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| **PB/CSAK/1220/B 10/12/2020** | | | |
| **PRE-BOARD EXAMINATION (2020-21)** | | | |
| **SUBJECT: COMPUTER SCIENCE**  **GRADE: XII** | | MAX. MARKS: 70TIME:3 HOURS | |
| Q No | **PART A** | | Marks |
|  | 1. 4 characters b)9 characters **(1/2 mark each)** | | 1 |
| 2. | a) mean(),median(),mode(), stdev()  b) random(),randint(),randrange()  (1/2 mark for each-anyone correct function) | | 1 |
| 3. | [2, 4, 3, 7, 9] | | 1 |
| 4. | True | | 1 |
| 5. | D1 has a key which is a list[2,3] and dictionaries cannot have keys as mutable data types. | | 1 |
| 6. | fout.writerow(Li) | | 1 |
| 7. | Firewall | | 1 |
| 8. | show databases; | | 1 |
| 9. | SMPT-Simple mail transfer protocol | | 1 |
| 10. | DML-Data Manipulation Language -Select,Insert,Update,Delete. | | 1 |
| 11. | Wireless communication-Satellite/Radiowaves/Microwave  Wired Communication- Coaxial cables, Optical Fiber | | 1 |
| 12. | (33, 81, 89, 1, 56) | | 1 |
| 13. | 512 | | 1 |
| 14. | Characteristics of Web 2.0 are as follows:  1) interaction, communication and collaboration, (2) knowledge creation, (3) ease of use and flexibility, and (4) writing and technology skills. | | 1 |
| 15. | b) Getting in someone’s social networking account without his consent and posting pictures on his behalf to harass him. | |  |
| 16. | The wildcards are incorrect. The corrected query is  SELECT NAME FROM TEACHER WHERE NAME LIKE ‘\_ \_0%’. | | 1 |
| 17. | c) tuple | | 1 |
| 18. | ('', 'xyz', 'abcxyzlmn') | | 1 |
| 19. | ALTER TABLE PRODUCT ADD TOTAL PRICE NUMBER (10,2); | | 1 |
| 20. | The count( ) function counts all non NULL values.  SELECT COUNT(Ename) FROM EMPLOYEE; | | 1 |
| 21. | Ascending | | 1 |
|  | **SECTION – II** | |  |
| 22. | a) PCode is the most suitable primary key. | | 1 |
|  | b) Degree- 4 ,Cardinality-5 | | 1 |
|  | c)ALTER TABLE PRODUCT ADD ( DISCOUNT NUMBER(2,2)); | | 1 |
|  | d) INSERT INTO PRODUCT(PCode,Pname,Uprice,Discount)  values( T09, ‘Talcum Powder’,38 ,5) ; | | 1 |
|  | e) UPDATE PRODUCT SET UPrice=UPrice+UPrice\*0.05  WHERE Manufacturer=”Dove”;  (1 mark for each answer. 4 sub-questions to be answered) | | 1 |
| 23. | a) "Cust.csv","a" | | 1 |
|  | b) filewrite.writerow | | 1 |
|  | c) "Cust.csv","r" | | 1 |
|  | d) row[0] | | 1 |
|  | e) Customer Found  ["Nikhil Thorat","Baroda",20000]  (1 mark for each answer. 4 sub-questions to be answered) | | 1 |
|  | **PART B** | |  |
|  | **SECTION – 1** | |  |
| 24. | a) ['A', 'E', 'A', 'I'] (1 mark)  b) Even=[x for x in range(1,20) if x%2==0 ] (1 mark) | | 2 |
| 25. | An Internet protocol address is a numerical and logical address that is assigned to devices connected in a computer network. In a network every machine can be identified by a unique IP address associated with it and this help in providing network security to every system connected in a network.  OR  Communication channels mean the connecting cables that link various work stations.  There are three basic types of cables   1. Twisted pair cable 2. Coaxial cable 3. Fibre-optic cable   (2 marks for correct answer) | | 2 |
| 26. | a) Network Interface Card  b) Network Interface Unit  c) Registered Jack 45  d) Multipurpose Internet Mail Extension  (1/2 mark each) | | 2 |
| 27. | OR  The list of identifiers used in a function call is called actual parameter(s) whereas the list of parameters used in the function definition is called formal parameter(s). Actual parameter may be value / variable or expression. Formal parameter is an identifier.  Example: def area(side): # line 1  return side\*side;  print(area(5)) # line 2  In line 1, side is the formal parameter and in line 2, while invoking area() function, the value 5 is the actual parameter. A formal parameter, i.e. a parameter, is in the function definition. An actual parameter, i.e. an argument, is in a function call.  (2 mark for correct answer) | | 2 |
| 28. | 1🡪5🡪10🡪11🡪5🡪6🡪7🡪1🡪2🡪3🡪7🡪8🡪12  (2 mark for correct answer , give 1 mark for partially correct) | | 2 |
| 29. | Minimum value of VALUE=2  Maximum value of VALUE=3  Correct option a) and d)  (1 mark for maximum and minimum, 1 mark for option) | | 2 |
