

**3.2.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during the year**

Sr.No.	Name of the Teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1.	Mr. Anap S.A	Haydrabad Sansthan Bhartiya Sangharat Vilinikaran Sandharbhat Sardar Patela yanche Yogdan	-	The Contribution of Marathvada in Hyderabad Freedom Struggle Movement	Haydrabad Sansthan Bhartiya Sangharat Vilinikaran Sandharbhat Sardar Patela yanche Yogdan	National	2022	978-93-91689-45-2	Arts, Commerce, Science and Computer Science College Ashvi kd	Aruna Prakashan
2.	Dr. Jadhav S.R	Vaishavik ke pariprakshya me Udayprakash ka Sahitik Yogdan.	-	Vaishavik Paridrushya me Hindi.	Vaishavik Paridrushya me Hindi	State	2023	978-93-95669-19-1	Arts, Commerce, Science and Computer Science College Ashvi kd	J.T.S. Publication, Delhi.
3.	Ms. Tambe D.D	Vaishavik ke pariprakshya me Udayprakash ka Sahitik Yogdan.	-	Vaishavik Paridrushya me Hindi	Vaishavik Paridrushya me Hindi	National	2022	978-93-95669-19-1	Arts, Commerce, Science and Computer Science College Ashvi kd	J.T.S. Publication, Delhi.
4.	Ms. Tambe D.D	Hindi Kavya Sahitya:Paryavaran	-	Hindi Sahitya	Hindi Sahitya	National	2022		Arts, Commerce, Science and	J.T.S. Publication, Delhi

				vavadha Vimarsh					Computer Science College Ashvi kd	
5.	Dr. Gaikar R.B	-	In Vitro effect of Catharanthus roseus Plant extract on Human blood lymphocytes.	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
6.	Dr. Bhumkar S.D	-	Review on Spectrophotometric Methods for Determination of Mercury-II	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
7.	Dr. Unde S.A	-	Recent Trends in Digital Marketing.	Recent Trends in Digital Marketing	Recent Trends in Digital Marketing	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime publishing House Jalgaon
8.	Dr. Gholap A.B	-	Prevalence of Cestode parasites in Domastic Foul from Sangamner Region of Maharashtra .	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
9.	Mr. Anap S.A	-	Digital Marketingc ha Etihas Ani Utkranti	Digital Marketing & Economy	Digital Marketing & Economy	International	2022	2348-7143	Arts, Commerce, Science and Computer Science	Prime Publishing House Jalgaon

									College Ashvi kd	
10.	Mr. Gaikwad V.S	-	Impact6 of Covid-19 on Social Media Marketing	Digital Marketing & Economy	Digital Marketing & Economy	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
11.	Dr. Gholap A.R	-	Digital Marketing: A New Stream of Marketing	Digital Marketing & Economy	Digital Marketing & Economy	International	Sept.20 22	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
12.	Ms. Mandhare N.S	-	Digital Marketing: Fayde Ani Tote	Digital Marketing & Economy	Digital Marketing & Economy	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
13.	Mr. Chaudhari V.P	-	Review of Various Cathode Materials use in Li-Ion Batteries.	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
14.	Mr. Lokhande D.V	-	Study of Ichtyofaunal Diversity in Pravara River Basin Near Ashvi Kd, Dist.Ahmednagar(MS) India.	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon

15.	Mr. Patel M.M	-	Qualitative Isolation, Identification of Steroids, Terpenoids, Alkaloids, Amino acids Bioactive Compound from Helicters Isora Fruit.	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
16.	Mr. Salve V.A	-	A Review on Synthesis of Pyrimidine Derivatives and there Biological Activities.	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
17.	Mr. Varpe S.S	-	Antioxidant Evaluation of Different Fractions of Heterophragma quadriqlarae(Roxb.) K Schum.	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
18.	Mr. Parwat N.S	-	Prasar Madhyme ani Digital Marketing	Digital Marketing & Economy	Digital Marketing & Economy	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
19.	Mr. Shaikh L.M	-	Social Media Marketing: A New Era in	Digital Marketing & Economy	Digital Marketing & Economy	International	2022	2348-7143	Arts, Commerce, Science and Computer Science	Prime Publishing House Jalgaon

			Globalization						College Ashvi kd	
20.	Ms. Khaladkar P.N	-	Review on Bismuth Complexes: Biomedical Applications.	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
21.	Ms. Talekar Y.R	-	The Chromones Derivative and it's Biological Activity's:A Review	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
22.	Ms. Shinde V.S	-	A Review on Ibuprofen and it's Derivatives with different Biological Activity.	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	Innovations in Science & Technology for Sustainable Futures(IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
23.	Mr. Shelke G.R	-	Impact of Digital marketing and current Scenario in India.	Digital Marketing & Economy	Digital Marketing & Economy	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
24.	Dr. Rohamare S.S	-	Relationship Between Digital Marketing and Economy Stability	Digital Marketing: A New Stream of Marketing	Digital Marketing: A New Stream of Marketing	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon

25.	Mr. Parakhe B.D	-	Studies on Saprophytic Fungi from Ahmednagar District, Maharashtra.	Innovations in Science & Technology for Sustainable Futures (IS TSF-22)	Innovations in Science & Technology for Sustainable Futures (IS TSF-22)	International	2022	2348-7143	Arts, Commerce, Science and Computer Science College Ashvi kd	Prime Publishing House Jalgaon
26.	Mr. Shelke G.R	-	Krushivi Vidyan Kendrancha Sankalpnatmak Abhyas	75 Years of Indian Economy: Opportunities and Challenges	75 Years of Indian Economy: Opportunities and Challenges	International	2022	2278-9308	Arts, Commerce, Science and Computer Science College Ashvi kd	Aadhar Publication
27.	Mr. Shelke G.R	-	E-BANKING IN INDIA: Overview	Financial Literacy in Economics	Financial Literacy in Economics	National	2023	978-93-91324-41-4	Arts, Commerce, Science and Computer Science College Ashvi kd	Yashodeep Publications Pune & Yashodeep Creations, Pune
28.	Dr. Unde S.A	-	Enhancing Students Skill Development in Higher Education through the Implementation of the National Education Policy 2020	Implementation of National Education Policy-2020 (Industry Institute Linkage)	Implementation of National Education Policy-2020 (Industry Institute Linkage)	National	2023	978-93-95369-27-5	Arts, Commerce, Science and Computer Science College Ashvi kd.	Advent Publication
29..	Dr. Rohmare S.S	-	Digital Marketing: Opportunities and Challenges	Digital Marketingchya Sandhani Avhane	Digital Marketing: Opportunities and Challenges	National	2023	978-81-927305-8-5	Arts, Commerce, Science and Computer Science College Ashvi kd	

30.	Mr. Shelke G.R	-	E-BANKING IN INDIA: Overview	Digital Marketing: Opportunities and Challenges	Digital Marketing: Opportunities and Challenges	National	2023	978-81-927305-8-5	Arts, Commerce, Science and Computer Science College Ashvi kd
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**अरुणा प्रकाशन**

१०३, ओमकार कॉम्प्लेक्स - अ,  
खर्डेकर स्टॉप, औसा रोड, लातूर  
मो. ९४२१४८६९३५, ९४२१३७१७५७

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: प्रथम आवृत्ती :- ६ जानेवारी २०२३

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: अक्षर जुळवणी : हिंदवी कॉम्प्युटर, लातूर

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: मुखपृष्ठ : विरभद्र गुळवे

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**मूल्य : ४००.०० रुपये**

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\*"The Contribution of Marathwada in Hyderabad Freedom Struggle Movement"  
या पुस्तकातील सर्व मते आणि अभिप्राय संबंधित लेखकांची असून त्या संबंधी प्रकाशन, मुद्रक व वितरक  
सहमत असतीलच असे नाही.

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हैदराबाद संस्थान भारतीय संघरात विलिनीकरण संदर्भात सरदार  
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संशोधक:- श्री.अनाप एस. ए.

वसंतदादा पाटील कला, वाणिज्य, विज्ञान महाविद्यालय, पाटोदा, जिल्हा- बीड

मो. न. ९६२३२६६८२५

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इतिहास विभाग प्रमुख एस. पी. कॉलेज, भूम

मो.न. ९४२१३५८७१०

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**प्रास्ताविक:**

भारताला स्वतंत्र मिळावे यासाठी अनेक घटना प्रसंग घडले. जे स्वातंत्र्य मिळाले तेही इतक्या सहजतेने मिळालेले नव्हते यासाठी अनेकांनी आपल्या प्राणाची आहुती दिली होती. स्वतंत्र मिळाल्यानंतरही कितीतरी समस्या भारतापुढे निर्माण झालेल्याच होत्या. त्यापैकीच एक म्हणजे संस्थानाचा प्रश्न होय. भारताला स्वातंत्र्य मिळाल्यानंतर भारतीय संस्थानिकांचा प्रश्न सोडवणे महत्त्वाचे होते. हे काम सरदार वल्लभभाई पटेल आणि व्ही पी मेनन यांनी केले. स्वातंत्र्य मिळाल्यानंतर सरदार वल्लभभाई पटेल यांच्या सूचनेनुसार संस्था लिखाणा साठी एक स्वतंत्र विभागाची स्थापना करण्यात आली. संस्थानिकांनी भारतात सामील होण्याबाबत एक सामील नामा करार तयार करण्यात आला. की जो भारतीय संस्थानिकांना मान्य होता. भारताला स्वातंत्र्य मिळाले तेव्हा भारतात ५६५ संस्थाने होती. या संस्थानांना भारतात विलीन करून भारताला एकात्म स्वरूप प्राप्त करून देण्याचे अशक्यप्राय कार्य तत्कालीन गृहमंत्री, भारताचे पोलादी पुरुष सरदार वल्लभभाई पटेल यांच्या अथक प्रयत्नातून शक्य झाले. भारतीय स्वातंत्र्यसंग्रामातील एक दैदिप्यमान पर्व म्हणजे हैदराबाद मुक्तिसंग्राम. हैदराबादचा मुक्ती लढा कर्मयोगी संन्यासी स्वामी रामानंद तीर्थ यांच्या नेतृत्वाखाली लढला गेला आणि तत्कालीन गृहमंत्री, भारताचे पोलादी पुरुष सरदार वल्लभभाई पटेल यांच्या कणखर भूमिकेमुळे हैदराबाद संस्थान भारतात विलीन झाले.

सरदार वल्लभभाई पटेल यांचे कार्य :

‘शरीरातून पोट बाहेर काढलं तर शरीर जिवंत कसं राहणार?’

अश्या मताचे सरदार वल्लभभाई पटेल होते. हैदराबाद राज्य जणू भारताच्या पोटात होतं. हैदराबाद स्वतंत्र होणं म्हणजे वल्लभभाईचं एकात्म भारताचं स्वप्न भंग पावण्यासारखं होतं. १ सरदार वल्लभभाई पटेल यांच्या दृष्टीने काश्मीरपेक्षा हैदराबाद अधिक महत्वाचं होतं. हैदराबादचा संस्थानिक सातवा निजाम मीर उस्मान अली खान विविध प्रसंगी हेतूतः आपण स्वतंत्र राज्य असल्याचं दाखवून देत होता. पाकिस्तानला २० कोटींचं कर्ज मंजूर करणं, काँग्रेस नेत्यांना तुरुंगात डांबण आणि रझाकारांच्या कारवाया याबाबी अत्यंत चिंताजनक होत्या. इतर संस्थानांबरोबरच निजामाशी करार करावा असे वल्लभभाईंना वाटत होतं. पण माउंटबॅटन यांच्या आग्रहाखातर त्यांनी ही कारवाई थांबवली. हैदराबादचा पंतप्रधान मीर लायक अली यांच्यावर वल्लभभाईंचा काडीमात्र नव्हता. इकडे निजामाचे घटनात्मक सल्लागार वॉल्टर मॉकटन हे माउंटबॅटन यांचे मित्र होते. विशेष म्हणजे भारताबरोबरच्या वाटाघाटीसाठीच माउंटबॅटननी मॉकटन यांना मुद्दाम पाठवले होते. आणि या दोघांना हैदराबादचं भारतात विलीनीकरण नको होतं. त्यातच ब्रिटीश सरकारचे गृहमंत्री कॉनरॉड कोलफिल्ड यांच्या भारतविरोधी कारवायांमुळे पटेल अधिकच सावध झाले होते.

निजामाशी शांततामय मार्गाने तोडगा निघावा असे पंडित जवाहरलाल नेहरू आणि सरदार वल्लभभाई पटेल यांना वाटत होते. माउंटबॅटन भारतात असेपर्यंत आपण हैदराबादवर कोणतीही कारवाई करू शकत नाही याची जाणीव वल्लभभाईंना होती. हैदराबादमधील स्टेट काँग्रेसच्या मंडळींनाही हा लढा तुम्हाला वर्षभर तरी लढावा लागेल याची जाणीव त्यांनी करून दिली होती. रझाकार व निजामी पोलीस यांच्याशी अहिंसेच्या मार्गाने लढणे शक्य नाही. त्यामुळे संस्थानात चालू असलेल्या सशस्त्र लढ्यास गांधीजींप्रमाणेच सरदार वल्लभभाई पटेल यांची मूक संमती होती. एवढेच नव्हे तर संस्थानाच्या सीमेवर चालू झालेल्या बॉर्डर कॅम्पना शेजारील भागातून शस्त्र व इतर मदत सरदारांच्याच आशिर्वादामुळेच मिळत होती. यात मध्य प्रांताचे गृहमंत्री द्वारकाप्रसाद मिश्र यांचा आवर्जून उल्लेख करावा लागेल. हैदराबादमध्ये लष्करी हस्तक्षेप करावा लागणार याची वल्लभभाईंना सुरुवातीपासूनच कल्पना होती. मार्च १९४८ मध्ये त्यांना हृदयविकाराचा तीव्र झटका आल्यामुळेही कारवाईला थोडा विलंब झाला.

हैद्राबाद संस्थान :

हैद्राबाद संस्थान तेलंगण, कर्नाटक आणि मराठवाडा या तीन विभागाने तयार झालेले होते. तेलंगणचे ८ जिल्हे, कर्नाटक ३ आणि मराठवाड्याचे ५ जिल्हे (जाता सात जिल्हे) एकत्र येऊन निजामी राजवट अस्तित्वात आली होती. राज्याचे क्षेत्रफळ ८२,००० चौरस मैल आणि वार्षिक महसूल २६ कोटी रुपये होता. लोकसंख्या १६ दशलक्ष इतकी होती.

त्यात ८६ टक्के हिंदू, १२.५ टक्के मुस्लीम, १.५ टक्के ख्रिश्चन व इतर होते. बहुतेक लोक तेलुगू, मराठी व कन्नड भाषिक होते. तर उर्दू बोलणारे फक्त प्रशासकीय अधिकारी होते. या तीनही विभागात बहुसंख्य जनता हिंदू आणि राजा मुस्लीम अशी ही राजवट होती. अशा रीतीने हैद्राबादची जनता सामाजिक, धार्मिक व सांस्कृतिक बंधनांनी जोडलेली होती.<sup>२</sup>

१९४१ मध्ये संस्थानातील लष्कर, पोलीस, प्रशासकीय अधिकारी अशा सरकारी नोकऱ्यांत मुस्लिमांची संख्या १ लाख १२ हजार ७३७, तर हिंदूंचे प्रमाण केवळ २३ हजार ३६८ होते, तर प्रतिनिधी मंडळात हिंदूंची संख्या १०, तर १३२ मुस्लीम होते. भाषिक आणि सांस्कृतिक संघर्ष संस्थानातील अस्वस्थ वातावरणाच्या प्रमुख कारणांपैकी एक होते. १८८६ साली राजभाषा म्हणून फारसीऐवजी उर्दूला मान्यता देण्यात आली होती. सरकारने प्रार्थमिक शिक्षणापुरते प्रादेशिक भाषा बंदिस्त केलेली होती. उच्चशिक्षणासाठी उर्दूशिवाय दुसरा पर्याय नव्हता. ज्यांना अन्य भाषेत शिक्षण घ्यावयाचे असे, ते पुणे, मुंबई, कलकत्ता आदी शहरात जात असत. त्यामुळे फारच अल्प गट शिक्षणाकडे वळत. उर्दू भाषेचा हट्टाग्रह जनतेला अमान्य झालेला होता. प्रशासनात असलेला बोटार मोजण्याइतका एक वर्ग उर्दू भाषेशी संबंधित होता. या पलीकडे उर्दूचा फारसा संबंध

कोणाचा येत नसे. बहुतेक जनता तेलुगू कानडी आणि मराठी बोलणारी होती. त्यांच्यासाठी उर्दू भाषा ह एकमेव पर्याय म्हणून लावणे राजवटीसाठी धोकादायक होते. गैर उर्दू भाषकांसाठी ही दंडकशाही होती. ज्यांन उर्दू भाषा अवगत असे, असे लोकच सरकारी नोकऱ्या पटकावत. त्या काळी मध्यमवर्गीयात शिक्षणाचे फारसे प्रमाण नव्हते. शिक्षणाची धुरा उच्च समजल्या जाती समुदायांच्या खांद्यावर होती. त्यात उर्दू भाषेमुळे शिक्षण सामान्य व मध्यम वर्गीयापासून लांब गेले. संस्थानवासियांवर बेरोजगारीची कुऱ्हाड कोसळली. मराठवाड्यातून देशपांडे, कुलकर्णी नावाचे अधिकारी उर्दू शिकून नोकरीत सामील झाले होते. प्रशासनाचा भाग झालेला असा लाभधारक वर्ग मोठा होता.<sup>३</sup>

किरकोळ स्वरूपातील व्यवसाय व उद्योगावर सामान्य लोकांची गुजराण चाले. मोठे-मोठे व्यापार, उद्योग व त्याचे फायदे मोठ्या शहरापुरते मर्यादित होते. संस्थानचा अर्धा प्रदेश तेलंगणने व्यापला होता. तिथे जमीनदारी पद्धत प्रबळ होती. हजारो एकर शेतीची मालकी मूठभर लोकांकडे होती. शेती पिकवणारे व प्रत्यक्ष राबवणारे वेठबिगार भूमिहीन होते. मराठवाडा व कर्नाटकमध्ये फारशा मोठ्या जमिनी नव्हत्या. प्रदेशात देशमुखी व देशपांडेगिरीची वतनदारी निजामाने सुरू केली होती. जहागिरीमधून शोषणाची व्यवस्था तयार झालेली होती. असे सांगितले जाते की, या जहागिरदारांच्या मर्जीप्रमाणे प्रशासन चाले.

निजाम उस्मानअलीकडे मोठ्या प्रमाणात पिकाऊ जमिनी होत्या. त्यातून दरवर्षी मोठे उत्पन्न त्यांना मिळत. उपलब्ध आकडेवारीतून असे दिसून येते की, ८१०९ चौरस मैल

क्षेत्रफळाची जहागीर सरकारकडे होती. संस्थानात ८४ टक्के लोकांचे उपजीविकेचे साधन शेती होते. बहुतेक शेती कोरडवाहू होती. तेलंगणमधील जमीन पाणथळ होती. बागायती जमिनीसाठी ५ ते ८ रुपये एकरी तर कोरडवाहूसाठी १ रुपया एकरी असा शेतसारा वसूल केला जात. असे सांगितले जाते की, ब्रिटिशांसारखीच अन्यायी वसुली संस्थानात होत. या उत्पन्नातून विकासकामासाठी खूप कमी निधी खर्च केला जाई. निजाम सरकारच्या या शोषणव्यवस्थेविरोधात अनेक ठिकाणी अस्वस्थतेचे वातावरण होते. १९२६ पासून सरकारचा प्रत्यक्ष व अप्रत्यक्ष विरोध सुरू झालेला होता. व्यंकटेश खेडगीकर उर्फ स्वामी रामानंद तीर्थ यांनी १९२९पासून 'राष्ट्रीय शाळा, हिप्परगे' येथून निजाम सरकारविरोधात संघटन बांधणी सुरू केली होती.

### हैदराबाद संस्थानात निजाम विरोधी चळवळ:

निजामाने जाणीवपूर्वक भारताला वाटाघाटीत अडकवून वेळकाढूपणाचे धोरण अवलंबले होते. कासीम रझवी या काळात अत्यंत उद्दाम वक्तव्ये करत होता, संस्थानात रझाकारांच्या कारवायात प्रचंड वाढ होत होती, हिंदू जनता भयभीत झाली होती. या काळात आपण शांत राहून चालणार नाही याची जाणीव वल्लभभाईंना होती. दरम्यान निजामाला भरपूर सवलती देणारा करार वॉल्टर मॉकटन यांनी माउंटबॅटन यांच्या मध्यस्थीने सरदार पटेलांकडून मंजूर करून घेतला होता पण आपल्या सुदैवाने खुद्द निजामाने आणि त्यांच्या सल्लागारानेच हा करार फेटाळून लावला. या सर्व घडामोडीमुळे माउंटबॅटन अतिशय निराश झाले. कासीम रझवीने हस्तक्षेप केल्यामुळेच हैदराबादने ही संधी गमावली. मात्र भारतासाठी हा विजय ठरला. ७ आता कोणत्याही क्षणी हैदराबादमध्ये हस्तक्षेप करण्याचा नैतिक अधिकार भारताला प्राप्त झाला. माउंटबॅटन लंडनला परत गेले आणि भारतासमोरचा एक अडथळा दूर झाला. पण अजूनही नेहरूंना लष्करी कारवाई टाळता आली तर बरे होईल असेच वाटत होते. माउंटबॅटन गेल्यावर सरदारवल्लभभाई पटेलांमध्ये एक वेगळाच उत्साह संचारला. सरदार वल्लभभाई पटेल यांची यासंबंधीची जवळपास ३०० पत्रे प्रसिद्ध झाली आहेत. त्यावरून सरदार वल्लभभाई पटेलांनी हैदराबाद संस्थान भारतात विलीन करण्यासाठी किती विविध पद्धतीने प्रयत्न चालविले होते यावर नव्याने प्रकाश टाकता येईल. भारताचे हैदराबादमधील प्रतिनिधी के. एम. मुन्शी यांनी फोनवर बोलताना निजाम अजूनही कराराबाबत विचार करतो आहे असे सांगितले, तेव्हा सरदार पटेल म्हणाले, 'कराराची बोलणी आणि अटी माउंटबॅटनबरोबरच लंडनला गेल्या. आता निजामाबरोबर जो करार होईल तो अन्य संस्थानाबरोबर झालेल्या कराराप्रमाणेच होईल'.

### हैदराबाद संस्थानांचे भारतीय संघराज्यात विलीनीकरण :

हैदराबादमधील परिस्थिती साठ्याने संघर्षाच्या दिशेने जात होती. जुलैच्या सुरुवातीला



हैदराबादला एखाद्या लष्करी छावणीचे स्वरूप आले होते. सिडनी कॉटन या ऑस्ट्रेलियन वैमानिकाच्या माध्यमातून कराचीहून गोवा मार्गे रात्रीच्या अंधारात संस्थानातील बिदर व वरंगल येथे शस्त्रे उतरवली जात होती. संस्थानात अनेक हत्याकांड घडत होते त्यात गोरटा हत्याकांड आणि शोएब उल्ला खान यांची हैदराबाद शहरातच रझाकारांनी केलेली हत्या या घटनांमुळे पंडित नेहरू यांच्या मनातील द्विधा अवस्था संपली. ९ सप्टेंबर १९४८ रोजी झालेल्या मंत्रिमंडळाच्या बैठकीत लष्करी कारवाईचा निर्णय झाला. जनरल चौधरी यांच्याकडे या कारवाईचे नेतृत्व सोपविण्यात आले. १३ सप्टेंबरच्या सकाळी भारतीय लष्कराच्या तुकड्यांनी हैदराबाद संस्थानात प्रवेश केला. या कारवाईला 'ऑपरेशन पोलो' असे नाव देण्यात आले होते. ४ काही अपवाद वगळता फारसा प्रतिकार झालाच नाही. अवघ्या १०९ तासात निजाम शरण आला. १७ सप्टेंबर १९४८ ला हैदराबाद संस्थान मुक्त झाले. स्वामी रामानंद तीर्थ यांच्या नेतृत्वाखाली संस्थानातील जनतेने दिलेल्या अभूतपूर्व लढयाला यश आले, सरदार वल्लभभाई पटेल हेच खत्या अर्थाने या विजयाचे शिल्पकार होते. १९४९च्या फेब्रुवारीच्या शेवटच्या आठवड्यात वल्लभभाईंनी हैदराबादला भेट दिली. निजामानं विमानतळावर जाऊन त्यांचं स्वागत केलं. पराभूत निजामाला त्यांनी दिलेल्या सन्माननिय वागणुकीमुळे निजामाच्या मनातील भीती नाहीशी झाली. फतेह मैदानावर झालेल्या जाहीर सभेत बोलताना वल्लभभाई हैदराबादवासीयांना उद्देशून म्हणाले, 'तुम्ही जाता भारताचा एक भाग नव्हे, तर भारतचं हृदय बनला आहात.' आजही हैदराबाद संस्थानातील जनतेच्या मनात सरदार वल्लभभाई पटेल यांचे स्थान 'आमचा मुक्तिदाता' असेच आहे. सरदार वल्लभभाई पटेल यांनी ज्या परिस्थितीत हे कार्य केले त्यावरून त्यांचे श्रेष्ठत्व सिद्ध होते. 'देशावर अनेक संकट कोसळली, पण पटेलाला मृत्यू हे देशावरच सर्वात मोठं संकट आहे.' हे श्रद्धांजलीच्या वेळचं पंडित जवाहरलाल नेहरू यांचे वाक्य त्यांची थोरवी यथार्थपणे वर्णन करणारे आहे. आशा प्रकारे हैदराबाद संस्थान भारतीय संघ राज्यात विलीन झाले.

### निष्कर्ष :

हैदराबाद संस्थानाचे भारतीय संघराज्यात विलीनीकरण झाल्यानंतर संस्थानाला विदारक परिस्थितीला सामोरे जावे लागने गृहमंत्री सरदार पटेल यांनी संस्थानाचे राज्यपाल आणि अखेरचे निजाम मीर उस्मानअलींना आश्वासन दिले होते की, राज्याची भाषा उर्दू न राहिल. सरकारने तो शब्द पाळला नाही. विलीनीकरणानंतर थोड्याच कालावाधीत उर्दू भाषेवर कारवाईचा बडगा उगारला गेला. शिक्षकांना तीन महिन्यांत तेलुगू शिकण्याची सक्ती करण्यात आली जे तेलुगू शिकू शकले नाहीत, त्यांची सेवेतून हट्टी करण्यात आली.

प्रशासनातही तेलुगूची सक्ती करण्यात आली. जे शासकीय अधिकारी तेलुगू शकत नव्हते, त्यांना काढून टाकण्यात आले. विलीनीकरणानंतर प्रशासन बरखास्त झाल्यानंतर उर्दू

भाषिक सरकारी अधिकाऱ्यांना सेवेत पूर्ववत करून घेण्यात आले नाही. त्यामुळे अनेक कुटुंबे देशोधडीला लागली. विलीनीकरणाच्या वर्षभराच्या आतच सरकारी व्यवस्थापनात इंग्रजी व तेलुगू लादण्यात आली. कार्यालये, न्यायालय आणि प्रभासनाची भाषा उर्दू बदलून इंग्रजी करण्यात आली उर्दू भाषिक कर्मचाऱ्यांच्या कामावर परिणाम व्हायला लागला. त्यांची पदोन्नती थांबवण्यात आली. राजभाषा बदल्याने हजारो लोकांचे रोजगार मेले एकाएकी रोजगार गेल्याने अनेक कुटुंब उद्ध्वस्त झाली. ही परिस्थिती वगळता सरदार पटेल यांच्या प्रयत्नातून हैदराबाद संस्थान १७ सप्टेंबर १९४८ ला संस्थान भारतीय संघराजांत विलीन झाले. सरदार वल्लभभाई पटेल हेच खऱ्या अर्थाने या विजयाचे शिल्पकार होते. त्यांनी दिलेल्या योगदानाला आपल्याला विसरता येणार नाही.

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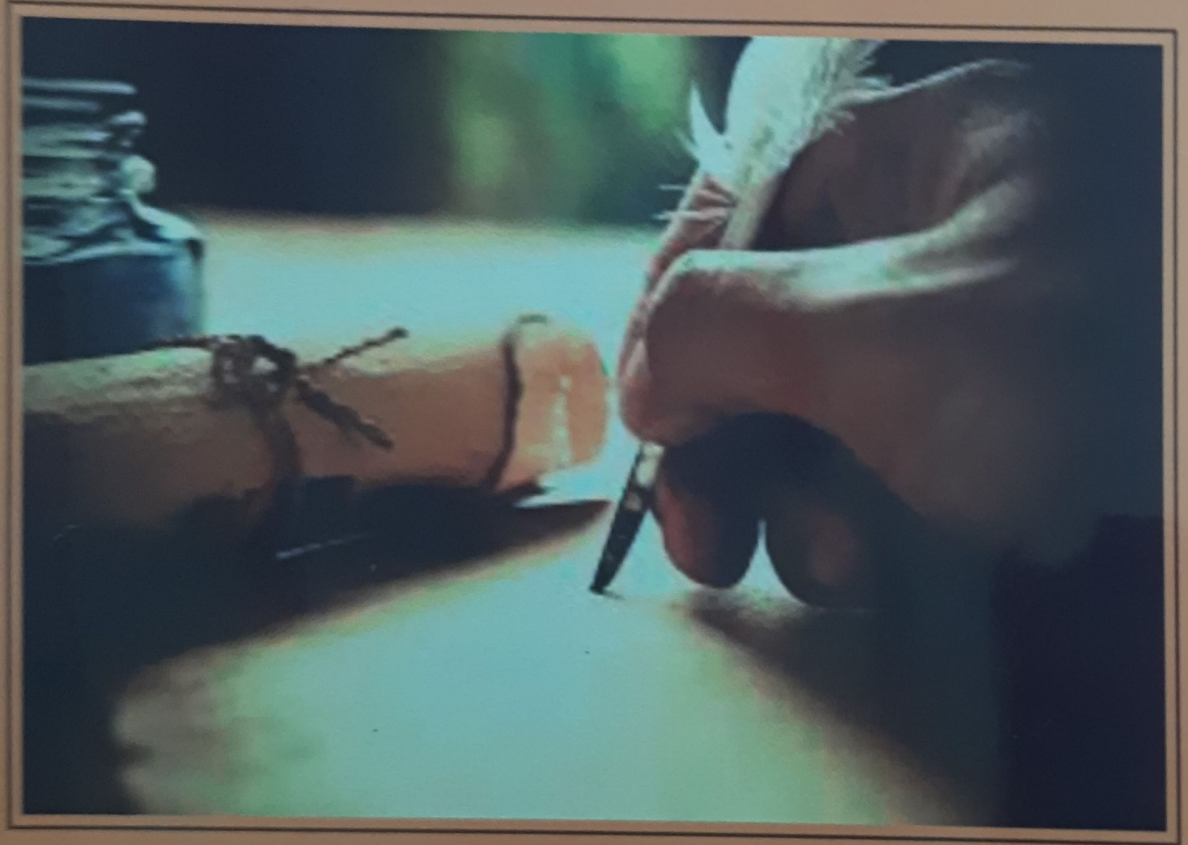
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डॉ. सुवर्णा राजेश जाधव

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साहित्यनिर्मिती हा मानवाच्या सामाजिक जीवनावरील सांस्कृतिक उपक्रम आहे .तसेच तो संस्कृतीचा एक घटकही आहे. युवा संस्थेपासून राज्यसंस्थेपर्यंत सर्व सामाजिक संस्था या संस्थेच्या लिखित नियमाने निर्माण झालेल्या चालीरीती रूढी, परंपरा आणि रिवाज तसेच कला व साहित्य संस्कृती ही लघुसंस्था परिचित झालेली आहे .संस्कृती आणि समाज यांना संज्ञा अदलाबदल करण्याच्या म्हणून वापरल्या जातात. परंतु या दोघी मधील फरक स्पष्ट होण्याजोगा आहे. आपण समाज असे म्हणतो तेव्हा समाजातील लोक असे आपल्याला अभिप्रेत असते. समाज हा ओळखला येण्यासारखा लोक समुदाय असतो. आणि तो आदिम समाज असेल भटका विमुक्त समाज असेल खेड्यातील कृषी जीवनाशी निगडित ग्रामीण समाज असेल अथवा आधुनिक समाज असेल पण समाज म्हणजे एका अर्थी परिचित लोकांची संस्थाच असे आणि संस्कृती म्हणजे लोक समुदायाच्या किंवा समाजाच्या जीवनाची एक विकसित पद्धती असते .या जीवन पद्धतीत कला आणि साहित्य यांना अविभाज्य आणि अपरिहार्य असे स्थान आहे. हे संस्कृतीचे चार घटक आहेत .या चार घटकांची म्हणजे संस्था .साहित्य हा समाज जीवनाचा आरसा आहे

त्यामुळे साहित्य व समाज यांचा परस्पर संबंध दिसून येतो .साहित्याची सामाजिकता ही माणसाच्या सामाजिकते सारखीच एक वस्तू स्थिती आहे.

