

Code No. 1019

Second Year – March 2016

Time : 2 Hours  
Cool-off time : 15 Minutes

Part – III

**COMPUTER SCIENCE**

Maximum : 60 Scores

**General Instructions to Candidates :**

- There is a 'cool-off time' of 15 minutes in addition to the writing time of 2 hrs.
- You are not allowed to write your answers nor to discuss anything with others during the 'cool-off time'.
- Use the 'cool-off time' to get familiar with questions and to plan your answers.
- Read questions carefully before answering.
- All questions are compulsory and only internal choice is allowed.
- When you select a question, all the sub-questions must be answered from the same question itself.
- Calculations, figures and graphs should be shown in the answer sheet itself.
- Malayalam version of the questions is also provided.
- Give equations wherever necessary.
- Electronic devices except non-programmable calculators are not allowed in the Examination Hall.

**നിർദ്ദേശങ്ങൾ :**

- നിർദ്ദിഷ്ട സമയത്തിന് പുറമെ 15 മിനിറ്റ് 'കൂൾ ഓഫ് ടൈം' ഉണ്ടായിരിക്കും. ഈ സമയത്ത് ചോദ്യങ്ങൾക്ക് ഉത്തരം എഴുതാനോ, മറ്റുള്ളവരുമായി ആശയവിനിമയം നടത്താനോ പാടില്ല.
- ഉത്തരങ്ങൾ എഴുതുന്നതിന് മുമ്പ് ചോദ്യങ്ങൾ ശ്രദ്ധാപൂർവ്വം വായിക്കണം.
- എല്ലാ ചോദ്യങ്ങൾക്കും ഉത്തരം എഴുതണം.
- ഒരു ചോദ്യനമ്പർ ഉത്തരമെഴുതാൻ തെരഞ്ഞെടുത്തു കഴിഞ്ഞാൽ ഉപചോദ്യങ്ങളും അതേ ചോദ്യനമ്പറിൽ നിന്ന് തന്നെ തെരഞ്ഞെടുക്കേണ്ടതാണ്.
- കണക്ക് കുട്ടലുകൾ, ചിത്രങ്ങൾ, ഗ്രാഫുകൾ എന്നിവ ഉത്തരപേപ്പറിൽ തന്നെ ഉണ്ടായിരിക്കണം.
- ചോദ്യങ്ങൾ മലയാളത്തിലും നൽകിയിട്ടുണ്ട്.
- ആവശ്യമുള്ള സ്ഥലത്ത് സമവാക്യങ്ങൾ കൊടുക്കണം.
- പ്രോഗ്രാമുകൾ ചെയ്യാനാകാത്ത കാൽക്കുലേറ്ററുകൾ ഒഴികെയുള്ള ഒരു ഇലക്ട്രോണിക് ഉപകരണവും പരീക്ഷാഹാളിൽ ഉപയോഗിക്കുവാൻ പാടില്ല.

1. Represent a structure named student with attributes of different types and give the advantages of using structure. (Scores : 3)
2. Structure within a structure is termed as \_\_\_\_\_. (Score : 1)
3. Orphaned memory blocks are undesirable. How can they be avoided ?  
OR  
Discuss problems created by memory leaks. (Scores : 2)
4. Compare static and dynamic polymorphism. (Scores : 3)
5. Attempting to insert in an already full stack leads to \_\_\_\_\_. (Score : 1)
6. Explain how push operation is done in a stack. (Scores : 2)
7. Linked lists usually do not have the problem of overflow. Discuss. (Scores : 2)
8. HTTPS stands for \_\_\_\_\_. (Score : 1)
9. How will you distinguish a static webpage from a dynamic webpage ? (Scores : 2)
10. Write HTML code for a webpage of an institution with the following features. It should have a marquee welcoming users, a heading in different fonts and a picture and address of the institution. (Scores : 3)
11. The <DD> tag gives \_\_\_\_\_. (Score : 1)
12. Create a table with 5 types of fruit names, use headings as serial number, name and cost.

OR

Create an Ordered list of five fruits numbered using small Roman numerals. (Scores : 5)

13. "TRUE AND FALSE are used to represent boolean values." State if the above given statement is correct or not. (Score : 1)
14. Explain the use of for loop with an appropriate example. (Scores : 3)
15. Develop a webpage that implements a JavaScript function that takes two numbers as input and displays their product. (Scores : 2)
16. Name a protocol that provides secure file transfer. (Score : 1)
17. What type of hosting will you use to support a government website ? Give its advantages. (Scores : 2)
18. Discuss the levels of data abstraction in DBMS. (Scores : 3)

19. In the ACCOUNT relation shown below

Acc. Number	Name	Balance	Type
1000	Simon	1,50,000	SB
1001	Abey	2,00,000	SB
1003	Vishnu	1,00,000	SB
1004	Rahim	2,50,000	SB

- (a) Identify the primary keys and candidate keys.
- (b) Select all account holders with balance greater than ₹ 2,00,000. (Scores : 2)
20. Give the correct syntax of the queries in SQL for the following :
- (a) Renaming a table
- (b) Deleting rows from a table
- (c) Changing definition of a column
- (d) Removing columns from a table
- (e) Adding a new column (Scores : 5)

21. Give the output obtained with the pattern match “---” in the string “board”. (Score : 1)
22. PHP is
- (a) freeware
  - (b) proprietary
  - (c) both
  - (d) none (Score : 1)
23. (a) Compare Indexed and associative arrays in PHP. (Scores : 2)
- (b) Write a PHP program to display prime numbers below 50. (Scores : 3)

**OR**

- Write a PHP program to display the perfect numbers below 100. (Scores : 3)
24. (a) The computing technology in which a problem is broken into pieces and solved concurrently is called ..... (Score : 1)
- (b) Categorize the cloud service models. (Scores : 3)
25. (a) Name a digital financial instrument. (Score : 1)
- (b) Discuss about various IPRs with examples for each. (Scores : 3)