| 30. | The product of 2 tables ( called cross product or cross join)bracket close is the concatenation of every tuple of 1 table with every tuple of the 2nd table. The cartesian product of table A having m rows and table B having n tuples has total rows m\*n.  (2 marks for correct answer) | | 2 |
| 31. | fetchall() fetches all the rows of a query result. An empty list is returned if there is no record to fetch the cursor. fetchone() method returns one row or a single record at a time. It will return None if no more rows / records are available.    (2 marks for correct answer) | | 2 |
| 32. | The difference between viruses and worms is the method by which they reproduce and spread. A worm can run independently and spread itself through a network connection whereas virus is dependent upon last life or boot sector and transfer of files between machines to spread.  (2 mark for correct answer) | | 2 |
| 33. | 35 & 4  38 # 9  (1 mark for each line) | | 2 |
|  | **Section - II** | |  |
| 34. | def Change(Arr,n): (1/2 mark)  for i in range(len(Arr)):  if Arr[i]%10==n:  num=Arr[i] (1 mark)  sum=0  while num!=0:  sum+=num%10  num//=10 (1 and ½ mark)  Arr[i]=sum  return(Arr) | | 3 |
| 35. | def filter(oldfile,newfile):  fin=open(oldfile,”r”)  fout=open(newfile,”w”)  while True:  text=fin.readline()  if len(txt)==0:  break  if text[0]==”A”:  continue  fout.write(text)  fin.close()  fout.close()  filter(“source.txt”,”target.txt”)  OR  def DisplayWords(myfile):  c=0  file=open(myfile,’r’)  line=file.read()  word=line.split()  for w in word:  if len(w)<4:  print(w)  file.close()  DisplayWords(“STORY”.txt)  (3 marks for correct code) | | 3 |
| 36. | a)    b)    c)  NAME COURSE  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  EKANT NETWORKING  ELA OFFICE MANAGEMENT  (1 mark for each) | | 3 |
| 37. | def PUSH(Li,Stack):  for x in range(0,len(Li)):  if Li[x]%2==0 and Li[x]%7==0:  Stack.append(Li [x])  def popStack(Stack) :  if len(Stack)==0:  print("Underflow")  else:  L = len(Stack)  val=Stack[L-1]  print(“The deleted item”,val)  Stack.pop(L-1)  OR  def InsertQ(List,Queue):  for i in List:  prime=0  for j in range(1,i):  if i%j==0:  prime+=1  if prime==0:  Queue.append(i)  if len(Queue)==0:  print(“Underflow”)  else:  print(Queue)  (3 marks for correct code) | | 3 |
|  | **Section - III** | |  |
| 38. | a) The most suitable place to house the server in building JAMUNA because it has maximum number of computers. important-questions-for-class-12-computer-science-c-communication-technologies-(350-2)  **c) Switches** are needed in every building as they help share bandwidth in every building. **Repeaters** may be skipped as per above layout(because distance is less than 100 m) however if building RAVI and building JAMUNA are directly connected, we can place a repeater there as the distance between these two building is more than 100 m. d) Coaxial cable  e) WAN  (1 mark each) | | 5 |
| 39. | a) Select CODE,NAME from SALESPERSON where ITCODE=”I7”;  b) Select \* from SALESPERSON order by SALARY desc;  c) Select ITCODE,COUNT(\*) from SALESPERSON group by ITCODE;  d) Select S.CODE,S.NAME,I.ITCODE from SALESPERSON S, ITEM I where S.ITCODE=I.ITCODE AND I.TURNOVER>=700000;  e) SELECT Avg(SALARY) FROM SALESPERSON;  **(1 mark each)** | | 5 |
| 40. | import pickle  def createFile():  fobj=open("Employee.dat","ab")  Empid=input(" Enter employee ID: "))  Empname=input("Enter Employee Name :")  Dept = input(“Enter Department: “)  Salary = int(input("Enter Salary : "))  rec=[Empid,EmpName,Dept,Salary]  pickle.dump(rec,fobj)  fobj.close()  def CountRec(Department):  fobj=open("Employee.dat","rb")  num = 0  try:  while True:  rec=pickle.load(fobj)  if Department.upper()==rec[2].upper():  num = num + 1  except:  fobj.close()  return num  OR  import pickle  def CountRec():  fobj=open("Item.dat ","rb")  num = 0  try:  while True:  rec=pickle.load(fobj)  if rec[2] > 25:  print(rec[0],rec[1],rec[2],rec[3],end="\t")  num = num + 1  except:  fobj.close()  return num  ( ½ mark for each correction done) | | 5 |

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