माणूस हा समाजशील प्राणी आहे. याचा अर्थ असा की माणसाच्या अस्तित्व व अर्थपूर्णता या बाबी समाजातच सिद्ध होतात. माणसाचा जन्म जीवन व मरण या



गोष्टी समाजाच्या कक्षेतच घडतात व त्याचे स्वरूप महत्त्व मूल्य या बाबी समाजाच्या संदर्भातच निश्चित होतात.

थोडक्यात माणसाचे सगळे अस्तित्व हे समाजसापेक्ष असते. साहित्याचे स्वरूप त्यासारखे समाजसापेक्ष असते. साहित्य हे समाजात समाजासाठी व समाजातील व्यक्तींद्वारे निर्माण होते. त्याचे त्याचे स्वरूप व त्याचे अर्थपूर्णता समाजातील भाषिक वाङ्मय परंपरेनुसार निश्चित होत असते. समाज निरपेक्ष माणूस जसा अशक्यप्राय आहे.

\*समाजाचा साहित्य वरील परिणाम

पुढील प्रमाणे

1. साहित्यिकाचा अनुभव हा साहित्य निर्मितीचा गाभा आहे. लेखकाला समाजात वावरत असताना जे भले भुरे अनुभव प्राप्त होतात. त्यापैकी कित्येक अनुभव मनात घर करून राहतात. कित्येक दडपले जातात कित्येक त्याला अस्वस्थ करतात.
2. समाजात भेटलेली कित्येक माणसं त्याला लक्षात राहते. तितकी प्रभावित करून टाकतात तर कित्येक जण त्याला असे काही विलक्षण अनुभव देतात की ती माणसे जर त्याच्या आयुष्यात आलीच नसती तर तो आज काहीच नसता. तसाच दिसला नसता हे त्याला जाणवत राहते. उदा. हरिभाऊ आपटे यांनी आपल्या कादंबऱ्यांमधून अनेक व्यक्ती रेखाटल्या माझ्या कादंबरीत असे एकही पात्र नाही की जे मला कधी भेटलेले नाही. यावरून साहित्य कृतीत समाजाचे प्रतिबिंब असते. हे निश्चित आहे. ते समाजातील माणसे समाजातील प्रश्न, समाजातील जीवन पद्धती, त्या जीवनपद्धतीतील संस्कार समाजातील कुटुंब त्यांचे संस्कार, त्यांची नाती, संसारातली सोहळे, पुरस्कार माणसांचे एकमेकांशी असलेले संबंध, याचे अवलोकन कलावंत करतो.
3. वरील प्रमाणेच मानवी मनातील आंदोलने यांचे मंथने कलावंताच्या मनाला परिचित असते. तो शोषक, शोधक दृष्टीने याकडे पहात असतो. असा समाज, अशी माणसे, जीवनपद्धती कलावंतला सतत आव्हान करीत असतात. त्याच्याजोगी त्याची साहित्यकृती साकार होते.
4. साहित्यातली सुखदुःख ही हा लेखकाच्या अनुभवाचा

मोठा भाग असतो. कारण त्यापैकी काही मध्ये तो स्वतः सहभागी झालेला असतो. समाजाला टाळून त्याच्या साहित्यातली माणसे उभे राहून शकणार नाही. आणि चुकूनही उभी राहिली तर ती सजीव उतरणार नाही. समाजातील सुखदुःखा मांडणाऱ्या अनेक साहित्यकृतीच्या आपल्याला उदाहरणे देता येईल. उदा. 'पाचोळा' बोराडे, 'ढग' उद्धव शेळके, 'उपरा' लक्ष्मण माने या सर्व साहित्य कृतींमध्ये समाजाचे चित्रण मोठ्या प्रमाणात आलेले आहे.

5. काही वेळा समाजातल्या समस्यांना तोंड फोडण्याचा प्रयत्न करण्याचा मोह लेखकाला झाला. तर त्यात स्वभाविक असे काही नाही. उदा. 'उचल्या' या लक्ष्मण गायकवाड यांनी लिहिलेल्या आत्मकथनात भटक्या जमातीचे अनेक प्रश्न लेखकाने मांडले आहे. बेरड या भीमराव गस्ते यांच्या आत्मकथनात बेरड समाजाची अवस्था आणि त्यांच्या प्रश्नांना फोडलेली वाचा. आपल्याला दिसते.

6. समाज जीवनाला जर साहित्यात स्थान नसते, तर वाचकाला व अपेक्षकांना ती साहित्य कृती आपली वाटणार नाही. तिच्याशी वाचक मनाचे नाते जुळविता येणार नाही. आपण जे वाचतो आहे ते सगळे उपरे खोटे व न पटणारे आहे. असेच त्याला वाटेल. आणि जीवन आधारित साहित्य पुन्हा वाचण्याची इच्छा तेला होणार नाही.

7. साहित्य कृतीमध्ये जीवनातली सगळी संभाव्यता अपेक्षित असते. हे जीवन म्हणजे मानवी जीवन असते. समाज जीवन असते. समाज साहित्यावर जो परिणाम घडवतो तो लेखकाला खाल पुरविण्याचे व त्या व त्याचे चिंतन करावे या येथून येथील खाल पुरवली असते. उदा. प्रचलित समस्या सामोरे जाणारे प्रश्न, समकालीन जीवन पद्धतीचे गुण-अवगुण यांना हात घालण्याचा मोह साहित्यिकाला होतो. कारण असे जीवन तो जवळून नेहाळत असतो ते त्याच्या नित्य अवलोकनाचा भाग आहे. उदा. लक्ष्मण माने आपल्या 'उपरा' या आत्मकथना म्हणतात. जे भूगोल अनुभवलं पाहिलं ते तसंच लिहित गेलो. पुन्हा एकदा तेच जगणं जगत गेलो. पिढ्यां पिढी पाठीवर घेऊन गाढवाचं चिन्ह जगणाऱ्या मंडळींच्या वेदना हे पुस्तक वाचून समाज समाजातून घेऊ शकला तरी खूप झालं. गतकाळातील चित्रणही दृष्टिकोनातून मानण्याचा प्रयत्न साहित्यिकच करतो असे प्रश्न पुन्हा काळातले असले तरी त्याचे हाताळणी वर्तमान

काळाच्या संदर्भात करण्याचा लेखकाला होत असतो. उदा. वि. वा. शिरवाडकर यांचे 'नटसम्राट' जयवंत दळवी चे 'संध्याच्छाय' व श्री. ना. पेंडसे यांची 'गारंबीचा बापू' ही कादंबरी एका साहित्य कृतीना गतकाळाची पार्श्वभूमी आहे असे म्हणता व्यक्ती माणसे शाश्वत मूल्य घेऊन साकार झाली आहेत. असं म्हणावं जागतं ही सगळी माणसं समाजात कुठे ने कुठे पाहायला मिळते. तशी शक्यताही असते. आचार्य अत्रे यांची 'उद्याचा संसार' मधील चित्रण आज आपल्या भोवती थोड्याफार प्रमाणात दिसल्यापासून राहत नाही. लेखकाचे दृष्टि म्हणतात. ते यासाठीच समाज साहित्यिकाला चिंतन करायला लावतो. त्याच्यातला कलावंत जागा करतो. त्याला प्रेरणाही देतो. उदा. आजच्या समाजातील हुंडाबळीच्या चित्रणा वरील भेट दुष्काळांची, भ्रष्टाचारांची लाच घेणाऱ्यांची स्त्री - पुरुषांच्या, सोयराच्या किंवा अशा अनेक प्रकारच्या समस्या लेखकाला फार मोठ्या प्रमाणे आव्हान देत आहेत. थोडक्यात समाजाचा साहित्यावर निश्चित परिणाम होतो. साहित्याची बीच समाजात रुजलेली असतात. \*साहित्याचा सामाजिक दृष्टीने अभ्यास-

साहित्य हा समाज समाजाचा आरसा आहे. साहित्य म्हणजे समाजाची प्रतिबिंब होय. साहित्यिक हा खऱ्या अर्थाने सामाजिक प्राणी होय. अशी विधाने आपण अनेकदा वाचतो या सर्व विधानाचा अर्थ साहित्य आणि समाज यांच्यात जन्य जनक संबंध आहे. झाडाचे मुळे जमिनीतून आपली पोषणद्रव्य शोषून घेतात झाडाचा विस्तार मुक्तपणे होतो वर पाहिले तर त्याचे जमिनीशी नाते दिसत नाही. पण जमिनीवरील पोषणद्रव्याशिवाय झाडाची वाढच काय जन्म ही सिद्ध होत नाही. त्याचप्रमाणे समाज जीवनाच्या अशा याशिवाय कलाकृतीला जीवनमूल्यच प्राप्त होत नाही. हे समाज आणि साहित्य यांचा संबंधच अधिक यथार्थपणे मांडून दाखवत आहे. साहित्यिक हा मानव प्राणी समाजामध्ये जन्माला येतो. त्याच्या व्यक्तिमत्त्वाला समाजामध्येच आशय आणि आकार प्राप्त होतो. समाजाच्या संस्कार शाळेतच त्याच्या मनाला नाना पैलू पडत असतात. साहित्यिकांचे व्यक्तिगत जीवन सामाजिक जीवनामुळे प्रभावित होते. साहित्यिकांच्या जीवनात आणि नेहमीच समाजाची त्यांची असलेले अनुकूल व प्रतिकूल नाती या नात्यास्वरूपात वावरत असतात.

साहित्यिकांचे व्यक्तिमत्व ही जमिनीत उगवलेल्या झाडासारखे असते, समाज जीवनात सुखदुःखात अत्यंत उत्कट पणे रुतलेले असते आणि समाज जीवनातील सुखदुःखे तीव्रपणे त्यांच्या व्यक्तिमत्त्वात रुतलेले असतात. एक धारदार एक मर्म भेदक संवेदनशीलता त्याला लाभलेली असते. या संवेदनशीलतेची धार आणि मर्म भेदकता समाजात येणाऱ्या व अनुप भावातून तो अधिक चोखंडपणे मांडत असतो. नित्य नवा दिस जागृतीचा प्रमाणे या संवेदनशील आपली नजर सतत सतेज करून घेत चालावे लागते. अशी तयार झालेली संवेदनशीलता असलेल्या प्रतिबंध मनाचा अनुभव साहित्यात व्यक्त होतो. असा अनुभव नसेल तर साहित्यकृतीची कल्पनाच करता येत नसते. हा अनुभव कधी प्रत्यक्ष समाज वास्तवाला समांतर राहून स्वतःची सृष्टी उभी करतो तर हाच अनुभव कधी या वास्तवापासून दूर जाऊन एक दुसरी अंतरावरून एक कल्पनेची सृष्टी उभारतो. त्या त्या प्रमाणात त्या त्या अनुभवाला कल्पनेचे रंग, गंध आणि उपकार येऊन मिळतात अर्थात हे कितीही प्रमाणात घडले तरी अनुभवाचे अनुभवच मिटून कोणत्याही साहित्यिकाला साहित्यकृतीची निर्मिती करता येणे शक्य नसते. साहित्यिकांची कथा साहित्यिकांमधील व्यक्ती व्यक्तीचे समूह व्यक्ती व्यक्तींच्या आणि समूह समूहाचे संबंध व्यक्तींच्या व समूहांच्या भावना संवेदना विचार सुखदुःख आले असंख्य समस्यांचे वर्णन गोष्टी सामाजिक असतात समाज वास्तवाचे नियंत्रित झालेल्या असतात समाज साहित्याला असा अनुभव येतो जीवन सत्य आणि असे देतो. चित्रणासाठी भाव संवेदनाची भिजलेली तपशील देतो ही सारी असंख्य आणि विविध बंधने हा मानवी मनाचा नित्य आयोजनशील गुंतवळा गोतावळा असतो. साहित्य म्हणजे साहित्य कृतीचे ईश्वर साहित्य कृतीचे प्रयोजन असते. अनुभूती नवीन संगती लाभलेली अनुभूती समाज जीवनाचा आरसा असतो. अनुभूती हा समाजाचा अर्थ असतो. समाजाची प्रचिती असते. अध्यात्मिक निराशावादी वायु व्यक्तिमत व्यक्तीवादी अशा कोणत्याही प्रकारच्या अनुभूती समाजाचा या नात्या प्रकारचा संदर्भ असतोच साहित्याने समाज यांचा संबंध कोणालाही कधीही कोणत्याही पातळीवर नाकारता येत नाही.

साहित्य आणि समाज यांच्यातील संबंधाचा विचार पुन्हा पुन्हा होतो .कारण बदलत्या काळानुसार दोघांचे संदर्भ बदलतात त्याचप्रमाणे सामाजिकता आणि कलात्मकता यातील संबंधाचा विचारही पुन्हा पुन्हा होत असतो. साहित्य निर्मितीचा व्यवहार निशंकपणे सुदृढ होण्यासाठी असा विचार पुनर्विचार होणे. आवश्यकही असते इतर प्राण्यांपेक्षा मानवी प्राण्याची मिश्र आहे. इतर प्राणी नुसतेच कळप अथवा समुदाय करून राहतात मनुष्य प्राणी समाज करून राहतो म्हणजे माणूस हा समाजशील प्राणी आहे. माणसाला शरीर परंपरा आणि जीवशास्त्रीय वारसा असतो. त्याचा सामाजिक वारसा आहे. या सामाजिक वार्षिक विशिष्ट भूप्रदेश , श्री पुरुष संबंधा द्वारे प्रज्योत पद्धत सर्वसामान्य स्वतंत्रता यासारख्या गोष्टींचा समावेश असतो.

\*समारोप-

साहित्य व समाज यामध्ये परस्पर संबंध आहे. साहित्याला काही प्रमाणात तरी जीवनाचा आधार घ्यावा लागतो. इथे आणखी एक मताची नोंद करता येईल साहित्य निर्मिती ही ज्या व्यक्ती मनातून होते. त्या व्यक्ती मनाचे स्वरूप तसे समाज निर्मितीच असतेस. म्हणजेच व्यक्तिमत्त्वातील जाणारे पिंडधर्मी वेगळेपण तुलनेने फार कमी असते .त्या व्यक्तीची व्यक्ती म्हणून होणारी जी घडण असते .त्यात सभोवतांचे संस्कार मोठ्या प्रमाणात असतात. तेव्हा अनुभवाचा स्वीकार अविष्कार करणारे प्रामुख्याने समाज निर्मितीत असेल तर त्या मनाची साहित्यरूपी निर्मिती ती संस्कारीत सामाजिकता उतरत असते .लेखक या सामाजिक ते पासून विभक्ती होऊ शकत नाही. निर्मितीच्या मनात विशिष्ट स्वरूपामुळे या दोन्ही गोष्टी परस्पर संबंधित असतात .हा साहित्य आणि समाजातील संबंध लक्षात घेऊनच परस्पर संबंध दिसतो. विशिष्ट प्रदेशाची विशिष्ट भौगोलिकता समाजाच्या विशिष्ट परंपरा व जीवनपद्धती यामुळे निर्माण होणारी विशिष्ट सामाजिकता हा घडणारा विशिष्ट स्वरूपाचा विद्यपनाचा अविष्कार असतो. समाजाने परंपरेने जपलेली प्रचार प्रसार माध्यमे अभिप्रेत आहेत. महाराष्ट्राच्या बाबतीत कीर्तन, तमाशा किंवा संगीत, नाटक ही अशीच परंपरे जपत गेलेली प्रसार किंवा आविष्काराची माध्यमे असे म्हणता येईल .अशा माध्यमांची एक

विशेषत्व असे आणि ते त्या समाजाच्या ऐतिहासिक वाटचालीशी निगडित झालेली असते.

साहित्य म्हणजे भाषेच्या माध्यमाने केलेली कलानिर्मिती. साहित्यिक म्हणजे कला निर्मितीची क्षमता असलेला व कलानिर्मिती करणाऱ्या व्यक्ती आणि समाज म्हणजे पारंपारिक व नव्याने निर्माण होणाऱ्या संबंधाच्या संदर्भात एकत्र आलेला एक एकत्र राहणारा माणूस समूह. भाषा हे साहित्याचे द्रव्य असते साहित्य व समाज यातील परस्पर संबंधाचा शोध घेताना या सर्व गोष्टींचा विचार होतो. साहित्य या कला प्रकाराच्या निर्मितीचे मूलद्रव्य किंवा साधन म्हणजे भाषा व अशा भाषेच्या आधारे लेखक साहित्य निर्मिती करतो. आणि वाचक या भाषेच्या आधारेच साहित्यकृतीचा आस्वाद घेतो या दोघांच्या कृती मागे निर्मिती आस्वाद यामागे अनेक कारणे व प्रयोजने असतात साधारणपणे बहुसंख्य प्रयोजनांना एक सामाजिक व जीवन विषयक संदर्भ असलेला जाणवतो साहित्य ही एक सामाजिक संस्था आहे व समाज निर्मित भाषा ही त्याची माध्यम आहे म्हणूनच साहित्याच्या सामाजिकतेचा अभ्यास हे साहित्य अभ्यासाचे एक महत्त्वाचे अंग आहे त्यामुळे साहित्य समाज व संस्कृती यांचा परस्परांशी संबंध आहे असे दिसते.

संदर्भ ग्रंथ-

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डॉ० संगीता वर्मा

# वैश्विक परिदृश्य में हिंदी

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## वैश्वीकरण के परिप्रेक्ष्य में उदयप्रकाश का साहित्यिक योगदान

—दिपाली तांबे

वर्तमान में समाज वैश्वीकरण के प्रभाव में पल-बढ़ रहा है। परिणाम स्वरूप समाज में तेजी से परिवर्तन हो रहा है। इस परिवर्तन को मूल्य परिवर्तन भी हम कह सकते हैं। हिंदी साहित्य विश्व में उदय प्रकाश ऐसे साहित्यकार है, जिन्होंने अपनी तमाम कहानियों के माध्यम से समाज की वास्तविकता सामने लायी है। वैश्वीकरण आधुनिकता तथा विकास की विभिन्न अवधारणाओं ने देश में उपभोक्तावादी संस्कृति को जन्म दिया है। इसी उपभोक्तावादी संस्कृति ने हमारे समाज सभ्यता तथा संस्कृति को केवल प्रभावित ही नहीं किया बल्कि भारतीय संस्कृति को परिवर्तित कर दिया है।

वैश्वीकरण का अर्थ है— विश्व की सभी अर्थव्यवस्थाओं को जोड़ देना और एक नई वैश्विक अर्थव्यवस्था और संस्कृति का निर्माण करना। इस प्रकार वैश्वीकरण से उपभोक्तावादी संस्कृति और मूल्यों का जन्म हुआ। उदय प्रकाश ने पॉल गोमरा का स्कूटर, पीली छतरी वाली लड़की, वारेन हेस्टिंग्स का सांड जैसी कहानियों के माध्यम से उपभोक्तावादी संस्कृति एवं उसके परिणामों को उजागर किया है। उदय प्रकाश ने अपनी कहानियों में वैश्वीकरण का जो चित्र प्रस्तुत किया है। वह अन्य साहित्यकारों में कम नजर आता है।

वैश्वीकरण की प्रक्रिया ने हमें समूचे विश्व के साथ चलना सिखाया है। वर्तमान में हमारी सामाजिक, आर्थिक, राजनीतिक व्यवस्था से लेकर भाषा संस्कृति तक वैश्वीकरण के अभिलक्षणों का प्रभाव दिखाई देता है। हिंदी भाषा की नई दिशाओं तथा साहित्य की प्रवृत्तियों पर इसका सीधा प्रभाव परिलक्षित हो रहा है। आज हिंदी जन-सामान्य

उपभोक्ता की भाषा बनी हुई है। वर्तमान हिंदी साहित्य सूचना प्रौद्योगिकी, डिजिटल क्रांति तथा अंतरजाल के संपर्क से वैश्वीकरण की व्यापकता का लाभ उठा रहा है। आज संसार की किसी भी भाषा में प्रकाशित साहित्य तत्काल अनुवाद होकर पाठकों तक पहुँच रहा है। व्यापारिक और तकनीकी सुविधाओं के कारण देश तरक्की कर रहा है। आर्थिक उद्देश्यों के पूर्ति के लिए वैश्वीकरण के कारण नये विश्व बाजार का निर्माण हुआ है। उदय प्रकाश ने वैश्वीकरण के नाम पर बेनकाब होती समाज की सच्चाई पर प्रहार किया है। उन्होंने अपनी कहानियों के माध्यम से कई ज्वलंत समस्याओं को स्पष्ट किया है। जो वैश्वीकरण के विकृत रूप को प्रस्तुत करती है। आज जिस वैश्वीकरण और उपभोक्तावाद से सामान्य मनुष्य प्रभावित है, उसका प्रभाव उदय प्रकाश के रचनाओं की अन्तर्वस्तु में समाहित है। उनके द्वारा लिखित 'पॉल गोमरा का स्कूटर', 'वारेन हेस्टिंग्स का साँड', 'और अंत में प्रार्थना', मोहनदास आदि कहानियों में वैश्वीकरण का चित्रण दृष्टव्य है। उदय प्रकाश की पॉल गोमरा का स्कूटर कहानी रामगोपाल सक्सेना से पॉल गोमरा बने एक सामान्य मनुष्य की कहानी है। वैश्वीकरण के कारण पश्चिमी देशों की सभ्यता का उस पर प्रभाव पड़ता है और वह अपना नाम बदल लेता है। वह यहाँ पर भी नहीं रुकता। अपने आप को विशेष बताने के लिए वह एक स्कूटर खरीदता है। परंतु वहीं उसके विक्षिप्तता का कारण बनता है। उन्हें स्कूटर चलाने नहीं आती। पॉल गोमरा के आस-पड़ोस की औरते उनकी पत्नी का मजाक उड़ाती स्कूटर का इस तरह निठल्ला खड़ा रहने से उन्हें कई तरह के अप्रिय सवालों का सामना करना पड़ता। उदय प्रकाश लिखते हैं— "क्या आपके पति आजकल दफ्तर नहीं जाते? बीमार है? "ये स्कूटर भई है किसका?" जब चलाना ही नहीं आता था, तो पैसा फूँकने की क्या जरूरत थी?" वगैरह।" उदय प्रकाश ने इस कहानी के माध्यम से पश्चिमी सभ्यता का अनुकरण करनेवाले जनमानस की पोल खोल दी है। वैश्वीकरण के इस दौर में पैसा ही सबसे बड़ा मूल्य बन गया है। आज हर रिश्ता आर्थिक बुनियाद पर टिका हुआ है। पैसों का महत्व बढ़ जाने के कारण रिश्तों में दरारे पड़नी लगी। यह जीवन की भयावह त्रासदी क्रूरता और विसंगतिपूर्ण स्थितियों को सामने लाती है।

वैश्वीकरण के इस दौर में बाजारवाद का प्रभाव बढ़ रहा है। समकालीन समाज बाजारवाद के घेरे में आया है। बहुराष्ट्रीय कंपनियाँ अपना माल बेचने के लिए मनुष्य को मनुष्य न समझकर वस्तु समझ रही है। आधुनिकीकरण के साथ पाश्चात्य संस्कृति का अनुकरण बाजारवाद से प्रभावित दिखाई दे रहा है। बाजारवाद के जरिये जिस नये समाज की संरचना होती रही है, उसमें पूँजी तथा संस्कृति की मिलावट स्पष्ट रूप से दिखाई दे रही है। बाजार आज प्रमुख भूमिका में है, इसीलिए धन की आवश्यकता बढ़ी है। परंतु हमें यह भी याद रखना चाहिए कि हम जिस दौर से गुजर रहे हैं, यहाँ बाजार का मतलक केवल बेचना या खरीदना नहीं है। उपभोक्तावाद के कारण आज विश्वबाजार संगठन ने पूरे संसार को एक बाजार में बदल दिया है। औरत को मॉडल के रूप में देखा जा रहा है। अपनी वस्तु की खपत के लिए औरत के न्यूड सीन दिखाकर ग्राहक को आकर्षित किया जाता है। एक ओर उपभोक्ता वर्ग को आकर्षित किया जा रहा है तो दूसरी ओर नारी को विज्ञापन के क्षेत्र में घसीट लिया जा रहा है। उदय प्रकाश की पॉल गोमरा की स्कूटर कहानी में बाजारवाद की चकाचौंध का चित्रण है। उदय प्रकाश लिखते हैं— बाजार अब सभी चीजों का विकल्प बन चुका था। शहर गाँव, कस्बे बड़ी तेजी से बाजार में बदल रहे थे। हर घर दुकान में तब्दील हो रहा था। बाप अपने बेटे को इसलिए घर से निकालकर भगा रहा था, कि वह बाजार में कहीं फिट नहीं बैठ रहा था। पत्नियाँ अपने पतियों को छोड़-छोड़कर भाग रही थी क्योंकि बाजार में उनके पतियों की कोई खास माँग नहीं थी औरत बिकाऊ और मर्द कमाऊ का महान् चकाचक युग आ गया था।<sup>2</sup> वास्तव में बाजारवाद के कब्जे के कारण समाज में बहुत सारे परिवर्तन आ रहे हैं। बाजारवाद पारिवारिक रिश्तों के बीच की रागात्मकता को निरंकुश और निर्मम तरह से कुचल रहा है। उत्तर—आधुनिक उपभोक्तावाद कहानी उपभोक्तावादी मनुष्य की त्रासदी बयान करती है। यहाँ कुत्ते को प्रतीक बनाकर बाजारवाद के प्रभाव को व्यक्त किया है। कुत्ते के पूँछ में पटाखों की लड़ी बाँधकर उसे जला दिया जाता है। पटाखों के फूटने से कुत्ता होशोहवास खो कर चीखता भाँकता, रोता गिरता भागता है। कुत्ता जब विनायक दत्तात्रेय के पास से गुजरता है,

तो वह उसके सामने हड्डी के टुकड़े फकते हैं। उदय प्रकाश लिखते हैं— “एक तरफ लालच में कुत्ता हड्डी चबा रहा था, दूसरी तरफ पूँछ में पटाखों के लगातार फूटने की वजह से चीख-पुकार भी मचा रहा था।”<sup>3</sup> उदय प्रकाश यहाँ उपभोक्तावादी मनुष्य की बात करते हैं। यह एक जीवन की त्रासदी है कि उसे एक तरफ सुविधाएँ दी जाती हैं तो दूसरी ओर उसका शोषण किया जाता है। ‘मैंगोसिल’ कहानी में उदय प्रकाश बाजारवाद के प्रभाव को प्रस्तुत करते हैं। घर आज दुकान में तब्दील हो रहा है। घरों का बाजार के रूप में बदलने का बड़ा कारण मनुष्य की असीम इच्छाएँ हैं। घरों में दुकानों का बनना, ब्यूटी पार्लर खोलना, टिफिन व्यवस्था करना, तरह-तरह के कोर्स सिखाना बाजारवाद का परिणाम है। उदय प्रकाश लिखते हैं— “जहांगीरपुरी, मंगोलपुरी लोनी, नजफगढ़, हरिनगर, जियासराय, बेरसराय, कडकडडूमा जैसे सैकड़ों गावों का अस्तित्व ही मिट गया। जहां-जहां वे हुआ करते थे, वहां शॉपिंगमाल, मल्टीप्लेक्स, होटल बने हैं।”<sup>4</sup>

वर्तमान में हम जिस दुनिया में रहते हैं, उसमें सब कुछ अपना होकर भी अपना नहीं लगता है। वैश्वीकरण ने भले ही पूरी दुनिया को इतने समीप लाकर खड़ा कर दिया है, कि हम सिमट कर एक गांव में तब्दील हो रहे हैं। परंतु वास्तव में हम समीप आ रहे हैं क्या? क्या लाए जा रहे हैं यह महत्वपूर्ण सवाल है। उदय प्रकाश की कहानी या इसी वास्तविकता उनसे हमें परिचित करवाती है। लेखक ने पात्रों के माध्यम से वैश्वीकरण तथा उससे उत्पन्न ना समस्याओं को समाज के सामने लाने का प्रयास किया है।

**निष्कर्ष :-** निष्कर्ष के रूप में सकते हैं— वैश्वीकरण ने हमारे भाव, भाषा और संस्कृति को भी बदल कर रख दिया है। बाजार ने ‘भाषा’ रूपी संस्कार को पूरी तरह बदल दिया है। बाजार ने जिस नई भाषा को गढ़ा है, उसका असर वर्तमान समाज पर भी पड़ा है, उसे उदय प्रकाश के साहित्य के माध्यम से बखूबी समझा जा सकता है। कथाकार उदय प्रकाश ने अपने कहानी साहित्य में उस बदलती हुई भाषा पर ध्यान केंद्रीत किया है साथ ही वैश्वीकरण के यथार्थ से हमारा परिचय रचनात्मक स्तर पर करवाया है।

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# हिंदी साहित्य विविध विमर्श

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हिंदी साहित्य विविध विमर्श

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## हिंदी काव्य साहित्य : पर्यावरण विमर्श

प्रा. दिपाली तांबे,  
हिंदी विभाग प्रमुख,  
कला, वाणिज्य, विज्ञान तथा  
संगणकशास्त्र महाविद्यालय, आश्री खु .

