

Subject Name Solutions

4341601 – Winter 2024

Semester 1 Study Material

Detailed Solutions and Explanations

Question 1(a) [3 marks]

Explain three important factors that influence a website's SEO ranking.

Solution	
Factor	Description
Content Quality	Fresh, relevant, keyword-optimized content that provides value to users
Backlinks	High-quality external websites linking to your site (domain authority)
Technical SEO	Site speed, mobile-friendliness, SSL certificate, and proper site structure
<ul style="list-style-type: none">• Content Quality: Search engines prioritize websites with original, valuable content• Backlinks: Act as votes of confidence from other websites• Technical SEO: Ensures search engines can crawl and index your site efficiently	

Mnemonic
“CBT - Content, Backlinks, Technical”

Question 1(b) [4 marks]

Define data privacy and its importance in digital marketing.

Solution	
Data Privacy is the protection of personal information collected from users during digital marketing activities.	
Aspect	Importance
User Trust	Builds customer confidence and loyalty
Legal Compliance	Avoids penalties from GDPR, CCPA regulations
Brand Reputation	Prevents negative publicity from data breaches
<ul style="list-style-type: none">• User Trust: Customers share more data when they trust your privacy practices• Legal Compliance: Mandatory compliance with data protection laws• Brand Reputation: Data breaches can severely damage brand image	

Mnemonic
“TLR - Trust, Legal, Reputation”

Question 1(c) [7 marks]

Explain the key components of a digital marketing plan.

Solution

Component	Description
Goals & Objectives	SMART goals aligned with business objectives
Target Audience	Demographics, psychographics, and behavior analysis
Channel Strategy	Selection of appropriate digital platforms
Content Strategy	Content types, themes, and publishing schedule
Budget Allocation	Resource distribution across channels
Analytics & KPIs	Measurement frameworks and success metrics

Mermaid Diagram (Code)

```
{Shaded}
{Highlighting} []
graph TD
    A[Digital Marketing Plan] --> B[Goals & Objectives]
    A --> C[Target Audience]
    A --> D[Channel Strategy]
    A --> E[Content Strategy]
    A --> F[Budget Allocation]
    A --> G[Analytics & KPIs]
{Highlighting}
{Shaded}
```

- **Goals & Objectives:** Define specific, measurable outcomes
- **Target Audience:** Create detailed buyer personas
- **Channel Strategy:** Choose optimal mix of social media, email, SEO, PPC
- **Content Strategy:** Develop engaging content calendar
- **Budget Allocation:** Distribute resources based on ROI potential
- **Analytics & KPIs:** Track performance and optimize continuously

Mnemonic

“GT-CCBA - Goals-Target, Channels-Content-Budget-Analytics”

Question 1(c OR) [7 marks]

Define the P.O.E.M. Framework and explain its importance in digital marketing.

Solution

P.O.E.M. stands for **Paid**, **Owned**, **Earned**, **Media** framework for digital marketing strategy.

Media Type	Description	Examples
Paid	Media you pay for	Google Ads, Facebook Ads, YouTube Ads
Owned	Media you control	Website, Blog, Email list, Mobile app
Earned	Media gained through credibility	Social shares, Reviews, PR mentions

Mermaid Diagram (Code)

```
{Shaded}  
{Highlighting} []  
graph TD  
    A[P.O.E.M Framework] --> B[Paid Media]  
    A --> C[Owned Media]  
    A --> D[Earned Media]  
    B --> E[Immediate Reach]  
    C --> F[Long-term Asset]  
    D --> G[Trust & Credibility]  
{Highlighting}  
{Shaded}
```

- **Paid Media:** Provides immediate visibility and targeted reach
- **Owned Media:** Creates long-term assets and brand control
- **Earned Media:** Builds trust and authentic brand advocacy

Mnemonic

“POE - Pay, Own, Earn”

Question 2(a) [3 marks]

Differentiate between black hat and white hat SEO techniques.

