

**SECTION WISE PRACTICE SET OF PROFESSIONAL KNOWLEDGE
FOR IBPS IT OFFICER**

IT KNOWLEDGE

151. A certain processor supports only the immediate and the direct addressing modes which of the following programming language features cannot be implemented on this processor?
(a) Pointer (b) Arrays (c) Records
(d) Recursion (e) None
152. Aliasing in the context of programming languages refers to
(a) Multiple variables having the same memory location.
(b) Multiple variables having the same value.
(c) Multiple variables having the same identifier.
(d) Multiple uses of the same variable.
(e) None
153. The best data structure to check, whether an arithmetic expression has balanced parantheses is a
(a) Quene (b) Stack (c) Tree
(d) List (e) None
154. A binary Tree T has n leaf node. The number of nodes of degree 2 in T is
(a) Log n (b) n-1 (c) n+1
(d) n (e) 2^n
155. Which of the following statements is false?
(a) A tree with n nodes has (n-1) edges
(b) A labled rooted binary tree can be uniquely constructed give its post order and pre order traversal result
(c) A complete binary tree with n internal nodes has (n+1) leaves
(d) The maximum number of nodes in a binary tree of height h is $2^{h+1}-1$
(e) None
156. In the worst case, the number of comparisions needed to search singly linked list of length n for a given element is
(a) $\log_2 n$ (b) $\frac{n}{2}$ (c) $\log_2(n-1)$
(d) n (e) $\frac{n}{4}$
157. Which one of the following is a top-down parser?
(a) Recursive descent parser
(b) Operator precedence parser
(c) An LR (K) parser
(d) An LALR (K) Parser
(e) None
158. Which scheduling policy is most suitable for a time-shared operating systems?
(a) Shortest job first (b) Round Robin
(c) FCFS (d) Elevator (e) None
159. A processor needs software interrupt to
(a) Test the interrupt system of the processor
(b) Implement co-routines
(c) obtain system services which need execution of privileged instruction
(d) Return from subroutine
(e) None
160. Which of the following system calls results in the sending of SYN packet?
(a) Socket (b) Bind (c) Listen
(d) Connect (e) None
161. A critical region of
(a) One which is enclosed by a pair of P and V operations on semaphores
(b) A program segment that often causes unexpected system crashes.
(c) A program segment that has not been proved bug free.
(d) A program segment where shared resources are accessed.
(e) None
162. A solution to the dining philosophers problem which avoids dead lock is
(a) Ensure that all philosophers pick up the left fork before the right fork.
(b) Ensure that all philosophers pick up the right fork before the left fork.
(c) Ensure that one particular philosophers picks up the left fork before the right fork, and that all other philosophers pick up the right fork before the left fork.
(d) All of the above (e) None
163. When the result of a computation depends on the speed of the processes involved there is said to be
(a) cycle stealing (b) race condition
(c) a time lock (d) a dead lock
(e) None
164. Which of the following is NOT a valid dead lock prevention scheme?
(a) Release all resources before requesting a new resources.
(b) Number of resources uniquely and never request a lower numbered resource than the last one requested.
(c) Never request a resource after relasing any resource.
(d) Request and all required resources be allocated before execution.
(e) None
165. The capacity of a memory unit is defined by the number of words multiplied by the number of bits/word. How many seprate address and data lines are needed for a memory of $4k \times 16$?
(a) 10 address, 16 data line
(b) 11 address, 8 data line
(c) 12 address, 16 data line
(d) 12 address, 12 data line
(e) None