प्रकृति का मनोरम रूप हमेशा से ही कवियों को प्रिय रहा है। कविता से प्रकृति का संबंध मां और पुत्री के समान है। हर युग में प्रकृति के विराट व मनोराम रूप ने कवियों को उद्दीप्त किया है। हिंदी में पर्यावरण शब्द प्रकृति का वाचक है। हिंदी में पर्यावरण शब्द 'परि' तथा 'आवरण' शब्दों के मेल से बना है। 'परि' इस शब्द का अर्थ है- चारों ओर तथा 'आवरण' का अर्थ है 'घेरा' अर्थात् प्रकृति में जो भी चारों ओर परिलक्षित है अर्थात् वायु, जल, पेड़ - पौधे तथा मृदा सभी पर्यावरण के अंग हैं। हिंदी साहित्य में पर्यावरण का संस्कृति तथा समाज व्यवस्था से अटूट संबंध है। कोई भी साहित्यकार अपने द्वारा लिखित साहित्य के माध्यम से समकालीन परिस्थितियों का अर्थात् वर्तमान समाज का प्रतिबिंब चित्रित करता है। साहित्य के माध्यम से मानवीय मन की चिन्ताओं तथा परिवेश की अभिव्यक्ति होती है। वर्तमान में हिंदी साहित्यकारों ने मनुष्य जीवन की सर्वोपरि चिन्ता अर्थात् पर्यावरण को अपने गीतों, कविताओं, गजलों तथा दोहों आदि के माध्यम से सशक्त वाणी दी है। आधुनिक युग में मनुष्य जीवन के सरोकारों में यदि सबसे बड़ा कोई सरोकार वर्तमान में माना जाए तो निश्चित रूप से पर्यावरण ही है। आज पर्यावरण चिन्ता का विषय बनता जा रहा है। संपूर्ण विश्व बढ़ते प्रदूषण से त्रस्त है। तालाबों का अस्तित्व समाप्त हो रहा है। नदियाँ सुख रही हैं। प्रकृति के अंधाधुंध उपयोग करने के कारण मनुष्य का जीवन खतरे में दिखाई दे रहा है। साथ ही बढ़ते आण्विक युद्ध ने तो विश्व मानव ही नींद उड़ा दी है। हिंदी साहित्य में पर्यावरण का चित्रण विशेष रूप में हुआ है। पर्यावरण के प्रभाव से आज हिंदी साहित्य भी प्रभावित

दिखाई देता है। प्रकृति के प्रति प्रेम आत्मानुभूति तथा पर्यावरण का रक्षण करना सभी का कर्तव्य है। हिंदी साहित्य में प्रारंभ से ही पर्यावरण के अनावश्यक दोहन का विरोध किया है। हिंदी के प्राचीन कवियों में संत कबीर, रविदास तुलसीदास, सूरदास आदि तथा आधुनिक कवियों में सुमित्रानंदन पंत, मैथिलीशरण गुप्त, अज्ञेय तथा निराला आदि ने प्रकृति के अनावश्यक शोषण के विरोध में आवाज उठाने का प्रयास किया है। तुलसीदास द्वारा लिखित महाकाव्य 'रामचरितमानस' में इस प्रकार के अनेक उदाहरण मिलते हैं। जहाँ राम गंगा, यमुना आदि नदियों की पूजा करते हैं, वहाँ सीता पेड़ - पौधों को पानी देती है। 'रामचरितमानस' में एक प्रसंग का वर्णन प्रकृति प्रेम को दर्शाता है। जिसमें समुद्र द्वारा मार्ग न मिलने के कारण लक्ष्मण राम से समुद्र का पानी नष्ट करने के लिए कहते हैं। परंतु राम इस बात को अस्वीकार करते हैं। वह कहते हैं- ऐसा करने से समुद्र के सभी जीव जंतू तथा वनस्पतियाँ आदि को क्षति पहुँचेगी। इस प्रकार के बहुत से उदाहरण प्राचीन तथा मध्यकालीन साहित्य में देखने को मिलते हैं, जो पर्यावरण संरक्षण के प्रति मनुष्य में चेतना जागृत करते हैं। साथ ही कवि रहिम पानी के माध्यम से जीवन के तत्वों का ज्ञान हमें प्रस्तुत दोहे के माध्यम से समझाते हैं।

" रहिमन पानी राखिए बीन पानी सब सून ।

पानी गए न ऊबरे , मोती मानुस चून ॥ " <sup>1</sup>

इस प्रकार रहिम ने अपने इस दोहे में पानी के महत्व को व्यक्त किया है। जो वर्तमान की चिन्ता को प्रस्तुत करता है। आज का मनुष्य पानी का जो दुरुपयोग कर रहा है, उसे जागृत करने का प्रयास मध्ययुगीन काल से हो रहा था। हिंदी साहित्य में आदिकाल से लेकर रीतिकाल तक अनेक उदाहरणों द्वारा काव्य में प्रकृति और पर्यावरण को वर्णित किया है। आधुनिक काल भी इससे अछूता नहीं रहा है। छायावादी काव्य को तो प्रकृति काव्य भी कहा जाता है। जयशंकर प्रसाद के काव्य में प्रकृति की सुंदरता के साथ - साथ पर्यावरण के प्रति चिन्ता व्यक्त की है। उनके द्वारा लिखित कामायनी, झरना, लहर, कानन कुसूम आदि काव्य संग्रहों में पर्यावरण के महत्व को समझाया है। प्रसाद द्वारा लिखित कामायनी के पात्र इड़ा ने मनुष्य जीवन की निराशा एवं पर्यावरण के महत्व को स्पष्ट किया है। इड़ा कहती है,

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मानव के जीवन में निराशा का कारण वह स्वयं है। जो प्रकृति मनुष्य की निराशा को आशा में परिवर्तित कर हमें सुख एवं शांति का अनुभव कराती है, मनुष्य उसे ही नष्ट कर रहा है। प्रकृति के प्रति इड़ा कहती हैं-

"देख मैंने वे शैल श्रृंग, जो अचल हिमानी से रंजित,  
उन्मुक्त, उपेक्षा भरे तुंग अपने जड़ गौरव के प्रतीक,  
वसुधा का कर अभिमान भंग अपनी समाधि में रहे,  
सुखी बह जाती है नदियाँ अबोध कुछ स्वेत बिन्दु।" <sup>2</sup>

इन पंक्तियों के द्वारा इड़ा पर्यावरण की हो रही हानी को दर्शाती है। साथ ही कामायनी का एक ओर उदाहरण दृष्टव्य है। जिसमें प्रकृति के भयानक रूप का वर्णन किया है।

"हिमगिरी के उत्तुंग शिखर पर,  
बैठ शीला की शितल छाँह।  
एक पुरुष भीगे नयनों से,  
देख रहा था प्रलय प्रवाह।" <sup>3</sup>

यहाँ जल प्रलय की भयानकता का चित्रण प्रस्तुत है। वर्तमान मनुष्य प्रकृति के साथ खिलवाड़ कर रहा है। मनुष्य का प्रकृति के प्रति भोगवादी दृष्टिकोण मानवीय जीवन को खतरे में डाल रहा है। परिणाम स्वरूप अकाल, बाढ़, भूकंप जैसी प्राकृतिक आपदाओं का सामना करना पड़ता है। बाबा नागार्जुन ने अकाल के भयावह प्राकृतिक आपदा का चित्रण किया है। जो हमें अकाल की सच्ची दासता सुनाता है। अकाल का चित्रण करते हुए बाबा नागार्जुन कहते हैं।

"कई दिनों तक चूल्हा रोया, चक्की रही उदास,  
कई दिनों तक कानी कुतिया, सोई उनके पास,  
कई दिनों तक लगी भित पर छिपकलीयों की गस्त,  
कई दिनों तक चूहों की भी हालत रही शिकस्त ॥" <sup>4</sup>

इस प्रकार कवि ने इन पंक्तियों के माध्यम से अकाल का चित्रण किया है। अकाल जैसी स्थिति का सामना हमें पर्यावरण को क्षती पहुँचाने से ही करना पड़ता

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है। भोगवादी दृष्टि के साथ वैज्ञानिक प्रयोगों ने भी पर्यावरण को नष्ट करने का प्रयास किया है। सुमित्रानंदन पंत के काव्य में पर्यावरण का चित्रण हुआ है। प्रकृति में चेतना के आरोप को मूलतः छायावाद कहते हैं। इस दृष्टि से सुमित्रानंदन पंत को छायावादी कवि कहते हैं। एक अर्थ से छायावाद प्रकृति चित्रण का ही दूसरा नाम है। पंतजी ने प्रकृति को चेतन माना है। उनके द्वारा लिखित वीणा तथा बूढ़ा चाँद इन काव्य ग्रंथों में पर्यावरण प्रेम का चित्रण प्रमुखता से हुआ है। वीणा इस काव्य ग्रंथ में कवि स्वयं को बालिका के रूप में चित्रित करता है और प्रकृति को सजीव मानकर उनसे सवाल पूछता है। 'पल्लव' इस काव्य संग्रह में प्रकृति एक चित्रशाला का वर्णन है। इसमें बादल नक्षत्र, लहर, पवन, बसंत आदि का चित्रण मिलता है। कवि ने उपमाओं के माध्यम से पर्यावरण का कल्पना प्रधान वर्णन किया है और प्रकृति के संपर्क में आकर आनंद की अनुभूति को प्रमुख माना है। कवि पर्यावरण के संदर्भ में कहते हैं-

"पावस ऋतु थी पर्वत प्रदेश।

पल - पल परिवर्तित प्रकृति वेश में खलाकर पर्वत अपार,  
अपने सहस्र दृग- सुमन फाड़, अवलोक रहा है बार - बार।"<sup>5</sup>

इस प्रकार कवि ने पर्यावरण को केंद्र बनाकर अपने मन में उमडनेवाले विचारों को वाणी दी है। छायावाद के अतिरिक्त प्रयोगवाद में भी पर्यावरण और मानव के संबंधों की झलक मिलती है। प्रयोगवाद के प्रवर्तक कवि अज्ञेय ने अपनी कविता 'असाध्य वीणा' में मानव और पर्यावरण का संबंध प्रस्तुत किया है। मनुष्य को अंह का त्याग करने तथा आत्मानुभूति प्राप्त करने की प्रेरणा 'असाध्य वीणा' में दी है। आत्मानुभूति द्वारा ही मनुष्य स्वयं को सिमित दायरे से बाहर निकलकर विश्व के साथ एकता प्रस्तापित कर सकता है। कवि संदेश देता है कि पर्यावरण संरक्षण न किया गया तो जो प्रकृति हमें प्रकाश और जीवन देती है। वहीं हमें हानी भी पहुँचा सकती है।

निष्कर्ष -

## हिंदी साहित्य विविध विमर्श

अतः हिंदी काव्य में पर्यावरण के विभिन्न पहलूओं का चित्रण किया गया है। प्रकृति सौंदर्य से लेकर प्रकृति का मानवीयकरण प्रस्तुत किया गया है। साहित्य और मानव जीवन का एक दूसरे के साथ हमेशा संबंध रहा है। साहित्य अपने युगीन समाज की धड़कन बनता आया है। साहित्य के माध्यम से ही मानव मन की चिंताओं को अभिव्यक्ति मिली है। हिंदी काव्य साहित्य जहाँ प्रकृति के प्रत्येक उपादान वृक्ष, नदी, फल, फूल, अनाज आदि पर अधिकार जमाए बैठा है। वहीं आज का ईन्सान अपने जीवन रस ही लूटाने चला है। ऐसी स्थिति में काव्य जगत को मौन रहना पसंद नहीं है। इसलिए अपनी रचना धर्मिता से मानवता को बचाने का प्रयास किया जा रहा है। क्योंकि प्रकृति से अलगाव मनुष्य के स्वार्थी होने की निशानी है। भूमंडलीकरण के दौर में बाजारवाद की त्रासदी का शिकार सबसे पहले पर्यावरण बना है। इसका परिणाम स्वच्छ वायु, स्वच्छ, जल, शुद्ध फल तथा भोजन का भी अभाव उत्पन्न हो गया है। ऐसी परिस्थिति में हिंदी काव्य साहित्य हमेशा सजग रहा है और पर्यावरण के प्रति सदियों से जागरूकता निर्माण कर रहा है। इस प्रकार हिंदी साहित्य में पर्यावरण को लेकर आवाज उठायी जा रही है। जो पर्यावरण के भविष्य के लिए आवश्यक है।

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## In vitro effect of catharanthus roseus plant extract on human blood lymphocytes

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### Abstract:

*Catharanthus roseus* (family Apocynaceae) is well known for its anticancer activity. It possesses a number of alkaloids like Vindoline, Catharanthine, Vincristine, Vinblastine, Ajmalicine, Serpentine and Reserpine with many medicinal uses. Immunoglobulins are secreted from B cells (plasma cells) and are responsible for humoral immunity. In present study, leaf extract of *C. roseus* was prepared by cold maceration using ethanol as solvent. PBLs were isolated by density gradient centrifugation, the cytotoxic effect of *C. roseus* was determined on human blood lymphocytes by using MTT assay and the in vitro IgG production was studied.

**Key Words:** Catharanthus Roseus, Gel Filtration, Lymphocytes, MTT Assay, SDS -PAGE.

### Introduction:

Lymphocytes are the central cells of the immune system. They have the capacity to recognize and respond to antigens [1]. Lymphocytes are remarkable in being able to mount a specific immune response against virtually any foreign antigen. There are two major types of lymphocyte: B lymphocytes- B cells, which when activated differentiate into plasma cells that secrete antibodies; and T lymphocytes- T cells, of which there are two main classes. One class differentiates on activation into cytotoxic T cells, which kill cells infected with viruses, whereas the second class of T cells differentiates into cells that activate other cells such as B cells and macrophages. Each individual lymphocyte matures bearing a unique variant of a prototype antigen receptor, so that the population of T and B lymphocytes collectively bears a huge repertoire of receptors that are highly diverse in their antigen-binding sites [2]. The B-cell antigen receptor (BCR) is a membrane-bound form of the antibody that the B cell will secrete after activation and differentiation to plasma cells. Antibody molecules as a class are known as immunoglobulins, usually shortened to Ig, and the antigen receptor of B lymphocytes is therefore, also known as membrane immunoglobulin (mIg) [3].

IgG plays very important role in the immunity because; IgG is the most abundant antibody present in the blood. It is the only antibody which readily cross the placenta and provide passive immunity to the fetus. IgG is most effective complement activator, it also mediates opsonization by binding to Fc receptors on phagocytes

cells. Immunomodulation of immune response could provide an alternative to conventional chemotherapy for variety of disease conditions, especially when a selective immunosuppression has to be induced in situation like autoimmune disorder and transplantation or when host defense mechanism has to be activated during immune deficient state [4].

*C. roseus* is an important member of the family Apocynaceae. It is an evergreen shrub/herbaceous plant. Smooth, slightly hairy, branched up to 60cm high. Leaves are oval, oblong, 4-7 cm long, rounded at the tip, pointed at the base and arranged in opposite pairs. Flowers are white, pink or variegated white and red, borne in the axils of the leaves.

It is native of Madagascar but found throughout India. This herb is now common in many tropical and subtropical regions worldwide, including the southern United States. *Catharanthus* is a genus of eight species of herbaceous perennial plants; seven are endemic to the island of Madagascar. They were formally included in the related genus *vinca*. It is cultivated as an ornamental plant. It flowers all year round. Grows in abundance along seashore and sandy areas [5].

More than hundred alkaloids have been found. *Catharanthus roseus* is a sole commercial source of monoterpenoids indole (MIAs), Vindole, Catharanthine, Vincristine, Vinblastine [6]. Other alkaloids like Ajmalicine, Serpentine and Reserpine [7]. The leaves yield a volatile oil containing aldehyde, sesquiterpenes, sulphur-containing compounds and an alcohol etc. The root bark contains the alkaloid Alstonine which has

been used for its calming effect and its ability to reduce blood pressure [8].

Besides alkaloids, other secondary metabolites isolated from *C. roseus* include monoterpenoids glycosides, steroids, phenolics, flavinoids and recently 7-O ethylated anthocyanins [9]. Study noncolored phenolics in *C. roseus* characterized three caffeoylquinic acids and fifteen flavonol glycosides.

*C. roseus* the most important plant source of alkaloids has been traditionally used for various purposes. Research was stimulated by its traditional use in treatment of diabetes. The leaf extract is used as anticarcinogenic. The infusion of leaves is used as antidiabetes and for diarrhea. The root decoction is used as vermifuge [10]. Two of the common anticancer drugs derived from this plant are Vincristine and Vinblastine. Vincristine is used in chemotherapeutic regime for Hodgkin's lymphoma while vinblastine is used for childhood leukemia [11]. It is also effective in treating various other types of cancers including breast cancer and lung cancer, uterine cancer melanomas and Hodgkin's and non Hodgkin's lymphoma. The plant is also known for its antihypertensive and antispasmodic properties [12]. *C. roseus* leaves extract made significant changes in each cardiovascular parameter after investigation with hypotensive and hypolipidemic effects in leaves extract treated animal.

#### Materials and Methods:

##### Preparation of *C. roseus* Leaf Extract:

The plant was collected from PIMS campus and authenticated from Department of Botany. The plant was uprooted and the leaves were separated, the leaves were washed and then used further for extraction by the process of cold maceration. Fresh leaves were taken and paste was prepared by grinding, 200 ml of ethanol was added and kept for incubation for 2 hrs. Supernatant was taken and centrifuged at 3000 rpm for 15 min., then supernatant was kept at room temperature for evaporation till the extract becomes completely dry. 10 mg dried form of extract was suspended in 1ml of sterile RPMI-1640 medium and the solution was filtered through filter paper. Then, the solution was again filtered through 0.22  $\mu$ m syringe filter. The filtrate was used as stock (10 mg/ml) and stored at 4°C [13].

##### Isolation of Human Peripheral Blood Lymphocytes:

Human Peripheral Blood (20ml) was collected in a heparinised vacutainer from a consent subject. The blood was diluted up to 40ml with sterile phosphate buffer saline (PBS). Same amount of diluted blood was

layered upon 10ml of Ficoll-paque, centrifuged at 1500 rpm for 30 min. Buffy coat containing lymphocytes was carefully removed. Then the cell suspension was diluted with 10 ml PBS and centrifuged at 3000 rpm for 5 min. The Cell Pellet washed with 10ml of PBS and centrifuged at 3000rpm for 5min, washing was repeated for 2 more times. Cells pellet were suspended in sterile RPMI-1649 media supplemented with 10% fetal bovine serum. Then Cell culture was transferred in T-25 flask and kept for incubation at 37°C for 1hr. Supernatant containing non adherent lymphocytes was collected in fresh tube and the cells were maintained with RPMI-1649 medium at 37°C in CO<sub>2</sub> incubator [14].

##### Viability and Counting of Lymphocytes:

The isolated lymphocyte suspension was mixed thoroughly to disperse any clumps. Cell suspension was diluted 1:1 with trypan blue dye and the suspension was immediately transferred to the edge of the hemocytometer and allowed to flow under the cover slip. Care was taken not to overfill or underfill the chamber. Under 40x objective, the cells lying in each of the large squares were counted and number of stained and unstained cells was recorded [15].

##### Treatment of PBLs with plant extract and LPS:

Peripheral blood lymphocytes (PBLs) 100 $\mu$ l were treated with plant extract at different concentrations-1000 $\mu$ g/ml, 500 $\mu$ g/ml, 50 $\mu$ g/ml was added in microtiter plate. Positive control was kept as 100 $\mu$ l of cells + 100 $\mu$ l of LPS and 100 $\mu$ l of cells + 100 $\mu$ l of PBS as Negative control. Test samples A was kept as 100 $\mu$ l of cells + 100 $\mu$ l of P.E at different concentrations-1000  $\mu$ g/ml, 500  $\mu$ g/ml, 50 $\mu$ g/ml. Test samples B was kept as 100 $\mu$ l of cells + 100 $\mu$ l of P.E (different concentrations-1000  $\mu$ g/ml, 500  $\mu$ g/ml, 50 $\mu$ g/ml.) + 100 $\mu$ l of LPS [16].

##### MTT Assay:

For this study cell culture were exposed to the plant extract and then, the number of surviving cells was determined indirectly by MTT dye reduction. 50 $\mu$ l of all treated cell mixture was taken in a microtiter plate, 10 $\mu$ l of MTT Reagent [3-(4,5dimethyl thiazol-2yl)-2, 5 diphenyl tetrazolium bromide, 5mg/ml] was added in PBLs in all the wells. Plate was incubated at 37°C in 5%CO<sub>2</sub> incubator for 4hrs. 100 $\mu$ l of DMSO in all the wells were added and incubated at R.T. for 15mins. Plate reading was taken at 570nm [16].

##### Preparation of dialysis tubing & Dialysis:

The tubing was cut into convenient length. Then, it was boiled for 10 min in 2% (w/v) sodium bicarbonate. Tubing was rinsed thoroughly in distilled water, then it was boiled for 10mins in 1mm EDTA (pH8). The

tubing was allowed to cool and stored at 4°C in PBS. It was made sure that the tubing was always submerged. 1ml of purified sample was taken in the activated dialysis bag. Dialysis was performed using PBS, stirred continuously and the buffer was changed every 3 hrs[17].

**Purification of sample:**

Column was prepared using sephacryl S-200 and the purification were carried out by Gel filtration/Column chromatography. All the test samples were collected separately. The samples were centrifuged at 1500 rpm for 15 minute. The supernatant was collected and used for further analysis. 1ml of the dialysed sample was loaded in the column and allowed to flow up to the face of the beads then the elution buffer was added, Fraction collector was used to collect the eluted fractions [adjusted to 15 drops (i.e 500µl)]. Protein content of all the 30 fractions collected was determined spectrophotometrically at 280nm. Samples at maximum absorbance were selected for further analysis [18].

SDS-PAGE were carried out for purified samples which have maximum absorbance.

**Spectrophotometric Analysis :**

The U.V lamp was warmed up about 15min. Wavelength was adjusted to 280nm, zero absorbance was calibrated with buffer solution only. The protein solution was measured at 280nm. Wavelength was adjusted to 260nm, zero absorbance was calibrated with buffer solution only. The protein solution was measured at 260nm [19].

Protein concentration is measured by the following formula :

$$\text{Protein conc.} = \frac{\text{Absorbance at 280nm}}{\text{Extinction coefficient of IgG (13.6)}} \times 10\text{mg / ml}$$

**Double Immunodiffusion :**

Double immunodiffusion is a simple gel-based assay for detecting antigen-specific antibodies. It is also known as Ouchterlony technique. 1.4% agar was prepared. Wells were punched on agar plate by using template. Mean while dilution of antigen (anti-human IgG) and samples were prepared. Serial dilution was done to get the required dilutions. The Anti-Human IgG and samples were loaded into their respective wells on the gel. The slide was placed in a humidified chamber and incubated overnight at 37°C. Slide was observed for any line of precipitation and result were recorded [20].

**Result:**

**Lymphocyte count :** -  $1.76 \times 10^6$  cells/ml (90% cell viability).

**Effect of plant extract on proliferation of PBLs:**

After treatment with plant extract the proliferation increased compared with the cells treated with control and LPS alone and the synergistically with plant extract and LPS the proliferation increased significantly.

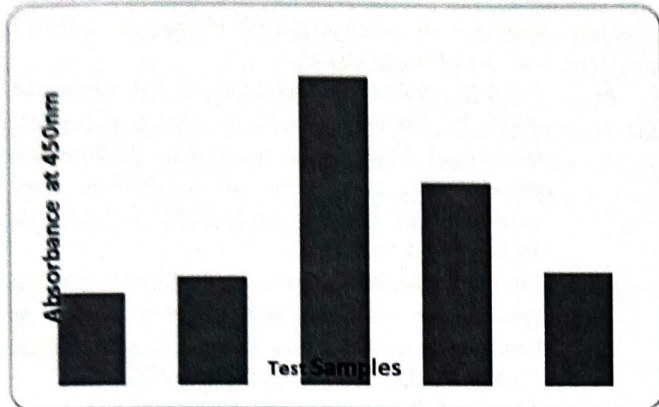
**MTT Assay :-**

**Table no. 1**

Samples	Contents	Absorbance at 450nm	Average
Negative Control	Cells + RPMI + PBS	0.1	0.103
		0.104	
		0.096	
		0.106	
Positive Control [LPS]	Cells + RPMI + LPS	0.109	0.121
		0.129	
		0.113	
		0.13	
Test A (with P.E)	1000 µg/ml Cells + RPMI +P.E.	0.128	0.127
		0.106	
		0.122	
		0.168	
500 µg/ml	Cells + RPMI +P.E.	0.107	0.227
		0.125	
		0.114	
		0.133	
Test B (with P.E+LPS)	1000 µg/ml Cells + RPMI + LPS +P.E.	0.228	0.109
		0.351	
		0.165	
		0.257	
1000 µg/ml [LPS]	Cells + RPMI + LPS +P.E.	0.13	0.232
		0.098	
		0.088	
		0.105	
500 µg/ml	Cells + RPMI + LPS +P.E.	0.128	0.392
		0.15	
		0.12	
		0.177	
50 µg/ml	Cells + RPMI + LPS	0.193	0.392
		0.524	
		0.766	
		0.711	
		0.221	
		0.144	
		0.118	
		0.118	

**Graphical Representation:**

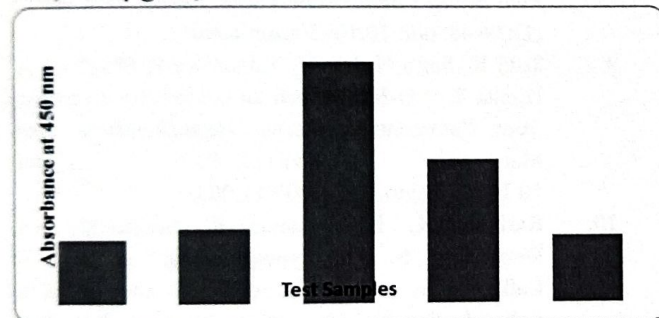
**Cells +Plant extract at concentration (50, 500, 1000 µg/m)**



**Graph No. 1**

Statistical analysis was done Students t test,  $p > 0.05\%$  significant difference was observed between the control and test sample.

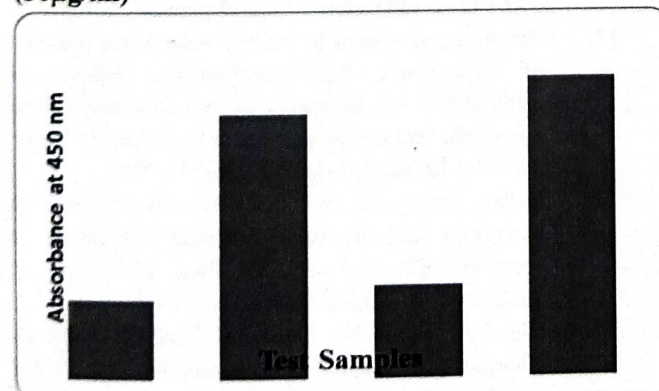
**Cells +LPS + Plant extract at concentration (50, 500, 1000µg/ml)**



**Graph No. 2**

Statistical analysis was done by students t test and significant difference was observed, at  $p > 0.05\%$

**Comparison of P.E (50µg/ml) and LPS+P.E (50µg/ml)**



**Graph No. 3**

Statistical analysis was done, significant difference was observed between positive control and test sample B, t- test ( $p > 0.05$ ), but no significant difference was observed between positive control and test sample A, t-test ( $p < 0.05$ )

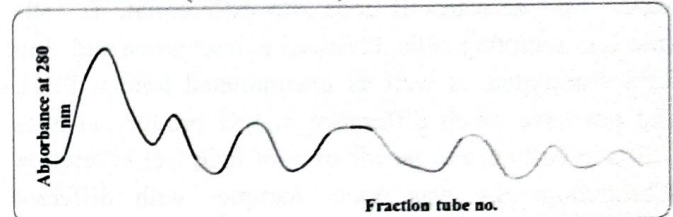
**Protein concentrations (mg/ml)**

**Table No. 2**

Test Sample	Protein conc. mg/ml
Control (cells + PBS)	26.78
Positive control(cells + LPS)	30.64
Test sample A (cells + P.E)	40.95
Test sample B (cells +LPS +P.E)	41.95

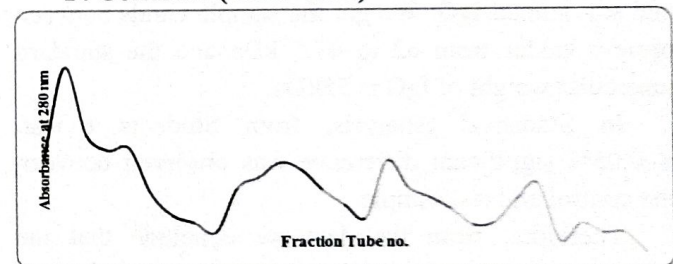
**Spectrophotometric Analysis**

**Control : (Cells + PBS)**



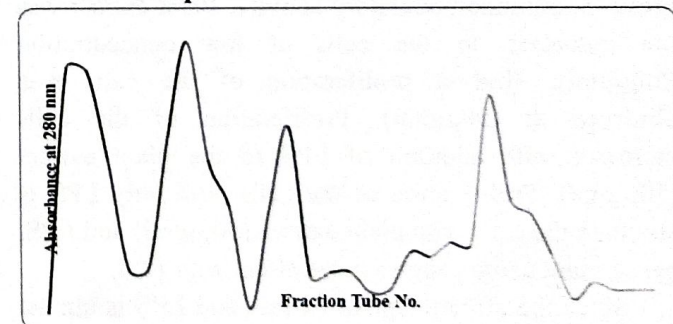
**Graph No. 4**

**P. Control : (Cells+LPS)**



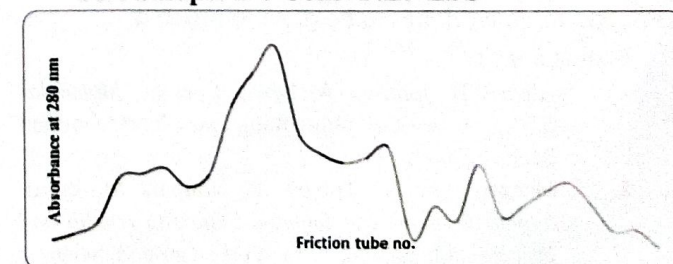
**Graph No. 5**

**Test Sample A : Cells+P.E**



**Graph No. 6**

**Test Sample B :-Cells+P.E.+LPS**



**Graph No. 7**

**Discussion :**

In MTT Assay, Human peripheral blood lymphocytes were incubated for 3 days with plant

extract with concentration of 1000 µg/ml, 500 µg/ml, 50 µg/ml, stimulated and unstimulated with LPS. The *C. roseus* extract enhanced the cell proliferation in unstimulated human PBLs, highest at 50µg/ml. In the presence of LPS, *C. roseus* extract (50µg/ml) synergistically increased the cell proliferation, compared with LPS alone. Therefore, the *C. roseus* extract might be acting as a mitogen for both B and T cells. The viability was checked and observed that the extract had no adverse effect on cell viability when exposed to 72hrs. Cells were found to be alive in all the wells. LPS activates B cells and differentiate B cells into IgG secreting cells. *C.roseus* extract when added to LPS stimulated as well as unstimulated human PBLs did not have much difference in IgG production after 72hrs in culture. For purification of IgG, Gel Filtration Chromatography was done. Samples with different protein fraction were collected. In SDS-PAGE we loaded sample with high fraction values, protein ladder and std. human IgG. We got the sample bands between protein ladder from 62 to 47.5 kDa and the standard molecular weight of IgG is 55kDa.

