

30	Bangladesh Atomic Energy Regulatory Authority Recruitment Exam – 2021 Exam Venue : BUET Exam Date : 29/01/2021 Time : 10-11 AM Non Departmental : 20 Dept : 60 Total 80 marks.
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SL	Question	Solution
1	Consider the following Java Program : <pre> Public class Rectangle{ Private double length; Private double width; Private double height; Public double getvalue(double length, double width) { this.length = length; this.width = width; } Public double getArea() { } } return length*width; </pre> Make a class Box that inherits Rectangle and same methods don not declare extra methods or variable.	
2	What is Black box Testing ? Is equivalence partitioning is a type of black box testing ? why or why not ?	
3	Implement a queue using two stack. Is it possible to implement queue using one stack?	
4	Determine inorder and postorder travelsal for the following tree .	
5	Write a shell program to print all files using loop in a directory.	
6	What is the full meaning of NAT and TCP	
7	Given the ip address : 124.67.48.82 and subnet mask 255.255.224.0 find the network address and host .	
8	Given a table : Employee (dept_id,dept_name,location),Employee(id,dept_id,salary,joining_date) Write a SQL query for the above table. Find the Average Salary of all Employees and Department name for each department .	
9	Find the Reverse function for the following input : one positive and other is negative input.	
10	What is Shell and kernel .Which one is used mostly by users	
11	Write three difference between Post and Get method.	
12	Write the difference between == and === in javascript.	
13	Put (tick marks left of the questions) : Which is not static in c ? Which is faster memory Which SQL command is executed last	

	Switch is—device In inheritance which access specifier is access to the child class? Which command is used to sleep ? Sleep Agile framework not in ? Which one is the worst case time complexity ? Which port number is used to HTTP error .	
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41	Bangladesh Atomic Energy Regulatory Authority Exam Taker : BUET, Exam Date : 26.11.2021 Time: 1 hour MCQ 1*20=20 Math-5, English-5, Bangla-5 GK-5 Written 12*5=60
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SL	Question	Solution
1	Draw ER diagram on hospital Patient(ID,name,age,appointment_time) Doctor(ID,name,specialization) Test(ID,name,date,time,result)	
2	Delete a specific node (200) from B+ tree & write the result	
3	Given ML algorithm name, categorize them into a) supervised learning, a) unsupervised learning Support vector machine, linear regression, clustering, dimensioning, classification	
4	Given 5 sentence. Write true false.	
5	Given traffic light truth table for red, yellow, green. Find Boolean function	
6	Find memory access time for given processor configuration given Cache hit percentage	
7	Given four sentences about hash function & its properties. Right Yes if true, No if false	
8	Two scenario given. Write the name of scenario. Call by value/ call by name/ call by reference	
9	Given full max heapify code. Find the output. (Sample Question given)	
10	Write the name of the protocol described below:	
11	Given two attack picture. a. Attacker sends fraudulent (e.g spoofed, fake or otherwise deceptive) message designed to trick a human victim into revealing sensitive information to the attacker or to deploy malicious software on the victim's infrastructure. b. Targeted computers running the Microsoft windows operating system by encrypting data and demanding ransom payments in the Bitcoin cryptography.	
12	5 MCQ on DS	
13	Design an asynchronous counter using any flip flop.	

62	Bangladesh Energy Regulatory Authority Exam Taker: BUET Exam date:28/07/2023 Non Dept:20 + Dept: 10 MCQ Rest: Written
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SL	Question	Solution
1	Where do we use Dynamic Programming?	
2	A tree has been given print it post order	
3	An array with N size that contain 1 to n random order but unfortunately one value of replaced by 0.	
4	Find the value of array which is converted into zero.	
5	What is the output of the following code: <pre>int main() { int i; for(i=0;i<4;i++){ int pid = fork(); if(pid==0) print("%d\n", i); exit(0); } } for(i=0;i<4;i++) { wait(NULL); } Return 0; }</pre>	
6	Suppose an array contain data 1 to 10 randomly. One of them replace with 0. Write c/c++ program to restore the missing value.	
7	Describe for the following two: a. Which data structure is used for the accept BAERA request, where each request attached with a priority (highest importance to lower). Now write the data structure name which is better for the following requirement? b. BAERA store a set of object. Now write the best data structure which is appropriate for search a specific object with run time $O(1)$?	
	Write five testing name which are to testing before software development.	
	If X assumes value of 0,1 and 2 with the probability of 0,2,0.4 and 0.4 respectively. What is the expected value of x	
	Decision tree for playing football in different situations (weather-cloudy, sunny, rainy etc). From the tree you have to determine if you should play football under certain condition.	
	Given an IP address 168.20.96.18 and subnetmask 255.255.192.0 then find what is the network address, broadcast address and number of host that can be connect?	
	Many power requests come from users for certain time frame (start time and end time) we have to write algorithm that process maximum request discarding the overlapping request.	
	A Boolean expression given simplify it: $yz+xz+xyz$	

