

**UCSC****University of Colombo, Sri Lanka***University of Colombo School of Computing***DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY
(EXTERNAL)**Academic Year 2025 — 3rd Year Examination — Semester 6**IT6506 — e-Business Technologies***Structured Question Paper*
(2 Hours)**To be completed by the candidate****Index Number**

--	--	--	--	--	--	--

Important Instructions

- The duration of the paper is **2 hours**.
- The medium of instructions and questions is English. Students should answer in the medium of English language only.
- This paper has **4 questions** on **16 pages**. Answer **all** questions.
- All questions carry **equal** marks.
- Write your answers **only on the space provided** on this question paper.
- Do not tear off any part of this question paper. Under no circumstances may this paper (or any part of this paper), used or unused, be removed from the Examination Hall by a candidate.
- Note that questions appear on both sides of the paper. If a page or part of a page is not printed, please inform the supervisor/invigilator immediately.
- Any electronic device capable of storing and retrieving text, including electronic dictionaries, smartwatches, and mobile phones, is not allowed.
- Calculators are **not allowed**.
- *All Rights Reserved*. This question paper can NOT be used without proper permission from the University of Colombo School of Computing.

**To be completed by
the examiners**

1	
2	
3	
4	
Total	

1) **Use the following case study to answer the questions given below.**

PrintMagic is a newly established digital printing business that commenced operations in early 2023 in Dehiwala, Sri Lanka, with a strong focus on leveraging eBusiness technologies to enhance service delivery and customer reach. Founded by a group of young entrepreneurs with expertise in graphic design and Information Technology, the company aimed to modernize the traditional printing industry by integrating online platforms into its core operations. Following a successful launch, the business expanded rapidly, opening branches in Bambalapitiya, Wattala, and Galle, targeting both individual and corporate customers. PrintMagic offers a wide range of services including business cards, banners, customized merchandise, and bulk printing, while enabling customers to place orders online, upload designs, customize templates, and make digital payments through its website and mobile platforms.

Despite its innovative approach, PrintMagic encountered several eBusiness-related management challenges during its expansion. One major issue was the integration of digital systems across multiple branches, as inconsistencies in order processing and file management led to delays and occasional errors in production. The reliance on an online ordering system also required significant investment in IT infrastructure and cybersecurity to protect customer data and intellectual property, particularly for corporate customers.

Furthermore, managing real-time communication between customers and production teams proved difficult, especially when handling design revisions and urgent orders. Dependence on third-party delivery services affected delivery timelines and customer satisfaction, while intense competition in the digital printing market increased pressure on pricing and service quality. Additionally, converting website traffic and social media engagement into actual sales remained a challenge, highlighting gaps in digital marketing effectiveness.

In response to these challenges, management decided to implement several strategic eBusiness solutions. It also enhanced its website with user-friendly design tools, live chat support, and automated order tracking to improve customer experience. PrintMagic adopted data analytics to monitor customer behaviour, optimize pricing strategies, and personalize marketing campaigns. To reduce dependency on third-party platforms, the company developed its own delivery coordination system and strengthened partnerships with reliable logistics providers. Additionally, the business invested in staff training to improve digital competencies and customer service.

While these initiatives improved performance and customer satisfaction, PrintMagic continues to navigate challenges related to cost management, technological upgrades, and maintaining a consistent service standard across both online and offline channels. Since the industry is highly competitive, the company recognised the critical role of eBusiness integration in transforming their business in order to achieve their business goals.

PrintMagic is hoping for an expansion of its customer base in each branch, incorporating a digital business platform to operate the business, and for a growth in the market.

- (a) Carry out a Situational Analysis for the company “PrintMagic” to identify their Strengths, Weaknesses, Opportunities and Threats.

(10 Marks)

ANSWER IN THIS BOX

- (c) Propose **two (2)** eBusiness models to deal with the situation to minimise the forces working on the company in order to be more competitive in the industry and write down **six (6)** features and functionalities to be incorporated in the eBusiness solution.

(09 Marks)

ANSWER IN THIS BOX

2) (a) Illustrate, Compare and Contrast the characteristics of the following eBusiness Models comparing the benefits of the models to the company and the customers.

- (i) Direct-to-Customer vs Supply Chain eBusiness Models
- (ii) Revenue Sharing vs Full Service Provider eBusiness Models
- (iii) Global Trade Platform vs Extended Enterprise eBusiness Models

(12 Marks)

ANSWER IN THIS BOX

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

- (b) The Seven (7) Es of eTransformation is a formal methodology used to take companies through the transformation process successfully. Illustrate the 7Es in eTransformation and briefly describe its **seven (7)** stages.