In Statistical Analysis, from Students t test,  $p > 0.05\%$  significant difference was observed between the control and test sample.

Therefore, from the data we conclude that the extract has mitogenic activity and is immunomodulatory but further studies is required to prove its immunomodulatory activity. Plant extract was not cytotoxic to the cells at low concentration (50µg/ml). Highest proliferation of the cells was observed at (50µg/ml). Proliferation of the cells increases with addition of LPS to the plant extract (50µg/ml). Proliferation of the cells with only LPS is less than the cells with plant extract (50µg/ml) and LPS, hence Plant extract shows more effect with LPS.

Since the effect of plant extract and LPS is almost same in both the cell proliferation and protein production, our plant extract might be partial agonist to LPS. But more work has to be done to prove it.

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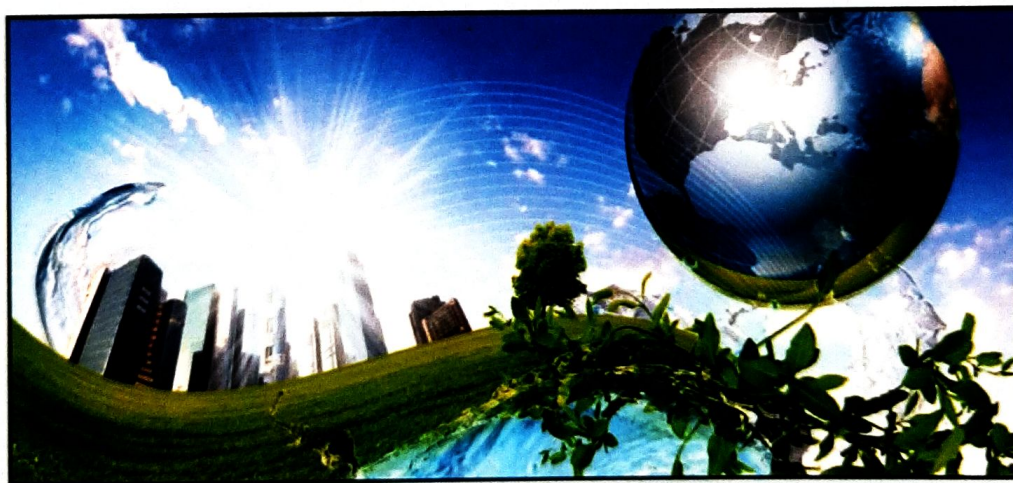
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## Review on Spectrophotometric Methods for Determination of Mercury (II)

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### Abstract:

Present article provides mini review of methods for determination of toxic metal mercury(II) from various matrices. Principally spectrophotometric determination methods are reviewed. Various parameters viz. wavelength of maximum absorption, beer's law range, limit of detection, sensitivity, advantages and disadvantages are compared.

**Key Words:** Mercury (II), Spectrophotometric Determination.

### Introduction :

Mercury is one of the most toxic elements. Inorganic mercury exists in either the mercurous( $\text{Hg}^+$ ) and mercuric( $\text{Hg}^{2+}$ ) form[1]. Determination of mercury becomes important due to the toxicity of mercury to human beings and to other animals in the food chain. Mercury can enter the environment from natural sources and from human activities[2]. The major source of organic mercury in the ecosystems is methylmercury (MeHg)[3]. MeHg is absorbed by fish and enters food chain into other fish-eating species where it is partially converted to inorganic mercury by metabolic process. Thus mercury affects aquatic ecosystems and humans through bioaccumulation[4]. Industrial use of mercury, contributes significantly to mercury pollution of the environment[5,6]. After discharge into the environment, mercury enters the sediments where it persists for many decades. It is taken up by aquatic organisms in the form of highly toxic methylmercury and is subsequently its concentration increases through the food chain. The health birds, fish, seals, and man, is thereby affected[7,8]. Mercury binds to the sulfhydryl groups of enzymes and proteins, thereby inactivating vital cell functions[9]. Mercury and its compounds are cumulative toxins and are hazardous to human health even in small quantities[10,11]. The major effects of mercury poisoning are neurological and renal disturbances as it can easily pass the blood brain barrier and effect on the brain[12].

Due to toxic effects of mercury in environment, it is necessary to develop an precise, sensitive and selective methods for its separation and determination. Various analytical techniques are available for determination of mercury from various environmental samples[13]. Solid-Phase Extraction followed by Spectrophotometric Determination of trace amounts of mercury in natural

samples is carried out. The method is based on sorption of mercury as  $\text{Hg}^{2+}$ -N,N'-bis(2-mercaptophenyl)ethanediamide complex on silica gel column followed by elution of by acetone and determined spectrophotometrically at 523 nm. Method is applicable for determination of mercury from various water bodies[14]. Mercury (II) forms yellow colored complex with Anthrone phenylhydrazine (APH) at pH 7. The system obeys Beer's law in concentration range 0.8146-8.1456  $\mu\text{g mL}^{-1}$ [15]. 1:2 mercury Diphenylthiocarbazon is spectrophotometrically determined from 0.18-1.80 M sulphuric acid media. The maximum absorbance of complex is observed at 488 nm[16]. O-carboxyphenyl diazobenzene is used for the determination of mercury spectrophotometrically. The basis of the method is the formation of purple violet colored dye-mercury complex that absorbs strongly 540 nm. The complex exhibits molar absorptivity of  $2.22 \times 10^5 \text{ mol}^{-1} \text{ cm}^{-1}$ [17].

2-Acetylpyridine thiosemicarbazone (APT) forms 1:2(Hg-APT) complex in aqueous phase having pH 6. The complex is measured at 351 nm. Method gives both zero order and second order spectras. Method is limited due to interference from Cu(II), Al(III), Fe(III) and Zn(II) where masking is necessary[18]. Spectrophotometric Determination of Hg(II) using 2-mercaptobenzothiazole (MBT) as chelating agent in Cetyltrimethylammonium Bromide media is reported. The complex is stable at pH 10. Cu(II) and Bi(III) interferes in the analysis[19]. Simultaneous spectrophotometric determination of mercury and palladium is reported. Hg and Pd forms complexes with Thio-Michler's Ketone (TMK) at pH 3.5[20].

Dispersive liquid-liquid microextraction followed by spectrophotometric determination is widely used for

the determination of mercury from variety of environmental samples[21–24]

Micelle-mediated separation and preconcentration method followed by spectrophotometric determination of Hg(II) is reported. The method involves cloud point extraction (CPE) of Hg(II) ions with polyethylene glycol tert-octylphenyl ether (Triton X-114) in the presence of chelating agents such as 1-(2-pyridylazo)-2-naphthol (PAN) and 4-(2-thiazolylazo) resorcinol (TAR) at pH 8.0 & 9.0[25]. Colorimetric determination method for the Hg(II) ions by exploiting the peroxidase-like activity of few-layered MoS<sub>2</sub> nanosheets is reported. The blue colored product shows maximum absorption at 652 nm[26]. 1,5-diphenylthiosemicarbazone is used as reagent for non-extractive spectrophotometric determination of mercury from acidic media. Sodium dodecyl sulphate is used as a micelle medium[27]. Amberlite XAD-4 coupled with brilliant green using an azo spacer is employed for preconcentration and separation of mercury. Cd<sup>2+</sup>, Pb<sup>2+</sup> and Cu<sup>2+</sup> interferes which are masked with EDTA[28].

Mercury forms ternary ion-association complex with Xylidyl Blue (XB) and cationic surfactant (CTAB). The absorbance of extracted colored ion associate complex measured at 523 nm[29]. Solid phase extraction is used for the selective preconcentration of mercury[30,31].

#### Conclusion:

Toxic nature of mercury and its adverse effect on environment and human beings, development of method for separation and quantitative determination of mercury is necessary. The present article reviews some of the methods reported for determination of mercury.

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# **DIGITAL MARKETING AND ECONOMY**



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## Recent Trends in Digital Marketing

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### Abstract:

*Delivering promises to their customers in this digital era requires more than business acumen and seed capital. To drive growth and contentment in this digital era, companies need to modernize their mindset and processes. Leaving behind traditional marketing mediums and adapting digital marketing mediums is one of the first steps in inciting growth and innovation in modern times.*

*In this paper, we will explore digital marketing trends that are helping organizations keep their promises to their customers. Moreover, these latest digital marketing trends also modernize businesses and bring about a new way of operating in the current business milieu.*

**Keywords:** Digital Marketing, Trends, Internet Marketing.

### Introduction:

The term Digital Marketing was first used in the 1990s. The digital age took off with the coming of the internet and the development of the Web 1.0 platform. The Web 1.0 platform allowed users to find the information they wanted but did not allow them to share this information over the web. Up until then, marketers worldwide were still unsure of the digital platform. They were not sure if their strategies would work since the internet had not yet seen widespread deployment.

In a world where over a 5.03 billion people use social media on a regular basis, every working professional is expected to be familiar with at least the core tenets of Digital Marketing. In simple terms, Digital Marketing is the promoting of products over the internet or any form of electronic media. According to the Digital Marketing Institute, "Digital Marketing is the use of digital channels to promote or market products and services to targeted consumers and businesses. People are consuming digital content on a daily basis. Very soon, traditional marketing platforms will disappear, and the digital market will completely take over. There are a number of advantages to Digital Marketing. Unlike traditional marketing, digital marketing is more affordable.

Experts define digital marketing as promoting products and services on a digital medium using modern and versatile tools. A few digital marketing trends of 2022 can create a competitive advantage when used efficiently. Influencer marketing, video marketing,

omnichannel marketing, and others are some of the latest digital marketing trends discussed below.

### Statement of the problem:

The digital marketing landscape is constantly changing, and it's essential to keep up with the current trends. Therefore an overview of the most effective digital marketing tactics/ trends are to be studied that will be most effective in coming years.

This study will help to gain knowledge on recent trends and issues such as the primary factors that influencing online shopping, buying behavior and ideas of customers about the digital marketing.

### Objective of the study:

1. To study the role of digital marketing.
2. To Study the popular trends in digital marketing.

### Review of Literature:

Sharad Madhukar Dashaputre (2011), in his thesis "A study of the growth of internet marketing in Indian scenario" came to a conclusion that an increase in the use of internet and mobile has resulted for the increase in the growth of internet marketing. Based on their study all the respondents agree that internet is mandatory for the growth of online marketing and hence people should be given awareness of internet. Most of them strongly agree that traditional marketing will be replaced by online marketing in the near future.

D.K Gangeshwar (2013) in his journal, "E-commerce or internet marketing: a business review from Indian Context", remarked that the present developed in online marketing would be a valuable

addition to researcher and academicians and useful theory for practitioners, advertisers and entrepreneurs. In the next three to five years India will have 30 to 70 million internet users which will equal many of the developing countries. E-commerce is set to play a very important role in the 21st century, the new opportunities that will be thrown open, will be accessible to both large corporations and small companies.

Dr. Amit Singh Rathore, Mr. Mohit Pant, Mr. Chetan Sharma (2017), in their article "Emerging trends in Digital marketing in India" says that the consumers are looking and searching more on internet to find the best products and services from the sellers around India. By different techniques of digital marketing such as search engine optimization (SEO), search engine marketing (SEM), content marketing, influencer marketing, e-commerce marketing, campaign marketing, social marketing etc. the shopping speed of the customers have been increased vastly. The usage of social media has created new opportunities for digital marketers to attract the customers through digital platform.

Mathew Johnson (2020), conclude that without a doubt, the corona virus has left its mark in the history books. The question marketers should be asking themselves is just how much will these change things? We are starting to realize the impact the virus has had on industries, but how will the innovative marketers of today adjust? One thing is certain- digital solutions should be at the top of the agenda for all businesses.

Silviu stanciu, Riana Iren Radu (2020) the need to make the educational system more flexible and its preparation for completing face-to-face activities with the online version; the capacity of some companies from SME's group to adapt to the critical incidents and to identify market segments; the reappraisal of the national agro-food system (primary production – agricultural, industrial processing and trade), national investments and governmental support measures. The agro-food market is dependent on imports, and the manifestation of some critical situations can destabilize the food supply of the population. The agricultural production is dependent from climatic conditions and the governmental investments in a national irrigation system are insignificant.

Rae Yule Kim (2020) states that the pandemic forced workplace operations to go virtual –and many businesses have made such transition successfully in a short period of time. However, how the pandemic affects consumers and marketplaces has received

relatively limited attention. In this paper, we explore how the pandemic accelerated the growth of e-commerce

### **Tools in Digital Marketing:**

#### **Social media platforms:**

Common part of any integrated marketing strategy social media platforms like Facebook, Instagram, Snapchat are a great way for marketers to engage their audiences and generate buzz around their brands. In addition to the standard features these platforms offer, there are also some features that are designed specifically for marketing.

#### **Design tools:**

Another key part of digital marketing is design, this is especially common when it comes to creating and content like social media posts and blogs. Because digital marketing is such a design heavy industry, doing it effectively wouldn't be possible without design tools like Canva and Photoshop, programs that help those without extensive graphic design skills to create dynamic images to their content. Analytics is another set of helpful tools for digital marketers. These include everything from Google Analytics (designed to track stats for web traffic on a particular site) to social media analytics tools like Facebook Insights and Twitter Analytics which provide metrics related to engagement and help marketers optimize their campaigns.

#### **Content marketing tools:**

For marketers who are more focused on content marketing, tools like CoSchedule and Hubspot are a great help when it comes to content creation and curation. They can help marketers identify content opportunities and craft engaging blog and social media posts that will resonate with their audience.

#### **Email marketing tools:**

The final set of tools in a digital marketer's toolbox is email marketing marketing tools. These help marketers create email campaigns that amplify their content and encourage their users to become more engaged with their brand — taking additional steps like signing up for events and buying products. Common email marketing tools include email marketing platforms like Mail Chimp and Iterable which allow marketers to build email lists and automate their email campaigns. These platforms also provide analytics for every email campaign, making testing and optimization quick and easy.

### Latest Digital Marketing Trends:

- 1. Influencer marketing** - Influencer marketing is the practice of using an influencer's image and goodwill to promote and advertise a brand's product or services. Influencers can be individuals or groups with a massive fan following. Here are some of the reasons why influencer marketing has gained momentum in the current business milieu:
  - *Persuades audience:* Influencers have a loyal fan-base, meaning they can sway the audiences in a jiffy. Many brands opt for influencer marketing to attract a diverse set of audiences to their products.
  - *Increases trust:* Influencers use social media applications to promote or advertise products or services. Therefore, many brands opt for influencer marketing to increase brand awareness and amplify their social media presence.
  - *Supports content strategy:* Influencer marketing is best suited for filling the gaps in content marketing strategy.
- 2. Omnichannel marketing** - Omnichannel marketing is believed to be one of the most effective ways to reach the target audience. It is an approach that stands true to the definition of digital marketing using different digital mediums to promote, engage, and serve customers. Omnichannel marketing offers a varied set of benefits, which are as follows:
  - Attracting new customers and market segments
  - Engaging customers after sales
  - Increasing trust and loyalty of customers
  - Boosting sales and customer satisfaction
  - Helps understand customer demand and needsOmnichannel marketing is widely used in retail, entertainment, food service, business, and other industries.
- 3. Artificial intelligence** - Artificial intelligence (AI) is the process of developing smart computer systems that can perform similar functions to the human brain. Companies can use AI to gauge the needs and demands of their customers. Simultaneously, it can be used to find out patterns in customer buying behavior, monitor and offer a solution to formulate a marketing strategy.

Moreover, AI applications like machine learning, deep learning, and others can be used for various customer and marketing-related activities – including content creation, ad monitoring, promoting products, interacting with customers, and more. Therefore, as a digital marketing trend, AI is a boon for companies looking to level up their advertising game.

- 4. Video marketing** - Social media platforms have offered a new space for companies to promote their products or services to their target audience. Video marketing is a potent digital marketing tool popular among businesses trying to increase their customer base. Experts believe that videos are more effective than any other form of content; that's why many brands are shifting their focus to developing content-rich and enthralling videos to promote their products or services. Similarly, social media applications like Instagram, YouTube, Facebook, and others have also integrated short-form content into their algorithms, helping brands proliferate to their target audience. Therefore, brands looking to increase their customer base can opt for video marketing as their promotional strategy.
- 5. Long-form content** - Content marketing is a popular digital marketing trend using which companies often promote their product or services. Similarly, long-form content is the subset of content marketing that consists of blog posts or articles of more than 3000 words to promote a product or service. Companies create long-form content intending to increase their visibility, industry expertise, and customer engagement. In addition to this, here are some other reasons why businesses opt for long-form content:
  - **Increases traffic on the website** - More people visit the company's website due to the long-form content's popularity. However, people are less likely to explore more products and services of the brand.
  - **High ranking on search engine** - Search engine ranking and website traffic have a direct correlation. Therefore, an increase in traffic would lead to a high ranking on a search engine, further increasing customer interaction and engagement on the website.

- **Increases customer engagement and interaction** - Long-form content helps in initiating a conversation between a brand and its customers. Furthermore, it also increases customer engagement and loyalty.

7. **Social media shopping-** The advent of social media has helped businesses closely interact with their audience and provide a medium to sell their goods and service. The integration of social media and e-commerce has opened doors for an online marketplace for customers from different strata of society to buy products and services that match their expectations. It is a popular social media trend that transcends different industries. Moreover, it is an effective way to make your products available to the customers while interacting and engaging with them.

8. **Progressive web pages** - Progressive web pages are online websites that perform the functions of a mobile application. They send push notifications, load faster than other sites, and are accessible offline, among others. A progressive web page is one of the latest digital marketing trends that has addressed the need for websites that can offer a versatile user interface to customers with different devices. Furthermore, this latest digital marketing trend is expected to grow leaps and bounds in the forthcoming years.

Modernizing business is a complex and long-term process that requires perseverance, skills, and deep knowledge. Emeritus India offers some of the best digital marketing courses online that help brand leaders learn new skills that will help them locate and implement new trends into their business. Moreover, our courses provide deep knowledge of the evolving digital marketing environment and prepare you to face obstacles. So, enrol in our digital marketing courses to get akin with modern marketing systems.

#### Most impactful digital marketing trends:

**Chatbot:** Chatbots are considered one of the top digital marketing trends in 2022, the AI-based technology makes use of instant messaging to chat with customers, and with site visitors.

#### Most effective digital marketing tactics/ strategies:

1. **Use videos on social media:** Why not try a new approach to content marketing in 2022? With

68% of consumers wanting image-based posts and 50% looking for video engagement, it might be time. You can always use videos on social media instead!

2. **Focus on the user experience:** The way you design and develop your website is vital for keeping visitors engaged. In a world where everyone has so many options, it's crucial to make the user experience as smooth & straightforward as possible because people will be more likely to stay on yours instead of moving over too soon!
3. **Ensure your website is mobile-responsive:** Your website should be mobile responsive to ensure a great user experience for visitors and higher search rankings. The pandemic has caused device usage to increase, so your site must be optimized on the numerous types of smartphones/tablets available today!
4. **Update your website:** The best forward-thinking approach to start 2022 it's by providing users with an updated and contemporary website. It takes .05 seconds for a shocking impression that makes users decide to purchase. Therefore, you must ensure a fast and efficient user experience, mobile-optimized, modernized, and quickly found online. Otherwise, it would be time to benefit from web design services.
5. **Incorporate tools for digital sales enablement:** As consumers grow more and more comfortable engaging with companies online, it is crucial to be equipped for the future. Today's consumer wants instant solutions—so give them that! Incorporate some digital tools into your company's arsenal by 2022 to make sure you can keep up with their changing needs.
6. **Create self-service options:** Client expectations are constantly more demanding, and you need to satisfy them quickly. An easy technique is by providing resources in a knowledge base with answers to frequently asked questions with examples, pictures, explanations, links to additional resources, and training videos.
7. **Try account-based marketing:** It's time to consider a new digital strategy for 2022 - account-based marketing. This personalized strategic approach where key business accounts are marketed directly has been proven by 85% of marketers who measure ROI and find it



delivers higher returns than any other type or medium in use today!

8. **Market towards Generation Z:** Generation Z is one of the most noteworthy generations in today's thrift. They make up 20% of America's force and have grown demographically since 2020. With 40% as consumers, they outnumber millennials by 4 to 1! These influential young people use technology more than any other generation, making them even more vital for businesses that need an audience.
9. **Take advantage of paid media:** Since the pandemic, digital marketing has become a less-affected advertising medium than traditional marketing efforts as more people have stayed at home. Businesses continue to cut their spending on old marketing methods and allocate their funds to Paid Media to compete online.
10. **Create tailored content for your audience:** When creating content, it is crucial to think about what topics people in your industry search for. Search engine optimization (SEO) practices and analytic tools can help by suggesting popular keywords that relate mainly to the goods offered on a website. This is beneficial to create new blogs based on these specific interests. Remember that human connection while selling products helps create credibility, which leads directly to trustworthiness among existing clientele and future customers.

#### Future of Digital Marketing:

Marketing is becoming more and more digital in recent years, and it seems that the digital marketing tactics which will be most effective in 2022 are slowly becoming apparent. Digital marketing is a craft, and one of the things to think about is how your product or service will have a good impact. In other words, if you're looking for talented people who can help you use social media strategically to reach new audiences, you'll want to consider hiring people with the skills that are in high demand today.

Social media is expected to be an integrated part of marketing. You'll need to have your website and content optimized for mobile so that they're easy to access and use on the go. The trend towards digital

advertising is likely to continue with more companies moving towards targeted and personalized advertising.

#### Conclusion:

So what are the most effective digital marketing tactics in 2022? Social media platforms, undoubtedly! You will likely see many people give up on traditional marketing in favor of social media, and they're going to be correct. However, social media today is nowhere near as strong as in five years. The digital marketing tactics that will be most effective in 2022 are the ones that have a broad reach, which can be accomplished by investing time and money into social media.

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## Relationship Between Digital Marketing and Economy Stability

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### **Abstract:**

*The world is drastically changing through time. Most people nowadays use technology likes Mobile phones and computers. Much technological advancement arises. People can do online shopping and many more through an internet connection since it saves a lot of time. The purpose of the undertaken study is to examine the effectiveness of online digital between digital marketing and the economic stability of online sellers as a strategic tool for building brand sustainability the researchers aim to identify the online sellers' factors that will produce a success of a good quality of the product. The results show a high level of online sellers between digital marketing it has also been found out that among indicators of online sellers' attention and satisfaction are two predictors of online marketing. Furthermore, the outcomes have significant industrial implications for the marketers and consumers that they can devise effective marketing strategies to maintain optimum market share and competitive advantages.*

**Keywords:** digital marketing, economic stability, brand sustainability, online sellers, Marketers & consumers.

### **Introduction:**

People today are exposed to internet. With how accessible the internet is today, the number of people who go online are still increasing Online shopping is one of the commonly used mediums for convenient shopping. It is in fact, a popular means of shopping among the Internet community (M. Bourlakis, *et. al*, 2008). No matter clothes, electronics, or pets, online shopping trend is becoming more popular with each passing day. Hundreds of websites and applications are being created and deployed every year to cater this rising demand of comfortable shopping trends (R. Bashir, I. Mehboob, W. Bhatti, 2015).. In such, most business that people got their selves into is online selling. Online selling is the act or process of selling goods, products or services via an internet or mobile app, auction site, online classified advertisement, online shop, social networking, social media, or web shop. Communication technologies have become advanced since last decade of the twentieth century that accelerated the process of globalization. It is necessary for different countries to develop specialized e-business strategies that exploit their unique capabilities and resources, and even geographic positions.

Companies must assess global markets and broaden online in developed countries as well as in the emerging economies of other nations like China, Brazil, and India to exploit the technology of global e-business. Companies may proactively utilize global e-business

opportunities and take benefits of e-commerce or may implement a protective approach to new global competition that intimidates their business. The internet symbolizes a new and important technology that has received more attention from academicians, entrepreneurs, business, and investors (M. Sawhney and J. Zabin. 2002).Efficient and affordable e-commerce can help sustain economic activities and drive growth as the country continues to manage COVID-19 risks and transitions to the new and better normal, the National Economic and Development Authority said "Online shopping and marketing platforms will play bigger role in the new normal as businesses and consumers increase the use of electronic transactions, including cashless payment system and other financial technology platforms.

Therefore, this study sought to address that problem by identifying and measuring the effectiveness of online business factors that successfully produce a good consumer and buyers specifically in shopping / e-commerce and will conform to the standards.

Economic stability means that people have the resources essential to a healthy life. Factors affecting economic stability include affordable housing; employment that provides a living wage; things that support employment, like worker protections, paid sick leave, and child care; and access to reliable transportation. using and food, and a job that provides a stable, living wage. Economic stability allows people

the ability to access resources essential to life, including financial resources, quality housing and food, and a job that provides a stable, living wage.

#### Hypothesis:

1. There is no significant difference on the level of economic stability of online sellers when group according to: Age, Gender, Marital Status and Occupation.
2. There is a significant relationship between digital marketing and the level of economic stability of online sellers.

#### Methodology:

In this research, the researchers investigated the significant relationship between digital marketing and the economic stability of online sellers. The research design used in this study allows the researchers to examine the relationship between digital marketing and the economic stability of online sellers.

#### Results and discussion:

Demographic Profile of online sellers in terms of Age, Gender, Marital status, and Occupation Digital marketing in terms of Quality, Pricing and Product Variety. Economic Stability in terms of Price Stability and Full employment. Digital marketing and economic stability have a strong connection to each other. The connection of these two has a huge impact in our economy's growth as it helps the online sellers to improve their business, make it bigger and bigger that help them reach other places and sell more products. Increasing the relationship between economic growth and marketing, is the outcome of the efficient ability of e-marketing companies and provides high productivity in the presentation of products and services on Internet pages dedicated to companies. The digital marketing and economic stability are interrelated to each other in which these two variables affect each other. The meteoric rise in online shopping poses both obstacles and opportunities for this crucial mission to be accomplished. Shopping online isn't going anywhere.

#### Conclusions:

The level of digital marketing in terms of quality, pricing, and product variety the results of descriptive

level are high. The overall descriptive level of this indicators is high. It implies that, the customers are satisfied with the pricing, quality, and product variety of the online sellers. The level of economic stability when it comes to price stability and full employment are all high. It implies that, online selling can affect the economic stability. The digital marketing and economic stability have a distinction. Based on the conclusions, the following Online Sellers who have a big business already may conduct a seminar regarding the importance of digital marketing in online selling and to promote positive engagement among online sellers in online business. To the online sellers, you may attend seminars and trainings that your place or barangay conducted regarding to online selling to help yourself boost your confidence and gain a positive mindset.

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## Prevalence of Cestode parasites in domestic fowl from Sangamner region of Maharashtra

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### Abstract :

Present investigation deals with the prevalence of cestode parasites in domestic fowl from Sangamner region of Maharashtra. Given experimental work was conducted of the period from June 2020 to May-2021. About 105 infected intestinal samples from host were collected from different villages of Sangamner region of each month of year. After that parasites examination and maintain the record of infected host and cestode parasites count and calculate prevalence, mean intensity and abundance, which is on an average prevalence rate of infection was (45.45%), mean intensity is (3.66) and abundance is (1.63) for given result conclude that requirement of proper development of hygienic practice and medication to control the parasite infection and decrease the rate of the infection to better poultry management.

**Key Words:** Prevalence, Cestode parasites, Domestic fowl, mean intensity.

### Introduction :

Parasitism is an association in which the parasite is metabolically dependent to a greater or lesser extent to the host. Gastro-intestinal parasites are however the most prevalent and most devastating parasites affecting chicken productivity (Swaton *et al.*, 2003). These fowls are with high nutritional value. Sometimes these are domesticated traditionally under free-range management systems in villages where little or no supplementary foodstuff is provided and the poultry farmers are unaware of any veterinary care, which finally leads to the parasitic infections to the chicken (Gary and Richard 2012). Poultry birds can carry a large number of viral, bacterial, fungal, protozoan and helminthes infection the hosts of infected vectors. Gastro-intestinal parasitic helminthes have a serious impact on poultry health, productivity, quality and quantity of meat and egg. Helminth parasites of poultry birds are commonly divided into three main groups: Cestode, Nematode and Trematode. Cestode parasites are the one of the class of helminthes parasites, domestic fowl are infected with helminth infection, which are responsible many diseases to human beings. Population dynamics of the parasites, resulting in dramatic changes in the prevalence and intensity of helminthes infections (Magwisha *et.al*, 2002)

Poultry birds are reared by rural farmers in their backyard without following any scientific feeding practices and medication, where they are more prone to parasitic infection as compared to birds reared on intensive farming though their produce viz. eggs and

meat fetches a much higher price than that from commercial poultry. Parasitism inflict heavy economic losses to poultry industry particularly of free range chicken in rural house hold in the form of anorexia, retarded growth, reduced weight gain, decreased egg production, diarrhoea, intestinal obstruction, morbidity and mortality (Anwar *et. al* 1991; Shah *et. al* 1999; Dube *et. al* 2010; Katoch *et. al* 2012). Parasitism has resulted 17 % reduction of weight gain in growing chicken and 12.5 % reduction in egg production in laying hens in Bangladesh (Bhowmik *et. al* 1982).

Many workers studies on prevalence of cestode parasites in *Gallus gallus domesticus*. Observed a gastrointestinal helminthes infection of domestics fowl in discharge western Cameroon. These factors may explain the wide range and distribution of cestode and nematode species in poultry birds, especially during the tropical rainy season (Dube *et.al*, 2010). Cestode Parasites of Free-Range Chickens (*Gallus gallus domesticus*) in the North-Eastern of Algeria (Medjouel Ilyes and Benakhla Ahmed, 2013), Prevalence of cestode parasites of *Gallus gallus domesticus* from solapur district, Maharashtra, India (Dama L.B. *et.al*, 2012), Prevalence of helminthic infection in *capra hircus* from Ahmednagar district (M.S.) (Tambe D.S. *et.al*, 2011), Survey of endoparasite *Cotugnia* Sp. (Platyhelminths) in *Gallus domesticus* from Pune district, (M.S), India.(Kalim Shaikh, *et.al*, 2018).

The present study is a follow up the importance of these parasites in poultry, this study was designed with following aims to determine the prevalence, mean

intensity, abundance of different gastrointestinal cestode present in domestic fowl in the Sangamner region.

**Materials and Methods :**

The present work was carried out in the Sangamner region Total 230 intestine were collected from slaughter house of different villages of Sangamner tehsil, out of 230 intestine 105 intestine are infected with helminthes parasites selection of intestines of different age groups and both sexes during the period from June-2020 to May-2021 In laboratory working The gastrointestinal tract of host was opened in a longitudinal section with forceps, cestode parasites were removed from the dissected gastrointestinal tract and it fixed with hot 4% formalin, all cestode were counted before being fixed and preparation of permanent slides by staining and

mounting then parasitological examinations were performed by standard methods, identify the cestode as per key (Soulsby 1982). For statistical analysis the formula was used for to calculate prevalence, mean intensity and abundance. (Bari S.M.et. al, 2015).

