Diploma Engineering

Laboratory Manual

Essentials of Digital Marketing

4341601

Information Technology – 4th Semester

Enrolment No	
Name	
Branch	
Academic Term	
Institute	

Directorate Of Technical Education

Gandhinagar - Gujarat

DTE's Vision:

- To provide globally competitive technical education;
- Remove geographical imbalances and inconsistencies;
- Develop student friendly resources with a special focus on girls' education and support to weaker sections;
- Develop programs relevant to industry and create a vibrant pool of technical professionals.

DTE's Mission:

Institute's Vision:

Institute's Mission:

Department's Vision:

Department's Mission:

<u>Certificate</u>

This is to certify that Mr./Ms …………………………………………………………………. Enrollment No. ……………………. of ……………. Semester of *Diploma in*………………………………………………………………………………of ……………………………………………………………. (GTU Code) has satisfactorily completed the term work in course …………………………………………………………………for the academic year: ………………… Term: Odd/Even prescribed in the GTU curriculum.

Place:…………….

Date: …………………..

Signature of Course Faculty   **Head of the Department**

Preface

The primary aim of any laboratory/Practical/field work is enhancement of required skills as well as creative ability amongst students to solve real time problems by developing relevant competencies in psychomotor domain. Keeping in view, GTU has designed competency focused outcome-based curriculum -2021 (COGC-2021) for Diploma engineering programmes. In this more time is allotted to practical work than theory. It shows importance of enhancement of skills amongst students and it pays attention to utilize every second of time allotted for practical amongst Students, Instructors and Lecturers to achieve relevant outcomes by performing rather than writing practice in study type. It is essential for effective implementation of competency focused outcome- based Green curriculum-2021. Every practical has been keenly designed to serve as a tool to develop & enhance relevant industry needed competency in each and every student. These psychomotor skills are very difficult to develop through traditional chalk and board content delivery method in the classroom. Accordingly, this lab manual has been designed to focus on the industry defined relevant outcomes, rather than old practice of conducting practical to prove concept and theory.

By using this lab manual, students can read procedure one day in advance to actual performance day of practical experiment which generates interest and also, they can have idea of judgement of magnitude prior to performance. This in turn enhances predetermined outcomes amongst students. Each and every Experiment /Practical in this manual begins by competency, industry relevant skills, course outcomes as well as practical outcomes which serve as a key role for doing the practical. The students will also have a clear idea of safety and necessary precautions to be taken while performing experiment.

This manual also provides guidelines to lecturers to facilitate student-cantered lab activities for each practical/experiment by arranging and managing necessary resources in order that the students follow the procedures with required safety and necessary precautions to achieve outcomes. It also gives an idea that how students will be assessed by providing Rubrics.

This manual provides guidelines on how to perform different digital marketing practical, how to analyze different parameters of web pages using tools available and guides students with the steps.

Programme Outcomes (POs):

1. **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the *engineering* problems.

2. **Problem analysis**: Identify and analyse well-defined *engineering* problems using codified standard methods.

3. **Design/ development of solutions:** Design solutions for *engineering* well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

4. **Engineering Tools, Experimentation and Testing:** Apply modern *engineering* tools and appropriate technique to conduct standard tests and measurements.

5. **Engineering practices for society, sustainability and environment**: Apply appropriate technology in context of society, sustainability, environment and ethical practices.

6. **Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

7. **Life-long learning:** Ability to analyze individual needs and engage in updating in the context of technological changes *in field of engineering.*

Practical Outcome - Course Outcome matrix

Course Outcomes (COs):

a. Explain the role of Digital Marketing in the rapidly changing digital landscape.

b. Apply Search Engine Optimization techniques in digital marketing.

c. Use website analytics to improve the effectiveness of advertisement and conversion rate.

d. Create Digital Marketing Campaigns using various social media marketing platforms and measure their effectiveness.

e. Apply Search engine marketing techniques for creating effective advertising campaigns

S. No.	Practical Outcome/Title of experiment	CO1	CO2	CO3	CO4	CO5
1.	Prepare Report on P.O.E.M. framework and its benefits in digital marketing.	✓				
2.	Analyze Amazon, Flipkart, Snapdeal, or any three e-commerce sites for the following: (i) Do a comparative analysis of their product offerings (ii) Do a comparative analysis of their landing pages (iii) Do a comparative analysis of their call to action (CTA) (iv) Do a comparative analysis of website loading and website navigation (v) Find the rankings of Amazon, Flipkart, Snapdeal using Alexa.com		✓			
3.	Use any SERP simulator tool to check SERP snippet preview of any website for title tag and meta tag descriptions. (https://popupsmart.com/tools/serp-preview-tool/)		✓			
4.	Pick up the website name of any two top TV brands you like and conduct an SEO audit (with any of the free available audit sites) on key On-Page and Off-Page impact parameters. Prepare a report on your key observations		✓			
5.	Pick up the website name of any two top TV brands you like and conduct an SEO audit (with any of the free available audit sites) on key On-Page and Off-Page impact parameters. Prepare a report on your key observations		✓			

No.	Task					
6.	Use the Google Tag Manager to insert the tracking code in the sample web pages of your website.			✓		
7.	Use the Google Tag Manager to insert the tracking code in the sample web pages of your website.			✓		
8.	Create a Facebook ad campaign and analyze the performance of your Facebook ad accounts and campaigns with AdsReport. (https://adsreport.agorapulse.com/home)				✓	
9.	Compare your Facebook page performance pages using the Barometer Facebook page analytics tool or other similar tools (https://barometer.agorapulse.com/home)				✓	
10.	Design infographics, ads, covers, and posts for social networks using Canva tool.				✓	
11.	Create an engaging video using Loom or any other tool and share it on social media. (https://www.loom.com/)				✓	
12.	Create a proxy YouTube ad and measure the success using YouTube Analytics				✓	
13.	Create an Email marketing campaign for the blood donation camp at your institute. You are required to identify the ideal target audience and develop proper email messages which will increase open email rate, engagement, and ultimately registration and attendance to the event. You can use MailChimp, sender, or any of the available tools for designing and testing campaign success					✓
14.	Create an Email marketing campaign for the blood donation camp at your institute. You are required to identify the ideal target audience and develop proper email messages which will increase open email rate, engagement, and ultimately registration and attendance to the event. You can use MailChimp, sender, or any of the available tools for designing and testing campaign success					✓

15.	Create a proxy ad campaign using Google Ads and measure the effectiveness.					✓
16.	Optimize your Google Ad campaign results with the use of the Google Analytics tool, proper keyword selections, Ad groups, and bid adjustments.					✓

Industry Relevant Skills

The following industry relevant skills are expected to be developed in the students by performance of experiments of this course.

1. Technical skills: Students should develop technical skills related to the tools and platforms used in digital marketing, such as Google Analytics, social media platforms, email marketing tools etc.
2. Analytical skills: Students should learn how to analyze data and make data-driven decisions to improve digital marketing performance. This includes skills in data analysis, reporting, and measurement.
3. Creative skills: Students should develop creative skills related to the development of engaging content and effective digital marketing campaigns. This includes skills in graphic design, video production etc.
4. Communication skills: Students should develop strong communication skills to effectively convey their ideas and insights. This includes skills in designing, presentation, writing etc.

Overall, digital marketing lab manual are designed to help students develop a range of technical, analytical, creative and communication skills that are highly valued by employers in the digital marketing industry. By gaining these skills, students can better position themselves for success in their careers.

Guidelines to Course Faculty

1. Course faculty should demonstrate experiment with all necessary implementation strategies described in curriculum.
2. Course faculty should explain industrial relevance before starting of each experiment.
3. Course faculty should involve & give opportunity to all students for hands on experience.
4. Course faculty should ensure mentioned skills are developed in the students by asking.
5. Utilise 2 hrs of lab hours effectively and ensure completion of write up with quiz also.
6. Encourage peer to peer learning by doing same experiment through fast learners.

Instructions for Students

1. Organize the work in the group and make record of all observations.
2. Students shall develop maintenance skill as expected by industries.
3. Student shall attempt to develop related hand-on skills and build confidence.
4. Student shall develop the habits of evolving more ideas, innovations, skills etc.
5. Student shall refer technical magazines and data books.
6. Student should develop habit to submit the practical on date and time.
7. Student should well prepare while submitting write-up of exercise.

Continuous Assessment Sheet

Name: Enrolment No: Term:

Sr no	Practical Outcome/Title of experiment	Page	Date	Marks (25)	Sign
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Date: ……………

Practical No.1: Prepare Report on P.O.E.M. framework and its benefits in digital marketing.

A. **Objective:** The objective of this practical is to make student understand about P.O.E.M. framework, its benefits and its challenges in digital marketing.

B. **Expected Program Outcomes (POs):**

1. **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the *engineering* problems.

2. **Problem analysis**: Identify and analyse well-defined *engineering* problems using codified standard methods.

7. **Life-long learning:** Ability to analyze individual needs and engage in updating in the context of technological changes *in field of engineering.*

C. **Expected Skills to be developed based on competency:**

This practical is expected to develop the following skills for the competency: **Explain the role and importance of digital marketing in a rapidly changing world.**

  a. Analyze and identify a suitable approach for the problem-solving.
  b. Report Writing Skill

D. **Expected Course Outcomes (Cos)**

Explain the role of Digital Marketing in the rapidly changing digital landscape.

E. **Practical Outcome (PRo)**

Prepare Report on P.O.E.M. framework and its benefits in digital marketing.

F. **Expected Affective domain Outcome (ADos)**

Work as a leader/team member.

G. **Prerequisite Theory:**

The POEM framework is a business model that marketers use as a reference for their digital marketing strategies. You can use the POEM framework for various digital marketing practices, such as social media management, SEO, SEM, etc.

H. Experimental set up/ Program Logic-Flow chart:

NA

I.   Resources/Equipment Required

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
_1_	Laptop/Desktop with Internet Connection	Any processor above i3 and any operating system	1

J.   Safety and necessary Precautions followed

a. Keep all computers in the lab area clean and free from dust.
b. Ensure all computers are properly grounded and plugged into surge protectors.
c. Use antivirus software to protect computers from malicious software and viruses.
d. Provide clear instructions and demonstration on how to use the tool.
e. Establish a safe and comfortable environment for students to work in.
f. Refrain from using computers in the lab for activities that could be deemed as inappropriate or illegal.

K. Procedure to be followed/Source code:

a. Explain what is POEM.
b. Draw the POEM framework.
c. Describe all the blocks of diagram.
d. Write benefits of all media in POEM framework.
e. Write challenges of all media in POEM framework.

L.   Observations and Calculations/Input-Output:

NA

M.   Interpretation of Results
NA

N.   Conclusion:

NA

O.   Practical related Quiz.
1. What is the full form of P.O.E.M.?
2. Which are different paid media?

3. What are the benefits of Earned media?
4. Which is the preferable media for organization?

P. References / Suggestions

a. https://www.oom.com.sg/poem-in-digital-marketing-what-is-it-why-must-you-use-poem/
b. https://www.ontomatrix.com/introduction-to-poem-model
c. https://opentextbc.ca/foundationsdigitalmarketing/chapter/introduction-to-digital-marketing/
d. https://www.youtube.com/watch?v=813mH3S5Ptw
e. https://www.youtube.com/watch?v=jLbVskE0ST0

Q. Graph

NA

R. Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	

C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good (5-4 marks):Properly explained solution/ Result/ Output	
		Satisfactory (3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement (0-1 marks): Very less explained solution/ Result/ Output	
C5: Prepare a report/presentation for the given problem	20 %	Good (5-4 marks):Properly prepared report/presentation for given problem	
		Satisfactory (3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement (0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

<div align="right">

Date: ……………
</div>

Practical No. 2: Analyze Amazon, Flipkart, Snapdeal, or any three e-commerce sites for the following: (i) Do a comparative analysis of their product offerings (ii) Do a comparative analysis of their landing pages (iii) Do a comparative analysis of their call to action (CTA) (iv) Do a comparative analysis of website loading and website navigation (v) Find the rankings of Amazon, Flipkart, Snapdeal using Alexa.com

A. Objective:

The goal of this lab practical is to give students the opportunity to analyze and compare different parameters of different e-commerce websites.