Solution

Aspect	White Hat SEO	Black Hat SEO
Methods	Ethical, guideline-compliant	Manipulative, rule-breaking
Results	Sustainable long-term growth	Quick but temporary gains
Risk	Safe from penalties	High risk of penalties

- **White Hat SEO:** Follows search engine guidelines for sustainable results
- **Black Hat SEO:** Uses deceptive practices for quick ranking gains
- **Risk Factor:** Black hat techniques can result in complete site bans

Mnemonic

“WEB - White Ethical Benefits, Black Breaks-rules”

Question 2(b) [4 marks]

Explain how search engine algorithms work and how they rank websites.

Solution

Process	Function
Crawling	Bots discover and scan web pages
Indexing	Pages stored in search engine database
Ranking	Algorithm determines page relevance and authority
Results	Best matches displayed for user queries

- **Crawling:** Web crawlers follow links to find new content
- **Indexing:** Content analyzed and stored in massive databases
- **Ranking:** 200+ factors determine search result positions
- **Results:** Most relevant pages shown first to users

Mnemonic

“CIRR - Crawl, Index, Rank, Results”

Question 2(c) [7 marks]

Describe the strategies for building backlinks.

Solution

Strategy	Description	Effectiveness
Guest Posting	Write articles for other websites	High
Resource Link Building	Get listed in industry directories	Medium
Broken Link Building	Replace broken links with your content	High
Content Marketing	Create shareable, valuable content	Very High
Influencer Outreach	Partner with industry influencers	High

Mermaid Diagram (Code)

```
{Shaded}
{Highlighting} []
graph TD
    A[Backlink Building] --> B[Guest Posting]
    A --> C[Resource Links]
    A --> D[Broken Link Building]
    A --> E[Content Marketing]
    A --> F[Influencer Outreach]
{Highlighting}
{Shaded}
```

- **Guest Posting:** Builds relationships and authority in your niche
- **Resource Link Building:** Establishes credibility through directories
- **Broken Link Building:** Provides value by fixing broken resources
- **Content Marketing:** Naturally attracts links through quality content
- **Influencer Outreach:** Leverages established audiences for link opportunities

Mnemonic

“GRBCI - Guest, Resource, Broken, Content, Influencer”

Question 2(a OR) [3 marks]

Explain the importance of backlinks, website speed and performance in search engine ranking.

Solution

Factor	Impact on SEO
Backlinks	Authority and trust signals
Website Speed	User experience ranking factor
Performance	Core Web Vitals affect rankings

- **Backlinks:** Act as votes of confidence from other websites
- **Website Speed:** Faster sites rank higher and reduce bounce rates
- **Performance:** Google prioritizes sites with good Core Web Vitals

Mnemonic

“BSP - Backlinks, Speed, Performance”

Question 2(b OR) [4 marks]

Differentiate between on-page and off-page SEO, and provide examples of each.

Solution

SEO Type	Focus	Examples
On-Page	Website optimization	Title tags, meta descriptions, content optimization
Off-Page	External factors	Backlinks, social signals, brand mentions

- **On-Page SEO:** Controls elements within your website
- **Off-Page SEO:** Builds authority through external validation
- **Examples:** On-page includes keyword optimization; off-page includes link building

Mnemonic

“IO - Internal Optimization, External Elevation”

Question 2(c OR) [7 marks]

Explain Different ways to improve SEO rankings.

Solution

Method	Description	Impact
Keyword Research	Target relevant, low-competition keywords	High
Content Optimization	Create valuable, keyword-rich content	Very High
Technical SEO	Improve site speed, mobile-friendliness	High
Link Building	Acquire quality backlinks	Very High
User Experience	Enhance site usability and engagement	Medium
Local SEO	Optimize for local search results	High (for local business)

Mermaid Diagram (Code)

```
{Shaded}
{Highlighting} []
graph TD
    A[SEO Improvement] --> B[Keyword Research]
    A --> C[Content Optimization]
    A --> D[Technical SEO]
    A --> E[Link Building]
    A --> F[User Experience]
    A --> G[Local SEO]
{Highlighting}
{Shaded}
```

- **Keyword Research:** Foundation for all SEO efforts
- **Content Optimization:** Provides value while targeting keywords
- **Technical SEO:** Ensures search engines can effectively crawl your site
- **Link Building:** Builds domain authority and trust
- **User Experience:** Reduces bounce rate and increases engagement
- **Local SEO:** Critical for businesses with physical locations

Mnemonic

“KC-TLUL - Keywords, Content, Technical, Links, User-experience, Local”

Question 3(a) [3 marks]

Differentiate between single-touch and multi-touch attribution models.

