

GANPAT UNIVERSITY
PH.D. ENTRANCE TEST JULY – 2017
FACULTY OF COMPUTER APPLICATION

SECTION – B

Instruction:

- (a) The Question Paper consists of two Parts.
- (b) Part – I of Question Paper consists 25 objective types of questions each of one marks. Correct answer is to be write as **A, B, C** or **D** in given separate answer sheet.
- (c) Part – II of Question Paper consists 5 descriptive type of questions each of 5 marks. The answers are to be write in given answer book.
- (d) All Questions are compulsory.

PART - I

Multiple Choice Questions [25 Marks]

- 1 The main measure for efficiency algorithm are
- A. Processor and Memory B. Complexity and Capacity
C. Data and Space ~~D. Time and space~~
- 2 What does the algorithmic analysis count?
- A. The number of arithmetic and the operations that are required to run the program
B. The number of lines required by the program
 C. The number of seconds required by the program to execute
D. None of these
- 3 Which of the following data structure is linear data structure?
- a. Trees b. Graphs
 c. Arrays d. None of above
- 4 The memory address of fifth element of an array can be calculated by the formula.
- a. $LOC(Array[5]) = Base(Array) + w(5 - \text{lower bound})$, where w is the number of words per memory cell for the array
b. $LOC(Array[5]) = Base(Array[5]) + (5 - \text{lower bound})$, where w is the number of words per memory cell for the array
c. $LOC(Array[5]) = Base(Array[4]) + (5 - \text{Upper bound})$, where w is the number of words per memory cell for the array
d. None of above
- 5 When inorder traversing a tree resulted E A C K F H D B G; the preorder traversal would return
- a. FAEKCDHBG
b. FAEKCDHGB
 c. EAFKHDCBG
d. FEAKDCHBG
- 6 A _____ is a property of the entire relation, rather than of the individual tuples in which each tuple is unique.
- a, Rows b. Key c. Attribute d. Fields
- 7 Which of the join operations do not preserve non matched tuples?
- a. Left outer join
b. Right outer join
c. Inner join
 d. None of above

- 8 What type of join is needed when you wish to include rows that do not have matching values?
 a. Equi-join b. Natural join c. Outer join d. All of the mentioned
- 9 Which one of the following is used to define the structure of the relation , deleting relations and relating schemas ?
 a. DML(Data Manipulation Language)
 b. DDL(Data Definition Language)
 c. Query
 d. Relational Schema
- 10 Which forms are based on the concept of functional dependency:
 a) 1NF
 b) 2NF
 c) 3NF
 d) 4NF
- 11 A system program that sets up an executable program in main memory ready for execution is
 a. Linker
 b. Loader
 c. Compiler
 d. Assembler
- 12 Process is
 a. Program in High level language kept on disk
 b. Content of main memory
 c. A program in execution
 d. Job in secondary memory
- 13 Fragmentation of the file system
 a. occurs only if the file system is used improperly
 b. can always be prevented
 c. can be temporarily removed by compaction
 d. none of above
- 14 Which command is used extract specific column from a file?
 a. cat
 b. cut
 c. grep
 d. paste
- 15 The Octal number to be given along with chmod command to make a file readable, writable and executable to the owner, readable and executable to group and others is
 a. 000
 b. 755
 c. 744
 d. 555
- 16 Choose the correct statement?
 a. Random scan monitors draw a picture one line at a time
 b. The components line of a random scan picture must be refreshed in a particular order
 c. Raster scan monitors draw a picture one line at a time
 d. Random scan method is well suited for displaying shading and colour areas
- 17 Reflection of a point about x-axis, followed by a counter-clockwise rotation of 90° , is equivalent to reflection about the line ?
 a. $x = -y$
 b. $y = -x$
 c. $x = y$
 d. $x + y = 1$

- 18 (2, 4) is a point on a circle that has center at the origin. Which of the following points are also on circle?
 a. (2,-4) b. (-2, 4) c. (-4,-2) d. All of above
- 19 The phrase _____ describes viruses, worms, Trojan horse attack applets, and attack scripts.
 A)malware B) spam C) phish D)virus
- 20 Which of the following malicious program do not replicate automatically?
 A)Zombie
 B) Virus
 C) Worm
 D) Trojan Horse
- 21 In asymmetric key cryptography, the private key is kept by
 a) sender
 b) receiver
 c) sender and receiver
 d) all the connected devices to the network
- 22 ElGamal encryption system is
 a) symmetric key encryption algorithm
 b) asymmetric key encryption algorithm
 c) not an encryption algorithm
 d) none of the mentioned
- 23 The main disadvantage of spinlocks is that :
 a) they are not sufficient for many process.
 b) they require busy waiting
 c) they are unreliable sometimes
 d) they are too complex for programmers
- 24 The code that changes the value of the semaphore is :
 a) remainder section code
 b) non – critical section code
 c) critical section code
 d) None of these
- 25 A digital certificate
 a. is an electronic message uniquely identifying the message sender.
 b. is a summary of a plain text document.
 c. is a reliable third party that authenticates the message sender.
 d. is used to identify the owner of a private key and related public key

PART-II

	Answer the following question in detail. (Any FIVE)	
Q.1	Discuss the Three- way handshake implementation at Transport Layer.	[5]
Q.2	Define software testing. Explain various level of testing.	[5]
Q.3	Differentiate : - BFS Vs DFS	[5]
Q.4	What is Genetic Algorithm? Explain the term 1. Crossover and 2. Mutation with respect to GA.	[5]
Q.5	Explain predictive modelling techniques of Data mining.	[5]
Q.6	Explain 1. E-wallet and 2. E-cash technologies.	[5]

ANSWER KEY
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1	D
2	A
3	C
4	A
5	B
6	B
7	C
8	C
9	B
10	C
11	B
12	C
13	c
14	B
15	B
16	a
17	c
18	d
19	a
20	d
21	b
22	b
23	b
24	c
25	d