - 89
- * Kakepae Village school headmaster along with full
teaching staff :- 4
- * Kakepae Village has one Anganwadis = - 1
- * Name of Anganwadis Teacher :-
Sundarebai wagh
- * Ashawakore :- Indukada kelas Danvijae (Tekadi)
- * Name of students who have complete their
Education = - 1) Jaydish Malode [M.A]
- 2) Vaishnavi Malode = [10th]
- 3) Suchita Malode = [10th]
- 4) Shada Malode = [10th]
- 5) Ashvin Bankar = [12th]
- 6) Vibha wagh = [12th]
- 7) Shital Malode = [12th]
- 8) Snehal Bhoyar = [12th]
- 9) Kundan Malode = [12th]
- 10) Shantanu Meshram = [12th]