B. Expected Program Outcomes (POs)

1. **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the *engineering* problems.

2. **Problem analysis**: Identify and analyse well-defined *engineering* problems using codified standard methods.

4. **Engineering Tools, Experimentation and Testing:** Apply modern *engineering* tools and appropriate technique to conduct standard tests and measurements.

7. **Life-long learning:** Ability to analyze individual needs and engage in updating in the context of technological changes *in field of engineering.*

C. Expected Skills to be developed based on competency:

This practical is expected to develop the following skills for the competency: **Explain the role and importance of digital marketing in a rapidly changing world.**
   a. Understanding of how each e –commerce site uses different parameters to grow their popularity.
   b. Ability to effectively analyze different parameters.

D. Expected Course Outcomes (Cos)

CO b): Apply Search Engine Optimization techniques in digital marketing.

E. Practical Outcome (PRo)

Analyze Amazon, Flipkart, Snapdeal, or any three e-commerce sites for the following: (i) Do a comparative analysis of their product offerings (ii) Do a comparative analysis of their landing pages (iii) Do a comparative analysis of their call to action (CTA) (iv) Do a comparative analysis of website loading and website navigation (v) Find the rankings of Amazon, Flipkart, Snapdeal using Alexa.com

F. Expected Affective domain Outcome (ADos)

Can work as a leader/team member
Can observe different parameters by comparative analysis

G. Prerequisite Theory:

E-commerce, Basic terminology of SEO

H. Experimental set up/ Program Logic-Flow chart:

NA

I. Resources/Equipment Required

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer	Any computer with latest configuration with internet access	1

J. Safety and necessary Precautions followed:

a. Keep all computers in the lab area clean and free from dust.
b. Ensure all computers are properly grounded and plugged into surge protectors.
c. Use antivirus software to protect computers from malicious software and viruses.
d. Establish a safe and comfortable environment for students to work in.
e. Refrain from using computers in the lab for activities that could be deemed as inappropriate or illegal.

K. Procedure to be followed/Source code:

a. Go to any 3 e-commerce websites.

b. Compare their product offerings and list down domains in which they have products. (For e.g., electronics, clothing, books, etc.)

c. Compare their landing page. (For e.g., Notice how user-friendly navigation they provide? how much ads are displayed in their web-page, etc.)

d. Compare their call to action (For e.g., how prominent and clear call-to-action buttons all three websites have? such as "Buy Now," "Add to Cart," and "Check Out.")

e. Compare website loading and website navigation (For e.g., compare their filters, layout of website, navigation time & loading time, etc.)

f. To find rankings of website, go to any Alexa rank checker website or go to https://www.rankwatch.com/free-tools/alexa-rank-checker.

g. Type URL of website to find their global rank.

h. Prepare a report of above comparative analysis.

L.   Observations and Calculations/Input-Output:

 Input: Any 3 e-commerce websites

 Observations/Output: Product Offerings, landing page, call to actions, website loading and navigation, ranking

M. Interpretation of Results
NA

N.   Conclusion

 NA

O. Practical related Quiz.
a. Which are popular e-commerce websites?
b. What is landing page?
c. What is global rank?
d. Define reach for any website.

P. References / Suggestions

a. https://www.rankwatch.com/free-tools/alexa-rank-checker
b. https://www.diva-portal.org/smash/get/diva2:1639060/FULLTEXT02
c. https://publications.anveshanaindia.com/wp-content/uploads/2016/09/A-COMPARATIVE-STUDY-BETWEEN-FLIPKART-AND-AMAZON-INDIA.pdf
d. https://www.youtube.com/watch?v=DU6V43iBFlE
e. https://www.indiaretailing.com/2016/11/07/amazon-vs-flipkart-vs-snapdeal-won-festive-sales-war/

Q. Graph

NA

R. Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	

C4: Interpret the result and conclusion	20 %	Good (5-4 marks): Properly explained solution/ Result/ Output	
		Satisfactory (3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement (0-1 marks): Very less explained solution/ Result/ Output	
C5: Prepare a report/presentation for the given problem	20 %	Good (5-4 marks): Properly prepared report/presentation for given problem	
		Satisfactory (3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement (0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No. 3: Use any SERP simulator tool to check SERP snippet preview of any website for title tag and meta tag descriptions.

A. Objective:

The goal of this lab practical is to make students aware about title tag and meta tag descriptions. Also, this practical aim to make student to use the SERP tool to check the snippet preview.

B. Expected Program Outcomes (POs)

1. **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the *engineering* problems.

3. **Design/ development of solutions:** Design solutions for *engineering* well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

4. **Engineering Tools, Experimentation and Testing:** Apply modern *engineering* tools and appropriate technique to conduct standard tests and measurements.

6. **Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

C. Expected Skills to be developed based on competency:

This practical is expected to develop the following skills for the competency: 'Demonstrate advanced practical skills in common digital marketing tools and online platforms.'
  i. Understanding of how to use the SERP simulator tool to check preview of SERP snippet.
  ii. Ability to develop skills in working with SERP simulator tools.
  iii. Observation of different website's SERP snippet preview.

D. Expected Course Outcomes (Cos)

CO 2): Apply Search Engine Optimization techniques in digital marketing.

E. Practical Outcome (PRo)

Use any SERP simulator tool to check SERP snippet preview of any website for title tag and meta tag descriptions.

F. Expected Affective domain Outcome (ADos)

Work as a leader/team member.

G. Prerequisite Theory:

SEO Page title, SEO Meta description, SEO meta keywords

H. Experimental set up/ Program Logic-Flow chart:

NA

I. Resources/Equipment Required

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer	Any computer with latest configuration with internet access	1
2	Any SERP Simulator tool	For e.g. https://popupsmart.com/tools/serp-preview-tool/	

J. Safety and necessary Precautions followed:

a. Keep all computers in the lab area clean and free from dust.
b. Ensure all computers are properly grounded and plugged into surge protectors.
c. Use antivirus software to protect computers from malicious software and viruses.
d. Provide clear instructions and demonstration on how to use the tool.
e. Establish a safe and comfortable environment for students to work in.
f. Refrain from using computers in the lab for activities that could be deemed as inappropriate or illegal.

K. Procedure to be followed/Source code:

To use the SERP Preview Tool of Popupsmart, follow the instructions below;

a. Enter your meta title,

b. Enter your meta description,

c. Paste the URL of the relative webpage,

d. Select a word that you wish to make bold.

Then the tool generates a pre virtual search result based on the input you have provided.

L.   Observations and Calculations/Input-Output:

Input: Title tag, Meta tag description Observations

Output/Observations: Take the 2-3 input and observe the SERP snippet preview of each input.

M.   Interpretation of Results
NA

N.   Conclusion

NA

O.   Practical related Quiz.
a. How many characters a search engine shows for meta title?
b. What is the usual optimal meta description length?
c. Why is the title tag important?
d. List any 3-4 instructions to write optimized meta descriptions.

P.   References / Suggestions

a. https://popupsmart.com/tools/serp-preview-tool/
b. https://www.portent.com/serp-preview-tool/
c. https://mangools.com/serpchecker/features/serp-analysis-tool/

Q.   Graph: NA

R.   Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	

C4: Interpret the result and conclusion	20 %	Good (5-4 marks): Properly explained solution/ Result/ Output	
		Satisfactory (3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement (0-1 marks): Very less explained solution/ Result/ Output	
C5: Prepare a report/presentation for the given problem	20 %	Good (5-4 marks): Properly prepared report/presentation for given problem	
		Satisfactory (3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement (0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No. 4: Design Pick up the website name of any two top TV brands you like and conduct an SEO audit (with any of the free available audit sites) on key On-Page and Off-Page impact parameters. Prepare a report on your key observations.

A. Objective:

The goal of this lab practical is to give students the opportunity to analyze different parameters of SEO audit by any SEO audit tool.

B. Expected Program Outcomes (POs)

1. **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the *engineering* problems.

2. **Problem analysis**: Identify and analyse well-defined *engineering* problems using codified standard methods.

4. **Engineering Tools, Experimentation and Testing:** Apply modern *engineering* tools and appropriate technique to conduct standard tests and measurements.

7. **Life-long learning:** Ability to analyze individual needs and engage in updating in the context of technological changes *in field of engineering.*

C. Expected Skills to be developed based on competency:

This practical is expected to develop the following skills for the competency: 'Demonstrate advanced practical skills in common digital marketing tools and online platforms.'
   a. Understanding of how to use the Semrush platform for SEO audit.
   b. Ability to effectively analyze different parameters.

D. Expected Course Outcomes (Cos)

CO b): Apply Search Engine Optimization techniques in digital marketing.

E. Practical Outcome (PRo)

Pick up the website name of any two top TV brands you like and conduct an SEO audit (with any of the free available audit sites) on key On-Page and Off-Page impact parameters. Prepare a report on your key observations.

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F. Expected Affective domain Outcome (ADos)

- Can work as a leader/team member
- Can observe different parameters by comparative analysis

G. Prerequisite Theory:

On-page SEO, Off-page SEO

H. Experimental set up/ Program Logic-Flow chart:

NA

I. Resources/Equipment Required

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer	Any computer with latest configuration with internet access	1
2	Semrush account		

J. Safety and necessary Precautions followed:

a. Keep all computers in the lab area clean and free from dust.
b. Ensure all computers are properly grounded and plugged into surge protectors.
c. Use antivirus software to protect computers from malicious software and viruses.
d. Establish a safe and comfortable environment for students to work in.
e. Refrain from using computers in the lab for activities that could be deemed as inappropriate or illegal.

K. Procedure to be followed/Source code:

a. Go to https://www.semrush.com/features/
b. Click on "Get started for free".
c. Create your account and login.
d. Enter any TV brand domain name in search bar (you have to perform it for 2 different TV brands site.)
e. Observe and compare the following for both the sites:

       (a) Domain overview (b) traffic analytics (c) Keyword Gap (d) Backlink Gap (e) Keyword overview (f) Position tracking (g) site audit

    f. Observe the results and prepare a report

L.   **Observations and Calculations/Input-Output:**

    Input: Any 2 website URL

    Observations/Output: Domain overview (b) traffic analytics (c) Keyword Gap (d) Backlink Gap (e) Keyword overview (f) Position tracking (g) site audit

M. Interpretation of Results
    NA

N.   **Conclusion**

    NA

O. Practical related Quiz.
    a. What is page rank?
    b. What is link popularity?
    c. What is SEO directory submission?

P. References / Suggestions

    a. https://www.semrush.com/projects/
    b. https://search.google.com/search-console/welcome
    c. https://www.javatpoint.com/seo-tutorial
    d. https://www.youtube.com/watch?v=SIR4Kn62bLQ
    e. https://www.youtube.com/watch?v=vdFm0J-tizI

Q. Graph: NA

R. Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the	

		Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good (5-4 marks): Properly explained solution/ Result/ Output	
		Satisfactory (3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement (0-1 marks): Very less explained solution/ Result/ Output	

C5: Prepare a report/presentation for the given problem	20 %	Good (5-4 marks): Properly prepared report/presentation for given problem	
		Satisfactory (3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement (0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No. 5: Conduct an audit of any website for performance, accessibility, progressive web apps, and SEO using Lighthouse Tool or other similar tools

A. Objective:

The goal of this lab practical is to give students the opportunity to analyze different parameters of SEO audit by any SEO audit tool.

B. Expected Program Outcomes (POs)

1. **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the *engineering* problems.

2. **Problem analysis**: Identify and analyse well-defined *engineering* problems using codified standard methods.

4. **Engineering Tools, Experimentation and Testing:** Apply modern *engineering* tools and appropriate technique to conduct standard tests and measurements.

7. **Life-long learning:** Ability to analyze individual needs and engage in updating in the context of technological changes *in field of engineering.*

C. Expected Skills to be developed based on competency:

This practical is expected to develop the following skills for the competency: 'Demonstrate advanced practical skills in common digital marketing tools and online platforms.'
   a. Understanding of how to use the Lighthouse or any other platform for SEO audit.
   b. Ability to effectively analyze different parameters.