**Prevalence (%)**

$$= \frac{\text{Number of a host species infected}}{\text{Number of hosts examines}} \times 100$$

**Mean Intensity**

$$= \frac{\text{Number of parasites collected}}{\text{Number of infected host}} \times 100$$

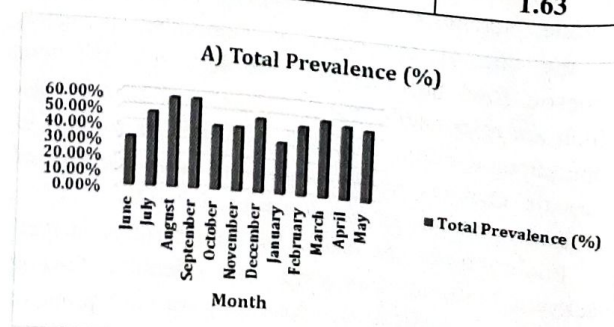
$$\text{Abundance} = \frac{\text{Number of parasites collected}}{\text{Number of hosts examines}}$$

**Results and Discussion :**

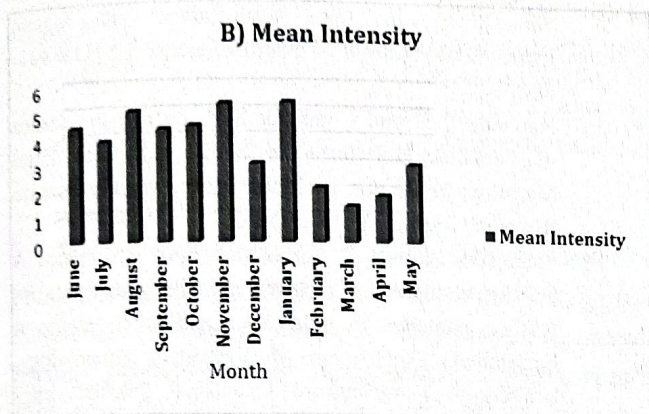
**Table-1 :** Showing prevalence, mean intensity and abundance of the cestode parasites from the host domestic fowl in the year June 2020 to May-2021.

Month	No. of host Intestine Examine	No. of host Intestine infected	No. of Cestode parasites Recorded	Total Prevalence (%)	Mean Intensity	Abundance
June	16	5	22	31.25%	4.4	1.37
July	19	9	35	47.36%	3.88	1.84
August	21	12	52	57.14%	4.3	2.47
September	22	9	40	40.90%	4.44	1.81
October	17	7	37	41.17%	5.28	2.17
November	21	10	30	47.61%	3	1.42
December	18	6	32	33.33%	5.33	1.77
January	20	9	19	45.00%	2.11	0.95
February	24	12	17	50.00%	1.41	0.7
March	23	11	20	47.82%	1.81	0.86
April	15	7	21	46.66%	3	1.4
May	230	105	365	45.45%	3.66	1.63

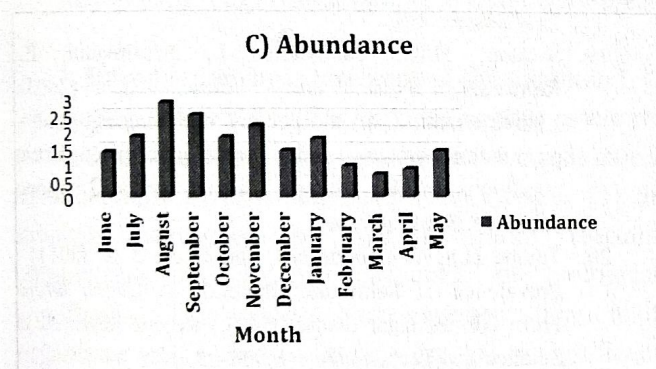
**Graph-1 :** Showing prevalence of the cestode parasites from the host domestic fowl in the year June 2020 to May-2021.



**Graph-2 :** Showing mean intensity of the cestode parasites from the host domestic fowl in the year June 2020 to May-2021.



**Graph-3 :** Showing abundance of the cestode parasites from the host domestic fowl in the year June 2020 to May-2021.



In the year 2020-2021 total average prevalence rate of infection was (45.45 %), mean intensity is (3.66) and abundance is (1.63) as 105 out of 230 collected intestines of domestic fowl and about 365 numbers of cestode parasites were recorded (Table no.-1). The maximum prevalence rate of infection found in the months of August to September is (57.14%), mean intensity is (4.65) and abundance is (2.65) this incidence of parasitic infection occurs due to rainy season because of easy dispersal of larvae in pasture resulting in increased contact between the host and the parasites. While minimum infection prevalence rate was found in the months of June on an average (31.25%), mean intensity is (4.4) and abundance is (1.37) and respectively followed in the months of February to May in average prevalence (47.37 %) mean intensity is (2.08) and abundance is (0.97). The most heavily infected segment of the intestine was the lower small intestine. The cestode infection is a common problem in the study area.

The current results are linked with many prior finds which are discoursed here (Shahin A.M. *et.al*, 2011) also reported the prevalence of cestode (83.00%), (Hamad H, Al-Jamaien 2013) and (Eshetu *et.al*, 2001) in Ethiopia they reported higher prevalence of *Raillietina* sp. (22.4%) and (25.84%) respectively as relate to the present study. Such as beetles, cockroaches, earthworm, flies and grass hoppers in poorly manage stocks (Abdu, 1987). The present study related with the report of (Ashenafi and Eshetu, 2004) who documented prevalence of cestode of (86.32%), whereas (Heyradin Hussen *et. al*, 2012) also reported the prevalence of cestode (83.00%). The prevalence of *R. cesticillus* was (22.5%) which is consistent with the prevalence of the same parasite reported the infected birds lose weight, increases appetite and ruffled plumage. If cestode of birds continue to spread, rapid detection will be an important public health issue. The most frequently and sensitive target organ from birds for detecting the infection of cestode. (Naphade S.T. and Chaudhar K.V., 2013)

**Conclusion :**

Cestode infections are the major issue of economic loss in poultry industry and its management. The present work carried out revealed high cestode infections having the highest prevalence. This may however increase due to environmental abundance of specific hosts. Therefore development of hygienic practice and medication to control the parasite infection and reduce the rate as well as the load of the infection in poultry farm is suggested.

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प्रा. एस. ए. अनाप

इतिहास विभाग प्रमुख

कला, वाणिज्य, विज्ञान व संगणकशास्त्र महाविद्यालय, आश्री ख-

### प्रास्ताविक :

प्राचीन काळापासून मानवी जीवनात वेगवेगळे स्थित्यंतरे झालेत. प्रत्येक बदलाचा मानवाने स्वीकार केला. कधी प्रसंगानुसार तर कधी परिस्थितीनुसार. बदल प्रत्येक ठिकाणी अपेक्षित असतो आणि हे बदल घडत असताना आज आपण या काळापर्यंत येऊन पोहोचलो जेथे इंटरनेटशिवाय विश्वाची कल्पना करणे खूप कठीण आहे. आणि इंटरनेटच्या सुरुवातीपासून, मार्केटिंग, इंटरकनेक्शन आणि कम्युनिकेशन यासारख्या विविध गोष्टी सुलभ झाल्या आहेत आणि आता खूप सोप्या झाल्या आहेत. जर इंटरनेट एका दिवसासाठी थांबले तर जग खूप संघर्ष करेल.

आजकाल, इंटरनेट आणि डिजिटल मार्केटिंगच्या फायद्यांमुळे, कंपन्या आता पारंपारिक आणि जुन्या मार्गावर लक्ष केंद्रित करण्याऐवजी संबंधित आणि प्रभावी डिजिटल मार्केटिंग धोरण विकसित करून ग्राहक मिळविण्यावर आणि टिकवून ठेवण्यावर लक्ष केंद्रित करत आहेत. विपणन विभाग त्यांच्या प्रतिस्पर्धीपासून वेगळे राहण्यासाठी आणि सर्व तांत्रिक बदल आणि प्रगतीशी जुळवून घेण्यासाठी पुरेसे कठोर परिश्रम करत आहेत.

मार्केटिंग विभाग आणि डिजिटल मार्केटर्स गेल्या तीन दशकांपासून तांत्रिक प्रगतीच्या खेळात टिकून आहेत. विक्रेते आणि विक्रेते आता समजतात आणि स्वीकारतात की इंटरनेटचे आगमन त्यांच्या स्वतःच्या साधक आणि बाधकांसह आले. यामुळे वस्तू आणि सेवांचे मार्केटिंग करणे आणि ग्राहकांचे समाधान आणि ग्राहक समर्थन प्रदान करणे सोपे झाले. दुसरीकडे, नव्याने स्थापन झालेल्या व्यवसायांना टिकून राहण्यासाठी स्पर्धात्मक बाजारपेठही निर्माण केली.

आम्ही येथे फक्त विक्रेते किंवा डिजिटल मार्केटर्सबद्दल बोलत आहोत असे नाही. दैनंदिन आधारावर, मोठ्या संख्येने लोक (४.५ अब्ज पेक्षा जास्त) देखील डिजिटल सामग्री आणि सामग्री वापरतात. डिजिटल क्षेत्र वर्षानुवर्षे प्रगती करत असताना, अशी अपेक्षा आहे की पारंपारिक मार्केटिंग प्लॅटफॉर्म लवकरच टप्प्याटप्प्याने बंद होतील आणि सर्वकाही लवकरच डिजिटल होणार आहे. शिवाय, पारंपारिक मार्केटिंगच्या तुलनेत डिजिटल जाहिराती आणि विपणन खूपच कमी खर्चिक आहे.

डिजिटल मार्केटिंगचा इतिहास आणि उत्क्रांती जाणून घेण्यापूर्वी डिजिटल मार्केटिंग आणि त्याचे फायदे याबद्दल अधिक समजून घेऊ.

### डिजिटल मार्केटिंग म्हणजे काय ?

डिजिटल मार्केटिंग हा शब्द डिजिटल मार्केटमध्ये मोठ्या आणि अधिक लक्षित प्रेक्षकांपर्यंत पोहोचण्यासाठी डिजिटल चॅनेलद्वारे जाहिराती उत्पादने आणि सेवांच्या सरावाला सूचित करतो. डिजिटल मार्केटमध्ये तुमच्या व्यवसायाचा प्रचार करण्यासाठी सर्च इंजिन, सोशल मीडिया, वेबसाइट्स, मोबाइल डिव्हाइस आणि इतर डिजिटल चॅनेल वापरणे नेहमीच चांगली कल्पना असते.

कंपन्या वृत्तपत्रे, दूरचित्रवाणी आणि रेडिओद्वारे त्यांच्या उत्पादनांची विक्री करत असत. हे पर्याय, तथापि, अजूनही प्रवेशयोग्य आहेत आणि आज अनेक किरकोळ विक्रेते आणि व्यवसाय मालक वापरतात. व्यवसाय त्यांच्या ग्राहकांशी कसे जोडले जातात यातील बदल इंटरनेटच्या आगमनामुळे झाले आहेत. तथापि, येथेच डिजिटल मार्केटिंग लागू होते. या प्रकारच्या मार्केटिंगचे उदाहरण वेबसाइट्स, सोशल मीडिया, शोध इंजिन, ॲप्स आणि इतर अनेकांद्वारे दिले जाते.

१. **विविधता प्रदान करते :** इंटरनेट ही नेटवर्क उपकरणांची एक जागतिक परिसंस्था आहे ज्यामध्ये स्मार्टफोन, टॅब्लेट आणि विविध प्रकारचे संप्रेषण तंत्रज्ञान समाविष्ट आहे. इंटरनेटवर इतरांशी संवाद साधण्यासाठी व्यक्ती त्यांचा वापर करू शकतात. दिवसेंदिवस तंत्रज्ञानात बदल आणि प्रगती होत आहे. बदल स्वीकारण्यात कंपन्यांना मदत करण्यात डिजिटल मार्केटिंग महत्त्वपूर्ण भूमिका बजावते. हे प्रवेश विंडो तयार करते ज्याद्वारे प्रेक्षकांपर्यंत पोहोचता येते.
२. **शेअर करणे सोपे :** अनेक डिजिटल मार्केटिंग प्लॅटफॉर्म सामायिकरण क्षमतांवर भर देतात, ज्यामुळे साहित्य आणि लेख मोठ्या संख्येने लोकांना पाठवता येतात. इंटरनेटच्या आगमनानंतर, अनेक व्यवसायांनी डिजिटल चॅनेलवर जाहिराती आणि प्रचार करणे सुरू केले आहे, त्याच वेळी, बरेच ग्राहक आणि खरेदीदार दुकानात जाण्याऐवजी ऑनलाइन खरेदी करणे पसंत करतात. हे गुणक प्रभाव तयार करण्यात मदत करते आणि व्यवहार परिणाम आणि रूपांतरणांना लक्षणीयरीत्या चालना देऊ शकते.
३. **रूपांतरण दर वाढतो :** अशा वैयक्तिकरण आणि सानुकूलनाच्या परिणामी लोक कंपनीच्या उत्पादन/सेवांना अधिक ग्रहणक्षम असतात. डिजिटल मार्केटिंग संपूर्ण जगात पोहोचले आहे, विविध देशांतील लोकांपर्यंत आणि त्यांच्या स्वतःच्या आवडी आणि गरजांनुसार प्रवेश करत आहे. हे भरपूर लीड्स व्युत्पन्न

- करते आणि त्यांना चांगल्या प्रकारे रूपांतरित करते.
४. **सहज मोजता येण्याजोगे** : कारण डिजिटल मार्केटिंग रिअल-टाइम परिणाम उत्पन्न करते, त्याचा परिणाम उच्च-अंत ब्रँड प्रसिद्धीमध्ये होतो. डिजिटल मार्केटिंग डिजिटल मार्केटर्स आणि ब्रँड मालकांना त्यांच्या विक्री आणि प्रतिबद्धता दरांबद्दल अधिक समजून घेण्यात मदत करते. डिजिटल मार्केटिंगसह, अधिक विक्री व्युत्पन्न होते आणि संपूर्णपणे संस्थेची आर्थिक स्थिती सुधारते.
५. **उच्च प्रतिबद्धता दर** : डिजिटल मार्केटिंगमध्ये Google Analytics आणि Google Planner सारखी विश्लेषणात्मक साधने समाविष्ट आहेत, जी जाहिरात मोहिमेवर माहिती देतात. कोणत्याही समस्येचे जागेवरच निराकरण केले जाऊ शकते आणि सुधारणा त्वरीत अंमलात आणल्या जाऊ शकतात. एखादी व्यक्ती मोहिमेतील इनबाउंड रहदारी, बाऊन्स रेट, रूपांतरण दर, इंप्रेशन आणि बरेच काही ट्रॅक करू शकते.
६. **मोठा प्रेक्षक** : आजच्या काळात त्याच्या वाढलेल्या जागतिक उपस्थितीमुळे, डिजिटल मार्केटिंग हे जागतिक गाव म्हणून कार्यरत आहे. अल्पावधीत, तुम्ही लाखो लोकांपर्यंत पोहोचू शकता. पारंपारिक विपणन तुम्हाला एका वेळी विशिष्ट स्थान, शहर किंवा राष्ट्र लक्षित करण्याची परवानगी देते, परंतु डिजिटल मार्केटिंगमध्ये ही मर्यादा नाही.
७. **ब्रँडची दृश्यमानता आणि वाढ** : ब्रँड इमेज तयार करताना, डिजिटल मार्केटिंग विरुद्ध पारंपारिक मार्केटिंगची आकडेवारी वेगवेगळी असते. पारंपारिक विपणन ब्रँडचा प्रचार करण्याच्या सोप्या पद्धतींवर लक्ष केंद्रित करते जे प्रभावी असू शकतात किंवा नसू शकतात. एसईओ, पीपीसी आणि एसएमएम सारख्या डिजिटल मार्केटिंग धोरणे, दुसरीकडे, परताव्याची हमी देतात आणि कंपनीला घरगुती नावात रूपांतरित करण्याची क्षमता असते.
८. **कमी खर्च** : वर्तमानपत्रे, हॉर्डिंग आणि दूरदर्शन जाहिराती यासारख्या पारंपारिक विपणन पद्धती अत्यंत महाग आणि वेळखाऊ आहेत. अशा किंमती कमी केल्या जातात आणि डिजिटल मार्केटिंगमुळे यापुढे जास्त नसतात. परिणामी, मार्केटिंग आणि जाहिरातींसाठी लाखो खर्च करणे डिजिटल मार्केटिंगमध्ये कोणतीही समस्या नाही. डिजिटल मार्केटिंगद्वारे, कमीतकमी खर्चासह जास्तीत जास्त व्याज मिळू शकते.

#### डिजिटल मार्केटिंगचा इतिहास आणि उत्क्रांती :

डिजिटल मार्केटिंग हा वाक्प्रचार १९९० मध्ये तयार करण्यात आला आणि पहिल्यांदा वापरला गेला. त्या काळात, वेब १.० प्लॅटफॉर्म तयार केला गेला, ज्याने वापरकर्त्यांना आवश्यक माहिती शोधण्यात

मदत केली. मात्र, ते हे ज्ञान इंटरनेटवर पोहोचवू शकले नाहीत. या काळात, विक्रेते आणि तज्ञ डिजिटल मार्केटिंगच्या फायद्यांकडे दुर्लक्ष करतात. त्यांचे तंत्र यशस्वी होईल की नाही याची त्यांना कल्पना नव्हती कारण इंटरनेटचा अजून व्यापक वापर झाला नव्हता.

डिजिटल मार्केटिंग साठी अनेक नवीन तंत्रज्ञान विकसित केले गेले आणि नवीन ध्येयासह बाजारात आणले गेले. याहू सारखी कंपनी एका वर्षातच याने ०१ दशलक्ष हिट्स मिळवले. धरहे ने डिजिटल मार्केटिंगची संकल्पना बदलली आहे आणि व्यवसायांनी त्यांची शोध इंजिन क्रमवारी सुधारण्यासाठी त्यांच्या वेबसाइट्स ऑप्टिमाइझ करण्याचा प्रयत्न केला आहे. HotBot, Look Smart आणि Alexa सारखी अधिक शोध इंजिने आणि साधने १९९६ मध्ये सादर करण्यात आली. Sixdegrees.com ही १९९७ मध्ये स्थापन झालेली पहिली सोशल नेटवर्किंग साइट होती. १९९८ हे वर्ष डिजिटल मार्केटिंगसाठी एक महत्त्वाचा क्षण होता कारण ते Google ची निर्मिती करण्यात आले होते. या व्यतिरिक्त, मायक्रोसॉफ्टने एमएसएन सादर केले आणि याहूने याहू ऑनलाइन शोध चालू केला.

वर्डप्रेस २००३ मध्ये रिलीज झाला होता, तर मायस्पेस पुढच्या वर्षी लॉन्च झाला होता. जीमेलची स्थापना २००४ मध्ये झाली. फेसबुक आणि गुगल दोन्ही एकाच वर्षी सार्वजनिक झाले. त्यानंतर २००५ मध्ये यूट्यूबची स्थापना झाली. आणखी एक उल्लेखनीय वर्ष २००६ होते, जेव्हा शोध इंजिन रहदारी एकाच महिन्यात ६.४ अब्जने वाढल्याचा दावा करण्यात आला होता. मायक्रोसॉफ्टने यावर्षी एमएस लाइव्ह शोध सुरू केला आणि त्याच वेळी ट्विटरची स्थापना झाली. त्याचबरोबर, अॅमेझॉनचा ई-कॉमर्स महसूल १० अब्ज डॉलर्सच्या पुढे गेला आहे. Tumblr ची स्थापना २००७ मध्ये झाली. याशिवाय, Hulu ही ऑनलाइन स्ट्रीमिंग सेवा या वर्षी तयार करण्यात आली. त्याच वर्षी अॅपलने आयफोन रिलीज केला. २००८ मध्ये, Spotify आणि Groupon हे दोन्ही लॉन्च केले गेले. रिअल-टाइम शोध इंजिन परिणाम प्रदान करण्यासाठी Google झटपट २००९ मध्ये सादर केले गेले. अँडवर्ड्स, ज्या तीन-ओव्हीच्या जाहिराती आहेत ज्या शोध इंजिन परिणामांच्या शीर्षस्थानी किंवा उजवीकडे दिसतात आणि AdSense, प्रति-क्लिक-किंमत जाहिरात कार्यक्रम, प्रथम Google ने विकसित केले होते. कालांतराने, Google ने क्लायंटच्या स्वारस्यांवर आधारित जाहिरातींना लक्ष्य करण्यास सुरुवात केली आणि परिणामी, ते डिजिटल व्यवसाय क्षेत्रातील एक प्रमुख सहभागी बनले.

Whatsapp आणि Google Buzz हे दोन्ही २०१० मध्ये रिलीज झाले. Google+ आणि Google Panda २०११ मध्ये सादर करण्यात आले. लोकांनी आधीच विविध माध्यमांसाठी वेळ घालण्यास सुरुवात केली आहे आणि त्यांच्या दर्शकांची संख्या टेलिव्हिजनपेक्षा जास्त झाली आहे. २०१२ हे वर्ष सोशल मीडियाचे वर्ष म्हणून स्मरणात राहिल. कॉर्पोरेशनच्या सोशल मीडिया बजेटमध्ये ६४ % वाढ झाली आहे आणि Google नॉलेज ग्राफची स्थापना करण्यात आली आहे. मायस्पेस आणि फेसबुक हे सर्वात जास्त वापरले जाणारे सोशल नेटवर्किंग प्लॅटफॉर्म आहेत. कंपन्यांना माहित होते की या साइट्स त्यांना त्यांचे उद्योग इंटरनेटवर वाढवण्यास मदत करतील,

म्हणून, ते वेगवेगळ्या सोशल मीडिया प्लॅटफॉर्मवर त्यांची उत्पादने आणि ब्रँडची जाहिरात करण्याचा प्रयत्न करत होते. त्यांनी त्यांच्या उद्योगांना प्रोत्साहन देण्यासाठी सोशल मीडियाचा वापर करण्याचाही प्रयत्न केला आहे. Tumblr २०१३ मध्ये Yahoo ने खरेदी केला होता. २०१४ मध्ये, मोबाईल आणि स्मार्टफोन वापरकर्त्यांची संख्या प्रथमच PC वापरकर्त्यांपेक्षा जास्त होती. फेसबुक मेसेंजर ॲप, तसेच लिंकडइन आणि iWatch लक्षित जाहिराती प्रसिद्ध करण्यात आल्या. फेसबुकने या वर्षाच्या सुरुवातीला व्हॉट्सॲप विकत घेतले. स्नॅपचॅटने २०१५ मध्ये त्याचे डिस्कव्हर वैशिष्ट्य जारी केले. या वर्षी अनेक नवीन तंत्रज्ञान जसे की विस्तार, घालण्यायोग्य तंत्रज्ञान आणि सामग्री विपणन देखील तयार केले गेले.

डिजिटल मार्केटिंगच्या जगात आणखी एक महत्त्वाचा टप्पा होता कुकी. प्रथम कुकी वापरकर्त्यांच्या प्राधान्यांचा मागोवा ठेवण्यासाठी तयार केली गेली. कुकीचा उद्देश कालांतराने विकसित झाला आहे, आणि आजच्या कुकीज जाहिरातदारांना शब्दशः वापरकर्ता डेटा गोळा करण्याचे अनेक मार्ग प्रदान करण्यासाठी कोड केल्या आहेत. २०१७ मध्ये Facebook, YouTube, Instagram, Twitter, आणि इतर लोकप्रिय सोशल नेटवर्किंग साइट्समध्ये Facebook, YouTube, Instagram, Twitter आणि Reddit यांचा समावेश आहे. फेसबुकचे २.०१ अब्ज सक्रिय वापरकर्ते आहेत.

#### डिजिटल मार्केटिंगची उत्क्रांती :

महिन्यातून किमान एकदा ८५.४ टक्के इंटरनेट वापरकर्ते ऑनलाइन माहिती शोधतात. सरासरी, Google प्रत्येक सेकंदाला सुमारे ४०,००० शोध चौकशी हाताळते. दररोज, ते जवळपास ३.५ अब्ज शोध आहेत. जगभरातील सर्च इंजिन मार्केटच्या ९२ टक्क्यांहून थोडे अधिक Google नियंत्रित करते. Bing (२.७५ टक्के) आणि Baidu (२.७५ टक्के) ही पुढील दोन सर्वाधिक लोकप्रिय जगभरातील सर्च इंजिन (१.९ टक्के) आहेत. सर्व Google शोधांपैकी ६० टक्क्यांहून अधिक मोबाइल डिव्हाइसेसचा वाटा आहे.

९२.३ टक्के स्मार्टफोन वापरकर्ते ऑनलाइन शोध घेण्यासाठी त्यांची उपकरणे वापरतात. संशोधनानुसार, युनायटेड स्टेट्समध्ये प्रायोजित शोध इंजिन आणि क्लिक्सपैकी ७० टक्के मोबाइल डिव्हाइसेसचा वाटा आहे. ७० टक्के स्मार्टफोन मालक दुकानात खरेदी करण्यापूर्वी अधिक संशोधन करण्यासाठी त्यांचे उपकरणे वापरतात. Amazon हे ४९ टक्के उत्पादन शोधांसाठी प्रारंभिक बिंदू आहे, तर Google हे ३६ टक्के शोधांसाठी प्रारंभिक बिंदू आहे. Google च्या डेटानुसार, Google शॉपिंग जाहिराती सर्व किरकोळ शोध जाहिरात खर्चाच्या ७६ टक्के आणि सर्व क्लिकच्या ८५.३ टक्के आहेत. जर ते ऑनलाइन इन्व्हेंटरी तपासू शकतील, तर इंटरनेट ग्राहक ८० टक्के अधिक चिट-आणि-मोर्टार व्यवसायाला भेट देण्याकडे झुकतात. एका आठवड्याच्या आत, किरकोळ विक्रेता शोधण्यासाठी Google नकाशे वापरणारे ८८ टक्के मोबाइल वापरकर्ते लिंक केलेल्या स्टोअरला भेट देतात - आणि ७६ टक्के एका आठवड्यात भेट देतात. ८६ टक्के B2C विपणकांच्या मते, सामग्री विपणन हा त्यांच्या धोरणाचा महत्त्वाचा भाग आहे. ६३ टक्के कंपन्यांमध्ये सामग्री धोरण दस्तऐवजीकरण

केलेले नाही. सामग्री विपणन, ७२ टक्के विपणकांच्या मते, प्रतिबद्धता आणि आघाडी वाढवते. ७० टक्के कंपन्यांच्या मते, शीर्ष पाच सामग्री चॅनेलपैकी एक ब्लॉग सामग्री आहे. विचार नेतृत्व ब्लॉग नोंदी ४१ टक्के पोषण प्रयत्नांमध्ये दिसून येतात. महिन्यातून किमान एकदा, ८२.८ टक्के इंटरनेट वापरकर्ते डिजिटल व्हिडिओ पाहतात. पोषण कार्यक्रमांमध्ये, ३१ टक्के मार्केटर्स व्हिडिओ मेसेजिंगचा वापर करतात. तज्ञांचा अंदाज आहे की २०२२ पर्यंत, ०१ दशलक्षाहून अधिक व्हिडिओ इंटरनेटवर पोस्ट केले जातील. महिन्यातून किमान एकदा, ७१.१ टक्के इंटरनेट वापरकर्ते डिजिटल ऑडिओ सामग्री ऐकतात. ४८ टक्के विपणन विपणनामध्ये, वेबिनार नियुक्त केले जातात. महिन्यातून किमान एकदा, सर्व इंटरनेट वापरकर्त्यांपैकी ९०.९ टक्के ई-मेल पाठवतात. Facebook आणि Twitter च्या तुलनेत, ईमेलचा क्लिक-थ्रू दर ५० ते १०० पट जास्त असतो. २२.८६ टक्के ओपन रेट आणि ३.७१ टक्के क्लिक-थ्रू रेटसह ईमेल ८५ टक्के लोकांपर्यंत पोहोचतात. २.७ अब्ज मासिक सक्रिय वापरकर्ते, फेसबुक सर्वात लोकप्रिय सोशल मीडिया प्लॅटफॉर्म आहे.

TikTok चे वापरकर्ते इतर सोशल मीडिया साइट्सच्या वापरकर्त्यांपेक्षा १५ टक्के जास्त वारंवार गुंततात. २०२२ मध्ये, TikTok चे १.५ अब्ज वापरकर्ते असण्याचा अंदाज आहे. सोशल मीडियाचा वापर ५० टक्के विपणन विपणनामध्ये केला जातो. फेसबुकचा वापर ९७ टक्के व्यवसायांद्वारे सामग्री विपणनासाठी केला जातो. ७५ टक्के B2B खरेदीदार आणि ८४ टक्के C-suite एक्झिक्युटिव्हचा विश्वास आहे की सोशल मीडिया त्यांच्या खरेदी निर्णयांवर प्रभाव टाकतो. २०२१ मध्ये, ३.६ अब्ज पेक्षा जास्त व्यक्तींनी जागतिक स्तरावर सोशल मीडियाचा वापर केला, २०२५ पर्यंत हा आकडा सुमारे ४.४१ अब्ज पर्यंत वाढण्याची अपेक्षा आहे.

#### निष्कर्ष :

वर दिलेल्या आकडेवारीचा विचार करता, डिजिटल मार्केटिंग मोठ्या प्रमाणावर वाढले आहे आणि वर्षानुवर्षे अधिकाधिक वाढत राहील. आम्हाला आशा आहे की डिजिटल मार्केटिंगचा इतिहास आणि उत्क्रांती यावरील वरील सर्वसमावेशक लेखाचा तुम्हाला फायदा झाला असेल. तुम्हाला डिजिटल मार्केटिंग शिकण्यात स्वारस्य आहे का? बाजारात, तज्ञांद्वारे ऑफर केलेले बरेच डिजिटल मार्केटिंग कोर्स आहेत.

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## Impact of Covid-19 on Social Media Marketing

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### Abstract:

While the global pandemic of covid-19 has affected various sectors, in digital marketing, Advertisements, online web, education etc. problem create. Social Media marketing is a successful technology for buying and selling products online. Performing a task using the resource of the internet or electronic device is termed as digital marketing. Business is upgrading the buying and selling pattern, through various Social media platforms. The aim of the study is to examine the influence of social media marketing in post COVID-19. Online marketing is promoted through various social media platforms like Gmail, Facebook, Instagram, YouTube, Twitter, Blogs and What'sApp to create awareness and increase the sale especially during post COVID-19. The primary data have been collected from 207 online users through survey method by using convenience sampling. The research findings indicate that Social media platforms are the one of the effective tools to increase the sale. The outbreak of COVID-19 social distancing and risk inheriting visiting physical store are the main cause to increase online sale in the digital era.