Solution

Model Type	Credit Assignment	Use Case
Single-Touch	100% credit to one touchpoint	Simple customer journeys
Multi-Touch	Credit distributed across touchpoints	Complex customer journeys

- **Single-Touch:** First-click or last-click gets full credit
- **Multi-Touch:** Linear, time-decay, or position-based attribution
- **Usage:** Multi-touch provides more accurate customer journey insights

Mnemonic

“SM - Single Simple, Multi Multiple”

Question 3(b) [4 marks]

Explain how businesses can set up goals in Google Analytics.

Solution

Step	Action
1. Access Goals	Navigate to Admin → View → Goals
2. Choose Template	Select from template or create custom
3. Configure Details	Set goal name, type, and conditions
4. Verify Setup	Test goal using verification feature

- **Goal Types:** Destination, Duration, Pages/Session, Event goals
- **Configuration:** Define specific conditions for goal completion
- **Verification:** Ensure goals track correctly before implementation
- **Monitoring:** Regular review and optimization of goal performance

Mnemonic

“ACCV - Access, Choose, Configure, Verify”

Question 3(c) [7 marks]

What is the role of web analytics in formulation of digital marketing strategy? Discuss different types of web analytics.

Solution

Role in Strategy: Web analytics provides data-driven insights for informed decision-making in digital marketing.

Analytics Type	Purpose	Key Metrics
Content Analytics	Content performance tracking	Page views, time on page, bounce rate
Customer Analytics	User behavior analysis	Demographics, interests, conversion paths
Social Media Analytics	Social engagement measurement	Shares, likes, comments, reach
SEO Analytics	Search performance tracking	Keywords, rankings, organic traffic
Conversion Analytics	Goal completion tracking	Conversion rate, revenue, ROI

Mermaid Diagram (Code)

```
{Shaded}
{Highlighting} []
graph TD
    A[Web Analytics] --> B[Strategy Formulation]
    B --> C[Content Analytics]
    B --> D[Customer Analytics]
    B --> E[Social Analytics]
    B --> F[SEO Analytics]
    B --> G[Conversion Analytics]
{Highlighting}
{Shaded}
```

- **Strategic Role:** Identifies opportunities, measures performance, guides optimization
- **Content Analytics:** Helps optimize content strategy based on engagement
- **Customer Analytics:** Enables better audience targeting and personalization
- **Social Media Analytics:** Measures social media ROI and engagement
- **SEO Analytics:** Tracks organic search performance and opportunities
- **Conversion Analytics:** Measures bottom-line impact of marketing efforts

Mnemonic

“CCSSC - Content, Customer, Social, SEO, Conversion”

Question 3(a OR) [3 marks]

Define the terms: Unique visitors, Average Visit Duration, Bounce rate.

Solution

Metric	Definition
Unique Visitors	Individual users visiting site in specific time period
Average Visit Duration	Average time users spend on website per session
Bounce Rate	Percentage of visitors leaving after viewing one page
<ul style="list-style-type: none">• Unique Visitors: Counts each person once, regardless of return visits• Average Visit Duration: Indicates content engagement and site stickiness• Bounce Rate: High rates may indicate poor content match or site issues	

Mnemonic

“UAB - Unique, Average, Bounce”

Question 3(b OR) [4 marks]

Explain A/B testing in web analytics.

Solution

A/B Testing is comparing two versions of a webpage to determine which performs better.

Component	Description
Version A	Original webpage (control)
Version B	Modified webpage (variant)
Traffic Split	Usually 50/50 random distribution
Metrics	Conversion rate, click-through rate, engagement

- **Process:** Split traffic between two versions and measure performance
- **Duration:** Run tests long enough for statistical significance
- **Variables:** Test one element at a time (headlines, buttons, images)
- **Decision:** Implement winning version based on data

Mnemonic

“ABCD - A-version, B-version, Compare, Decide”

Question 3(c OR) [7 marks]

Explain following tracking code with their pros and cons: **Long tracking code, Obfuscated tracking code, UTM codes**