D. Expected Course Outcomes (Cos)

CO b): Apply Search Engine Optimization techniques in digital marketing.

E. Practical Outcome (PRo)

Conduct an audit of any website for performance, accessibility, progressive web apps, and SEO using Lighthouse Tool or other similar tools

F. Expected Affective domain Outcome (ADos)

Can work as a leader/team member

Can observe different parameters by comparative analysis

G. Prerequisite Theory:

On-page SEO, Off-page SEO

H. Experimental set up/ Program Logic-Flow chart

NA

I. Resources/Equipment Required

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer	Any computer with latest configuration with internet access	1
2	Lighthouse tool/ any other SEO tool		

J. Safety and necessary Precautions followed:

a. Keep all computers in the lab area clean and free from dust.
b. Ensure all computers are properly grounded and plugged into surge protectors.
c. Use antivirus software to protect computers from malicious software and viruses.
d. Establish a safe and comfortable environment for students to work in.
e. Refrain from using computers in the lab for activities that could be deemed as inappropriate or illegal.

K. Procedure to be followed/Source code:

a. Download Google Chrome for Desktop.
b. In Google Chrome, go to the URL you want to audit. You can audit any URL on the web.
c. Open Chrome DevTools. (https://developer.chrome.com/docs/ devtools/ open/)
d. Click the **Lighthouse** tab.
   To the left is the viewport of the page that will be audited. To the right is the **Lighthouse** panel of Chrome DevTools, which is powered by Lighthouse

e. Click **Analyze page load**. DevTools shows you a list of audit categories. Leave them all enabled.

f. Click **Run audit**. After 30 to 60 seconds, Lighthouse gives you a report on the page.

L. Observations and Calculations/Input-Output:

Input: Website URL

Output/Observations: Audit Report

M. Interpretation of Results
    NA

N. Conclusion

NA

O. Practical related Quiz.
    a. What SEO audit?
    b. Why SEO audit is required?
    c. What are SEO rankings?

P. References / Suggestions

a. https://flexiple.com/developers/using-google-lighthouse-to-audit-your-web-application/
b. https://developer.chrome.com/docs/lighthouse/
c. https://www.youtube.com/watch?v=Q-X_ED4LHrQ
d. https://www.elegantthemes.com/blog/wordpress/what-is-google-lighthouse-and-how-to-use-it

Q. Graph: NA

R. Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	

		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good (5-4 marks): Properly explained solution/ Result/ Output	
		Satisfactory (3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement (0-1 marks): Very less explained solution/ Result/ Output	
C5:	20 %	Good (5-4 marks): Properly prepared report/presentation for given problem	

Prepare a report/presentation for the given problem		Satisfactory (3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement (0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

<div align="right">Date: ……………</div>

Practical No. 6: Use the Google Tag Manager to insert the tracking code in the sample web pages of your website.

A.   Objective:

The objective of this lab practical is to use the Google Tag Manager to insert and deploy tracking code on sample web pages of a website. This will allow website owners to track user behavior, website performance, and other important metrics. Additionally, the lab practical will also demonstrate how to set up and configure Google Tag Manager for use on the website.

B.   Expected Program Outcomes (POs)

1. Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the *engineering* problems.

2. Problem analysis: Identify and analyse well-defined *engineering* problems using codified standard methods.

4. Engineering Tools, Experimentation and Testing: Apply modern *engineering* tools and appropriate technique to conduct standard tests and measurements.

7. Life-long learning: Ability to analyze individual needs and engage in updating in the context of technological changes in field of engineering.

C.   Expected Skills to be developed based on competency:

1. Understanding of the Google Tag Manager tools and its interface
2. Knowledge of code and syntax needed to create and edit tracking code
3. Ability to insert tracking code into web pages
4. Ability to troubleshoot and debug tracking code problems
5. Understanding of the different types of tracking codes available
6. Knowledge of how to create and manage tags and triggers
7. Understanding of how data is collected and analyzed from the tracking code
8. Ability to create and manage custom variables
9. Knowledge of the various features and options available in Google Tag Manager

D. Expected Course Outcomes (Cos)

CO c): Use website analytics to improve the effectiveness of advertisement and conversion rate.

E. Practical Outcome (PRo)

Use the Google Tag Manager to insert the tracking code in the sample web pages of your website.

F. Expected Affective domain Outcome (ADos)

The expected affective domain outcome of this lab practical is that Students will gain a better understanding of tracking code and how to use it to monitor their website activities. They will gain knowledge on how to use Google Tag Manager, which will help them to improve the efficiency of their website. Additionally, students will develop their analytical skills as they interpret the tracking data.

G. Prerequisite Theory:

The Google Tag Manager (GTM) is a platform that allows website administrators to easily add and manage code snippets on their websites. GTM allows you to add code snippets, such as tracking codes and analytics code, without having to directly edit the HTML of your website. This makes it easier to keep track of the snippets you have added, as well as quickly removing or changing them. Before you can start using Google Tag Manager (GTM) to insert tracking codes into your website, you need to understand some basic concepts.

First, you need to understand what a tag is and how to create one. A tag is a snippet of code that you can place on your website to capture data about visitors. Examples of popular tags include Google Analytics tracking codes, Facebook Pixel tracking codes, and AdWords conversion codes.

Second, you should understand what Google Tag Manager is and how it works. GTM is a tool that allows you to manage all of your tags in one place. You can use GTM to control when and where tags are fired, as well as customize the data that is captured.

Third, you should be familiar with the basic structure of HTML and how to insert code into a web page. This will help you understand how to place the tags correctly within the page.

Finally, you should have a working knowledge of the Google Tag Manager platform. This includes understanding how to create tags, triggers, and variables, as well as how to preview and publish your changes.

To use GTM, you will need to create an account and install a tracking code on your website. Once you have done this, you can add and manage code snippets from the GTM interface. To add a tracking code to your website, you will need to create a "tag" in the GTM interface, which is basically a code snippet that you want to add to the website. You can then choose the type of code snippet you want to add and add the tracking code to the tag. Once you have added the code, you can then specify the pages on which you want to display the code.

Finally, you will need to publish the changes you have made in GTM. This will ensure that the code snippets are added to the pages you have specified. Once the code is live, you can use the GTM dashboard to monitor its performance and make any necessary changes.

H.   **Experimental set up/ Program Logic-Flow chart:**

NA

I.   **Resources/Equipment Required**

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer	Any computer with latest configuration and internet access	1
2	1. Google Tag Manager Account 2. Access to the website's source code 3. Knowledge of HTML and web page coding 4. Knowledge of JavaScript 5. Google Analytics Account		

J.   Safety and necessary Precautions followed:

1. Keep all computers in the lab area clean and free from dust.
2. Ensure all computers are properly grounded and plugged into surge protectors.
3. Use antivirus software to protect computers from malicious software and viruses.
4. Ensure that all students are familiar with the google tag manager tool before starting any lab practice.
5. Provide clear instructions and demonstration on how to use the tool.
6. Only add tags from trusted sources: When adding tags to your website through Google Tag Manager, make sure you only add tags from trusted sources. This will help prevent the introduction of malicious code or data breaches on your website.
7. Limit access to your Google Tag Manager account: Only give access to your Google Tag Manager account to trusted individuals who need it. This will help prevent unauthorized access and changes to your tracking tags.
8. Establish a safe and comfortable environment for students to work in.
9. Ensure a secure backup of all the work done with the tool.
10. Make sure that all students are aware of the copyright and intellectual property rights associated with the work created.
11. Refrain from using computers in the lab for activities that could be deemed as inappropriate or illegal.

K.   Procedure to be followed/Source code:

1. Step-by-step guide to using Google Tag Manager to insert tracking code into a sample web page:
2. First, log in to your Google Tag Manager account and select the container you want to work with.
3. Click on the "Tags" tab in the left-hand navigation menu, then click the "New" button to create a new tag.
4. Choose the appropriate tag type based on the tracking code you want to insert. For example, if you want to track website traffic using Google Analytics, select the "Google Analytics: Universal Analytics" tag type.
5. Configure the tag settings as needed. This may include entering your tracking ID, enabling cross-domain tracking, or setting up event tracking.
6. Set up the trigger for the tag. This will determine when the tracking code is fired on your website. You can use a pre-defined trigger such as "All Pages" to track

visits to all pages on your site, or you can create custom triggers to track specific events such as clicks on a particular button.

7. Save the tag and give it a descriptive name so you can easily identify it later.
8. Click the "Submit" button to publish the tag to your container.
9. To insert the tag into a web page, you will need to add the Google Tag Manager container snippet to the header section of your HTML code. This code can be found in the "Admin" section of your Google Tag Manager account.
10. Once the container snippet has been added to your HTML, the tracking code should automatically be inserted into the sample web page as specified in the tag settings.
11. To verify that the tracking code is working correctly, visit the website and check the analytics data in your Google Analytics account.

L.   **Observations and Calculations/Input-Output:**

Input:

- A website or web page that you want to track using Google Tag Manager
- A Google Tag Manager account with an appropriate container set up for your website
- A tracking code or tag that you want to implement using Google Tag Manager (e.g., Google Analytics, Facebook Pixel, etc.)
- Information about the specific events or user interactions you want to track (if applicable)

Output:

- A functioning tracking code implemented on your website or web page
- Data and insights about user behavior and website traffic available in your analytics account (e.g., Google Analytics)
- Increased understanding of how to use Google Tag Manager to implement tracking codes and analyze website traffic

M.   **Interpretation of Results**
     NA

N.   **Conclusion**

     NA

O.   Practical related Quiz.

1. What is Google Tag Manager used for?
    A. Tracking user behavior on websites B. Managing website content C. Running online advertising campaigns D. None of the above
2. What is a tag in Google Tag Manager?
    A. A line of code that tracks user behavior on a website B. A container for a set of tracking codes C. A tool for creating website content D. None of the above
3. What is a trigger in Google Tag Manager?
    A. A tool for creating website content B. A container for a set of tracking codes C. A way to specify when a tag should fire D. None of the above
4. How do you install Google Tag Manager on a website?
    A. Add the container snippet to the website's HTML code B. Install a plugin on the website's CMS platform C. Submit a request to Google for installation D. None of the above
5. Which of the following is an example of a tag that can be implemented using Google Tag Manager?
    A. Google Analytics tracking code B. Facebook Pixel tracking code C. LinkedIn Insight Tag tracking code D. All of the above

P.   References / Suggestions

- Official Google Tag Manager Help Center:
  https://support.google.com/tagmanager
- https://www.simoahava.com/gtm-guide/
- https://www.youtube.com/watch?v=TXrxrRzFBAQ
- https://www.optimizesmart.com/google-tag-manager-tips-tricks/
- https://taginspector.com/google-tag-manager-debugging-guide/

Q.   Graph

NA

R.   Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	

		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good (5-4 marks): Properly explained solution/ Result/ Output	
		Satisfactory (3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement (0-1 marks): Very less explained solution/ Result/ Output	
C5:	20 %	Good (5-4 marks): Properly prepared report/presentation for given problem	

Prepare a report/presentation for the given problem		Satisfactory (3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement (0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No. 7: Use Google Analytics to analyze website performance.

A.   **Objective:**

The objective of this lab practical is to use Google Analytics to analyze a website's performance. This includes using the Google Analytics platform to track website traffic, analyze user behavior, and identify areas of improvement. Additionally, students will learn how to create custom reports and set up goals. By the end of this lab practical, students should have a deeper understanding of how to use Google Analytics to measure their website's performance.

B.   **Expected Program Outcomes (POs)**

1. Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the *engineering* problems.

2. Problem analysis: Identify and analyse well-defined *engineering* problems using codified standard methods.

4. Engineering Tools, Experimentation and Testing: Apply modern *engineering* tools and appropriate technique to conduct standard tests and measurements.

7. Life-long learning: Ability to analyze individual needs and engage in updating in the context of technological changes in field of engineering.