**Keywords:-**Covid-19, Social Media, Online Marketing,

### 1. Introduction:

Online marketing is a process that empowers individuals to promote their websites, products, or services through online social channels and to communication with and tap into a much larger community that may not have been available via traditional advertising channels.

Early forms of the internet have been around since the 1940s, but it wasn't until 1997 that the first official social media site appeared. Marketers' migrated to social media marketing around the time Facebook widened its.

Social Media Marketing makes use of social media sites to raise visibility on the Internet and to promote products and services. Social media sites are useful for building social (and business) networks, and for exchanging ideas and knowledge.

Social media networking is part of a trend known as Web 2.0, which refers to changes in the way users and software developers use the Web. It is a more collaborative use of the Web that enhances creativity and knowledge exchange. It is a more interactive and user-driven way to help users participate and collaborate over the Web through open applications and services. It is critical, therefore, open applications and services. It is critical, therefore, that content is accessible to the user; the user should be able to create, share, remix, and repurpose content. Technologies that are accessible and affordable like Ajax (a method of building interactive applications for the Web that processes user requests immediately) and RSS (Really

Simple Syndication) support Web 2.0 principles such as "user empowerment." Social Media Marketing uses podcasts, wikis, blogs, folksonomies, online videos, photo sharing, news sharing, folksonomies, online videos, photo sharing, news sharing, message boards, and posts on social networking sites to reach a large or targeted audience.

### 2. Objectives:

1. Which shows how commercially successful your product is.
2. To identify most frequently used social media platforms in post COVID-19
3. Ultimately all these objectives aim at customer satisfaction and emphasize user experience. Therefore, we can easily derive that the most important objective of social media is to aim at Better Customer Experience. And to better customer experience, social media helps to capture customer feedback and opinions.
4. To analysis the impact of Covid-19 on digital marketing
5. To analysis the future role of digital marketing post covid-19

### 3. Methodology:

In COVID-19, the digital marketing method was such that the human society should stay away from corona and the human being should remain secure. digital marketing company Also took care of customers

- B. Design tools** :-Another key part of digital marketing is design and this is especially common when it comes to creating ads and content like social media posts and blog posts. Because digital marketing is such a design heavy field, doing it effectively wouldn't be possible without design tools like Canva and Photoshop, programs that allow those without extensive graphic design skills to add dynamic images to their content.
- C. Analytics tools** :-Another set of helpful tools for digital marketers are analytics tools. These include everything from Google Analytics (designed to track stats for web traffic to a particular site) to social media analytics tools like Facebook Insights and Twitter Analytics which provide metrics related to engagement and help marketers optimize their campaigns. For measuring stats on the backend of a site (particularly related to conversions, sales and user demographics), there are also tools like Periscope that track user data, site searches and conversion metrics.
- D. Content marketing tools** :-For marketers who are more focused on content marketing, tools like CoSchedule and Hubspot are a big help when it comes to content creation and duration. They can help marketers identify content opportunities and craft engaging blog and social media posts that will resonate with their audience. And since Buffer also offers the ability to see what fans are talking about on social media, that content is almost guaranteed to be impactful and to generate attention for a specific event or news story.
- E. E-mail marketing tools** :-The final set of tools in a digital marketer's toolbox are email marketing, marketing tools. These help marketers create email

campaigns that amplify their content and encourage their users to become more engaged with their brand - taking additional steps like signing up for events and buying products. Common email marketing tools include email marketing platforms like Mail Chimp and Inerrable which allow marketers to build email lists and automate their email campaigns. These platforms also provide analytics for every email campaign, making testing and optimization quick and easy.

Working in digital marketing involves a unique blend of passion, strategy and media savvy. In order to maximize the impact of your various campaigns, it helps to have the best tools at your disposal

#### 7. Conclusion:

The research and practice of digital marketing is improving with the advancement of technology. The advancement in technology fosters multifaceted opportunities and at the same time poses unprecedented challenges for the marketers. As the COVID-19 eruption is new to the entire globe. The research study before and after COVID- 19 is increasing and became most important topic for the research discussion. This study is useful can be a powerful tool for any organization. It can increase your visibility, enhance relationships, establish two-way communication with customers, provide a forum for feedback, and improve the awareness and reputation of the organization.

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## डिजिटल मार्केटिंग : फायदे आणि तोटे

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### प्रस्तावना :

डिजिटल मार्केटिंग हा मार्केटिंगचा एक असा प्रकार आहे ज्याच्यामध्ये सर्व डिजिटल वस्तूंचा वापर करून जसे इंटरनेट सोजियल मीडिया व्हाट्सअप इत्यादींचा वापर करून आपले प्रॉडक्ट किंवा सेवा वांचा प्रचार आणि प्रसार डिजिटल माध्यमांवर केला जातो. सर्वेक्षणानुसार एखाद्या ग्राहकाला एखादी वस्तू खरेदी करावची असेल तेव्हा ४८% ग्राहक google वर जाऊन त्या वस्तूचा तपास करतात, तर ते ३०% त्या कंपनीच्या वेबसाईटला भेट देतात तर २६ टक्के ग्राहक मोबाईल ॲप्लिकेशनवर त्या वस्तूची चौकशी करतात. गेल्या काही वर्षांपासून डिजिटल मार्केटिंग हे मार्केटिंग मध्ये ट्रेंडिंग विषयांपैकी एक आहे आणि गेल्या काही वर्षांत मार्केटिंगसाठी हे प्रमुख माध्यम असणार आहे. प्रत्येक व्यावसायिकाने डिजिटल मार्केटिंग स्वीकारणे, डिजिटल मार्केटिंग मधील कुशल लोकांना नोकरीच ठेवणे आवश्यक आहे. अर्थ आणि इतर विभाग आणि उद्योग धंद्यामध्ये काम करणारे अनेक नोकरदार कारिबर म्हणून डिजिटल मार्केटिंगकडे वळत आहेत.

### शोधनिबंधाचे उद्दिष्टे :

- डिजिटल मार्केटिंग म्हणजे काय हे अभ्यासणे.
- डिजिटल मार्केटिंग चे फायदे आणि तोटे वांचा अभ्यास करणे.

### डिजिटल मार्केटिंगचे फायदे :

डिजिटल मार्केटिंगचा मुख्य फायदा असा आहे की, आपल्या टारगेट कस्टमरपर्यंत कमी खर्चात आणि कमी वेळात पोहोचता. ग्राहकांचा आपल्या ब्रँड वरचा वाढता विश्वास आणि ऑनलाइन क्रितीमध्ये वाढ हेही डिजिटल मार्केटिंगचे फायदे आहेत. डिजिटल मार्केटिंगचे अजून बरेच फायदे आहेत या सगळ्यांची आपण सविस्तर लेखी घेऊयात.

- कमी खर्च (Cost Effective) :** कोणत्याही व्यवसायामध्ये प्रॉडक्ट किंवा सेवेच्या मार्केटिंग आणि जाहिरातींचा लागणारा खर्च हा व्यवसायिकांना सोसावा लागणारा सर्वात मोठा आर्थिक भार आहे. मोठ्या व्यवसायांना त्यांच्या मार्केटिंग आणि जाहिरातीसाठी लाखो रुपये मोजावला फारशी अडचण नसली तरी लहान व्यवसायांसाठी ही न परवडणारी गोष्ट असू शकते. डिजिटल प्लॅटफॉर्मद्वारे मार्केटिंग करणे हे पारंपारिक मार्केटिंग पद्धतीस अधिक परवडणारा पर्याय म्हणून प्रदान करते आणि तितकाच प्रभावीपणे पण कमी खर्चात डिजिटल मार्केटिंग हा कमी खर्चात लाखो लोकांपर्यंत पोहोचण्याचा मार्ग आहे. अगदी थोड्या पैशांमध्ये आपण ईमेल मार्केटिंगला सबस्क्राईब करून आपण आपल्या ग्राहकांना आपण मेल पाठवून आपल्या प्रॉडक्टचे प्रमोशन करू शकतो.
- गुंतवणुकीवर प्रचंड परतावा (High Return on Investment) :** डिजिटल मार्केटिंगमध्ये खूप कमी

खर्चात आपण आपल्या टारगेट कस्टमर पर्यंत प्रभावीपणे पोहोचू शकतो. त्यामुळे, या पद्धतीमध्ये आपण केलेल्या गुंतवणुकीवर पारंपारिक मार्केटिंग पेक्षा आपल्याला चांगला परतावा मिळतो.

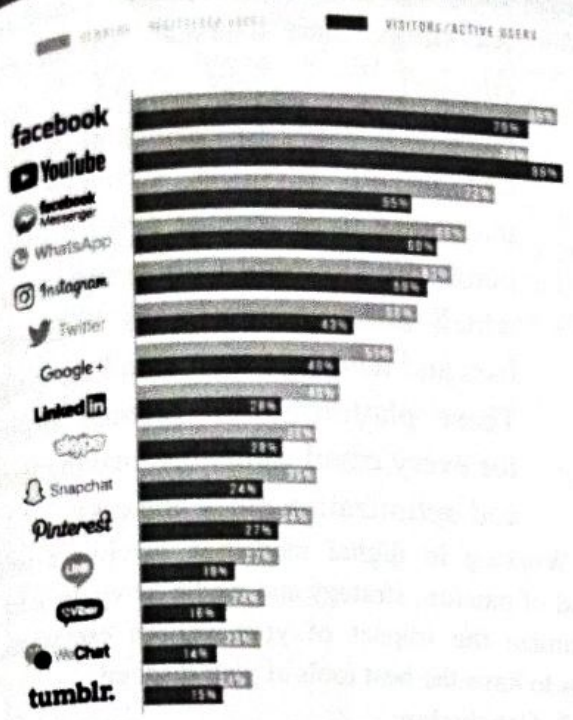
- ट्रॅक करणे योग्य मोजण्यायोग्य परिणाम (Trackable Measurable) :** वेब ॲनॅलिस्ट टिक्स आणि इतर ऑनलाईन मॅट्रिक साधनांचा उपयोग करून आपण आपल्या डिजिटल मार्केटिंगची पूर्ण माहिती घेऊ शकतो. या साधनांचा वापर करून आपले ग्राहक आपली वेबसाईट कशी कधी वापरतात किंवा आपल्या जाहिरातीस कसा प्रतिसाद देतात या सर्व गोष्टींबद्दल तपशीलवार माहिती आपण मिळू शकतो.
- योग्य ग्राहकांपर्यंत पोहोचणे (Target Your Customers) :** पारंपारिक मार्केटिंग पद्धतीमध्ये ठराविक लोकांना लक्ष करणे कठीण असते पण डिजिटल मार्केटिंग मध्ये आपण आपले मार्केटिंगचे अभियान जास्तीत जास्त प्रभावी होण्यासाठी आपण योग्य लोकांपर्यंत पोहोचू शकतो. आपले अभियान अशा लोकांपर्यंत पोहोचू शकतो ज्यांना आपल्या प्रॉडक्ट मध्ये इंटरेस्ट आहे, जे आपल्याकडून काहीतरी नवीन बघण्यासाठी आणि ऐकण्यासाठी तयार असतील.
- वैयक्तिकरण (Custlized) :** जर तुमचा ग्राहक डेटाबेस तुमच्या वेबसाईटची लिंक असेल तर जेव्हा जेव्हा कोणी तुमच्या साईटला भेट देईल तेव्हा तुम्ही त्यांना लक्षणी वापर देऊन त्यांचे अभिवादन करू शकता. या पद्धतीमध्ये आपण आपल्या ग्राहकांची आवड निवड तपासून आपण आपल्या प्रत्येक

वापर करतात. संशोधन हायलाईट करते की बी टू बी खरेदीदारांना ईमेल आणि कॉल आवडत नाहीत म्हणून डिजिटल मार्केटिंग योग्य लोक शोधण्यासाठी पुरेशा तरतुदींना अनुमती देते. सध्याच्या युगात खरेदीदारांना त्यांच्या उत्पादनाशी संबंधित समस्यांची संभाव्य समाधान देणारी ज्ञान अपेक्षित आहे. डिजिटल मार्केटिंग द्वारे संस्थेची किंवा ब्रँडची मजबूत दृश्य मानता ग्राहकांना ब्रँड बदल समजले ज्ञान विकसित करण्यात अनुमती देते तोंडी शब्दाचा प्रसार करून आणि त्यांच्या

कनेक्शन वरून शिफारशी मिळून वापरकर्त्यांना खरेदी बदल सक्रिय निर्णय घेण्यास मदत होते.

**संदर्भ :**

1. [www.digitalmarketing.com](http://www.digitalmarketing.com)
2. <https://mallchimpcomdigitalmarketing>
3. [www.https.inc.com](http://www.https.inc.com)



The most used online application in the period of covid-19 is face book, member registration users are 8.5 and visit active users are 7.9 and you tube users in registration users 7.9 and active users 8.6 etc. and all the rest are visible in the active and registered user chart .The difference between the two is simple: Digital Marketing is an umbrella term and includes all types of marketing activities while Social Media Marketing is one aspect of digital marketing and focuses primarily on the use on marketing on social media platforms

**4. Scope of the Study :**

Scope of the study is related to understand the concept of Digital Marketing, and to know the impact, that the outbreak of Covid-19 pandemic had/has on digital marketing and also understand the future of digital marketing post Covid-19 pandemic

**5. Digital Marketing :-**

The first approaches to digital marketing defined it as a projection of conventional marketing, its tools and strategies, on Internet. However, the particularities of the digital world and its appropriation for marketing have fostered the development of channels, formats and languages that have led to tools and strategies that are unthinkable offline.

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Social media marketing (SMM) (also known as digital marketing and e-marketing) is the use of social media the platforms on which users build social networks and share information to build a company's brand, increase sales, and drive website traffic. Digital media is any form of media that uses electronic devices for distribution. This form of media can be created, viewed, modified and distributed via electronic devices. Digital media is commonly used software, video games, videos, websites, social media, and online advertising.

**6. Tools of Digital Marketing:**

When it comes to digital marketing, few things are as important as the tools digital marketers rely on to get their jobs done. These include everything from social media platforms like Facebook and Instagram to analytics tools like Google Analytics. Allowing marketers to create, test and measure the performance of their campaigns, digital marketing tools ensure that marketers can launch and test campaigns quickly and effectively.

**Top 5 Tools for Digital Marketing :**

**A. Social Media Platform :-** A common part of any integrated marketing strategy, social media platforms like Facebook, Instagram and Snapchat a re a great way for marketers to engage with their audiences and generate buzz around their brand. In addition to the standard features these platforms offer, there are also some features that are designed specifically for marketing. These include Facebook Ads Manager, which allows marketers to run ads and track ad performance. As an added bonus, social media management tools like Buffer and Hoot suite also integrate well with these platforms, making it easy to schedule social posts and measure engagement.



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# **DIGITAL MARKETING AND ECONOMY**



- GUEST EDITOR -  
**Dr. R. A. Pawar**

- CHIEF EDITOR -  
**Dr. Dhanraj T. Dhangar**

- EXECUTIVE EDITORS -  
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## : P R E F A C E :

This Proceeding contains the contributed research presentations delivered at the National Seminar on 'Digital Marketing & Economy', organized by Department of Commerce and Economics, Arts, Commerce, Science and Computer Science College, Ashvi Kd., September 29th -30th 2022

Digital marketing has a significant importance in all aspects of life, businesses directly or indirectly. It has helped MSMEs in the expansion of path and helped them to fulfill their dream of reaching local and international markets. Digital Marketing has given us a small hope of running the business online for livelihood. In many fields, digital marketing is a boom where there are earnings. Digital Marketing has ensured that many people are in the digital marketing field and making huge amounts of rupees online. As online ecommerce facilities viz. Amazon, Flip kart, Urban Clap, Zomato, Swiggy are running well, & it has created many employment opportunities for the needy ones in these tough times. Peoples are getting connected through digital marketing via social media platforms, such as Facebook, Twitter, Instagram, Whatsapp, Linkedin, etc. The current pandemic situation has enforced us towards technologies, which further leads to our technologies automation, upgrading, etc.

Digital marketing in rural area is very immaculate zone and has lot of undiscovered potential but the techniques are yet being devised to explore this area. In long term, digital will help to increase the consumption in rural India and will also create employment opportunities; thereby increasing disposable income- this in turn will have positive effect on economic growth of the country. Digital marketing is competitive, and every company wants to give their best in terms of quality and affordability to their clients. Therefore, marketing has created awareness about brands leading to increased product demand. Lowering prices has improved the overall economic growth. With affiliate marketing, influencers promote other people's products and get a commission every time a sale is made, or a lead is introduced. Many well-known companies like Amazon have affiliate programs that pay out millions of dollars per month to websites that sell their products. Digital marketing poses special challenges for its purveyors. Digital channels proliferate rapidly, and digital marketers must keep up with how these channels work, how they're used by receivers, and how to use these channels to effectively market their products or services. Digital marketing is important because it connects a business with its customers when they are online & is effective in all industries.

Digital economy defined as that part of economic output derived solely or primarily from digital technologies with a business model based on digital goods or services" - consists of the digital sector plus emerging digital and platform services. It is useful to think of the digital economy as having three primary components--supporting infrastructure, electronic business processes how business is conducted, and electronic commerce transactions selling of goods and services online. Digital economy is the one of the most important driver of innovation, growth, and job creation. The digital economy has transformed the way businesses operate and has created new opportunities for them.

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## Digital Marketing : A new stream of marketing

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### Abstract:

Today's era is changing very fast, so everyone needs to know what digital marketing is. The world is becoming digital and everyone needs it. Many companies now hire digital marketing experts so that they can spread their business digitally as well. But there is also the question of how to learn digital marketing. Those who know this already know how to make money from it. Many people still do not know its significance. Everyone is aware of education, but many parents still do not know much about digital marketing and that is why they tell their children to focus on traditional studies.

Digital marketing is a modern way of spreading your business and increasing its brand value, so today every company builds its website with its business name and does digital marketing through many means. When a company starts a new business or a new product. So after all, to make it a success, its marketing is the most important because it is the only way your product can reach as many people as possible.

In the past, every major company used resources such as TV, newspapers, magazines, radio, paper, posters and banners to run its advertising campaigns, and many companies went from house to house talking about their products. But now the method of marketing has changed over time, and digital marketing is a very widely used option. More than half the world's population uses the Internet, and the number is growing. This is why digital marketing is expanding so fast. Digital marketing is also advancing rapidly in India. Because since the internet data in India has become cheaper, the number of internet users in India has increased a lot, India is the second most used country in the world.

**Key words :** Digital Marketing

### Objective:

1. To understand the concept Digital Marketing.
2. To Study the benefits of Digital Marketing for Business
3. To Study the Digital Marketing as a new trend for business marketing

### Limitations of the Study:

1. The research topic is related with only Digital Marketing
2. The research is based on Secondary data.

### Data collection:

The primary source of data collection in this research paper is the secondary data. The available information on Digital Marketing has been extensively used to complete the research report. All the available Journals, Related books, Web, Articles, Publish and unpublished information and Papers provided necessary information to the finalize the research paper.

### Meaning - Digital Marketing :

Digital marketing is basically applying all marketing techniques to digital channels. Different sources can be used to promote services and products like SMS, search engines, email, websites, social media and mobile devices. The digital nature of this marketing method makes it a cost-effective means of promoting one's business.

The use of digital marketing depends on the organization's marketing objective. It could be that the organization wants to generate more leads, build their brands, increase sales or improve brand engagement. Digital marketing means more than just having a website. The website needs to be aesthetically pleasing and easy to navigate, and also needs to have quality content to reflect the nature of the business.

Search engine optimization (SEO) is an important factor as well. Search engines need to read and index the website properly. There are content and SEO specialists who can help organizations to design

websites which are responsive and accessed through all devices. Digital marketing also involves managing the organization's social media presence and interacting with fans as well as marketing the business across major social media channels.

#### **Benefits of Digital Marketing for Business:**

1. You can reach your specific customers with the help of Google Advertise, as well as with the help of Social Advertise (Facebook, Instagram). i.g. you can target customers by age, location, hobby, location etc. and show them your advertise. Also you can target and reach people related to your product
2. You can reach the right customers through digital marketing at low cost. Digital marketing is very less expensive as compared to traditional marketing. In this you can create your digital campaign and attract your target customers.
3. You can create your business website. A website makes it easy for your business to be found online and you can share your profile with everyone. A website makes your online presence strong and thus gets you more leads.
4. Using social media marketing, e-mail marketing, Google advertise, blogs, etc. we can generate more leads and increase their conversion rate. You can get higher conversion rates by targeting specific audiences.
5. With the help of transparent digital marketing, you can gain the trust and loyalty of your customers. For example, you can create a website for your business, which showcases your business portfolio. A website allows you to communicate directly with your customers and your customers with you.
6. Social media marketing is the best platform for marketing. You can create awareness of your product changes and easily share them with customers. You can attract customers using e-mail marketing, Google advertises, blogs, etc. With this you can increase public trust, reputation and awareness of your brand.

#### **Future of Digital Marketing:**

India, a densely populated country with a population of 1,339,180,127 (as of July 2017) ranks second in the world. There are ample opportunities that are created every minute for the people. And when we

say digital marketing, then note that the future of digital marketing in India and the scope of digital marketing in future is going to get brighter in the coming years. A mobile phone has become the basic need for everyone.

Even if your mother wants to try out a new recipe, she definitely uses YouTube to take the jot down what is needed and how it is to be done. And when it comes down to the business, no doubt the trend of digital marketing is on the boom.

Everyone wants to market their products and services through the internet to increase the reach. Compared to traditional marketing these are some key benefits which make this marketing strategy more effective and affordable.

According to a survey (by Internet and Mobile Association of India (IAMAI)), India will have around 500 million internet users by June 2018. This will create a fascinating business opportunity to sell services and products to a growing population of tech-savvy internet users.

#### **Conclusion:**

Digital marketing needs changing times. Digital marketing is a must have, for any Affiliate, promoting any program. Do traditional marketing along with digital marketing. But focus more on digital marketing; create a special budget for marketing.

Today's consumer is more cognizant of the marketing messages all around them, leaving them more likely to tune out advertisements or other forms of marketing communication. Digital marketers turn to technology to help reach target consumers. Marketers must be creative and innovative to connect with today's consumer and target audiences.

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## Digital Economy: Challenges and Opportunity

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### Abstract:

*The world as we know it is continually changing, and one of the fundamental drivers is digital transformation. At its core, digital transformation isn't about Internet "unicorns." It's about using the latest technology to do what you already do.*

*The digital economy is the economic activity that results from billions of everyday online connections among people, businesses, devices, data, and processes. The backbone of the digital economy is hyper connectivity which means growing interconnectedness of people, organizations, and machines that results from the Internet, mobile technology and the internet of things. The digital economy is taking shape and undermining conventional notions about how businesses are structured; how firms interact; and how consumers obtain services, information & Goods*

*Many developed countries, predicting upcoming changes, have begun a systematic movement towards the development of digital economy. The first such program was implemented by the United States and China, the countries, which today are leaders in the development of the digital economy. Behind them, the corresponding programs were embraced by England, the countries of the European Union, Australia and others. Currently, the programs supporting the digital transformation of the economy are widely spread across many countries*

**Keyword :** Digital Economy, technology

### Objectives of the study :

1. To understand the concept Digital Economic.
2. To Study the various challenges of Digital Economic
3. To Study the various opportunities in Digital Economic

### Limitations of the Study :

1. The research topic is related with only Digital Economic
2. The research is based on Secondary data.

### Data collection:

The primary source of data collection in this research paper is the secondary data. The available information on Digital Economic has been extensively used to complete the research report. All the available Journals, Related books, Web, Articles, Publish and unpublished information and Papers provided necessary

### Meaning-

#### Digital Economic :

The Digital Economy also referred to as the New Economy, refers to an Economy in which digital computing technologies are used in Economic Activities.

According to Thomas Mesenbourg (2001), three main components of the digital economy concept can be identified:

- E-business infrastructure (hardware, software, telecom, networks, human capital, etc.),
- E-business (how business is conducted, any process that an organization conducts over computer-mediated networks),
- E-commerce (transfer of goods, for example when a book is sold online).

### Challenges of Digital Economic :

1. High level of digital illiteracy is the biggest challenge and hindrance in the success of digital India programme in adaptation of technologies.
2. There is lack of awareness as well as guidance in this programme as the masses are not familiar with its benefits.
3. It is a big and huge task to connect each and every village, town and city. To Connect all Gram Panchayats through National Optical Fibre is not an easy task. The biggest challenge is ensuring that each panchayat point of broad band is fixed up and functional.



4. A key component under this vision is high speed of internet as a core utility to facilitate online delivery of various services. India has low internet speed. According Akamai report on internet speed, India is lagging behind as it is at the 105th position in the world in average internet speed.
5. The slow and delayed infrastructure development in India is the biggest challenge faced by Digital India. India's digital infrastructure is comprehensively inadequate to tackle growing increase in digital transactions
6. The private participation in government projects in India is poor because of long and complex regulatory processes.
7. The competent private sector organizations are not able to pick up many request proposals by government since they are not commercially viable. Currently over 40000 villages remain deprived of mobile connectivity because providing mobile connectivity in such locations is not commercially viable.
8. Between urban and rural India, there is a wide digital division, the problem of funding is still not able to meet the cost of infrastructure creation in rural areas.
9. Because of a number of languages in India( 1600 languages and dialects), there is non-availability of digital services in local languages is a great barrier in digital literacy.

#### **Opportunities in Digital Economic :**

This new world evidences rapid change that attracts laws for competition, new sorts of organization and vigorous challenges for management. The Digital Economy is an environment characterized by immediacy and urgency, globalization, liberalization and privatization, virtualization (audio and video), online common workplace, innovation, and convergence.

The digital economy moves the centre of gravity of the investments in fixed assets to investments in human capital. Individual initiative, solidarity, cooperation and mutual trust in the workplace are key factors for

success in the informational society. The Internet has indeed become a multi-billion dollar industry which is vital for infrastructure for a global economy. It reshapes the way people live by bringing a greater variety of goods and digital services often at lower prices, availability of improved data collection, channels, and social networks.

With respect to the firms, the transition to digital technologies forced them to rethink the business models that led them to constantly adapt variant innovative measures to just survive in a global market. The digital economy aims at putting the needs of consumers in the first and foremost list of its priorities as the needs of consumers have an interactive character, participatory, realization of the interface between offer and demand in the area of volume, structure, space and time more rigorously.

#### **Conclusion:**

An economy that strives to transform into a digital one already rises a notch higher than the other traditional economies as it acquires an edge to compete better and stronger in the same market. Digital Economy enables to reduce of the cost of transactions and also in return helps in innovation because now everything is online, costs like building infrastructure, maintaining it, re-building and other related costs get reduced. As long as we don't back away from a problem with the fear of losing, and fight back with the knowledge of what went wrong, we will definitely win.

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# **DIGITAL MARKETING AND ECONOMY**



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## डिजिटल मार्केटिंग : फायदे आणि तोटे

एन. एस. मांडरे

सहाय्यक प्राध्यापक, वाणिज्य विभाग,  
कला वाणिज्य विज्ञान व संगणक शास्त्र महाविद्यालय आंध्री खुर्द

व्ही. एस. गायकवाड

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प्रस्तावना :

डिजिटल मार्केटिंग हा मार्केटिंगचा एक असा प्रकार आहे ज्याच्यामध्ये सर्व डिजिटल वस्तूंचा वापर करून जसे इंटरनेट सोशियल मीडिया वॉक ऑफ इत्यादींचा वापर करून आपले प्रॉडक्ट किंवा सेवा यांचा प्रचार आणि प्रसार डिजिटल माध्यमांवर केला जातो. सर्वेक्षणानुसार एखाद्या ग्राहकाला एखादी वस्तू खरेदी करायची असेल तेव्हा ४८% ग्राहक google वर जाऊन त्या वस्तूचा तपास करतात, तर ते ३०% जेक त्या कंपनीच्या वेबसाईटला भेट देतात तर २६ टक्के ग्राहक मोबाईल ॲप्लिकेशनवर त्या वस्तूची चौकशी करतात. गेल्या काही वर्षांपासून डिजिटल मार्केटिंग हे मार्केटिंग मध्ये ट्रेडिंग विषयांपैकी एक आहे आणि येत्या काही वर्षात मार्केटिंगसाठी हे प्रमुख माध्यम असणार आहे. प्रत्येक व्यावसायिकाने डिजिटल मार्केटिंग स्वीकारणे, डिजिटल मार्केटिंग मधील कुशल लोकांना नोकरीच ठेवणे आवश्यक आहे. मनु, आयटी आणि इतर विभाग आणि उद्योग धंद्यामध्ये काम करणारे अनेक नोकरदार करियर म्हणून डिजिटल मार्केटिंगकडे वळत आहेत.

शोधनिबंधाचे उद्दिष्टे :

१. डिजिटल मार्केटिंग म्हणजे काय हे अभ्यासणे.
२. डिजिटल मार्केटिंग चे फायदे आणि तोटे यांचा अभ्यास करणे.

डिजिटल मार्केटिंगचे फायदे :

डिजिटल मार्केटिंगचा मुख्य फायदा असा आहे की, आपल्या टारगेट कस्टमरपर्यंत कमी खर्चात आणि कमी वेळात पोहोचता येते. ग्राहकांचा आपल्या ब्रँड वरचा वाढता विश्वास आणि ऑनलाइन वेळीमध्ये वाढ हेही डिजिटल मार्केटिंगचे फायदे आहेत. डिजिटल मार्केटिंगचे अजून बरेच फायदे आहेत या सगळ्यांची आपण सविस्तर माहिती घेऊयात.

१. **कमी खर्च (Cost Effective)** : कोणत्याही व्यवसायामध्ये प्रॉडक्ट किंवा सेवेच्या मार्केटिंग आणि जाहिरातींचा लागणारा खर्च हा व्यवसायिकांना सोसावा लागणारा सर्वात मोठा आर्थिक भार आहे. मोठ्या व्यवसायांना त्यांच्या मार्केटिंग आणि जाहिरातीसाठी लाखो रुपये मोजायला फारशी अडचण नसली तरी लहान व्यवसायांसाठी ही न परवडणारी गोष्ट असू शकते. डिजिटल प्लॅटफॉर्मद्वारे मार्केटिंग करणे हे पारंपारिक मार्केटिंग पद्धतीस अधिक परवडणारा पर्याय म्हणून प्रदान करते आणि तितकाच प्रभावीपणे पण कमी खर्चात डिजिटल मार्केटिंग हा कमी खर्चात लाखो लोकांपर्यंत पोहोचण्याचा मार्ग आहे. अगदी थोड्या पैशांमध्ये आपण ईमेल मार्केटिंगला सबस्क्राइब करून आपण आपल्या ग्राहकांना आपण मेल पाठवून आपल्या प्रॉडक्टचे प्रमोशन करू शकतो.
२. **गुंतवणुकीवर प्रचंड परतावा (High Return on Investment)** : डिजिटल मार्केटिंगमध्ये खूप कमी

खर्चात आपण आपल्या टारगेट कस्टमर पर्यंत प्रभावीपणे पोहोचू शकतो. त्यामुळे, या पद्धतीमध्ये आपण केलेल्या गुंतवणुकीवर पारंपारिक मार्केटिंग पेक्षा आपल्याला चांगला परतावा मिळतो.