Solution

Tracking Type	Description	Pros	Cons
Long Tracking Code	Detailed parameters for comprehensive tracking	Complete data collection, detailed insights	Slow page load, complex implementation
Obfuscated Tracking	Encrypted/hidden tracking parameters	Data security, prevents tampering	Difficult debugging, complex setup

UTM Codes

URL parameters for campaign tracking

Easy implementation,
campaign attribution

Manual tagging
required, URL appearance

Mermaid Diagram (Code)

```
{Shaded}
{Highlighting} []
graph TD
    A[Tracking Codes] --> B[Long Tracking]
    A --> C[Obfuscated Tracking]
    A --> D[UTM Codes]
    B --> E[Comprehensive Data]
    C --> F[Secure Tracking]
    D --> G[Campaign Attribution]
{Highlighting}
{Shaded}
```

- **Long Tracking Code:** Best for enterprise-level detailed analytics
- **Obfuscated Tracking:** Ideal for sensitive data protection requirements
- **UTM Codes:** Perfect for campaign tracking and traffic source identification

Mnemonic

“LOU - Long comprehensive, Obfuscated secure, UTM simple”

Question 4(a) [3 marks]

Explain different types of YouTube ads.

Solution

Ad Type	Format	Placement
Skippable In-Stream	5-second skip option	Before/during videos
Non-Skippable	15-20 seconds, no skip	Before/during videos
Bumper Ads	6 seconds, non-skippable	Before videos

- **Skippable In-Stream:** Cost-effective, pay only for engaged viewers
- **Non-Skippable:** Guaranteed message delivery, higher completion rates
- **Bumper Ads:** Brand awareness, quick memorable messages

Mnemonic

“SNB - Skippable, Non-skippable, Bumper”

Question 4(b) [4 marks]

Explain the concept of LinkedIn marketing and discuss its significance in the digital marketing landscape.

Solution

LinkedIn Marketing focuses on professional networking and B2B relationship building.

Aspect	Significance
Professional Audience	Decision-makers and industry professionals
B2B Focus	Ideal for business-to-business marketing

Content Authority Networking

Establishes thought leadership
Direct access to key business contacts

- **Professional Audience:** Higher income, educated demographics
- **B2B Focus:** 80% of B2B leads come from LinkedIn
- **Content Authority:** Share industry insights and expertise
- **Networking:** Build valuable business relationships

Mnemonic

“PBCN - Professional, B2B, Content, Networking”

Question 4(c) [7 marks]

Describe the key differences between organic and paid social media marketing strategies. Provide two advantages and two disadvantages for each strategy.

Solution

Strategy	Description	Advantages	Disadvantages
Organic	Free content posting and engagement	<ul style="list-style-type: none">• Cost-effective• Builds authentic relationships	<ul style="list-style-type: none">• Limited reach• Time-intensive
Paid	Sponsored content and advertisements	<ul style="list-style-type: none">• Immediate reach• Precise targeting	<ul style="list-style-type: none">• Requires budget• Temporary results

Mermaid Diagram (Code)

```
{Shaded}
{Highlighting} []
graph TD
    A[Social Media Marketing] --> B[Organic Strategy]
    A --> C[Paid Strategy]
    B --> D[Cost-effective]
    B --> E[Authentic relationships]
    C --> F[Immediate reach]
    C --> G[Precise targeting]
{Highlighting}
{Shaded}
```

Organic Advantages:

- **Cost-effective:** No advertising spend required
- **Builds authentic relationships:** Genuine community engagement

Organic Disadvantages:

- **Limited reach:** Algorithm restrictions reduce visibility
- **Time-intensive:** Requires consistent content creation and engagement

Paid Advantages:

- **Immediate reach:** Instant visibility to target audience
- **Precise targeting:** Advanced demographic and interest targeting

Paid Disadvantages:

- **Requires budget:** Ongoing advertising costs
- **Temporary results:** Results stop when advertising stops

Mnemonic

“OPAL - Organic Patient Authentic Low-cost, Paid Quick Targeted Expensive”

Question 4(a OR) [3 marks]

What are the different types of Twitter ads? Explain any one type briefly.