C.   **Expected Skills to be developed based on competency:**

a)   Understand the data and metrics available in Google Analytics
b)   Learn how to set up and configure Google Analytics
c)   Analyze website traffic, sources, and conversions
d)   Monitor website performance and user behavior
e)   Understand the advantages and limitations of Google Analytics
f)   Use reporting tools to identify opportunities to optimize website performance
g)   Understand the report data to gain insights on website performance

D.   **Expected Course Outcomes (Cos)**

CO c): Use website analytics to improve the effectiveness of advertisement and conversion rate.

E.   **Practical Outcome (PRo)**

Use Google Analytics to analyze website performance

F.   **Expected Affective domain Outcome (ADos)**

The expected affective domain outcome of this lab practical is for students to gain an understanding of how to use Google Analytics to analyze website performance. This would include developing an understanding of the different types of data available, how to interpret the data, and how to adjust the settings to optimize website performance. Additionally, students should develop an understanding of the importance of website performance and the impact it can have on user experience.

G.   **Prerequisite Theory:**

Google Analytics is a powerful tool for website owners and marketers to understand how visitors interact with their website. It is used to track website traffic, analyze website performance, and measure the effectiveness of marketing campaigns.

Google Analytics provides a variety of reports, data, and insights that can be used to gain a better understanding of user behavior and how visitors interact with a website. It also helps website owners identify areas of improvement to optimize their website experience.

Google Analytics also allows website owners to set up goals and track conversions, create custom reports, and segment data to gain further insights. These features allow website owners to measure the effectiveness of their website and track the progress of their marketing campaigns.

It also allows you to track key performance indicators (KPIs) and measure the effectiveness of your marketing campaigns. Using Google Analytics, you can identify which content is most popular and understand how visitors interact with your website. You can also measure the impact of any changes you make to your website to ensure that your efforts are successful. With Google Analytics, you can segment your traffic to better understand user behavior and identify opportunities for improvement.

H.   **Experimental set up/ Program Logic-Flow chart:**

NA

I. Resources/Equipment Required

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer	Any computer with latest configuration and internet access	1
2	Google Analytics Account, Website address, Google Tag Manager (optional), HTML/CSS knowledge (optional)		

J. Safety and necessary Precautions followed:

a) Keep all computers in the lab area clean and free from dust.
b) Ensure all computers are properly grounded and plugged into surge protectors.
c) Use antivirus software to protect computers from malicious software and viruses.
d) Ensure that all students are familiar with the google analytics tool before starting any lab practice.
e) Provide clear instructions and demonstration on how to use the tool.
f) Do not store confidential data in the Google Analytics account.
g) Establish a safe and comfortable environment for students to work in.
h) Ensure a secure backup of all the work done with the tool.
i) Make sure that all students are aware of the copyright and intellectual property rights associated with the work created.
j) Refrain from using computers in the lab for activities that could be deemed as inappropriate or illegal.

K. Procedure to be followed/Source code:

a) Sign Up for Google Analytics: Visit the Google Analytics website and sign up for an account. You will need a Google account to sign up.
b) Add Tracking Code to Your Website: Once you have an account, you will need to add the tracking code to your website. You can find the tracking code in the Google Analytics admin panel. Copy and paste the tracking code into your website's HTML source code.

c) Set Goals: Goals allow you to track user behavior on your website and measure how successful you are in achieving those goals. Set your goals in the Google Analytics admin panel.

d) Analyze Data: Once you have set up your goals and added the tracking code to your website, you can start analyzing the data. You can view the data in the Google Analytics dashboard. This will give you insights into how your website is performing and trends in user behavior.

e) Create Reports: Google Analytics allows you to create custom reports that show you detailed information about the performance of your website. You can also create custom dashboards that show you the data that is most important to you.

f) Optimize Your Website: Once you have analyzed the data and identified areas of improvement, you can use this information to make changes to your website. This will help you optimize your website and improve its performance.

L.   Observations and Calculations/Input-Output:

Observations: Google Analytics is a powerful tool that can be used to analyze website performance. It provides insights into website traffic, visitor behavior, and user engagement. It also provides metrics to measure the success of campaigns and help users identify areas of improvement. It can also track conversions, calculate the ROI of campaigns, and identify trends in website traffic.

Inputs: Website traffic data, page views, page visits, page load time, etc.

Outputs: Analytical insights and metrics that can be used to assess website performance and identify areas of improvement such as reports on website performance, user engagement, page load time, etc.

M.   Interpretation of Results
   NA

N.   Conclusion

   NA

O.   Practical related Quiz.
   a) What is the purpose of Google Analytics?
   b) What type of data does Google Analytics collect?
   c) How can you use Google Analytics to improve website performance?
   d) What does the "Bounce Rate" metric measure?
   e) What is the purpose of setting up Goals in Google Analytics?
   f) What is the difference between a "Pageview" and a "Unique Pageview" in Google Analytics?
   g) What is an "Acquisition Report" in Google Analytics?

h) What is "Audience Segmentation" in Google Analytics?

P. References / Suggestions

- **https://analytics.google.com/analytics/academy/course/6**
- https://firstsiteguide.com/google-analytics-for-wordpress/
- https://www.youtube.com/watch?v=cN1Jcfxi4qs
- https://www.youtube.com/watch?v=ZRCAfFKtbg0
- https://intellipaat.com/blog/google-analytics-guide/

Q. Graph

NA

R. Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	

		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good (5-4 marks): Properly explained solution/ Result/ Output	
		Satisfactory (3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement (0-1 marks): Very less explained solution/ Result/ Output	
C5: Prepare a report/presentation for the given problem	20 %	Good (5-4 marks): Properly prepared report/presentation for given problem	
		Satisfactory (3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement (0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No. 8: Create a Facebook ad campaign and analyze the performance of your Facebook ad accounts and campaigns with AdsReport. (https://adsreport.agorapulse.com/home)

A. **Objective:**

The objective of this lab practical is to create a successful Facebook ad campaign and use AdsReport to analyze the performance of the ad account and campaigns. Through this, students will learn how to create effective Facebook ads, use AdsReport to measure the success of the campaign, and use the results of the analysis to optimize future campaigns. Additionally, this will help students understand the importance of using a suitable ad platform to track and analyze the performance of ads campaigns and learn how to adjust digital marketing strategy accordingly.

B. **Expected Program Outcomes (POs)**

1. Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the *engineering* problems.

2. Problem analysis: Identify and analyse well-defined *engineering* problems using codified standard methods.

4. Engineering Tools, Experimentation and Testing: Apply modern *engineering* tools and appropriate technique to conduct standard tests and measurements.

C. **Expected Skills to be developed based on competency:**

a) Understand the different components of a successful Facebook ad campaign.
b) Create effective and persuasive Facebook Ads.
c) Use AdsReport to track, analyze, and interpret the performance of Facebook ad campaigns.
d) Identify opportunities to improve the effectiveness of a Facebook ad campaign.

D. **Expected Course Outcomes (Cos)**

CO d): Create Digital Marketing Campaigns using various social media marketing platforms and measure their effectiveness.

E. Practical Outcome (PRo)

Create a Facebook ad campaign and analyze the performance of your Facebook ad accounts and campaigns with AdsReport.
(https://adsreport.agorapulse.com/home).

F. Expected Affective domain Outcome (ADos)

Students will be able to, foster a positive attitude and confidence towards creating and running effective digital campaigns.

G. Prerequisite Theory:

What are Facebook ads?

Facebook ads are paid posts that businesses use to promote their products or services to Facebook users.

Facebook ads are usually targeted to users based on their:

- Demographics
- Location
- Interests
- Other profile information

Businesses set an ad budget and bid for each click or thousand impressions the ad receives.

Like Instagram, Facebook ads appear throughout the app, including in users' feeds, Stories, Messenger, Marketplace, and more. They look similar to normal posts but always include a "sponsored" label to show they're an ad. Facebook ad include more features than regular posts, like CTA buttons, links, and product catalogues.

To get your brand in front of more users, ads should be a component of any Facebook marketing strategy.

Agorapulse AdsReport:

Agorapulse AdsReport is a powerful tool that helps analyze the performance of Facebook Ads. It offers in-depth insights on the performance of any ad campaign, including the reach, impressions, clicks, conversions, ROI, cost per action, and more. Additionally, the tool provides detailed reports on the performance of each ad, such as average cost per click, average click-through rate, and average cost per impression. This data can be used to optimize an ad campaign for maximum efficiency and profitability.

How AdsReport Works

Login with Facebook then pick what Facebook Ad account or campaign you want to dig into for analytics.

Choose your account
The dropdown menu will show you have many active campaigns you have.

Choose your ad campaign
Select one to track.

Select a period
You can choose a range of time from which to get data and statistics.

Once you've set those parameters, you can look at the easy-to-understand dashboard and get information about:

- Your Facebook Ad spend—How much you've spent of an allocated amount for a Facebook Ad
- Conversions—How many customers completed the action desired
- Reach—How many unique people were shown your Facebook Ad during its campaign
- Impressions—How many times a Facebook Ad was on the screen
- Clicks—All clicks that a Facebook Ad received
- CTR— (clickthrough ad) How many people clicked on your Facebook Ad
- CPC— (cost per click) How much you're charged each time a visitor interacts with your Facebook ad
- CPM— (cost per mille) How much the cost breakdown is for every 1,000 impressions

You can also filter the ad campaigns by active, paused, deleted, and/or archived.

Following are some of the prerequisites before using Facebook ads and AdsReport Tool:

a) Understand Your Target Audience: Identify who you want to reach with your ad and create buyer personas.

b) Set Goals & Objectives: Clarify your goals and objectives for the campaign.

c) Choose the Right Ad Format & Placement: Choose the right ad format and placement for your campaign objectives.

d) Create Compelling Copy & Visuals: Write clear and persuasive ad copy and create visuals that will grab your audience's attention.

e) Test & Adjust: Test different ad variations and adjust your campaigns to optimize performance.

f) Monitor & Analyze: Monitor and analyze the performance of your campaigns over time

H. **Experimental set up/ Program Logic-Flow chart:**

NA

I. **Resources/Equipment Required**

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer	Any computer with latest configuration and internet access	1
2	Facebook account with Facebook page		

J. **Safety and necessary Precautions followed:**

a) Keep all computers in the lab area clean and free from dust.
b) Ensure all computers are properly grounded and plugged into surge protectors.
c) Use antivirus software to protect computers from malicious software and viruses.
d) Ensure that all students are familiar with the Facebook ads and adsreport tool before starting any lab practice.
e) Provide clear instructions and demonstration on how to use the tool.
f) Establish a safe and comfortable environment for students to work in.
g) Ensure a secure backup of all the work done with the tool.
h) Make sure that all students are aware of the copyright and intellectual property rights associated with the work created.
i) Refrain from using computers in the lab for activities that could be deemed as inappropriate or illegal.

K. **Procedure to be followed/Source code:**

Creating Facebook ad:

a) Log into Facebook Ads Manager and select the **Campaigns** tab, then click **Create** to get started with a new Facebook ad campaign.
b) Select the objective for your ad campaign.
c) Set up your budget.

d) Choose the audience for your ad campaign.
e) Choose your Facebook ad placements
f) Set brand safety and cost controls
g) Create the ad

How to use AdsReport:

Follow these steps to get the most out of this reporting tool.

1. **Select a time period:** Pick standard settings like today or this month, or select a custom time frame.
2. **Choose an ad campaign**: By default, the tool shows metrics for all campaigns during the time period you selected. If you want to hone in on a specific campaign, pick one to view individually.
3. **Filter by status:** By default, the tool shows metrics for active and paused campaigns. You can filter by archived and deleted campaigns, too
4. **View standard metric:** Once you've selected parameters, you can view standard metrics, including *spend, revenue, reach, impressions, clicks, CTR, CPC,* and *CPM.*
5. Analyze the performance of the ad campaign.
6. Take appropriate action based on the results

L.   Observations and Calculations/Input-Output:

For Facebook Ad

Input Parameters:

- Target audience demographics (e.g., age, gender, location, interests, etc.)
- Ad creative (e.g., image, video, copy, call-to-action, etc.)
- Campaign objectives (e.g., website clicks, page likes, conversions, etc.)
- Campaign budget and bidding strategy
- Ad placement (e.g., Facebook, Instagram, Audience Network, etc.)
- Ad scheduling (e.g., start and end dates, days of the week, times of day, etc.)
- Ad frequency and reach (e.g., how often the ad is shown to the target audience and how many people see it)

Output Parameters:

- Ad impressions (how many times the ad was shown)
- Click-through rate (CTR)
- Cost per click (CPC)
- Conversion rate (if applicable)

- Cost per conversion (if applicable)
- Ad engagement metrics (e.g., likes, comments, shares, etc.)
- Overall campaign performance metrics (e.g., return on ad spend (ROAS), cost per result (CPR), etc.)