३. **ट्रॅक करणे योग्य मोजण्यायोग्य परिणाम (Trackable Measurable)** : वेब ॲनॅलिस्ट पिक्स आणि इतर ऑनलाईन मॅट्रिक साधनांचा उपयोग करून आपण आपल्या डिजिटल मार्केटिंगची पूर्ण माहिती घेऊ शकतो. या साधनांचा वापर करून आपले ग्राहक आपली वेबसाईट कशी कधी वापरतात किंवा आपल्या जाहिरातीस कसा प्रतिसाद देतात या सर्व गोष्टींबद्दल तपशीलवार माहिती आपण मिळू शकतो.
४. **योग्य ग्राहकांपर्यंत पोहोचणे (Target Your Customers)** : पारंपारिक मार्केटिंग पद्धतीमध्ये ठराविक लोकांना लक्ष करणे कठीण असते पण डिजिटल मार्केटिंग मध्ये आपण आपले मार्केटिंगचे अभियान जास्तीत जास्त प्रभावी होण्यासाठी आपण योग्य लोकांपर्यंत पोहोचू शकतो. आपले अभियान अशा लोकांपर्यंत पोहोचू शकतो ज्यांना आपल्या प्रॉडक्ट मध्ये इंटरेस्ट आहे, जे आपल्याकडून काहीतरी नवीन बघण्यासाठी आणि ऐकण्यासाठी तयार असतील.
५. **वैयक्तिकरण (Customized)** : जर तुमचा ग्राहक डेटाबेस तुमच्या वेबसाईटची लिंक असेल तर जेव्हा जेव्हा कोणी तुमच्या साईटला भेट देईल तेव्हा तुम्ही त्यांना लक्षणी वापर देऊन त्यांचे अभिवादन करू शकता. या पद्धतीमध्ये आपण आपल्या ग्राहकांची आवड निवड तपासून आपण आपल्या प्रत्येक

ग्राहकाच्या गरजेनुसार आपण त्यांच्याशी संवाद साधून त्यांच्याशी व्यवहार करू शकतो पारंपारिक मार्केटिंग पद्धतीमध्ये आपल्याला हा ऑप्शन मिळत नाही.

६. **रियल टाईम ऑप्टिमायझेशन (Real Time Optimization)** : डिजिटल मार्केटिंग मध्ये आपण रियल टाईम मध्ये आपल्या जाहिरातीमध्ये हवे असलेले योग्य बदल करू शकतो. रियल टाईम मध्ये म्हणजे जर आपली जाहिरातीची कॅम्पेन चालू असताना जर आपल्याला असे वाटले की कॅम्पेन तेवढी प्रभावी नाही. तर आपण आपल्या जाहिरातीच्या कॅम्पेन मध्ये कधीही बदल करू शकतो. ही गोष्ट पारंपारिक मार्केटिंगमध्ये शक्य नाही थोडक्यात आजच्या या जगामध्ये डिजिटल माध्यमांचा वापर वाढत आहे. ज्यामुळे आपल्याला जर आपला व्यवसाय वाढवायचा असेल, किंबहुना या स्पर्धेमध्ये टिकायचे असेल तर आपल्याला डिजिटल मार्केटिंगचा आधार घ्यावाच लागेल. आपण जर व्यवसायिक असाल तर डिजिटल मार्केटिंगचा योग्य तो प्रकार निवडून त्याचा अभ्यास करून डिजिटल मार्केटिंग सुरू करू शकतो.

**डिजिटल मार्केटिंगचे तोटे :**

१. **अति स्पर्धा (High Competition)** : डिजिटल मार्केटिंग मोहिमेचा नीट विचार केला पाहिजे. तो वेगळा असावा. लक्षवेधून घेतले पाहिजे आणि लक्षित प्रेक्षकांवर प्रभाव निर्माण केला पाहिजे. कारण अलीकडच्या काळात स्पर्धा अनेक पटीने वाढली आहे. कोणताही निरद दृष्टिकोन किंवा पुनरावृत्ती केलेली पद्धत ब्रँडला काही वेळा स्पर्धेतून बाहेर काढेल डिजिटल मार्केटिंग मोहिमा खूप स्पर्धात्मक झाल्या आहेत. त्यामुळे ब्रँड ग्राहकांच्या गरजांशी संबंधित असले पाहिजेत आणि प्रतिसाद देण्यास तत्पर असले पाहिजेत.
२. **तंत्रज्ञानावरील अवलंबित्व (Dependability on Technology)** : डिजिटल मार्केटिंग पूर्णपणे तंत्रज्ञानावर आधारित आहे आणि इंटरनेट त्रुटींना प्रवण आहे. असे काही वेळा आहेत, जेव्हा दुवे कार्य करू शकत नाहीत लँडिंग पृष्ठे लोड करू शकत नाहीत आणि पृष्ठ बटणे फक्त त्याचे कार्य करत नाहीत हे संभाव्य ग्राहकांना इतर ब्रँड कडे जाण्यास प्रवृत्त करते म्हणून हे टाळण्यासाठी वेबसाईटची चाचणी आवश्यक आहे. सामग्रीचे गुण रीडिंग आणि मोहिमा त्याचे लक्षित कार्य करतील याची खात्री करणे देखील महत्त्वाचे आहे.
३. **वेळ घेणारे (Time Consuming)** : डिजिटल मार्केटिंगचा सर्वात मोठा तोटा म्हणजे त्याचा वेळ घेणारा स्वभाव असंघटित डावपेच आणि रणनीती बराच वेळ खर्च करू शकतात आणि अनेकदा

मोहिमेसाठी इच्छित वेळ घालविणे कठीण होते. हे शेवटी नकारात्मक परिणामांकडे नेल म्हणून कंपनीला सर्वात जास्त आवश्यक असलेल्या धोरणावर लक्ष केंद्रित करण्याचे सुचवले आहे त्यानंतर त्यानुसार योजना आखून सामग्रीची क्युरेट केली जाते. हा स्मार्ट अफेर्स आणि सोशल मीडिया पोस्टिंग सारखी डिजिटल मार्केटिंग साधने आणि हॉटसाईट अँड सारखी शेड्यूलिंग साधने संभाव्य अडथळांवर मात करण्यासाठी वापरली जावीत.

४. **सुरक्षा आणि गोपनीयता समस्या (Security Privacy Issues)** : कोणत्याही ब्रँड साठी सुरक्षितता ही प्राथमिक आवश्यकता असते. म्हणून वेबसाईट संरक्षण ही डिजिटल मार्केटिंग म्हणून गांभीर्याने कार्यान्वित करण्याची गोष्ट आहे. व्हीपीएन सारख्या बाहेर ऑल आणि इनक्रीप्शन टूलचा वापर करून नेटवर्क सुरक्षित करणे आणि नेटवर्क कनेक्शनचे संरक्षण करणे नेहमी सुचविले जाते.
५. **तक्रारी आणि अभिप्राय (Complaints Feedback)** : ग्राहक सेवा ऑनलाईन करणे खूप आव्हानात्मक आहे एखाद्या ग्राहकाने नकारात्मक पुनरावलोकन लिहिल्यास ते संपूर्ण प्रेक्षकांना दिसेल त्याचा ब्रँडच्या जाहिराती व परिणाम होईल आणि त्याची प्रतिष्ठा प्रभावी होईल.
६. **कौशल्य आणि प्रशिक्षण (Skill Training)** : डिजिटल मार्केटिंग यशस्वीपणे पार पाडण्यासाठी तुमच्या कर्मचाऱ्यांना योग्य ज्ञान आणि कौशल्य आहे. याची तुम्हाला खात्री करणे आवश्यक आहे. साधने प्लॅटफॉर्म आणि ट्रेंड वेगाने बदलतात आणि तुम्ही अद्ययावत राहणे अत्यावश्यक आहे.
७. **देखभाल खर्च (Maintenance Cost)** : ऑनलाईन डिजिटल मार्केटिंग मुळे अनेक खर्च कमी होतात. परंतु त्यामुळे साधने खरेदी करणे आणि देखभाल खर्च वाढू शकतो. डिजिटल प्लॅटफॉर्म व्यवस्थापित करण्यासाठी तांत्रिक व्यवसायिक आणि विकासकांना नियुक्त करावे लागेल तसे डिजिटल मार्केटिंग साठी अनेक डिजिटल साधने खरेदी करावी लागतील. त्यासाठी खूप पैसे खर्च होऊ शकतात डिजिटल मार्केटिंग घटकांचे सर्व खर्च एकत्र केल्यावर तुम्ही ऑनलाईन डिजिटल मार्केटिंग साठी गुंतवलेल्या खर्चाची मोठी रक्कम बनते.

**निष्कर्ष :**

तंत्रज्ञानाच्या प्रगतीमुळे डिजिटल मार्केटिंगचे संशोधन सुधारत आ. हे तंत्रज्ञानातील प्रगती बहू आयामी संधींना चालना देते आणि त्याचवेळी विक्रेत्यांसाठी अभूतपूर्व आव्हाने उभी करतात, विश्वासार्हता जोडले अशा पद्धतीने उत्पादन परिभाषित करून व्यावसायिक ब्रँडचा प्रचार करण्यासाठी विपण डिजिटल पोर्टफोलिओचा प्लॅटफॉर्म म्हणून

वापर करतात. संशोधन हायलाईट करते की बी टू बी खरेदीदारांना ईमेल आणि कॉल आवडत नाहीत म्हणून डिजिटल मार्केटिंग योग्य लोक शोधण्यासाठी पुरेशा तरतुदींना अनुमती देते. सध्याच्या युगात खरेदीदारांना त्यांच्या उत्पादनाशी संबंधित समस्यांची संभाव्य समाधान देणारी ज्ञान अपेक्षित आहे. डिजिटल मार्केटिंग द्वारे संस्थेची किंवा ब्रँडची मजबूत दृश्य मानता ग्राहकांना ब्रँड बद्दल समजले ज्ञान विकसित करण्यात अनुमती देते तोंडी शब्दाचा प्रसार करून आणि त्यांच्या

कनेक्शन वरून शिफारशी मिळून वापरकर्त्यांना खरेदी बद्दल सक्रिय निर्णय घेण्यास मदत होते.

**संदर्भ :**

1. [www.digitalmarketing.com](http://www.digitalmarketing.com)
2. <https://mallchimplmcomdigitalmarketing>
3. [www.https.inc.com](http://www.https.inc.com)

## Impact of Covid-19 on Social Media Marketing

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Department of Commerce, Arts commerce Science & Computer Science College, Ashvi Kd.

### Abstract:

While the global pandemic of covid-19 has affected various sectors, in digital marketing, Advertisements, online web, education etc. problem create. Social Media marketing is a successful technology for buying and selling products online. Performing a task using the resource of the internet or electronic device is termed as digital marketing. Business is upgrading the buying and selling pattern, through various Social media platforms. The aim of the study is to examine the influence of social media marketing in post COVID-19. Online marketing is promoted through various social media platforms like Gmail, Facebook, Instagram, YouTube, Twitter, Blogs and What'sApp to create awareness and increase the sale especially during post COVID-19. The primary data have been collected from 207 online users through survey method by using convenience sampling. The research findings indicate that Social media platforms are the one of the effective tools to increase the sale. The outbreak of COVID-19 social distancing and risk inheriting visiting physical store are the main cause to increase online sale in the digital era.

**Keywords:-**Covid-19, Social Media, Online Marketing,

### 1. Introduction:

Online marketing is a process that empowers individuals to promote their websites, products, or services through online social channels and to communication with and tap into a much larger community that may not have been available via traditional advertising channels.

Early forms of the internet have been around since the 1940s, but it wasn't until 1997 that the first official social media site appeared. Marketers' migrated to social media marketing around the time Facebook widened its.

Social Media Marketing makes use of social media sites to raise visibility on the Internet and to promote products and services. Social media sites are useful for building social (and business) networks, and for exchanging ideas and knowledge.

Social media networking is part of a trend known as Web 2.0, which refers to changes in the way users and software developers use the Web. It is a more collaborative use of the Web that enhances creativity and knowledge exchange. It is a more interactive and user-driven way to help users participate and collaborate over the Web through open applications and services. It is critical, therefore, open applications and services. It is critical, therefore, that content is accessible to the user; the user should be able to create, share, remix, and repurpose content. Technologies that are accessible and affordable like Ajax (a method of building interactive applications for the Web that processes user requests immediately) and RSS (Really

Simple Syndication) support Web 2.0 principles such as "user empowerment." Social Media Marketing uses podcasts, wikis, blogs, folksonomies, online videos, photo sharing, news sharing, folksonomies, online videos, photo sharing, news sharing, message boards, and posts on social networking sites to reach a large or targeted audience.

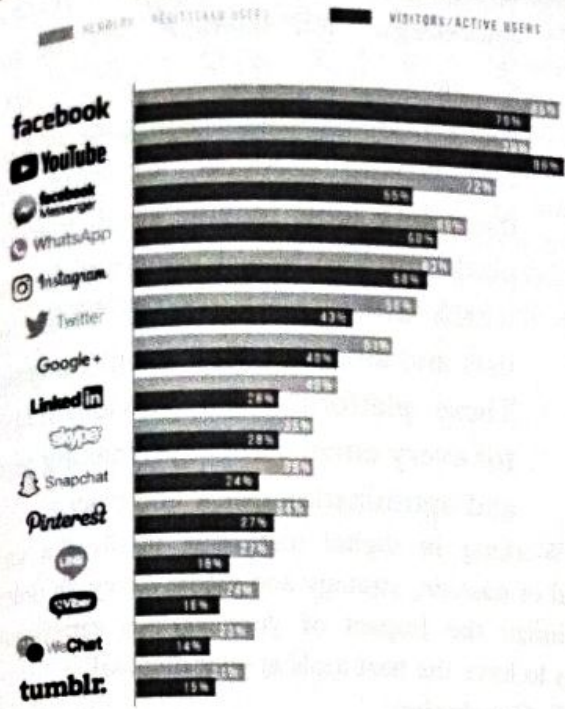
### 2. Objectives:

1. Which shows how commercially successful your product is.
2. To identify most frequently used social media platforms in post COVID-19
3. Ultimately all these objectives aim at customer satisfaction and emphasize user experience. Therefore, we can easily derive that the most important objective of social media is to aim at Better Customer Experience. And to better customer experience, social media helps to capture customer feedback and opinions.
4. To analysis the impact of Covid-19 on digital marketing
5. To analysis the future role of digital marketing post covid-19

### 3. Methodology:

In COVID-19, the digital marketing method was such that the human society should stay away from corona and the human being should remain secure. digital marketing company Also took care of customers





The most used online application in the period of covid-19 is face book, member registration users are 8.5 and visit active users are 7.9 and you tube users in registration users 7.9 and active users 8.6 etc. and all the rest are visible in the active and registered user chart .The difference between the two is simple: Digital Marketing is an umbrella term and includes all types of marketing activities while Social Media Marketing is one aspect of digital marketing and focuses primarily on the use on marketing on social media platforms

**4. Scope of the Study :**

Scope of the study is related to understand the concept of Digital Marketing, and to know the impact, that the outbreak of Covid-19 pandemic had/has on digital marketing and also understand the future of digital marketing post Covid-19 pandemic

**5. Digital Marketing :-**

The first approaches to digital marketing defined it as a projection of conventional marketing, its tools and strategies, on Internet. However, the particularities of the digital world and its appropriation for marketing have fostered the development of channels, formats and languages that have led to tools and strategies that are unthinkable offline.

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Social media marketing (SMM) (also known as digital marketing and e-marketing) is the use of social media the platforms on which users build social networks and share information to build a company's brand, increase sales, and drive website traffic. Digital media is any form of media that uses electronic devices for distribution. This form of media can be created, viewed, modified and distributed via electronic devices. Digital media is commonly used software, video games, videos, websites, social media, and online advertising.

**6. Tools of Digital Marketing:**

When it comes to digital marketing, few things are as important as the tools digital marketers rely on to get their jobs done. These include everything from social media platforms like Facebook and Instagram to analytics tools like Google Analytics. Allowing marketers to create, test and measure the performance of their campaigns, digital marketing tools ensure that marketers can launch and test campaigns quickly and effectively.

**Top 5 Tools for Digital Marketing :**

**A. Social Media Platform :-** A common part of any integrated marketing strategy, social media platforms like Facebook, Instagram and Snapchat are a great way for marketers to engage with their audiences and generate buzz around their brand. In addition to the standard features these platforms offer, there are also some features that are designed specifically for marketing. These include Facebook Ads Manager, which allows marketers to run ads and track ad performance. As an added bonus, social media management tools like Buffer and Hoot suite also integrate well with these platforms, making it easy to schedule social posts and measure engagement.

**B. Design tools :-**Another key part of digital marketing is design and this is especially common when it comes to creating ads and content like social media posts and blog posts. Because digital marketing is such a design heavy field, doing it effectively wouldn't be possible without design tools like Canva and Photoshop, programs that allow those without extensive graphic design skills to add dynamic images to their content.

**C. Analytics tools :-**Another set of helpful tools for digital marketers are analytics tools. These include everything from Google Analytics (designed to track stats for web traffic to a particular site) to social media analytics tools like Facebook Insights and Twitter Analytics which provide metrics related to engagement and help marketers optimize their campaigns. For measuring stats on the backend of a site (particularly related to conversions, sales and user demographics), there are also tools like Periscope that track user data, site searches and conversion metrics.

**D. Content marketing tools :-**For marketers who are more focused on content marketing, tools like CoSchedule and Hubspot are a big help when it comes to content creation and duration. They can help marketers identify content opportunities and craft engaging blog and social media posts that will resonate with their audience. And since Buffer also offers the ability to see what fans are talking about on social media, that content is almost guaranteed to be impactful and to generate attention for a specific event or news story.

**E. E-mail marketing tools :-**The final set of tools in a digital marketer's toolbox are email marketing, marketing tools. These help marketers create email

campaigns that amplify their content and encourage their users to become more engaged with their brand - taking additional steps like signing up for events and buying products. Common email marketing tools include email marketing platforms like Mail Chimp and Inerrable which allow marketers to build email lists and automate their email campaigns. These platforms also provide analytics for every email campaign, making testing and optimization quick and easy.

Working in digital marketing involves a unique blend of passion, strategy and media savvy. In order to maximize the impact of your various campaigns, it helps to have the best tools at your disposal

### 7. Conclusion:

The research and practice of digital marketing is improving with the advancement of technology. The advancement in technology fosters multifaceted opportunities and at the same time poses unprecedented challenges for the marketers. As the COVID-19 eruption is new to the entire globe. The research study before and after COVID- 19 is increasing and became most important topic for the research discussion. This study is useful can be a powerful tool for any organization. It can increase your visibility, enhance relationships, establish two-way communication with customers, provide a forum for feedback, and improve the awareness and reputation of the organization.

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## Review of various Cathode Materials used in Li-Ion Batteries

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### Abstract:

The lithium ion Batteries are dominate the market of electric vehicles, portable devices & energy storage system. Their high energy density, high working voltage, long cycle life, high specific capacity & specific energy, friendly to environment makes them commercially viable. More research required to improve the performance of the battery. The performance of the battery depend on the performance of the cathode, anode & electrolyte materials. This paper presents a review of comparative study of the physical & chemical properties of cathode material used in lithium-ion batteries.

**Key Words:** Li-Ion Battery, Cathode Materials.

### Introduction:

Li-Ion Batteries have been widely used in cell phones, laptops, electric cars, bikes & buses because of their long cycling life & high energy capacity. They are also used as energy storage system for Photovoltaic system & various electric grid applications such as wind, geo-thermal & other renewable energy sources [1][2][3]. In many application Li-Ion & Li-Ion based batteries are used. Lithium is the lightest metal with a density of only 0.53g/cm<sup>3</sup>. Lithium have a standard reduction potential, thus making it suitable for higher energy density, high voltage battery [4][5]. The lithium ion battery mainly comprises a graphite as the anode oxide, metal oxide for the cathode, electrolyte & separator [5]. Some of the most common cathode component are Lithium Cobalt oxide, Manganese oxide, Manganese Cobalt oxide, Iron Phosphate, Nickel Cobalt Aluminum oxide & Lithium Titanate [6]. The anode generally made of graphite (C) & the electrolyte generally selected is LiAsF<sub>6</sub>, LiPF<sub>6</sub>, LiBF<sub>4</sub> & other lithium salts. The diaphragm is generally Polyolefin Porous membrane [7]. This paper focuses on summarizing the characteristics and limitations of different cathode materials for lithium ion batteries.

### Cathode Materials:

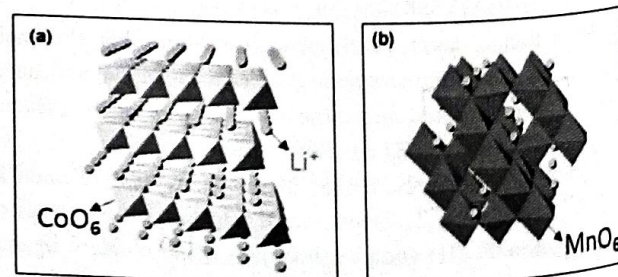
#### I) Lithium Cobalt Oxide (LiCoO<sub>2</sub>):

LiCoO<sub>2</sub> is the first commercial cathode material and most commercial successful form of Layered transition metal oxide cathodes. Its structure is  $\alpha$ -NaFeO<sub>2</sub> Layered structure. In a lithium cobalt oxide the Co & Li located in octahedral sites occupy alternating layers & form a hexagonal symmetry. LiCoO<sub>2</sub> was most studied and most popular cathode material for lithium ion batteries. LiCoO<sub>2</sub> has a theoretical specific capacity 274 mAh/g, it

can only provide an actual specific capacity of about 140 mAh/g & it has relatively stable electrochemical performance at a working voltage of 3.7 V [8] [12]. LiCoO<sub>2</sub> has a specific energy 546 Wh/kg. Cycle life of LiCoO<sub>2</sub> is more than 400 cycles. Compare to other cathode material it has stable charge & discharge voltage, high working voltage, high specific energy, good reversible performance & high electrical conductivity etc. the major limitations are high cost, poor thermal stability, toxicity of cobalt, lack of resources, a big security risk so its safety is a major problem in limiting the application of LiCoO<sub>2</sub> [13].

#### II) Lithium Nickel Cobalt Aluminum Oxide (LiNiCoAlO<sub>2</sub>):

The Lithium Nickel Cobalt Aluminum Oxide cathode has found relatively widespread commercial use. LiNiCoAlO<sub>2</sub> is a transition layered metal oxide cathode material. It has a 180-200 mAh/g specific capacity, 680-760 Wh/kg specific energy [8] [9]. It has long storage calendar life compared to conventional Co-based oxide cathode. Cycle life of LiNiCoAlO<sub>2</sub> is more than 500 cycles. It was reported that capacity fade may be severe at elevated temperature (40-70 °C) due to solid electrolyte interface growth & micro crack growth at grain boundaries [6] [7].



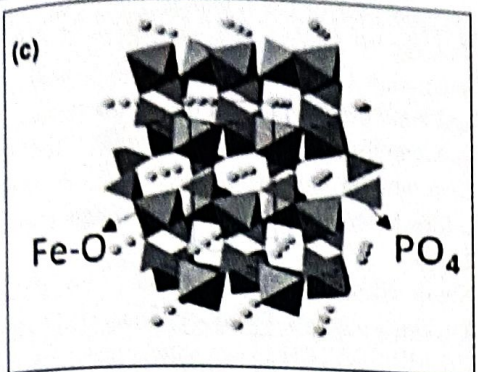


Fig 1. Crystal structure of a) layered LiCoO<sub>2</sub> b) spinel LiMn<sub>2</sub>O<sub>4</sub> & c) olivine LiFePO<sub>4</sub>

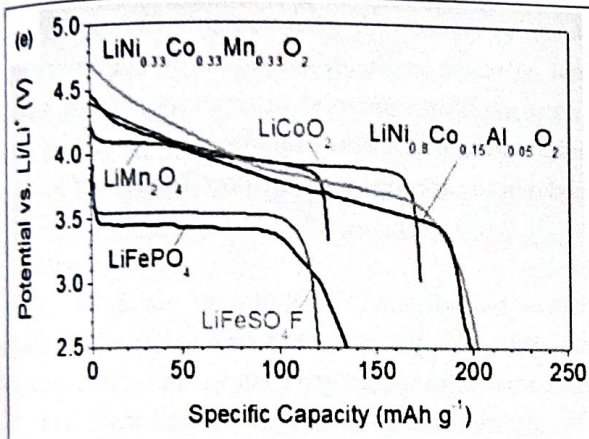


Fig 2. Discharge profiles of representative intercalation cathodes

### III) Lithium Manganese Cobalt Oxide (LiNiMnCoO<sub>2</sub>)

Lithium Manganese Cobalt Oxide is a layered cathode material. It has a 160-180mAh/g specific capacity, 610-650 Wh/kg specific energy & 3.8 average voltage range [8][9]. It has higher energy/power density, 1000-2000 cycle life & better safety than lithium cobalt oxide.

### IV) Lithium Manganese Oxide (LiMn<sub>2</sub>O<sub>4</sub>)

Lithium Manganese Oxide has a spinel crystal structure belong to Fd<sub>3</sub>M space group. Lithium Manganese Oxide offers a high operating voltage of 4.1 V with a practical specific capacity of 100-120 mAh/g. It has a 410-492 Wh/kg specific energy [8] [10]. Lithium Manganese Oxide has the advantage of low cost & environment friendly. It has a low cycle performance.

### V) Lithium Iron Phosphate (LiFePO<sub>4</sub>)

Lithium Iron Phosphate has an olivine crystal structure cathode material which is widely used in lithium ion battery. Specific capacity of Lithium Iron Phosphate is 150-160 mAh/g & Specific energy is 518-587 Wh/Kg. [8] [9]. It has a cycle life of more than 1500 times. It is low cost & environmentally friendly. Due to its compact structure, the material crystal lattice is small in stretching & deformation, which makes it difficult to de intercalate lithium ions, making the conductivity of Lithium Iron Phosphate very low [10].

Table 1. Properties of various cathode material used in commercial lithium ion batteries.

Cathode Material	Structure	Potential vs. Li/Li <sup>+</sup> , average V	Specific Capacity, mAh/g	Specific Energy, Wh/kg
LiCoO <sub>2</sub>	Layered	3.9	140	546
LiNiCoAlO <sub>2</sub>	Layered	3.8	180-200	680-760
LiNiMnCoO <sub>2</sub>	Layered	3.8	160-170	610-650
LiMn <sub>2</sub> O <sub>4</sub>	Spinel	4.1	100-120	410-492
LiFePO <sub>4</sub>	Olivine	3.45	150-160	518-587

#### Conclusion:

This paper summarizes the characteristics and limitation of different cathode materials for lithium ion batteries. In the development of lithium-ion batteries cathode material is the focus of research, because of the performance of Li-ion battery depend on performance cathode material. Cathode material is the key influence on the electrochemical performance of lithium ion batteries; also it determines the cost of preparing li-ion batteries.

Lithium ion batteries widely used in various portable devices and electric vehicles. Therefore the

cost, safety, energy density and cycle life of Li-ion batteries are still the focus of research. To overcome these challenges need a more research on development of cathode material with high energy density, low cost, better safety and space efficient.

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## Study of Ichthyofaunal diversity in Pravara River Basin Near Ashvi Kd, Dist. Ahmednagar (MS) India

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### Abstract:

Pravara River is one of the major tributaries of river Godavari and the source of capture fishery in this region. Revealed the Ichthyofaunal diversity, assemblage structure, distribution pattern, threat status, commercially important fishes. Fishes were collected during the one year, January-2020 to December-2021 for the study of diversity of fishes in river near bridge of Ashvi town Tal Sangamner District Ahmednagar. Present work find out total number of 09 species belonging to 9 genera, 6 orders and 7 families, 2 class of fishes. From the given investigation the Ichthyofaunal diversity of Pravara River near Ashvi basin is commercially and economically important for the fishery practice.

**Key Words:** River Pravara, biotic communities, Ichthyofaunal.

### Introduction :

Fresh water ecosystems represent an alternate avenue for culture fisheries. In India, not much progress has been made in the last few decades, though freshwater bodies and the potential to culture fish species are plenty. The freshwater sources in India are mainly contributing for augmenting the crop productivity in agriculture. Their proper utilization for aquaculture and management has not been given due consideration and attention (Usha *et. al*, 2006). Fishes constitute the most conspicuous component of inland aquatic fauna and rank very high as a source of proteins. Fishes are one of the important elements in the economy of many nations as they have been a stable item in the diet of many people. Fish constitutes a large portion of the biodiversity of aquatic ecosystems, and consequently, play significant roles in maintaining the aquatic ecosystem services of which benefit the human communities. Approximately 43% or 11,952 species of fish occupy freshwater ecosystems (Nelson, 2006), such as rivers, lakes, and swamps (Kottelat *et. al*, 1993). These freshwater fish contribute significantly to the livelihood of the people, especially in the developing world. However, the water where fish live is needed by many sectors, such as agriculture, energy, industries and domestic purposes, which lead to the competition for water uses among sectors, threatening the freshwater ecosystems which cause the decline of freshwater fish diversity. The fishes are the most important group of vertebrates influencing his life in the various ways. Millions of human being is suffer from hunger and malnutrition. They form the rich source of food and malnutrition, a meal to tide over the nutritional

difficulties of man in addition to serving as an important item of food they provided several products and byproduct. The fish provides fish oil used in medicinal and industrial in the life of human being. Several product and byproducts are also obtained from the different parts and waste part of fishes useful for feeding of animal manure for plantation. Fishes diet provided rich source of protein, carbohydrate and trace of several vitamin A, D and vitamin B- complex. The good taste and are easily defective and growth promoting value. The fishes show edible and economic value. Fishes of the fresh or inland water bodies of the Indian sub-continent have been a subject of study since last century; (Hamilton Buchanan, 1922, Talwar and Jhingran, 1991, Ghate and Wagh, 1991) River fishery in India is also important from social economic point of view assist as the potential providing employment to about millions people. Ahmednagar district in Maharashtra is concerned through there are minor and major rivers, which are contributing significantly to the total fresh water product so it gives attention on have systematic investigation on the diversity of fish fauna from these reservoirs as well as from rivers of this district; which is useful to get information on diversity of fishes from this river. Such a work at latter stage would provide the required database for further fishery prawn culture development and also beneficial to fishermen for catches the economical important fishes from river like Mula rivers of district Ahmednagar. Present investigation was undertaken to study the status of fishes Diversity from river Pravara near Ashvi kd Tal Sangamner District Ahmednagar. The river Pravara is



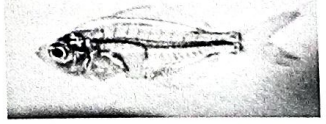


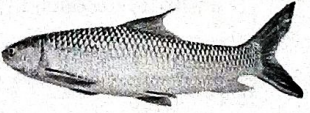
one of the tributary of river Godavari. Many workers worked on fish species richness of the different aquatic systems in India but only a few reports are from the Gandak River system. (Menon, 1974) has listed 141 species, belonging to 72 genera, 30 families and 11 orders from Ganga River system. India is one of the mega biodiversity hotspots in the world and occupies the ninth position in terms of freshwater mega biodiversity (Mittermeier *et. al*, 1997). Biodiversity conservation is one of the major issues throughout the world and aquatic environments are serious threats to both diversity and ecosystem stability and therefore, it is necessary to protect and develop research and systematic conservation planning to protect freshwater biodiversity (Lakra *et. al*, 2006). Various methods and Strategies have been proposed by many workers (Cowx, 1998.).In present study, Ichtyofaunal diversity of Pravara River has been documented.