Solution

Ad Type	Purpose
Promoted Tweets	Increase tweet visibility
Promoted Accounts	Gain more followers
Promoted Trends	Boost trending topics

Promoted Tweets: Regular tweets that businesses pay to show to wider audiences beyond their followers, appearing in users' timelines and search results with "Promoted" label.

Mnemonic

"PAT - Promoted tweets, Accounts, Trends"

Question 4(b OR) [4 marks]

Samsung launched a new smart phone in market and want to run YouTube ads. As social media marketing expert which type of YouTube ad format would you will choose and why?

Solution

Recommended Format: Skippable In-Stream Ads

Reason	Benefit
Cost-Effective	Pay only when users watch 30+ seconds
Product Demonstration	Longer format allows feature showcase
Audience Interest	Skip option ensures engaged viewers
Brand Awareness	Reaches broad audience with smartphone interest

- **Product Demonstration:** Smartphones need visual demonstration of features
- **Audience Interest:** Skip option filters for genuinely interested viewers
- **Cost-Effective:** Only pay for engaged viewers who watch beyond 30 seconds
- **Brand Awareness:** Broad reach for new product launch

Mnemonic

"PCAB - Product demo, Cost-effective, Audience interest, Brand awareness"

Question 4(c OR) [7 marks]

Describe the main functions of a Facebook Page, Business Manager, and Facebook Ads. How can these assets help businesses in their marketing efforts?

Solution

Asset	Main Functions	Marketing Benefits
Facebook Page	<ul style="list-style-type: none">• Brand presence• Content sharing• Customer engagement	<ul style="list-style-type: none">• Builds brand awareness• Direct customer communication
Business Manager	<ul style="list-style-type: none">• Account management• Team access control• Asset organization	<ul style="list-style-type: none">• Centralized control• Secure collaboration
Facebook Ads	<ul style="list-style-type: none">• Targeted advertising• Campaign management• Performance tracking	<ul style="list-style-type: none">• Precise audience targeting• Measurable ROI

Mermaid Diagram (Code)

```
{Shaded}  
{Highlighting} []  
graph TD  
    A[Facebook Marketing Assets] --> B[Facebook Page]  
    A --> C[Business Manager]  
    A --> D[Facebook Ads]  
    B --> E[Brand Presence]  
    C --> F[Account Management]  
    D --> G[Targeted Advertising]  
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```

Marketing Benefits:

- **Facebook Page:** Creates professional brand presence and enables organic reach
- **Business Manager:** Provides security and organization for multiple accounts and team members
- **Facebook Ads:** Delivers targeted campaigns with detailed analytics and ROI tracking

Integration Benefits:

- **Unified Strategy:** All three work together for comprehensive Facebook marketing
- **Data Sharing:** Pixel data from page enhances ad targeting
- **Brand Consistency:** Consistent messaging across organic and paid content

Mnemonic

“PMA - Page presence, Manager control, Ads targeting”

Question 5(a) [3 marks]

List the Types of Instagram Content and Ads.

Solution

Content Types	Ad Types
Posts	Photo Ads
Stories	Video Ads
Reels	Carousel Ads
IGTV	Stories Ads
Live	Reels Ads

- **Content Types:** Various formats for organic engagement
- **Ad Types:** Sponsored versions with targeting capabilities
- **Integration:** Ads blend naturally with organic content

Mnemonic

“PSRIL - Posts, Stories, Reels, IGTV, Live”

Question 5(b) [4 marks]

What is e-mail marketing? What are different types of e-mail marketing?

Solution

Email Marketing is direct digital communication with customers through personalized email messages.

Type	Purpose	Example
Newsletter	Regular updates and information	Monthly company news
Promotional	Sales and offers	Discount codes, new products

Transactional Welcome Series	Purchase confirmations New subscriber onboarding	Order receipts, shipping updates Introduction to brand and products
<ul style="list-style-type: none"> Newsletter: Builds relationships through valuable content Promotional: Drives sales and conversions Transactional: Provides essential customer service information Welcome Series: Nurtures new subscribers into customers 		

Mnemonic

“NPTW - Newsletter, Promotional, Transactional, Welcome”

Question 5(c) [7 marks]

Explain different types of ad extensions available in Google Ads with an example of each.

Solution

Extension Type	Function	Example
Sitelink Extensions	Additional page links	“About Us”, “Contact”, “Products”
Call Extensions	Phone number display	“+1-800-123-4567”
Location Extensions	Business address	“123 Main St, City, State”
Callout Extensions	Highlight features	“Free Shipping”, “24/7 Support”
Price Extensions	Product/service pricing	“Basic Plan: \$19/month”
App Extensions	Mobile app downloads	“Download our iOS/Android app”

Mermaid Diagram (Code)