For analysing with Adsreport

Input Parameters:

1. Ad account ID: This is the unique identification number of your Facebook ad account that you want to analyze.
2. Time period: This can be a specific date range or a predefined time period, such as last 7 days, last month, etc.
3. Ad campaign ID: This is the unique identification number of your Facebook ad campaign that you want to analyze.
4. Ad set ID: This is the unique identification number of your Facebook ad set that you want to analyze.
5. Performance metrics: These are the metrics that you want to analyze, such as reach, impressions, clicks, conversions, etc.

Output Parameters:

1. Performance data: This includes the performance metrics that you selected for your analysis, broken down by ad campaigns, ad sets, and individual ads.
2. Charts and graphs: These visualizations can help you quickly understand the performance trends and patterns.
3. Insights and recommendations: Based on the performance data and analysis, AdsReport may provide insights and recommendations on how to optimize your ad campaigns for better results.
4. Downloadable reports: You can export the performance data and analysis into various formats, such as Excel, CSV, or PDF, for further analysis or sharing with others

M.   Interpretation of Results
   NA

N.   Conclusion

   NA

O.   Practical related Quiz.
   a) What is the maximum number of Ads a single Facebook Ad Account can contain?
   b) What are the key elements of a successful Facebook ad?
   c) What is the recommended image size for Facebook ads?
   d) What are the objectives available for Facebook Ads?

e) What are the five key components of a successful Facebook ad?
f) What is A/B testing and how is it used for Facebook Ads?
g) What is the difference between a Facebook Ads campaign and ad set?
h) What is the Ad Quality Rater and why is it important?

P.   References / Suggestions

- https://en-gb.facebook.com/business/ads
- https://blog.hootsuite.com/how-to-advertise-on-facebook/
- https://www.searchenginejournal.com/facebook-ads-tips-beginners/441630/
- https://www.agorapulse.com/blog/facebook-ads-reporting/
- https://www.youtube.com/watch?v=ONftwWE-NwQ

Q.   Graph

NA

R.   Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	

C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good (5-4 marks): Properly explained solution/ Result/ Output	
		Satisfactory (3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement (0-1 marks): Very less explained solution/ Result/ Output	
C5: Prepare a report/presentation for the given problem	20 %	Good (5-4 marks): Properly prepared report/presentation for given problem	
		Satisfactory (3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement (0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No. 9: Compare your Facebook page performance pages using the Barometer Facebook page analytics tool or other similar tools (https://barometer.agorapulse.com/home)

A.   Objective:

The objective of this lab practical is to analyse the performance of a Facebook page using the Barometer Facebook page analytics tool. This tool will provide insights into the page performance, including page likes, post reach, engagement rate, and post impressions. Additionally, the tool will allow to compare the page performance with similar pages and track changes over time. This information can be used to measure the success of the page and make informed decisions on how to improve it.

B.   Expected Program Outcomes (POs)

1. Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the *engineering* problems.

2. Problem analysis: Identify and analyse well-defined *engineering* problems using codified standard methods.

4. Engineering Tools, Experimentation and Testing: Apply modern *engineering* tools and appropriate technique to conduct standard tests and measurements.

C.   Expected Skills to be developed based on competency:

a) Understanding of how to use the Barometer tool platform to analyse Facebook page performance metrics
b) Understanding of best practices for creating content that is engaging and drives performance.
c) Ability to identify areas of improvement and take appropriate action.
d) Understanding of how to use insights to use in future content and campaigns.
e) Ability to create and maintain an effective presence on the Facebook platform.

D.   Expected Course Outcomes (Cos)

CO d): Create Digital Marketing Campaigns using various social media marketing platforms and measure their effectiveness.

E.   Practical Outcome (PRo)

Compare your Facebook page performance pages using the Barometer Facebook page analytics tool or other similar tools.

F.   Expected Affective domain Outcome (ADos)

The students will demonstrate an increased understanding of the principles of effective social media management, including the importance of understanding the analytics of their page performance. They will also be able to identify areas of improvement to increase the success of their Facebook page.

G.   Prerequisite Theory:

The Barometer Facebook page analytics tool provides a comprehensive report of your page's performance by measuring metrics such as interactions, reach, likes, and followers. This tool allows you to compare your page's performance over time and with other pages in the same industry. It also provides insights into which posts are performing the best and which content resonates with your audience. Through the Barometer Facebook page analytics tool, you can identify areas for improvement and make changes accordingly. You can also find out which posts are the most engaging and which are the least successful, helping you craft content that will have the most impact on your audience.

How the Facebook Barometer Works

Once you sign into the Barometer with your Facebook account, choose the page you would like to analyse with our Facebook page analytics tool. The Barometer will determine how many fans this page has and will compare it to thousands of other pages with a similar fan range.

You will see how your last 50 Facebook posts compare in terms of:

- Facebook Reach
    - Fans reached
    - Organic reach
    - Viral reach
- Facebook Engagement
    - Engagement
    - People talking about
    - Negative feedback
- Facebook Click-through rate

Each Facebook metric also uses a heat map color spectrum—green and red being the dominant colors on a scale. For example, a square in a darker green is doing slighter better than a square in lighter green, and a darker red square is doing slightly worse than a lighter red square.

With this scale, you can easily tell what you should be working on to better your Barometer score.

You will see monthly page insights (underneath that heat map grid) for viral and organic reach on Facebook—day-by-day over the last 30 days. You can select the "Last 30 Days" dropdown menu to see reach over the last 90 or 180 days.

Following are some of the prerequisites before using Barometer Tool:

a) Create a Facebook page for your business.
b) Go to the Barometer Facebook page analytics tool and connect your Facebook page with Barometer.
c) Explore the various analytics features available

H.   Experimental set up/ Program Logic-Flow chart:

NA

I.   Resources/Equipment Required

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer	Any computer with latest configuration and internet access	1
2	Facebook account with Facebook page		

J.   Safety and necessary Precautions followed:

a) Keep all computers in the lab area clean and free from dust.
b) Ensure all computers are properly grounded and plugged into surge protectors.
c) Use antivirus software to protect computers from malicious software and viruses.
d) Ensure that all students are familiar with the Barometer tool before starting any lab practice.

e) Provide clear instructions and demonstration on how to use the tool.

f) Establish a safe and comfortable environment for students to work in.

g) Ensure a secure backup of all the work done with the tool.

h) Make sure that all students are aware of the copyright and intellectual property rights associated with the work created.

i) Refrain from using computers in the lab for activities that could be deemed as inappropriate or illegal.

K. Procedure to be followed/Source code:

a) Log into the Barometer Facebook page analytics tool

b) Select the Facebook page you want to analyse

c) View the performance dashboard to get an overview of the page's performance

d) you will get a visual representation of the following

- Average percentage of fans reached by each post, along with a minimum and maximum percentage
- Average percentage of users who have engaged with your post
- Average percentage of users who are talking about this
- Average percentage of users who react negatively by hiding your posts, etc.
- Line graph of monthly organic reach
- Line graph of monthly viral reach

e) Analyse the performance of each post type (e.g., photos, videos, links, etc.) to uncover insights

f) Review the demographic data to understand who is engaging with your page

g) Analyse the reach and engagement of each post to identify what content is resonating

h) Look at the top posts to determine what types of content are driving the most engagement

i) Compare the performance of different posts over time to identify trends

j) Create a report from the data.

k) Utilize the insights to make adjustments to your Facebook page strategy.

L. Observations and Calculations/Input-Output:

Input Parameters:

- Facebook Page URL: This is the URL of the Facebook Page that you want to analyze.

- Date Range: You can choose a custom date range to analyze the page's performance over a specific period.
- Time Zone: This is the time zone of the Facebook Page's location.
- Metrics: You can select the metrics you want to analyze, such as page likes, post reach, engagement, and more.

Output Parameters:

- Total Page Likes: This is the total number of likes the Facebook Page has received.
- Page Views: This is the number of times the Facebook Page has been viewed.
- Post Reach: This is the number of unique users who have seen any of the Page's posts.
- Post Engagements: This is the total number of likes, comments, and shares for the Page's posts.
- Page Followers: This is the total number of people who follow the Page.
- Demographics: This includes information about the age, gender, location, and language of the Page's audience.
- Best Performing Posts: This shows the posts that have received the most engagement or reach during the selected date range.
- Referral Traffic: This shows where the Page's traffic is coming from, such as Facebook search, external links, or other Facebook pages.

M.   Interpretation of Results
    NA

N.   Conclusion

    NA

O.   Practical related Quiz.
a) Which type of post generates the most engagement?
b) Find similar tools like Barometer

P.   References / Suggestions

- https://www.agorapulse.com/blog/why-use-facebook-barometer/
- https://openmindsagency.com/free-facebook-tools-to-measure-the-performance-of-your-business-page/
- https://www.phocuswire.com/Barometer-How-does-your-Facebook-page-stack-up

Q.   Graph

NA

R.   Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct	

		Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good (5-4 marks): Properly explained solution/ Result/ Output	
		Satisfactory (3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement (0-1 marks): Very less explained solution/ Result/ Output	
C5: Prepare a report/presentation for the given problem	20 %	Good (5-4 marks): Properly prepared report/presentation for given problem	
		Satisfactory (3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement (0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No. 10: Design infographics, ads, covers, and posts for social networks using Canva tool.

A.   Objective:

The goal of this lab practical is to give students the opportunity to create effective infographics, posts and ad covers for social media using the Canva tool.

B.   Expected Program Outcomes (POs)

1. Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the *engineering* problems.

2. Problem analysis: Identify and analyse well-defined *engineering* problems using codified standard methods.

3. Design/ development of solutions: Design solutions for engineering well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

4. Engineering Tools, Experimentation and Testing: Apply modern *engineering* tools and appropriate technique to conduct standard tests and measurements.

7. Life-long learning: Ability to analyze individual needs and engage in updating in the context of technological changes in field of engineering.

C.   Expected Skills to be developed based on competency:

a) Understanding of how to use the Canva platform to create custom graphics
b) Ability to effectively communicate design concepts
c) Increased confidence with graphic design principles.
d) Developed skills in working with Canva's tools, templates and features.
e) Improved knowledge of the different design elements and how they interact.
f) Increased ability to create aesthetically pleasing designs.

D.   Expected Course Outcomes (Cos)

CO d): Create Digital Marketing Campaigns using various social media marketing platforms and measure their effectiveness.

    E.   **Practical Outcome (PRo)**

Design infographics, ads, covers, and posts for social networks using Canva tool.

    F.   **Expected Affective domain Outcome (ADos)**

The students may experience a feeling of accomplishment and satisfaction upon completion of the Canva tool practical. They may also feel a sense of pride in their accomplishment, as well as a confidence boost in their ability to use the tool ethically. Additionally, they may feel motivated to learn more and take on new challenges.

    G.   **Prerequisite Theory:**

What is Canva?

Canva is a graphic designing tool that is very easy to use & helps in creating amazing designs quickly. The beauty of this tool is it does not require any installations on your PC. You can access it at www.canva.com Alternatively, you can also use the Canva mobile app.

Following are some of the prerequisites before using Canva Tool:

a) Understand the basics of computer technology and the operating system of the device you are using.
b) Have a basic knowledge of design principles, including the elements and principles of design, typography, and color theory.
c) Understand the basics of digital imaging and photo editing.
d) Have familiarity with the basic functionality of a design software program like Canva.
e) Be familiar with the wide range of digital tools available for creating visual content.
f) Have the ability to find and use digital assets such as images and fonts.
g) Have the ability to create and edit content such as images, text, and shapes.
h) Have the ability to use the Canva interface to create and save designs.
i) Be able to export designs in multiple formats for use in other applications.
j) Have the ability to troubleshoot and troubleshoot issues with the Canva software.