(13 Marks)**ANSWER IN THIS BOX**

ANSWER IN THIS BOX

- 3) (a) Describe at least **three (3)** key factors used by Uber in determining surge pricing.

(06 marks)

ANSWER IN THIS BOX

- (b) A customer joins an online community of smartphone users and begins identifying strongly with that group. According to Social Identity Theory, what are the **three (3)** mental processes that influence how the customer perceives members of their own group and other groups?

(03 marks)

ANSWER IN THIS BOX

- (c) A business wants Facebook to automatically optimize ad spending throughout a campaign, spending more on high-performing days and less on low-performing days. The business prefers to control the total amount spent over the entire campaign rather than set a budget for each day.

Which Facebook ad budget type would be most appropriate? Justify your answer.

(06 marks)

ANSWER IN THIS BOX

- (d) Read the following scenario and fill in the blanks (i) – (x) using the most appropriate terms from the word bank provided below.

After graduating from university, Nimal wanted to build a successful online business instead of pursuing a conventional office job. Since he possessed strong graphic design, content creation, and digital marketing skills, he decided to work independently as a (i) , offering services to clients from different countries through the Internet. To find customers and market his services globally, he registered on (ii) , a well-known online marketplace that connects service providers with individuals and businesses seeking digital services.

To attract different types of clients, Nimal created multiple (iii), each representing a specific service package such as logo design, social media content creation, video editing, and website banner development. As his reputation grew, he received positive reviews and a steady stream of orders from local and international customers.

Realizing the importance of having multiple income streams, Nimal launched a technology blog where he regularly published articles on entrepreneurship, eCommerce, digital marketing, and emerging technologies. To generate revenue from the visitors who read his articles, he enrolled in (iv), a Google advertising program that enables website owners to earn income by displaying advertisements on their websites. As the number of visitors increased, the advertising revenue became a significant source of passive income.

Recognizing the growing popularity of mobile devices, Nimal developed a mobile application that provided tips and resources for aspiring entrepreneurs. To monetize the application, he integrated (v), a mobile advertising platform that allows application developers to earn revenue by displaying advertisements within mobile apps.

As his audience expanded, many companies approached him to promote their products and services through his blog, YouTube channel, and social media accounts. Whenever a visitor clicked on his referral link and completed a purchase, Nimal received a (vi) as a reward. This approach is known as (vii), a business model where individuals earn income by promoting products or services offered by other businesses without owning the products themselves.

Encouraged by his success in digital services and content creation, Nimal decided to launch an online store selling technology accessories. However, he did not have enough capital to purchase and maintain large quantities of stock. Therefore, he adopted the (viii) business model, which allows online retailers to sell products without keeping inventory. Under this model, customer orders are automatically forwarded to the (ix), who is responsible for storing, packaging, and shipping the products directly to customers.

As part of his long-term vision, Nimal continuously explored emerging opportunities in the digital economy. He became particularly interested in (x), a form of digital currency that uses blockchain technology to facilitate secure and decentralized online transactions. He believed that understanding such technologies would help him identify future eBusiness opportunities and remain competitive in the rapidly evolving digital marketplace.

Word Bank

- Advertising,
- Affiliate Marketing
- Commission
- Cryptocurrency
- Customer
- Dropshipping
- Fiverr
- Freelancer
- Gig
- Google AdMob
- Google AdSense
- Inventory
- Marketplace
- Merchant
- Supplier

(10 marks)**ANSWER IN THIS BOX****(i)** -**(ii)** -**(iii)** -**(iv)** -**(v)** -**(vi)** -**(vii)** -**(viii)** -**(ix)** -**(x)** -

- 4) (a) Using an appropriate diagram supported by a suitable example, explain the concepts of upstream and downstream supply chain activities in an e-business environment. Clearly indicate how buy-side and sell-side e-commerce relate to these supply chain activities.

(09 marks)

ANSWER IN THIS BOX

- (b) Google Analytics provides several insights to help website owners understand user behavior and website performance.
- (i) What is Website Traffic in Google Analytics?
 - (ii) Explain how analyzing website traffic can help a business improve its online marketing strategy.
- (04 Marks)**

ANSWER IN THIS BOX

- (c) List down **three (3)** popular affiliate marketing platforms/websites used by businesses and marketers.

(03 marks)

ANSWER IN THIS BOX[illegible]

- (d) | Explain cross-selling and up-selling with one suitable example for each in the e-business domain.

(06 marks)

ANSWER IN THIS BOX

- (e) Which Google tool allows businesses to manage their presence on Google Search and Google Maps, share updates, and interact with customers? Explain two key features of this tool.

(03 marks)

ANSWER IN THIS BOX