```
{Shaded}
{Highlighting} []
graph TD
    A[Google Ad Extensions] --> B[Sitelink Extensions]
    A --> C[Call Extensions]
    A --> D[Location Extensions]
    A --> E[Callout Extensions]
    A --> F[Price Extensions]
    A --> G[App Extensions]
{Highlighting}
{Shaded}
```

Benefits:

- Increased CTR:** Extensions make ads more prominent and informative
- Better Quality Score:** Improved ad performance leads to lower costs
- Enhanced User Experience:** Users get more relevant information
- Competitive Advantage:** More screen real estate than competitors

Implementation:

- Automatic:** Google may show relevant extensions automatically
- Manual:** Advertisers can create and customize specific extensions
- Performance:** Extensions shown based on predicted impact

Mnemonic

“SCLCPA - Sitelink, Call, Location, Callout, Price, App”

Question 5(a OR) [3 marks]

Explain importance and benefits of social media marketing.

Solution

Benefit	Impact
Brand Awareness	Increases visibility and recognition
Customer Engagement	Direct interaction and relationship building
Cost-Effective	Lower costs compared to traditional advertising

- **Brand Awareness:** Exponential reach through sharing and viral content
- **Customer Engagement:** Real-time feedback and community building
- **Cost-Effective:** High ROI with targeted advertising options

Mnemonic

“BEC - Brand awareness, Engagement, Cost-effective”

Question 5(b OR) [4 marks]

Give the difference between PPC and SEO.

Solution

Aspect	PPC (Pay-Per-Click)	SEO (Search Engine Optimization)
Cost	Paid advertising	Organic/Free traffic
Results	Immediate visibility	Long-term sustainable results
Control	Full control over ads	Limited control over rankings
Duration	Results stop when payments stop	Long-lasting results

- **PPC:** Immediate results but requires ongoing investment
- **SEO:** Takes time to build but provides sustainable long-term value
- **Integration:** Best results come from combining both strategies
- **Budget:** PPC needs advertising budget; SEO needs time investment

Mnemonic

“ICRD - Immediate vs Continuous, Results vs Duration”

Question 5(c OR) [7 marks]

Explain the concept of Quality Score in Google AdWords and its impact on ad rankings.

Solution

Quality Score is Google's rating (1-10) of ad quality, keywords, and landing pages.

Component	Weight	Impact
Expected CTR	High	Predicted likelihood users will click
Ad Relevance	High	How closely ad matches search intent
Landing Page Experience	Medium	Page quality and user experience

Mermaid Diagram (Code)

```
{Shaded}  
{Highlighting} []  
graph TD  
    A[Quality Score] --> B[Expected CTR]  
    A --> C[Ad Relevance]  
    A --> D[Landing Page Experience]  
    B --> E[Ad Ranking]  
    C --> F[Cost Per Click]  
    D --> G[Ad Position]  
{Highlighting}  
{Shaded}
```

Impact on Ad Rankings:

Quality Score	Ad Rank Impact	Cost Impact
High (8-10)	Higher positions	Lower CPC
Medium (5-7)	Average positions	Average CPC
Low (1-4)	Lower positions	Higher CPC

Benefits of High Quality Score:

- **Lower Costs:** Pay less per click than competitors
- **Better Positions:** Appear higher in search results
- **Increased Visibility:** More ad extension eligibility
- **Improved ROI:** Better performance at lower costs

Optimization Strategies:

- **Keyword Relevance:** Match keywords closely to ad copy
- **Ad Copy Quality:** Write compelling, relevant ad text
- **Landing Page:** Ensure fast, relevant, user-friendly pages
- **Account Structure:** Organize campaigns and ad groups logically

Mnemonic

“EAL-RCP - Expected CTR, Ad relevance, Landing page affect Rank, Cost, Position”