    H.   **Experimental set up/ Program Logic-Flow chart:**

NA

I.   Resources/Equipment Required

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer	Any computer with latest configuration and internet access	1
2	Canva Account		

J.   Safety and necessary Precautions followed:

a) Keep all computers in the lab area clean and free from dust.

b) Ensure all computers are properly grounded and plugged into surge protectors.

c) Use antivirus software to protect computers from malicious software and viruses.

d) Ensure that all students are familiar with the Canva design tool before starting any lab practice.

e) Provide clear instructions and demonstration on how to use the tool.

f) Establish a safe and comfortable environment for students to work in.

g) Ensure a secure backup of all the work done with the tool.

h) Make sure that all students are aware of the copyright and intellectual property rights associated with the work created.

i) Refrain from using computers in the lab for activities that could be deemed as inappropriate or illegal.

K.   Procedure to be followed/Source code:

For Creating Ad content in Canva Instructions:

a) Set up and log in to your Canva account.

b) Choose the format of your ad cover (e.g., square, landscape, portrait).

c) Select a template to use as a starting point for your design.

d) Customize the template by adding images, text, and other elements to create an attractive ad cover.

e) Save your design and export it in the desired format.

For creating Infographics in Canva instructions:

1. Log into Canva Tool.
2. Select "Infographic" from the list of templates.
3. Choose a template to work with.
4. Add your data / information to the template.
5. Customize the design to your liking.
6. Save your infographic.

L.   Observations and Calculations/Input-Output:

Observations:

- The output design should be aesthetically pleasing and eye-catching
- The output design should be appropriate for the target audience
- The output design should contain relevant information about the lab practices
- The output design should be easily readable and understandable
- The output design should include an appropriate font size and color scheme

Input Parameters:

- Design Type: Canva offers a variety of design types, such as social media posts, flyers, business cards, and more.
- Dimensions: You can choose the size of your design, such as the dimensions for a social media post or print material.
- Template Selection: You can select a pre-designed template or start with a blank canvas.
- Branding: You can upload your company logo, brand colors, and fonts to maintain brand consistency in your designs.
- Images and Graphics: Canva provides access to a library of images and graphics, or you can upload your own.
- Text and Typography: You can customize your text with different fonts, sizes, colors, and effects.

Output Parameters:

- Design File: Canva allows you to download your design in various file formats, such as JPG, PNG, and PDF.
- Design Templates: You can save your designs as templates to reuse in the future or share with others.

- Image Library: Canva allows you to save and organize images and graphics you've used in your designs.
- Branding Kit: Canva allows you to save your company's branding elements, such as logos and colors, for easy access in future designs.
- Collaborative Design: Canva allows multiple users to work on the same design project, making it a collaborative tool for teams.
- Design Sharing: You can share your designs directly from Canva or through social media platforms.

M.   Interpretation of Results

 NA

N.   Conclusion

 NA

O.   Practical related Quiz.
   a) What is the maximum size of an image that can be uploaded to Canva?
   b) What is the main purpose of using grids and alignment tools when creating an ad in Canva?
   c) What is the maximum size for a document when creating a design in Canva?
   d) What type of objects can be added to a design in Canva?
   e) When creating an ad in Canva, what size should be used to ensure maximum visibility?
   f) How can you adjust the size of a textbox when creating an ad in Canva?

P.   References / Suggestions

- https://www.canva.com/designschool/tutorials/
- https://www.canva.com/learn/how-to-canva-beginners-guide/
- https://www.youtube.com/watch?v=un50Bs4BvZ8
- https://www.youtube.com/watch?v=YI_8NyLywIY&list=PLATYfhN6gQz8mNwk1cPwjCeppRiUKTUVD

Q.   Graph

 NA

R.   **Assessment-Rubrics**

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good (5-4 marks): Properly explained solution/ Result/ Output	

		Satisfactory (3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement (0-1 marks): Very less explained solution/ Result/ Output	
C5: Prepare a report/presentation for the given problem	20 %	Good (5-4 marks): Properly prepared report/presentation for given problem	
		Satisfactory (3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement (0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No.11: Create an engaging video using Loom or any other tool and share it on social media. (https://www.loom.com/)

A. **Objective:** The goal of this practical is to give students the opportunity to create video and share it on social media.

B. **Expected Program Outcomes (POs):**

PO1 [Basic & Discipline specific knowledge]: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.

[PO2] Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.

[PO3] Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

[PO4]Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements**.**

[PO7] Life-long learning: Ability to analyse individual needs and engage in updating in the context of technological changes.

C. **Expected Skills to be developed based on competency:**

This practical is expected to develop the following skills for the competency: 'Demonstrate advanced practical skills in common digital marketing tools and online platforms'**.**
a. Analyze and identify a suitable approach for the problem-solving.
b. Use of appropriate technology/software/tools.

D. **Expected Course Outcomes(Cos):**

CO4: Create Digital Marketing Campaigns using various social media marketing platforms and measure their effectiveness.

E. **Practical Outcome(PRo)**

Create an engaging video using Loom or any other tool and share it on social media. (https://www.loom.com/)

F. **Expected Affective domain Outcome(ADos)**

Work as leader/team member.

G. Prerequisite Theory:

To learn Loom, a video communication platform, you should have a basic understanding of video conferencing, internet connectivity, and using a computer or mobile device.

Here are some prerequisites for learning Loom:
1. A computer or mobile device: Loom can be used on desktops, laptops, and mobile devices. You should have access to a device that can run the Loom app or access the Loom website.
2. A reliable internet connection: Loom requires a stable and high-speed internet connection to work properly. You should have a reliable internet connection to ensure that your videos are uploaded and shared quickly.
3. Basic computer skills: You should have basic computer skills, such as opening and closing applications, navigating the internet, and downloading and installing software.
4. Video recording knowledge: It's helpful to have some knowledge of video recording, including how to record audio and video, how to adjust lighting, and how to frame shots.
5. Communication skills: Loom is a communication tool, so having good communication skills is important. You should be able to explain your ideas clearly and concisely, and be comfortable speaking in front of a camera.

Overall, Loom is a straightforward platform to use, and with a little bit of practice, you can easily create and share high-quality videos.

H. Experimental set up/ Program Logic-Flow chart:

NA

I. Resources/Equipment Required

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Laptop/Computer system with an operating system and Internet Facility	Any processor above i3 and any operating system	1

J.   Safety and necessary Precautions followed:

NA

K.   Procedure to be followed/Source code:

- **Download Loom:**

  Download the desktop app to record from anywhere. Install the Chrome extension to record from your browser and to unlock integrations like Gmail and Jira.

- **Record a video**

  Record a short video to share with your teammates. Try introducing yourself or replacing a meeting.

- **Share a video**

  Now it's time to get some views. Try sharing your last video.

- **Get a view**

  Slack, message or email your viewers to remind them about your Loom.

- **Invite a teammate**

  Invite your team to collaborate and share videos more easily.

L.   Observations and Calculations/Input-Output:

Observations:

1. Know your audience: It's essential to know your target audience, their interests, and preferences before creating a video. This knowledge will help you create a video that resonates with them and keeps them engaged.

2. Define the purpose: Before creating a video, define the purpose of the video. Is it to inform, educate, or entertain? Having a clear purpose will help you create content that is relevant and engaging.

3. Keep it short and sweet: Attention spans are short, so keep your video short and to the point. Ideally, a video should be between 1-3 minutes long. This way, you can keep your audience engaged without losing their interest.

4. Use visual aids: Use visual aids such as charts, images, and animations to help explain your message. This will help keep your audience engaged and make the content more memorable.

5. Include a call-to-action: Include a call-to-action (CTA) at the end of your video, asking your audience to do something, such as subscribing to your channel, liking your video, or sharing it on social media.

6. Use a clear and engaging tone: Use a tone that is clear, engaging, and easy to understand. Speak slowly and clearly, and avoid using jargon or technical terms that your audience may not understand.

7. Optimize for social media: When sharing your video on social media, optimize it by adding relevant hashtags, descriptions, and captions. This will help increase visibility and engagement.

M.   **Interpretation of Results**

NA

N.   **Conclusion**

NA

O.   **Practical related Quiz.**

1. What is Loom?
    - A video communication platform
    - A social media platform
    - A project management tool
    - A video editing software

2. Which types of files can you upload to Loom?
    a. Audio files
    b. Image files
    c. Video files
    d. All of the above

3. Can you use Loom to record your computer screen?
    a. Yes
    b. No

4. Which of the following integrations is not available on Loom?
    a. Slack
    b. Zoom
    c. Google Drive

       d. Microsoft Teams

5. What is the maximum length of a video you can record on Loom?
    a. 15 minutes
    b. 30 minutes
    c. 45 minutes
    d. 60 minutes

6. What is the difference between a Loom recording and a Loom video?
    a. There is no difference
    b. A Loom recording is saved locally, while a Loom video is saved on the Loom cloud
    c. A Loom recording is shorter than a Loom video
    d. A Loom recording can only be shared with a limited number of people

7. Which of the following features is NOT available on Loom?
    a. Video editing tools
    b. A drawing tool
    c. A transcription feature
    d. None of the above

8. Is Loom free to use?
    a. Yes, with limitations
    b. No, it requires a paid subscription
    c. It depends on the features you need

9. Which of the following is not a Loom plan?
    a. Basic
    b. Pro
    c. Enterprise
    d. Ultimate

10. What is the main advantage of using Loom for remote teams?
    a. It allows for real-time collaboration
    b. It improves team communication and saves time
    c. It provides a way to monitor employee productivity
    d. It enhances cyber security and data protection.

P.   References / Suggestions

- https://support.loom.com/hc/en-us/articles/360002187698
- https://support.loom.com/hc/en-us/articles/360002208157
- https://support.loom.com/hc/en-us/articles/360002208157
- https://www.loom.com/share/d97180be7d674f4fbf57744365457162?t=53

Q.   Graph(Not Applicable for CE & IT subjects)

NA

R.   Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/	

		Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good(5-4 marks):Properly explained solution/ Result/ Output	
		Satisfactory(3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement(0-1 marks): Very less explained solution/ Result/ Output	
C5: Prepare a report/presentation for the given problem	20 %	Good(5-4 marks):Properly prepared report/presentation for given problem	
		Satisfactory(3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement(0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No.12: Create a proxy YouTube ad and measure the success using YouTube Analytics.

A. **Objective:** The goal of this practical is to give students the opportunity to create YouTube ad and measure success using YouTube Analytics.

B. **Expected Program Outcomes (POs):**
PO1 [Basic & Discipline specific knowledge]: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
[PO2] Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.
[PO3] Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
[PO4]Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements**.**
[PO7] Life-long learning: Ability to analyse individual needs and engage in updating in the context of technological changes.

C. **Expected Skills to be developed based on competency:**

This practical is expected to develop the following skills for the competency: 'Demonstrate advanced practical skills in common digital marketing tools and online platforms'**.**
a. Analyze and identify a suitable approach for the problem-solving.
b. Use of appropriate technology/software/tools.
c. Relevance and quality of output.

D. **Expected Course Outcomes(Cos):**

CO4: Create Digital Marketing Campaigns using various social media marketing platforms and measure their effectiveness.

E. **Practical Outcome (PRo)**: Create a proxy YouTube ad and measure the success using YouTube Analytics.

F. **Expected Affective domain Outcome(ADos)**

Work as leader/team member.

G.   Prerequisite Theory:

1.   Knowledge of ad targeting: You should have an understanding of who your target audience is and how to target them with your ad. You can choose various targeting options such as demographics, interests, and keywords to ensure that your ad reaches the right audience.

2.   A YouTube channel: You need a YouTube channel to run ads on YouTube. If you don't have a channel, you can create one by visiting the YouTube website and following the steps to set up your channel.