166. Locality of reference implies that the page reference being made by a process
 (a) will always be to the page used in the previous page reference
 (b) is likely to be to one of the pages used in that last few page references
 (c) will always be to one of the pages existing in memory
 (d) will always lead to a page fault
 (e) None
167. In a computer, which of the following system software must reside in the main memory under all situation?
 (a) Assembler (b) Linker (c) Loader
 (d) Compiler (e) None
168. Dynamic linking can cause security concern because
 (a) security is dynamic
 (b) the path for searching dynamic libraries is not known till runtime
 (c) linking is in secure
 (d) cryptographic procedure are not available for dynamic linking
169. In which one of the following page replacement policies. Bledy's anomaly may occur?
 (a) FIFO (b) Optimal (c) LRU
 (d) MRU (e) None
170. The essential contents in each entry of a page table is/are
 (a) virtual page number (b) Page frame number
 (c) Both virtual page number and page frame number
 (d) Access right information. (e) None
171. On receiving an interrupt from an I/O device the CPU
 (a) halts for predetermined time
 (b) Hand over the control of address bus and data bus to the interrupting device
 (c) branches off to the interrupt service routine immediatly
 (d) branches off to the interrupt service routine after completion of the currant instruction.
 (e) None
172. The root directory of a disk should be placed
 (a) at a fixed address in main memory
 (b) at a fixed location on the disk
 (c) anywhere on the disk
 (d) at a fixed location on the system disk
 (e) None
173. Which of the following devices should get higher priority is assigning interrupt?
 (a) Hard disk (b) Printer (c) Keyboard
 (d) Floppy disk (e) None
174. Formatting of floppy disk refers to
 (a) Arranging the data on the disk in contiguous fashion
 (b) Waiting the directory
 (c) Erasing the system area
 (d) Writing Identification information on all tracks and sector
 (e) None
175. Which of the following disk scheduling strategies is likely to give the best throughput?
 (a) farthest cylinder next
 (b) Nearest cylinder next
 (c) First come first serve
 (d) Elevator algorithm
 (e) None
176. Which of the following requires a device driver?
 (a) Register (b) Cache
 (c) Main memory (d) Disk (e) None
177. Consider the Schema $R=(S\ T\ U\ V)$ and the dependencies $S \rightarrow T$, $T \rightarrow U$, $U \rightarrow V$ and $V \rightarrow S$. Let $R=(R_1$ and $R_2)$ be a decomposition such that $R_1 \cap R_2 = \emptyset$. The decomposition is
 (a) not in 2NF
 (b) in 2NF but not in 3 NF
 (c) in 3 NF but not in 2 NF
 (d) in both 2NF and 3NF
 (e) None
178. A clustering index is defined on the fields which are of types
 (a) Nonkey and ording
 (b) Nonkey and non ordering
 (c) Key and ordering
 (d) Key and non-ordering
 (e) None
179. The maximum window size for data transmission using the selective reject protocol with n-bit frame sequence number is
 (a) 2^n (b) 2^{n-1} (c) 2^{n-1}
 (d) 2^{n-2} (e) None
180. Which layer ensures reliable transport of data over a physical point to point link.
 (a) Data link layer (b) Network (c) Transport
 (d) Application (e) None
181. In Ethernet when Manchester encoding is used the bitrate is
 (a) Half the band rate (b) Twice the band rate
 (c) Same as the band rate (d) All of the above
 (e) None
182. Which of the following is NOT true with respect to a transparent bridge and a router?
 (a) Both bridge and router selectively forward data packet.
 (b) A bridge uses IP addresses while router uses MAC address.
 (c) A bridge builds up its routine table by inspecting incoming packet.
 (d) A router can connect between a LAN and a WAN.
 (e) None
183. Which of the following functionality of transport layer over and above the network Layer?
 (a) Recovery from packet losses
 (b) Detection of duplicate packets
 (c) Packet delivery in the correct order
 (d) End to end connectivity
 (e) None
184. The ARP(Address resoution protocol) is used for
 (a) finding the IP address from the DNS
 (b) finding the IP address of the default gateway.
 (c) finding the IP address that corresponds to a MAC address.
 (d) finding the MAC address that corresponds to any IP address
 (e) None
185. The address 192.10.10.0 belongs to
 (a) Class A (b) Class B (c) Class C
 (d) Class D (e) None
186. In the slow start phase of the TCP congestion control algorithm the size of the congestion window

- (a) Does not increase (b) Increase Linearly
(c) Increase quadratically
(d) Increase exponentially (e) None
- 187.** One of the header fields in the IP data gram is the Time to Live (TTL) field. Which of the following statements best explains the need for this field?
(a) It can be used to prioritize packets
(b) It can be used to reduce delay
(c) It can be used to optimize throughput
(d) It can be used to prevent packet looping
(e) None
- 188.** Which one of the following is NOT desired in good software requirement specification (SRS) document?
(a) Functional requirement
(b) Non functional requirement
(c) Goal of Implementation
(d) Algorithm for software Implementation
(e) None
- 189.** Which of the following statement is false?
(a) HTTP runs over TCP
(b) HTTP describes the structure of web pages
(c) HTTP allows information to be store in a URL
(d) HTTP can be used to test the validity of hyperlink.
(e) None
- 190.** Which of the following objects can be used in expression and scripts in JSP without exploitly declaring them?
(a) session and request only
(b) request and responce only
(c) responce and session only
(d) session, request and responce.
(e) None
- 191.** Level order traversal of a rooted tree can be done by starting from the root and performing.
(a) preorder traversal (b) Inorder travelsal
(c) DFS (d) BFS (e) None
- 192.** The results returned by function under value-result and refrence parameter passing conventions
(a) Do not differ
(b) Difffer in the presence of loop
(c) Differ in all class
(d) may differ in the presence of exception
(e) None
- 193.** Faster access to non-local variables is achieved using an array of pointers to activation records called a
(a) Stack (b) Heap (c) Display
(d) Activation tree (e) None
- 194.** Which of the following desired features are beyond the capability of relational algebra?
(a) Aggregate Computation
(b) Multiplication
(c) Finding transitive closure
(d) All of the above
(e) None of the above
- 195.** In an entity relationship, Y is the dominant entity and x is a sub ordinate entity. Which of the following is correct?
(a) operationally, if y is deleted, so is x;
(b) x is existence dependent on y
(c) operationally, x is deleted, so is y;
(d) operationally, s is deleted, y remains the same.
(e) None
- 196.** In airline reservation system, the entity are date, Flight number, place of departure, destination, types of plane and seat available. The primary key is
(a) Flight number
(b) Flight number + place of departure
(c) Flight number+date
(d) Flight number+ destination
(e) None of the above
- 197.** A data model is a collection of conceptual tools for describing
(a) data and data relationship.
(b) data semantics and consistency constraints.
(c) data, data relationship, data semantics and consistency constraints.
(d) All of the above (e) None of the above
- 198.** Which of the following schemes are used for ensuring atomicity?
(a) Log with deferred modification
(b) Log with Immediate modification
(c) Shadow paging
(d) All of the above
(e) None of the above
- 199.** If a relation schema is in BCNF, then it is also in
(a) 1st normal form (b) Second normal form
(c) 3NF (d) All of the above
(e) Only a and b
- 200.** For a weak entity set to be meaningful it must be part of a
(a) one to one relationship
(b) one to many relationship
(c) many to many relationship
(d) All of the above
(e) None of the above