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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

MCA (Integrated)

SEM: VII - THEORY EXAMINATION (2025 - 2026)

Subject: Advance Concepts of Optimization

Time: 3 Hours

Max. Marks: 100

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of **three Sections -A, B, & C**. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.

2. Maximum marks for each question are indicated on right -hand side of each question.

3. Illustrate your answers with neat sketches wherever necessary.

4. Assume suitable data if necessary.

5. Preferably, write the answers in sequential order.

6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION-A

20

1. Attempt all parts:-

1-a. Give the expansion of SEO? (CO1, K1)

1

- (a) Search Engine Operation
- (b) Search Engine Optimization
- (c) Site Engine Optimization
- (d) Search Easy Option

1-b. SEO is mainly divided into: (CO1, K1)

1

- (a) Paid & Unpaid SEO
- (b) On-page & Off-page SEO
- (c) Social & Technical SEO
- (d) Local & Global SEO

1-c. GOOGLE SEO stands for:(CO2, K1)

1

- (a) Search Easy Optimization
- (b) Simple Engine Operation
- (c) Search Electronic Output
- (d) Search Engine Optimization

1-d. The process by which search engines read website data is called:(CO2, K1)

1

- (a) Indexing
- (b) Crawling
- (c) Ranking
- (d) Mining

1-e. Identify which On-page element helps search engines understand the hierarchy of

1

content? (CO3, K2)

- (a) Anchor text
 - (b) H1, H2, H3 tags
 - (c) Meta keywords
 - (d) Alt text
- 1-f. A page has high impressions but low CTR. What is most likely the issue? (CO3, K4) 1
- (a) Page not indexed
 - (b) Poor meta title/description
 - (c) Low backlinks
 - (d) High keyword density
- 1-g. If a business wants to rank for “cheap flights,” the first step is: (CO4, K3) 1
- (a) Write random blogs
 - (b) Conduct keyword research on “cheap flights”
 - (c) Remove competitors’ backlinks
 - (d) Change web hosting
- 1-h. To improve app ranking in Google Play Store, you should: (CO4, K3) 1
- (a) Optimize app title and description with keywords
 - (b) Only use social media promotion
 - (c) Ignore reviews
 - (d) Disable updates
- 1-i. Identify which search engine has publicly emphasized social signals historically? (CO5, K1) 1
- (a) Google
 - (b) Bing
 - (c) Yahoo
 - (d) DuckDuckGo
- 1-j. Customer relationship building relies on what most? (CO5, K1) 1
- (a) High budget
 - (b) Random posting
 - (c) Consistency and engagement
 - (d) Keyword stuffing

2. Attempt all parts:-

- 2.a. Differentiate between On-page SEO and Off-page SEO.(CO1, K3) 2
- 2.b. Explain the role of Google’s BERT algorithm in search results.(CO2, K2) 2
- 2.c. Identify structural issues in a website that can hurt technical SEO.(CO3, K3) 2
- 2.d. List any two metrics used in Mobile/App SEO performance tracking. (CO4, K2) 2
- 2.e. Differentiate between organic SEO and social media-driven SEO. (CO5, K4) 2

SECTION-B

30

3. Attempt all parts:-

3.a. Answer any <u>one</u> of the following:-	
3.a.(i) Define keyword Research and explain any two tools used for it.(CO1, K3)	6
3.a.(ii) Apply the process of keyword research to create a keyword plan for a travel website.(CO1, K3)	6
3.b. Answer any one of the following:-	
3.b.(i) Illustrate the three major functions of search engines and their role.(CO2, K3)	6
3.b.(ii) Develop a sample persona for a travel website targeting frequent flyers.(CO2, K3)	6
3.c. Answer any one of the following:-	
3.c.(i) Explain web crawler? Mention two examples used in SEO.(CO3, K3)	6
3.c.(ii) Describe the role of site speed optimization in Technical SEO.(CO3, K3)	6
3.d. Answer any one of the following:-	
3.d.(i) Evaluate content gaps by analyzing competitors' blog performance and suggest improvements. (CO4, K4)	6
3.d.(ii) Analyze how internal linking and schema markup enhance website visibility. (CO4, K4)	6
3.e. Answer any one of the following:-	
3.e.(i) Define Social Media Marketing and explain its role in building customer relationships. (CO5, K2)	6
3.e.(ii) List and describe three key benefits of Influence Marketing for brand promotion. (CO5, K2)	6
<u>SECTION-C</u>	50
4. Answer any <u>one</u> of the following:-	
4-a. Explain the advantages of avoiding negative SEO for long-term website growth.(CO1, K3)	10
4-b. Apply the on-page SEO techniques to optimize a blog post about "Best Travel Destinations in India."(CO1, K3)	10
5. Answer any <u>one</u> of the following:-	
5-a. Analyze how the evolution of SEO has impacted the way businesses approach online visibility today.(CO2, K4)	10
5-b. Illustrate how SEO can be used as a career path by listing three job roles and their responsibilities.(CO2, K4)	10
6. Answer any <u>one</u> of the following:-	
6-a. Using a sample webpage, identify three key areas where On-page SEO can be improved.(CO3, K4)	10
6-b. Analyze how title tags and meta descriptions impact user click-through rates (CTR) in SERPs.(CO3, K4)	10
7. Answer any <u>one</u> of the following:-	
7-a. State the difference between Mobile SEO and App SEO. (CO4, K3)	10
7-b. Explain the concept of SMART SEO goals with one example. (CO4, K3)	10
8. Answer any <u>one</u> of the following:-	
8-a. Apply audience segmentation techniques to classify the types of influencers used in	10

product launches. (CO5, K5)

- 8-b. Evaluate the role of relationship-building in sustaining long-term influencer partnerships. (CO5, K5)

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