3.   A video ad: To run an ad on YouTube, you need to create a video ad. You can create a video ad using a video creation tool.

4.   Ad targeting based on location: You should be able to choose a specific location for your ad to target.

5.   Ad policies: You need to follow the YouTube ad policies when creating your ad to ensure that it meets the platform's guidelines. The policies cover topics such as copyright, inappropriate content, and ad formats.

H.   Experimental set up/ Program Logic-Flow chart:

NA

I.   Resources/Equipment Required

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer system with an operating system and Internet Facility	Any processor above i3 and any operating system	1

J.   Safety and necessary Precautions followed:

NA

K.   Procedure to be followed/Source code:

- Develop a concept for the ad: First, you need to develop a concept for your ad that would appeal to your target audience. This would include deciding on the message, tone, visuals, and duration of the ad.

- Create the ad: Once you have a concept for your ad, you would need to create it.
- Upload the ad to YouTube: After creating the ad, you would need to upload it to YouTube.
- Monitor the ad's performance: Once the ad is uploaded, you can monitor its performance using YouTube Analytics. YouTube Analytics provides data on metrics like views, watch time, engagement, and demographics of the viewers.
- Analyze the data: After collecting data on the ad's performance, you can analyze it to measure the ad's success.

L.   Observations and Calculations/Input-Output:

Input:

1. Concept for the ad
2. Video editing
3. YouTube account
4. Goals and objectives for the ad.

Output:

1. A completed proxy YouTube ad
2. Metrics such as views, watch time, engagement, and demographics of the viewers from YouTube Analytics
3. Data analysis comparing metrics to goals and objectives for the ad

M.   Interpretation of Results
NA

N.   Conclusion

NA

O.   Practical related Quiz.

1. What is a prerequisite for creating a proxy YouTube ad?

   a) A YouTube channel

   b) A Facebook account

   c) A Twitter account

   d) A LinkedIn account

2. Why is a proxy server necessary for creating a proxy YouTube ad?

    a) To change your IP address and location

    b) To create a video ad

    c) To access YouTube Analytics

    d) To follow YouTube's ad policies

3. What is a prerequisite for measuring the success of a proxy YouTube ad using YouTube Analytics?

    a) A YouTube channel

    b) A Facebook account

    c) A Twitter account

    d) A LinkedIn account

4. What metrics can you track using YouTube Analytics?

    a) Views, clicks, and engagement rates

    b) Likes, shares, and comments

    c) Demographics and interests of your audience

    d) All of the above

5. Why is it important to follow YouTube's ad policies when creating a proxy YouTube ad?

    a) To avoid copyright infringement

    b) To ensure that your ad meets the platform's guidelines

    c) To avoid inappropriate content

    d) All of the above

P.   References / Suggestions

- https://www.youtube.com/intl/en_in/ads/?subid=in-en-ha-yt-bk-c-techno!o3~CjwKCAiA0cyfBhBREiwAAtStHLiGpIUty1bEWtPaUGdFku0fxEjrR4hXvHcpn8ExVY4VcIOHSHXmFxoCImUQAvD_BwE~137458773287~kwd-357555722092~16379451522~626068035294&gclid=CjwKCAiA0cyfBhBREi

wAAtStHLiGpIUty1bEWtPaUGdFku0fxEjrR4hXvHcpn8ExVY4VcIOHSHXmFxoCImUQAvD_BwE&gclsrc=aw.ds

- https://support.google.com/youtube/answer/9002587?hl=en

Q.   Graph

NA

R.   Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/	

		Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good(5-4 marks):Properly explained solution/ Result/ Output	
		Satisfactory(3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement(0-1 marks): Very less explained solution/ Result/ Output	
C5: Prepare a report/presentation for the given problem	20 %	Good(5-4 marks):Properly prepared report/presentation for given problem	
		Satisfactory(3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement(0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No.13: Create an Email marketing campaign for the blood donation camp at your institute. You are required to identify the ideal target audience and develop proper email messages which will increase open email rate, engagement, and ultimately registration and attendance to the event. You can use MailChimp, sender, or any of the available tools for designing and testing campaign success.

A. **Objective:** The goal of this lab practical is to give students the opportunity to create an Email marketing campaign for the blood donation camp at your institute and test campaign success.

B. **Expected Program Outcomes (POs):**

PO1 [Basic & Discipline specific knowledge]: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
[PO2] Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.
[PO3] Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
[PO4]Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
[PO7] Life-long learning: Ability to analyse individual needs and engage in updating in the context of technological changes.

C. **Expected Skills to be developed based on competency:**

This practical is expected to develop the following skills for the competency: 'Demonstrate advanced practical skills in common digital marketing tools and online platforms'.
 d. Analyze and identify a suitable approach for the problem-solving.
 e. Use of appropriate technology/software/tools.
 f. Relevance and quality of output.

D. **Expected Course Outcomes(Cos):**

CO5: Apply Search engine marketing techniques for creating effective advertising campaigns.

E. **Practical Outcome (PRo)**: Create an Email marketing campaign for the blood donation camp at your institute. You are required to identify the ideal target audience and develop proper email messages which will increase open email rate, engagement, and ultimately registration and attendance to the event. You can use MailChimp, sender, or any of the available tools for designing and testing campaign success.

F. **Expected Affective domain Outcome(ADos)**

Work as leader/team member

G. **Prerequisite Theory:**

1. An email marketing tool: You need an email marketing tool such as MailChimp, Sender, or any other available tool that can help you design, send, and track your email campaign. These tools provide features such as email templates, automated campaigns, and analytics to help you create and measure the success of your campaign.

2. A target audience: You need to identify the ideal target audience for your email campaign. This includes people who are likely to be interested in donating blood, such as students, faculty, staff, and alumni of your institute. You can also target people who have donated blood in the past or those who have expressed interest in donating blood.

3. A targeted email list: Once you have identified your target audience, you need to create a targeted email list. This involves collecting email addresses of people who are interested in your blood donation camp or have given blood in the past.

4. A compelling email message: You need to develop a proper email message that will increase open email rates, engagement, and ultimately registration and attendance to the event. The message should be concise, clear, and compelling. It should provide all the necessary information about the event, such as date, time, location, and registration process.

5. An email template: You can use an email template provided by your email marketing tool.

6. Testing and optimization: Before sending out your email campaign, you should test it to ensure that it looks and works properly.

7. Analytics and reporting: Once you have sent out your email campaign, you need to track its success using the analytics and reporting features provided by your email marketing tool. This includes tracking metrics such as open rates, click-through rates, and conversion rates. You can use this data to make improvements to your future campaigns.

H. **Experimental set up/ Program Logic-Flow chart:**

NA

I. **Resources/Equipment Required**

Sr.No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Laptop/Computer system with an operating system and Internet Facility	Any processor above i3 and any operating system	1
2	https://www.sender.net/, MailChimp	-	-

J. **Safety and necessary Precautions followed:**

NA

K. **Procedure to be followed/Source code:**

- Set up your account
- Set up your audience
- Customize your signup form
- Create a campaign
- View your campaign reports

L. **Observations and Calculations/Input-Output:**

Input:

- List of email addresses of potential donors
- Information about the blood donation camp, such as date, time, location, and purpose
- Knowledge of the target audience, including their demographics, interests, and preferences
- Email marketing software, such as MailChimp or Sender
- Creatives, including images, graphics, and videos

Output:

- A targeted email marketing campaign designed to reach potential donors and encourage them to attend the blood donation camp
- Customized email messages tailored to the interests and preferences of the target audience
- Improved open rates, click-through rates, and engagement with the email campaign
- Increased registrations and attendance at the blood donation camp
- Data analysis from the email marketing software, including metrics such as open rates, click-through rates, conversion rates, and unsubscribe rates, used to measure the success of the campaign and inform future campaigns.

M.   Interpretation of Results

NA

N.   Conclusion

NA

O.   Practical related Quiz.

1. What is the first prerequisite for creating an email marketing campaign for a blood donation camp?
   a) An email marketing tool
   b) A target audience
   c) A compelling email message
   d) An email template

2. How do you identify the ideal target audience for your email campaign?
   a) By targeting people who have never donated blood before
   b) By targeting people who have donated blood in the past
   c) By targeting people who have expressed interest in donating blood
   d) All of the above

3. What is the purpose of developing a proper email message for your campaign?
   a) To increase the open email rate
   b) To increase engagement

c) To increase registration and attendance to the event

d) All of the above

4. What is the purpose of using an email template for your campaign?

a) To make the email look visually appealing

b) To make the email easy to read

c) To make the email mobile-friendly

d) All of the above

5. What is the purpose of testing and optimizing your email campaign?

a) To ensure that the email looks and works properly

b) To ensure that the email is delivered to the inbox and not the spam folder

c) To A/B test different subject lines, email content, and call-to-action buttons

d) All of the above

P.   References / Suggestions

- https://mailchimp.com/help/getting-started-with-mailchimp/
- https://www.sender.net/

Q.   Graph(Not Applicable for CE & IT subjects)

NA

R.   Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	

C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good(5-4 marks):Properly explained solution/ Result/ Output	
		Satisfactory(3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement(0-1 marks): Very less explained solution/ Result/ Output	
C5: Prepare a report/presentation for the given problem	20 %	Good(5-4 marks):Properly prepared report/presentation for given problem	
		Satisfactory(3-2 marks): Partially prepared report/presentation for given problem	

		Need Improvement(0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No.14: Design an email marketing campaign to reactivate dormant users for gym membership/ Library and measure the effectiveness of this campaign.

A.   **Objective:** The goal of this practical is to give students the opportunity to create an Email marketing campaign to reactivate dormant users for gym membership/ Library and measure the effectiveness of campaign.

B.   **Expected Program Outcomes (POs):**

PO1 [Basic & Discipline specific knowledge]: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.

[PO2] Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.

[PO3] Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

[PO4]Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements**.**

[PO7] Life-long learning: Ability to analyse individual needs and engage in updating in the context of technological changes.

C.   **Expected Skills to be developed based on competency:**

This practical is expected to develop the following skills for the competency: 'Demonstrate advanced practical skills in common digital marketing tools and online platforms**.**
g.   Analyze and identify a suitable approach for the problem-solving.
h.   Use of appropriate technology/software/tools.
i.   Relevance and quality of output.

D.   **Expected Course Outcomes(Cos):**

CO5: Apply Search engine marketing techniques for creating effective advertising campaigns.

E.   **Practical Outcome (PRo)**: Design an email marketing campaign to reactivate dormant users for gym membership/ Library and measure the effectiveness of this campaign.

F. **Expected Affective domain Outcome (ADos)**

Work as leader/team member.

G. **Prerequisite Theory:**

1. An email marketing tool: You need an email marketing tool such as Mailchimp, Constant Contact, or any other available tool that can help you design, send, and track your email campaign. These tools provide features such as email templates, automated campaigns, and analytics to help you create and measure the success of your campaign.

2. A list of dormant users: You need to create a list of dormant users who have not used your gym or library services for a certain period of time. This list should include their email addresses and other relevant contact information.

3. A targeted email message: You need to develop a proper email message that will encourage dormant users to reactivate their membership. The message should be personalized and relevant to the recipient's interests and needs.

4. An email template: You can use an email template provided by your email marketing tool or create your own template that reflects your gym or library's brand and message. The template should be visually appealing, easy to read, and mobile-friendly.

5. Testing and optimization: Before sending out your email campaign, you should test it to ensure that it looks and works properly. You can use the testing feature provided by your email marketing tool to preview the email in different email clients and devices.

6. Analytics and reporting: Once you have sent out your email campaign, you need to track its effectiveness using the analytics and reporting features provided by your email marketing tool. This includes tracking metrics such as open rates, click-through rates, and conversion rates. You can use this data to make improvements to your future campaigns.