**Material and Method :**

The Pravara River is a tributary of the Godavari River It is endowed with rich aquatic biodiversity of flora and fauna. The study was conducted to achieve the objective at Ashvi basin. Fish samples were collected from two sites Site 1- upper basin of Pravara River and Site 2- lower basin of Pravara River at Ashvi town. Fish collection was made with the help of local fisherman and the catches of fishers. The fishing was done by using different mesh size gill net, cast net, trap. After the collection of fish, the sampled specimens were immediately preserved in 10% formalin for identification. Before preservation photograph was taken with the help of digital camera. The identification was made with the help of taxonomic references (Srivastava, 1986, Talwar and Jhingran, 1991, Jayaram, 1999, Das *et. al.*, 2010). The conservation status of fishes based on conservation assessment and management plan for freshwater fishes of India (Molur and Walker, 1998).

**Result and Discussion :**

**Table 1 : Showing Fishes in River Pravara**

Sr. No	Class	Order	Family	Genus	Species	Image
1	<u>Actinopterygii</u>	<u>Anguilliformes</u>	<u>Anguillidae</u>	<i>Anguilla</i>	<i>bengalensis</i>	
2	<u>Actinopterygii</u>	<u>Cichliformes</u>	<u>Cichlidae</u>	<i>Oreochromis</i>	<i>niloticus</i>	
3	<u>Actinopterygii</u>	<u>Perciformes</u>	<u>Ambassidae</u>	<i>Parambassis</i>	<i>ranga</i>	
4	<u>Chondrichthyes</u>	<u>Rhinopristiformes</u>	<u>Pristidae</u>	<i>Anoxypristis</i>	<i>Propristis</i>	
5	<u>Actinopterygii</u>	<u>Siluriformes</u>	<u>Siluridae</u>	<i>Silurus</i>	<i>glanis</i>	
6	<u>Actinopterygii</u>	<u>Cypriniformes</u>	<u>Cyprinidae</u>	<i>Labeo</i>	<i>rohita</i>	

7	<u>Actinopterygii</u>	Cypriniformes	<u>Cyprinidae</u>	<i>Mrigala</i>	<i>cirrhinus</i>	
8	Actinopterygii	Cypriniformes	Cyprinidae	<i>Catla</i>	<i>catla</i>	
9	Actinopterygii	<u>Cypriniformes</u>	<u>Leuciscidae</u>	<i>Cyprinella</i>	<i>venusta</i>	

The present work confirms the occurrence of 9 species belongs to 6 orders, 9 genera and 7 families of fishes. The order cypriniformes was dominant with four fish species which are *Labeo rohita*, *Mrigala cirrhinus*, *Catla catla* and *Cyprinella venusta* to be followed the order silluriforms having one species which is *Silurus glanis* order Cichliformes with one species like *Oreochromis niloticus*, order perciformes with species *Parambassis ranga*, Rhinopristiformes with one species *Anoxypristis propristis* and Anguilliformes with one species *Anguilla bengalensis*. The work is supported by number of earlier studied on similar lines. (Das and Nath, 1966) were there first to describe 23 species of fishes belonging to seven families and 14 genera inhabiting the river Tawi and tributaries. (Das and Nath 1971) revised the fish fauna of Jammu and enlisted the presence of 27 fish species belong to eight families and fifteen genera in river Tawi and its tributaries. (Tilak 1971) surveyed river Tawi and its tributaries and reported the presence of 35 fish species in Inhabitancy River and Tawi and its Gadigarh tributary. (Malhotra et al. 1975). From the given investigation the Ichthyofaunal diversity of Pravara River near Ashvi basin is commercially and economically important for the fishery practice and such fish species are also useful for nutritive food purposes.

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# Qualitative Isolation, Identification of Steroids, Terpenoids, Alkaloids, Amino acids Bioactive Compound from Helicters Isora Fruit

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## Abstract:

Helicters isora fruit have been reported to use in bacterial infection, desyntry colic, Scabies, wound healing and gastropathy, the main objectives of this study was preliminary identification of these bioactive compound from Helicters isora fruit in this study investigation of various fraction different solvent of helicter isora fruit carried out with standard procedure. the qualitative test confirm that presence of steroids, terpenoids, aminoacids, Protein, alkaloids tannins etc. the Helicters isora a fruit is rich source of bioactive compound can used for treatment of various human diseases.

**Key Words:** Helicters Isora, Pharmacognostic, Murudsheng, Fruit.

## Introduction :

Medicinal plants are richest bioactive source of drug of the traditional system of medicine, modern medicine, Nutraceuticals, food supplements and chemical entities for synthetic drug. Helicters isora medicinal plant is used in several diseases. It is commonly known as Murudsheng or Marodphali etc. Murudsheng used as a folk medicine to treat diarrhoea, and constipation, of new born baby [1]. In the research, Aantioxidant, Hypolipidaemic, antibacterial and Antiplasmide activities, cardiac antioxidant, Antiperoxidative potency, brain Antiprotective potency, anticancer activity and wormical activity in the plant are reviwed. H.isora useful in fever cough, asthma, stomach infection, also useful for healing wounds and scabies [2].

Botanical name of Mrudsheng is Helicters isora, which belong to family Sterculiaceae. It is commonly known as Murudsheng in Marathi.

**Kingdom-** Plantae

**Class-** Angiosperm

**Sub class-** Eudicots

**Order-** Malvales

**Family-** Malvacea

**Sub Family-** Helicterideae

**Genus-** Helicters

**Species-** H.isora

## Material and Method :

Ferric Chloride, nitrobenzene and hydrochloric acid were used. Ethyl acetate, glacial acetic acid and sulphuric acid were used sodium nitro preside, petroleum ether and potassium iodide were used.

Fehling solution A and B, Lead acetate, Sodium hydroxide also used.

## Preparation of extract:

H.isora fruit were washed, dried, subject to size reduction to a course powder using an electric grinder the powder was extracted with different solvent ranging from non polar to polar (petroleum ether, benzene, chloroform, ethyl acetate, ethanol, and distilled water.

In Soxhlet apparatus, Theses extract were concentrated using evaporator all extract % yield also calculated. [3]

## Determination of moisture content and total solid content -

Fruit powder placed in beaker heated in water bath up to dryness cooled in desiccator and loss in weight recorded as moisture content.

Total solid = 100- moisture content % [4]

## Determination of ash content -

It contains inorganic radicals carbonate, phosphate silicates. The powder is ignited in silica crucible up to 450 C temperature the kept in desiccator total ash content is determined

Total ash = 100 (Z-X)/Y [4]

## 1) Test for alkaloids -

### Dragendorff test -

Take Extract in test tube add Dragendorff reagent (potassium bismuth iodide solution) gives brown red colour [5]

**Mayer test -** plant extract solution add potassium mercuric iodide solution gives cream colour solution [5]

**Hager test** – plant extract solution add a saturated solution of picric acid gives yellow precipitate [5]

**Wagner test** – plant extract solution add a solution of potassium iodide solution gives reddish brown ppt [5]

**Tannic acid test**- plant solution extract add a tannic acid gives Buff colour precipitate [6]

### 2) Test for amino acid

#### Millons test –

Plant extract solution add solution of Millons reagent it gives white precipitate to solution[7]

#### Ninhydrine test –

Plant extract solution add solution of Ninhydrine gives violet colour to solution [7]

### 3) Test for Steroids and Terpenoids

#### Salkowski test -

Plant extract solution add few drop of sulphuric acid red colour at lower layer solution [8]

#### Libermann- Burchard test -

Plant extract solution add few drop of acetic Anhydride boiled and cooled brown ring in solution [9]

Data and values of Helicters isora root.

Sr. No.	Parameters	% W/V
1	Moisture content	0.28
2	Solid contain	99.78
2	Ash content	4.00

### Determination of alkaloids, amino Acids, Steroids of Extract of Helicters Isora

Compound	Test name	Petroleum ether	Benzene	Chloroform	Ethyl acetate	Ethanol	distilled water
Alkaloids	Dragendorff test	+	+	+	+	+	+
	Mayer test	+	+	+	+	+	+
	Hager test	+	+	+	+	+	+
	Wagner test	+	+	+	+	+	+
Amino acid	Millons test	+	+	+	+	+	+
	Ninhydrin test	+	+	+	+	+	+
Steroids and terpenoids	Salkowski test-	+	+	+	+	+	+
	Libermann-Burchard test	+	+	+	+	+	+

### Steroids, terpenoids, Alkoloids, Amino acids Presnt in all type of Extract [10]

#### Characterization :

#### Antibacterial Test :

The zone of inhibition decreased with decrease in the concentration of extract. The highest zone of inhibition was exhibited in Helictus Isora with a zone diameter of 12mm at a concentration of 100 mg/ml, while the lowest zone of growth of inhibition as 5.05 mm at 50mg/ml concentration on Helicters Isora and the ethanol extract at 100 mg/ml and 70 mg/ml only showed minimal inhibition on Helicters Isora lower inhibition was recorded at the lower. concentrations (50mg/ml) used. The extract inhibit the growth of S. Typhy at any of the concentrations used. extract exhibited antibacterial effect on [11]

Inhibition Zone in diameter (mm)*			
Aqueous Leaf extract	50 mg/ml	70mg/ml	100mg/ml
Ecoli	5.016±0.14	09.06 ± 0.208	12 ± 0.13
S.typhy	7.016±0.14	10.06 ± 0.208	13 ± 0.13
S. aureus	-	9.02 ± 0.208	11 ± 0.16
E. aerogenes	-	8.01 ± 0.208	9 ± 0.03

#### Result and Discussion :

These fruit are employed in intestinal disturbance such as colic diarrhea. Fruit extract also showed similar antibacterial activity against the pathogen. Steriod present in fruit are employed as Anti-inflammatory activity. Alkaloids present in plants are responsible for antimicrobial property. Presence of Terpenoids responsible for Antidibetic activity.

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# A review on synthesis of pyrimidine derivatives and their biological activities

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Department of Chemistry, Arts, Commerce, Science and Computer Science College, Ashvi Kd.

## Abstract:

The present study aims at synthesis and biological activity of some pyrimidine derivatives 1,3,4-oxadiazoles are associated with broad spectrum of biological activities including antituberculosis, anticonvulsant, antiinflammatory, insecticidal, antifungal, analgesic and antitumor properties broad range of biological activities. 5- fluorouracil as anticancer; idoxuridine and trifluoridine as antiviral; zidovudine and stavudine as anti-HIV, trimethoprim, sulphamethiazine and sulphadiazine as antibacterial; sulphadoxin as antimalarial and antibacterial; minoxidil and prazosin as antihypertensive; barbiturates e.g. phenobarbitone as sedative, hypnotics and anticonvulsant; propylthiouracil as antihyroid; thionylamine as H1-antihistamine; and toxoflavin and fervennuline as antibiotics. Morpholine derivatives find their wide spectrum of antimicrobial activity and exhibit anthelmintic, bactericidal and insecticidal activity. This review give light up on biological activities of pyrimidine nucleus.

**Key Words:** Anti-inflammatory, sulphadoxin, sulphamethiazine, anticonvulsant, propylthiouraci.

## Introduction :

Pyrimidine is an aromatic heterocyclic organic compound similar to pyridine. The biological significance of the pyrimidine derivatives has led us to the synthesis of substituted pyrimidine. The synthesis of substituted pyrimidine and many detailed reviews have been appeared. The nitrogen containing fragment may be an amidine, urea, thiourea or guanidine and acetyl acetone serves as an excellent illustrative example in that it readily undergoes reaction with formamide, guanidine, urea or thioureas to produce the corresponding 4,6-dimethyl pyrimidine. The pyrimidine and its derivatives synthesized by using various methods. In continuation of this work, novel pyrimidine derivatives were synthesized by using the reported procedure for the first step.<sup>10,11</sup> These pyrimidine derivatives have a large number of reactive sites to produce the substituted derivatives.

## Synthesis and biological activities of some pyrimidine derivatives:

**5-Fluorouracil:** (5-FU) is a water-soluble pyrimidine analogue (Figure 1), used in cancer treatment that has been particularly effective in the treatment of colorectal cancer stomach, breast, and head and neck cancers. Despite its water solubility, this antitumor agent suffers from several drawbacks: the oral use of 5-FU exhibits a short plasma half-life (30 min) as a result of its rapid enzymatic metabolism, which demands continuous high doses that simultaneously lead to high toxicity, incomplete and non-uniform oral absorption, the development of drug resistance by tumor cells, and nonselective action against normal cells.

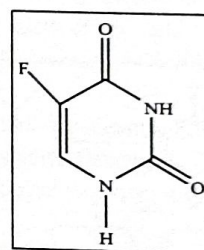
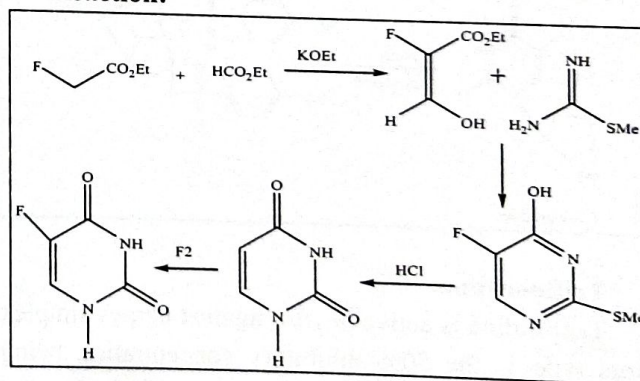


Figure 1: 5-Fluorouracil

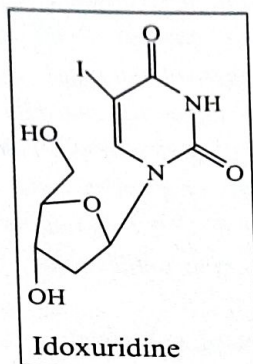
## Reaction:



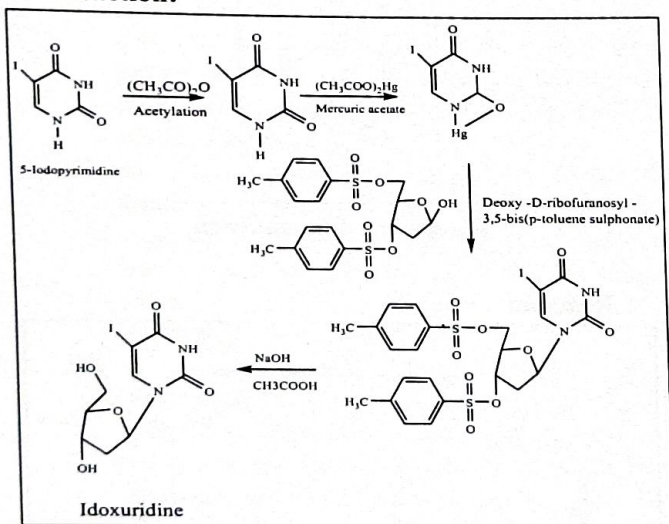
## Idoxuridine:

Idoxuridine (Figure 2) is an iodinated thymidine analogue that inhibits replication of various DNA viruses in vitro, particularly herpes viruses and poxviruses. Plaque production by most clinical isolates of HSV type 1 is inhibited by concentrations of 2 to 10 µg/ml. The median inhibitory concentration for two laboratory vaccinia strains was 0.2 to 0.3 µg/ml. Idoxuridine and cidofovir were reported to synergistically inhibit the growth of a vaccinia virus at concentrations that were not cytotoxic. The antiviral mechanism of action of idoxuridine is not completely defined, but the phosphorylated derivatives interfere

with various enzyme systems. The triphosphate inhibits viral DNA synthesis and is incorporated into viral and cellular DNA. Resistance to idoxuridine readily develops under laboratory conditions and occurs in viral isolates recovered from idoxuridine-treated patients with HSV keratitis.



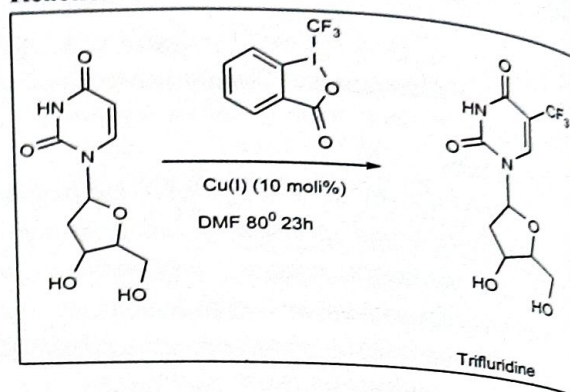
**Reaction:**



**Trifluoridine:**

Trifluoridine is active *in vitro* against herpes simplex virus type 1, the 50% inhibitory concentration being comparable with that for idoxuridine and lower than for vidarabine. Although most of a small number of type 2 strains of herpes simplex virus tested were inhibited by trifluoridine, their sensitivity relative to type 1 strains has yet to be clarified. Additional data on the *in vitro* susceptibility of adenovirus are also required, particularly as this virus can also cause keratoconjunctivitis in man. In *in vivo* studies a wide range of concentrations of trifluoridine (0.01 to 10mg/ml) effectively treated herpetic keratitis in rabbits.

**Reaction:**



**Drugs containing Pyrimidine nucleus:**

Sr.	Biological activity	pyrimidine derivatives
1	Anti- HIV activity	<p style="text-align: center;"><b>Zidovudine</b></p>
2	Antibiotics	<p style="text-align: center;"><b>Sulphadiazene</b></p>
3	Anti-Cancer	<p style="text-align: center;"><b>Thioguanine</b></p>
4	Fungicide	<p style="text-align: center;"><b>Ferimzone</b></p>

### Conclusion:

The reviewed pyrimidine derivatives has shown a wide spectrum of biological activities. The various substituted pyrimidine derivatives have been reported as anti-microbial, analgesic, antiviral, anti-inflammatory, anti-HIV, anti-tuberculosis, anti-tumour, anti-neoplastic, antimalarial, Diuretic, cardiovascular agents and also used as hypnotic drugs for the nervous system. Now a day's Pharmaceutical companies are produced pyrimidine derivatives drugs, such as marketed drugs are mentioned above. The versatile synthetic applicability and biological activity of these heterocyclic compounds will help the medicinal chemists to plan, organize and implement new approaches towards discovery of novel drugs.

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## Antioxidant Evaluation of Different Fractions of *Heterophragma quadricularae* (Roxb.) K Schum.

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### Abstract:

The extract obtained from *Heterophragma quadricularae* (Roxb.) K Schum. investigated as an antioxidant activity. The result of the present study suggested that the total phenolic and flavonoid content in bark was found in all different fractions of the extract, which is further proved by *in vitro* antioxidant studies. Extracts contains the significant amount of phenolic and flavonoids and exhibits the significant antioxidant activity through the scavenging of free radicals which participate in various pathophysiology of diseases including ageing.

**Key Words:** Antioxidant, *Heterophragma quadricularae*, Total antioxidant capacity.

### Introduction:

The free radicals (FR) and reactive oxygen species (ROS) are produced through frequent physiological and bio-chemical processes in the human body as by product (Halliwell and Gutteridge, 1990; Young and Woodside, 2001). ROS includes number of chemically reactive molecules derived from oxygen, such as hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>), superoxide (O<sub>2</sub><sup>-</sup>) and hydroxyl radical (OH) etc. Over production of such free radicals might leads to oxidative damage of biomolecules in the body (e.g. lipids, proteins, DNA) that can initiate number of diseases like atherosclerosis, diabetes mellitus, cancer, heart and neurodegenerative diseases etc. (Gulcin et al, 2002; Devasagayam et al, 2004). The harmful effect of the free radicals however, be blocked by antioxidant substances. Plants produce wide array of secondary metabolites such as phenolic compounds (phenolic acids, flavonoids, quinines and coumarins), nitrogen compounds (alkaloids and amines), vitamins, terpenoids and other secondary metabolites that have been proved for antioxidant activities (Zheng and Wang, 2001; Cai et al, 2003). Current research has confirmed that antioxidants are the most effective tools to eliminate free radicals which cause a oxidative stress and are possible protective agents that protect the cells from ROS and retard the progress of many diseases as well as lipid peroxidation (Tutour, 1990; Halliwell, 2000). Moreover, in recent past, the polyphenols have found to be beneficial as strong antioxidants (Vinson et al, 2002). In this context, evaluation of the polyphenols and antioxidant activity in

herbs has become important tool to understand the healing property of medicinal plants.

Natural products from the medicinal plants provide unlimited opportunities for new drugs because of the unparalleled accessibility of diverse chemical compounds (Parekh and Chanda, 2007). Cancer is a leading cause of death worldwide and it accounted for 7.9 million deaths (around 13% of all deaths) in 2007. It is also reported that more than 70% of all deaths of cancer occurred in middle and low income countries. Anticancer drugs from natural sources such as plants, marine organisms and microorganisms account approximately 60% of all anticancer drugs (Cragg and Newman, 2005). For thousands of years, human beings have used natural substances especially plants to relieve pain, heal wound and maintain health. Most of the bioactive components in medicinal plants probably evolved as chemical defence agents against infections or predators. Many plants were proved to be very important source of anticancer agents due to reducing risk factors of the cancer by consuming vegetables and fruits which are rich in naturally occurring phytochemicals including phenols and flavonoids (Han, 1994). Several investigations were carried out to evaluate anticancer properties of herbs and are being used as potent anticancer drugs (Balachandran and Govindarajan, 2005). In addition to antioxidant activity, the valuable health benefits of different medicinal plants were claimed as antibiotic agents against pathogenic microorganisms. There is also an urgent necessity to develop alternative antimicrobial drugs for the treatment of infectious diseases from

medicinal plants (Agrawal, et al, 1996). The antimicrobial compounds generated by these medicinal plants are active against plant and human pathogenic microorganisms (Lee et al, 1996).

They are efficient in the treatment of infectious diseases and at the same time mitigate many of the side effects namely, hypersensitivity, immune-suppression and allergic reactions that are often associated with synthetic antimicrobials (Cos et al, 2006). Moreover, there is an alarming prevalence of antibiotic resistance in bacteria of medical importance (Monroe and Polk, 2000). Keeping in view of the demand for developing natural antioxidants, the present study was aimed to investigate the antioxidant activities of different fractions isolated from methanol extract of *Heterophragma quadriculata*.

#### Material and Method :

##### 1. Sample Collection and Drying :

The fresh bark of plant specimen under present were collected from Kumshet village lies in Haishchandragarh range of Kalsubai Haishchandragarh wildlife sanctuary located in Akole tehsil of Ahmednagar district (MS), India. The plant specimen was identified at the Postgraduate department of Botany, Sangamner College, Sangamner, by using Floras (Cooke 1958; Pradhan and Singh, 1995). The collected plant material was washed with tap water and air dried on the laboratory bench for 15 days and then ground to fine powder using an electric mill.

##### 2. Extraction and Fractionation :

Dried and coarsely powdered bark (600 g) was extracted with methanol by cold extraction method (Harborne, 1984; Mahida and Mohan 2006). The mixture was kept for 24 hours with frequent shaking at room temperature to allow the extraction of compounds. Extract thus obtained was passed through filter paper and respective solvent was removed using rotavapor (at 40°C). The crude extract was further fractionated with increasing polar solvents as prescribed by Jamil et al., (2011). The extract was solubilized in water and sequential partition with petroleum ether (3×200 ml), ethyl acetate (3×200 ml), chloroform (3×200 ml), acetone (3×200 ml) and ethanol (3×200 ml) as indicated in Figure 1. Each fraction thus obtained was evaporated to dryness and subjected to polyphenolic determination and antioxidant activity.

##### 3. Determination of Polyphenols:

###### 3.1. Quantification of total flavonoids:

The total flavonoid content of the extracts was determined using prescribed method (Zou et al, 2004).

In brief; 0.1 ml of sample solution (1mg/ml) was mixed with 2ml of distilled water and subsequently with 0.15 ml of 5% NaNO<sub>2</sub> solution. After 6 min of incubation, 0.15 ml of 10% AlCl<sub>3</sub> solution was added and then allowed to stand for 6 min, followed by adding 2ml of 4% NaOH solution to the mixture. Immediately after that water was added to the sample to bring the final volume to 5 ml, the mixture was thoroughly mixed and allowed to stand for another 15 min. The absorbance of the mixture was determined at wavelength 510 nm. The total flavonoid content was expressed in microgram of rutin equivalents per milligrams of extract.

###### 3.2. Quantification of total Phenolic:

The total phenol content of the extracts was analyzed using Folin-Ciocalteu method (Cliffe et al., 1994). In brief, the extracts (0.2 ml of 1 mg/ml) were mixed with 2.5 ml of distilled water, 0.5 ml of the Folin-Ciocalteu reagent and 1.0 ml of Na<sub>2</sub>CO<sub>3</sub> reagent were added to the mixture. They were then incubated at room temperature for 30 min. The absorbance the mixture was measured spectrophotometrically (Systronic UV-VIS India) at wavelength 765 nm. The total phenol content was expressed in microgram gallic acid equivalents per milligram of extract. Triplicate measurements were taken and data were presented as mean ± standard deviation (Mean±SD).

##### 4. In Vitro Antioxidant Activity:

###### 4.1. Reducing Power Assay:

The reducing power of extracts was evaluated according to the method described by Yen and Chen (1995) with slight modification. Briefly, different amounts of extracts (100-700µg/ml) were incubated with 2.5 ml of phosphate buffer (0.2 M, pH 6.6) and 2.5 ml of 1% potassium ferricyanide [K<sub>3</sub>Fe (CN) 6] at 50°C for 20 min. The reaction was terminated by adding 2.5 ml of 10% TCA solution and the mixture was centrifuged at 3000 rpm for 10 min. The supernatant (1.0 ml) was mixed with 2.5 ml of distilled water and 1.0 ml of 0.1% ferric chloride (FeCl<sub>3</sub>) solution and absorbance was measured at 700 nm after incubation at room temperature for 10 min. Quercetin and Butylated Hydroxy Toluene (5-50 µg/ml) were used as positive control and experiments were performed in triplicate.

###### Percentage scavenging activity :

$$= \frac{A_{\text{control}} - A_{\text{test}}}{A_{\text{control}}} \times 100$$

Where A<sub>control</sub> is the absorbance of the control. A<sub>test</sub> is the absorbance in the presence of the sample.

### 4.2. Total Antioxidant Capacity:

0.4 ml of extract (1 mg/ml) dissolved in water was combined in test tube with 4 ml of the reagent solution (0.6 M sulphuric acid, 28 mM sodium phosphate and 4 mM ammonium molybdate). The tubes were capped and incubated at 95°C for 90 min. After cooling to room temperature, the absorbance was measured at 695 nm. The antioxidant activity was expressed as the number of equivalents of ascorbic acid (Preito et al., 1999; Shirwaikar et al., 2004).

### 5. Statistical Analysis:

All assays were carried out in triplicates and results were analyzed statistically using one way analysis of variance (ANOVA) followed by Dennett's multiple comparison test and expressed as mean ± SD. Statistical analysis was performed using Graph Pad (Graph Pad prism 5.00 for Windows, San Diego California USA).

### Result & Discussion:

#### 1. Fraction Yield:

The percentage yield of different fractions of methanol bark extract of *Heterophragma quadricularae* are given in Table 1 and Figure 1. The fractions isolated from the bark in the following order Pet ether > Chlo > Ethyl Acetate > Acetone. The high amount fraction is isolated in acetone fraction of the bark.

Table : 1 Percentage yield of different solvent fractions.

Fraction	Initial wt. (gm.)	Final wt. (gm.)	Difference (gm.)	Percent age
Pet ether fraction (HQPE1)	43.412	43.767	0.355	0.059
Chlo fraction (HQCh2)	46.314	46.441	0.127	0.021
Ethyl Ace fraction (HQEA3)	41.602	42.346	0.736	0.122
Acetone fraction (HQAc4)	45.020	61.950	16.230	2.821

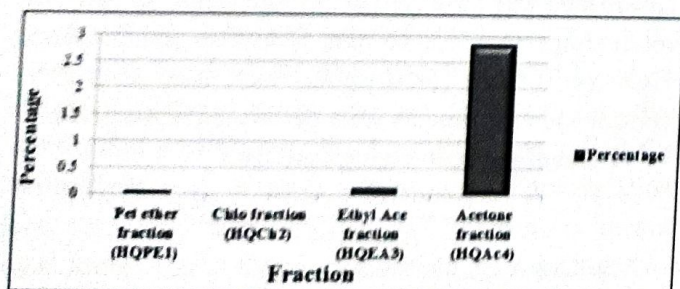


Fig. 1 : Percentage yield of different leaf solvent fraction of *Heterophragma quadricularae*.

### 2. Antioxidant Activity :

Reducing power is another assay to measure the overall antioxidant prospective of extract. Plant antioxidants convert the Fe + 3/ ferric cyanide complex to ferrous form by contributing one electron with subsequent turning of yellow color reaction solution to green. Intensity of color change is proportional to the concentration of antioxidant present in test sample. Reducing capability can be monitored spectrophotometrically by increase in absorbance at 700 nm. Previous data reported that reducing ability actually responsible for antioxidant activity by donating hydrogen atom that in turn will break the free radical chain. Increase in absorbance by all fractions of the plant was an indication of strong antioxidant potential of *Heterophragma quadricularae*.

Table : 2 Reducing power absorbance of all the fractions for different concentration.

Concentration (µg)	HQPEF	HQCh	HQEAF	HQAF
0	0	0	0	0
100	0.007	0.059	0.065	0.128
200	0.034	0.073	0.088	0.162
300	0.047	0.121	0.140	0.157
400	0.066	0.165	0.179	0.241
500	0.085	0.245	0.256	0.249

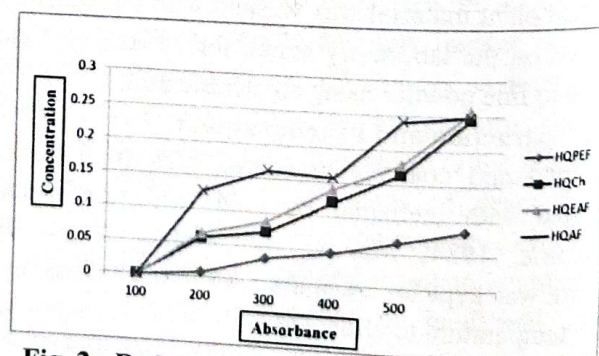


Fig. 2 : Reducing power absorbance of all the fractions for different concentration.

### Conclusion :

This study was designed to investigate the phenolic content, antioxidant effect of fractions isolated from bark extract of *Heterophragma quadricularae*. The antioxidant activity of the extracts correlated well with the total phenolic contents and indicated that phenolic compounds are dominant contributors to the antioxidant activity of the extracts. Overall, all the fractions isolated from methanol extract had concentration dependent antioxidant activity.

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