

09
Optional Paper
Computer Engg.
Paper – II

Time : 3 Hours

Maximum Marks : 200

IMPORTANT NOTES / महत्वपूर्ण निर्देश

- (A) Please fill up the OMR Sheet of this Question Answer Booklet properly before answering. Please also see the directions printed on the obverse before filling it.
प्रश्नोत्तर पुस्तिका में प्रश्न हल करने से पूर्व उसके संलग्न ओ.एम.आर. पत्रक को भली प्रकार भर लें। उसे भरने हेतु उसके पृष्ठ भाग पर मुद्रित निर्देशों का अध्ययन कर लें।
- (B) The question paper has been divided into three Parts - A, B and C. The number of questions to be attempted and their marks are indicated in each part.
प्रश्न-पत्र अ, ब और स तीन भागों में विभाजित है। प्रत्येक भाग में से किये जाने वाले प्रश्नों की संख्या और उनके अंक उस भाग में अंकित किये गये हैं।
- (C) Attempt answers in **English**.
उत्तर अंग्रेजी भाषा में दीजिये।
- (D) Answers to all the questions of each part should be written continuously in the script and should not be mixed with those of other parts. In the event of candidate writing answers to a question in a part different to the one to which the question belongs, the question will not be assessed by the examiner.
उत्तर पुस्तिका में प्रत्येक भाग के समस्त प्रश्नों के उत्तर क्रमवार देने चाहिये तथा एक भाग में दूसरे भाग के उत्तर नहीं मिलाने चाहिये। एक भाग में दूसरे भाग के प्रश्न के उत्तर लिखे जाने पर ऐसे प्रश्न को जाँचा नहीं जा सकता है।
- (E) The candidates should not write the answers beyond the limit of words prescribed in parts A, B and C failing this the marks can be deducted.
अभ्यर्थियों को भाग अ, ब और स में अपने उत्तर निर्धारित शब्दों की सीमा से अधिक नहीं लिखने चाहिये। इसका उल्लंघन करने पर अंक काटे जा सकते हैं।
- (F) **In case the candidate makes any identification mark i.e. Roll No./Name/Telephone No./Mobile No. or any other marking either outside or inside the answer book, it would be treated as resorting to using unfair means. In such a case his candidature shall be rejected for the entire examination by the Commission.**
अभ्यर्थी द्वारा उत्तर पुस्तिका के अंदर अथवा बाहर पहचान चिह्न यथा – रोल नम्बर / नाम / मोबाईल नम्बर / टेलीफोन नम्बर लिखे जाने या अन्य कोई निशान इत्यादि अंकित किये जाने को अनुचित साधन मान जायेगा। आयोग द्वारा ऐसा पाये जाने पर अभ्यर्थी की सम्पूर्ण परीक्षा में अभ्यर्थिता रद्द कर दी जायेगी।



BLANK PAGE



Note : Attempt all the twenty questions. Each question carries 2 marks. Answer should not exceed 15 words.

1 What is the main function of ARP (Address Resolution Protocol)?

2 What does the TTL field in the IP datagram header specifies?

3 Which functionality must be implemented by a transport protocol over and above the network protocol?



4 For what purpose does the ping utility is mainly used?

5 What is a real-time operating system?

6 Define deadlock with reference to operating system.



7 Write functions of linker and loader.

8 What is a system call?

9 Define McCabe's cyclomatic complexity?



10 What is a test case?

11 What is the difference between a fault and failure?

12 What do you mean by the terms cohesion and coupling in the context of software design?



13 The power of non-deterministic finite state automata is equivalent to deterministic finite state automata. However, the non-deterministic push down automata (PDA) is considered more powerful as compared to deterministic push down automata. Justify with an example.

14 What are the two approaches to handle collisions while using hash tables for the organization of a symbol table?

15 What is bottom-up parsing technique?



16 Give a regular expression for the set of binary strings where every 0 is immediately followed by exactly k 1's and preceded by at least k 1's (k is a fixed integer).

17 What is meant by rendering? What are the ways to perform volume rendering?

18 Briefly define the process of anti-aliasing.





Lined writing area with 25 horizontal lines.







Lined writing area with 25 horizontal lines.





Lined writing area with 25 horizontal lines.