H. **Experimental set up/ Program Logic-Flow chart:**

NA

I.   Resources/Equipment Required

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer system with an operating system and Internet Facility	Any processor above i3 and any operating system	1
2	https://www.sender.net/, MailChimp	-	-

J.   Safety and necessary Precautions followed:

NA

K.   Procedure to be followed/Source code:

- Set up your account
- Set up your audience
- Customize your signup form
- Create a campaign
- View your campaign reports

L.   Observations and Calculations/Input-Output:

Observations:

- Segment your audience: Before you start sending emails, it's essential to segment your audience. Create a list of dormant users who haven't visited the gym/library in a while. You can also segment your audience based on the reason why they stopped using your service, such as lack of time, injury, or financial reasons. Segmentation will help you create targeted emails that are more likely to resonate with your audience.
- Personalize your emails: Personalization is essential in email marketing. Use the recipient's name in the subject line and throughout the email. You can also personalize the email by referring to the recipient's previous activities, such as the last book they borrowed or the last class they attended at the gym.
- Use a clear call to action: Your email should have a clear call to action that encourages users to take action, such as visiting the gym/library or signing up for a membership. Make sure your call to action stands out, such as using a bright button or bold text.

- Measure the effectiveness: To measure the effectiveness of your email marketing campaign, you should track the open rates, click-through rates, and conversion rates. You can use an email marketing platform like Mailchimp to track these metrics. Make sure you set up tracking correctly to get accurate data.
- Optimize your campaign: Use the data from your email marketing campaign to optimize future campaigns. For example, if you notice a low open rate, try changing the subject line or sender name. If you notice a low conversion rate, try changing the incentive or call to action.

M.   Interpretation of Results

NA

N.   Conclusion

NA

O.   Practical related Quiz

1. Define Email marketing.
2. Give types of Email Marketing.
3. State any two three advantages of Email Marketing.
4. Mention any three tools for measuring Email Marketing campaign success.

P.   References / Suggestions

- https://mailchimp.com/help/getting-started-with-mailchimp/
- https://www.sender.net/

Q.   Graph

NA

R.   Assessment-Rubrics

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	

		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	
C4: Interpret the result and conclusion	20 %	Good(5-4 marks):Properly explained solution/ Result/ Output	
		Satisfactory(3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement(0-1 marks): Very less explained solution/ Result/ Output	
C5:	20 %	Good(5-4 marks):Properly prepared report/presentation for given problem	

Prepare a report/presentation for the given problem		Satisfactory(3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement(0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No.15: Create a proxy ad campaign using Google Ads and measure the effectiveness.

A. **Objective:** The goal of this practical is to give students the opportunity to create a ad campaign and measure the effectiveness.

B. **Expected Program Outcomes (POs):**
   PO1 [Basic & Discipline specific knowledge]: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
   [PO2] Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.
   [PO3] Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
   [PO4]Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements**.**
   [PO7] Life-long learning: Ability to analyse individual needs and engage in updating in the context of technological changes.

C. **Expected Skills to be developed based on competency:**

   This practical is expected to develop the following skills for the competency: 'Demonstrate advanced practical skills in common digital marketing tools and online platforms'**.**
   a) Analyze and identify a suitable approach for the problem-solving.
   b) Use of appropriate technology/software/tools.
   c) Relevance and quality of output.

D. **Expected Course Outcomes(Cos):**

   CO5: Apply Search engine marketing techniques for creating effective advertising campaigns.

E. **Practical Outcome (PRo)**: Create a proxy ad campaign using Google Ads and measure the effectiveness.

F. **Expected Affective domain Outcome(ADos):**

   Work as leader/team member.

G. **Prerequisite Theory:**

1. Understand the goal of the ad campaign - Determine what you want to achieve with your ad campaign.
2. Identify your target audience - Identify the demographics, interests, and behaviors of your ideal customer to ensure your ad campaign reaches the right people.
3. Develop a strong ad message - Create a compelling message that highlights your product or service's unique value proposition, and use clear and concise language.
4. Select appropriate keywords - Choose relevant keywords to ensure your ads are triggered when people search for specific terms related to your product or service.
5. Choose the right ad format - Select the most appropriate ad format for your campaign, such as text ads, image ads, or video ads.
6. Monitor and measure performance - Use Google Ads to track your ad's performance, including metrics such as click-through rate, conversion rate, and cost-per-click, and make adjustments as needed to optimize the campaign.
7. Use Google Analytics - Integrate Google Analytics with your Google Ads account to gain deeper insights into user behavior and measure the campaign's overall effectiveness.

H. **Experimental set up/ Program Logic-Flow:**

NA

I. **Resources/Equipment Required**

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer system with an operating system and Internet Facility	Any processor above i3 and any operating system	1

J.   Safety and necessary Precautions followed:

NA

K.   Procedure to be followed/Source code:

- Sign in to your Google Ads account.
- On the left-side menu, click Campaigns.
- Click the plus button, then select new campaign.
- Select your advertising objective for the campaign.
- Scroll down, then choose your conversion goals and click Continue
- Choose your campaign type and click Continue.

L.   Observations and Calculations/Input-Output:

Input:

- Goal: The first step in creating a proxy ad campaign using Google Ads is to define your goal.
- Audience: Determine your target audience based on factors such as age, gender, location, interests, and behaviour. This will help you create ads that resonate with your audience.
- Keywords: Choose relevant keywords that are likely to be searched by your target audience.
- Ad format: Select the ad format that best suits your goal and audience. This could be text, display, video, or shopping ads.

Output:

- Ad campaign creation: Once you have defined your goal, audience, keywords, ad format, you can create your ad campaign using Google Ads. This involves setting up your ad groups, creating your ads, and targeting your audience.
- Ad performance tracking: After launching your ad campaign, track its performance using metrics such as impressions, clicks, click-through rate (CTR), cost per click (CPC), and conversion rate. Google Ads provides a dashboard that displays these metrics and allows you to optimize your campaign accordingly.
- Campaign optimization: Based on the performance metrics, you can optimize your ad campaign to improve its effectiveness. This could involve refining your keywords, adjusting your ad format, or targeting a different audience.

M.   Interpretation of Results:

NA

N.   Conclusion

NA

O.   Practical related Quiz

1. SEM stands for

a) Search Engine Machine

b) Search Engine Marketing

2. Define PPC.

3. Give Types of Google Ads Campaigns

4. What is the purpose of monitoring and measuring the performance of your ad campaign?

a) To optimize the campaign and improve its effectiveness

b) To see how many times your ad was displayed

c) To track how many times someone clicked on your ad

d) Both a) and c)

5. What metrics can you track using YouTube Analytics?

a) Views, clicks, and engagement rates

b) Likes, shares, and comments

c) Demographics and interests of your audience

d) All of the above

P.   References / Suggestions

- https://ads.google.com/intl/en_in/home/how-it-works/#:~:text=We'll%20display%20your%20ads,get%20directions%20to%20your%20shop.

Q. **Graph**

NA

R. **Assessment-Rubrics**

Criteria	Weightage in %	Rubrics	Marks
C1: Analyze and identify a suitable approach for the problem solving	20 %	Good (5-4 marks): Full Identification of the problem and suitable approach.	
		Satisfactory (3-2 marks): Limited Identification of the Problem and suitable approach.	
		Need Improvement (0-1 marks): Very Less Identification of the Problem and suitable approach.	
C2: Use of appropriate technology/software/tools	20 %	Good (5-4 marks): Proper use of appropriate technology/software/tools	
		Satisfactory(3-2marks): Partial use of appropriate technology/software/tools	
		Need Improvement (0-1 marks): Very less use of appropriate technology/software/tools	
C3: Relevance and quality of output	20 %	Good (5-4 marks): Correct Solution/Result/Output as required.	
		Satisfactory (3-2 marks): Partially Correct Solution/ Result/Output for the Problem.	
		Need Improvement (0-1 marks): Very less Correct Solution/ Result/ Output for the problem.	

C4: Interpret the result and conclusion	20 %	Good(5-4 marks):Properly explained solution/ Result/ Output	
		Satisfactory(3-2 marks): Partially explained solution/ Result/ Output	
		Need Improvement(0-1 marks): Very less explained solution/ Result/ Output	
C5: Prepare a report/presentation for the given problem	20 %	Good(5-4 marks):Properly prepared report/presentation for given problem	
		Satisfactory(3-2 marks): Partially prepared report/presentation for given problem	
		Need Improvement(0-1 marks): Very less prepared report/presentation for given problem	
Total Marks:			
Signature with Date:			

Date: ……………

Practical No.16: Optimize your Google Ad campaign results with the use of the Google Analytics tool, proper keyword selections, Ad groups, and bid adjustments.

A. **Objective:** The goal of this practical is to give students the opportunity to optimize your Google Ad campaign results with the use of the Google Analytics tool, proper keyword selections, Ad groups, and bid adjustments.

B. **Expected Program Outcomes (POs):**

PO1 [Basic & Discipline specific knowledge]: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.

[PO2] Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.

[PO3] Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

[PO4]Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.

[PO7] Life-long learning: Ability to analyse individual needs and engage in updating in the context of technological changes.

C. **Expected Skills to be developed based on competency:**

This practical is expected to develop the following skills for the competency: 'Demonstrate advanced practical skills in common digital marketing tools and online platforms'.
1. Analyze and identify a suitable approach for the problem-solving.
2. Use of appropriate technology/software/tools.
3. Relevance and quality of output.

D. **Expected Course Outcomes(Cos):**

CO5: Apply Search engine marketing techniques for creating effective advertising campaigns.

E. **Practical Outcome (PRo)**: Optimize your Google Ad campaign results with the use of the Google Analytics tool, proper keyword selections, Ad groups, and bid adjustments.

F.   **Expected Affective domain Outcome (ADos):**

Work as leader/team member.

G.   **Prerequisite Theory:**

1. Set up a Google Analytics account - Google Analytics is a powerful tool that can help you analyze and optimize your Google Ad campaign. Make sure you have a Google Analytics account set up and that it's properly linked to your Google Ad campaign.
2. Identify your target audience - Determine the demographics, interests, and behaviors of your ideal customer to ensure your ad campaign reaches the right people.
3. Conduct thorough keyword research - Choose relevant keywords that match the intent of your target audience.
4. Create effective ad groups - Group your keywords and ad creatives based on themes or topics to make your ads more relevant and targeted.
5. Use bid adjustments - Bid adjustments allow you to increase or decrease your bids based on factors such as time of day, location, and device. Use bid adjustments to optimize your ad campaign and improve its performance.
6. Monitor your campaign regularly - Keep an eye on your campaign's performance and make adjustments as needed to improve its effectiveness.

H.   **Experimental set up/ Program Logic-Flow chart:**
NA

I.   **Resources/Equipment Required**

Sr. No.	Instrument/Equipment /Components/Trainer kit	Specification	Quantity
1	Computer system with an operating system and Internet Facility	Any processor above i3 and any operating system	1

J.   **Safety and necessary Precautions followed:**

NA

K.   **Procedure to be followed/Source code:**
- Organize account

- Set budget
- Pick keywords
- Set your keyword match types
- Set your landing pages
- Decide which devices to show up on
- Write your ads
- Connect your account to Google Analytics
- Hit go and check back in

L.   Observations and Calculations/Input-Output:

Input:

- Access to Google Analytics account
- Understanding of your target audience and advertising goals
- List of relevant keywords
- Ad copy and images

Output:

- Increased click-through rates (CTR)
- Increased conversion rates

M.   Interpretation of Results:

NA

N.   Conclusion

NA

O.   Practical related Quiz

1. State Google Ads Bidding and Ranking Strategies.
2. Give uses of Google Analytics tool.
3. Mention Search Engine Marketing techniques.
4. What is the benefit of using bid adjustments in your Google Ad campaign?
   a) They allow you to set a maximum bid for your ads
   b) They help you target specific locations and devices
   c) They improve your Quality Score
   d) They prevent your ads from appearing in irrelevant searches

5. How can conversion tracking help you optimize your Google Ad campaign?
   a) It allows you to track the number of clicks your ads receive
   b) It helps you identify which keywords generate the most traffic
   c) It enables you to track the number of conversions generated by your ads
   d) It prevents you from overspending on your ad campaign

P.   References / Suggestions

- https://support.google.com/google-ads/answer/6165592?hl=en
- https://ads.google.com/home/resources/how-to-setup-googleads-a-checklist/

Q.   Graph(Not Applicable for CE & IT subjects):

NA

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