***C-Programming***

*Assignment-1*

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**Q1. WRITE A C PROGRAM FOR CALCULATING THE PRICE OF A PRODUCT AFTER ADDING THE SALES TAX TO ITS ORIGINAL PRICE. WHERE RATE OF TAX AND PRICE IS INPUTTED BY USER.**

**#include<stdio.h>**

**#include<conio.h>**

**int main()**

**{**

**float p,r,s,tax;**

**printf(“enter the rate of tax and prize”);**

**scanf(“%l,%l”,&r,&tax);**

**s=r/100\*p;**

**t=p+s;**

**printf(“prize of product including tax”);**

**return 0;**

**}**

**Q2. Write a C program to calculate the weekly wages of an employee. The pay depends on wages per hour and number of hours worked. Moreover, if the employee has worked for more than 30 hours, then he or she gets twice the wages per hour, for every extra hour that he or she has worked**

**#include<stdio.h>**

**Int main()**

**{**

**int w,h,p;**

**Printf(“enter the no of hours and wage per hour”);**

**Scanf(“%d,%d”,&w,&h);**

**If(h>=30)**

**{ p=w\*h**

**Printf(“%d”,p);**

**}**

**Else**

**{ p=w\*h+2h**

**printf(“%d”,p);**

**}**

**return 0;**

**}**

**Q.3 Mr. X goes to market for buying some fruits and vegetables. He is having a currency of Rs 500 with him for marketing. From a shop, he purchases 2.0 kg Apple priced Rs. 50.0 per kg, 1.5 kg Mango priced Rs.35.0 per kg, 2.5 kg Potato priced Rs.10.0 per kg, and 1.0 kg Tomato priced Rs.15 per kg. He gives the currency of Rs. 500 to the shopkeeper. Find out the amount shopkeeper will return to X by writing a C program.**

**#include<stdio.h>**

**Int main()**

**{**

**float n=500.0,a=2.0,m=1.5,p=2.5,t=1.0,x;**

**x= n-a\*50+m\*35+p\*10+t\*15;**

**printf(“%f”,x);**

**return 0;**

**}**

**Q4. Write a C program to print your name, date of birth and mobile number in 3 different lines.**

**#include<stdio.h>**

**Int main()**

**{**

**printf(“Vansh Bhardwaj”);**

**printf(“/n 30-07-2006”);**

**printf(“/n 8533856025 ”);**

**return 0;**

**}**

**Q5. Write a program to read an integer, a character and a float value from keyboard and display the same in different lines on the screen.**

**#include<stdio.h>**

**Int main()**

**{**

**int a;**

**printf (“enter any no”);**

**scanf(“%d”,a);**

**printf(“%c”,a);**

**printf(“/n%f”,a);**

**return 0;**

**}**

**Q6. (sale is 172.53)**

**#include<stdio.h>**

**Int main()**

**{**

**float cost=172.53;**

**scanf(“%f”,%cost);**

**printf(“the sales total is : $ %f”,cost);**

**return 0;**

**}**

**Q7. (Raju is doing this)**

**#include<stdio.h>**

**#include<conio.h>**

**int main ()**

**{**

**float a=6.5,total;**

**total=a\*3**

**printf(“total apple got raju bhai”);**

**return 0;**

**}**

**Q8. (upto to decimal)**

**#include<stdio.h>**

**int main()**

**{**

**float a;**

**scanf(“%f”,a);**

**printf(“%2f”,a);**

**return 0;**

**}**

**Q9. (print mobile no)**

**#include<stdio.h>**

**int main()**

**{**

**long a;**

**printf(“enter the mobile no”);**

**scanf(“%l”,a);**

**return 0;**

**}**

**Q10. (Population after two year)**

**#include<stdio.h>**

**#include<conio.h>**

**Int main()**

**{**

**int p=30000,tp;**

**tp=p+p\*0.2+p\*0.3;**

**printf(“total population”,tp);**

**return 0;**

**}**

**Q11.(ASCII)**

**#include <stdio.h>**

**int main()**

**{**

**char c;**

**printf("Enter a character: ");**

**scanf("%c", &c);**

**// %d displays the integer value of a character**

**// %c displays the actual character**

**printf("ASCII value of %c = %d", c, c);**

**return 0;**

**}**

**Q12.(Salary)**

**#include<stdio.h>**

**#include<conio.h>**

**int main()**

**{**

**int bp,salary;**

**printf("enter the basic pay");**

**scanf("%d",&bp);**

**salary=bp-bp\*1.5-bp\*2;**

**printf("salary of an employee");**

**return 0;**

**}**

**Q13.(The slope of line)**

**#include<stdio.h>**

**#include<conio.h>**

**int main() {**

**float xp,yp,xq,yq,slope,aoi;**

**printf(“enter the corrdinates”);**

**scanf(“%f,%f,%f,%f”,&xp,&yp,&xq,&yq);**

**slope=(yp-yq)/(xp-xq);**

**aoi=**

**printf(“slope=%f,angle of incident=%f”,slope,aoi);**

**return 0;**

**}**

**Q14. (SPI)**

**#include<stdio.h>**

**#include<conio.h>**

**int main() { float g1,g2,g3,g4,g5,c1,c2,c3,c4,c5,spi;**

**printf(“enter the grade of 5 sub”);**

**scanf(“%f,%f,%f,%f,%f”,&g1,&g2,&g3,&g4,&g5);**

**printf(“enter the credit of sub”);**

**scanf(“%f,%f,%f,%f,%f”,&c1,&c2,&c3,&c4,&c5);**

**spi=(c1\*g1+c2\*g2+c3\*g3+c4\*g4+c5\*g5)/(c1+c2+c3+c4+c5);**

**printf(“SPI of 5 sub”,spi);**

**return 0;**

**}**

**Q-15. (frequency)**

**#include<stdio.h>**

**#include<conio.h>**

**int main() { float c,f,wl;**

**printf(“enter the wavelength and speed”);**

**scanf(“%f,%f”,&c,&wl);**

**f=c/wl;**

**printf(“frequency”);**

**return 0;**

**}**

**Q16. (velocity)**

**#include<stdio.h>**

**#include<conio.h>**

**int main() {**

**int u2=30,a=5,s=70,v2;**

**v2=u2+2\*a\*s;**

**printf(“ final velocity=%d”,v2);**

**return 0;**

**}**

**Q17. (velocity ,far travelled)**

**#include<stdio.h>**

**#include<conio.h>**

**int main()**

**{**

**int a=4,u=0,t=3,v;**

**float s;**

**v=u+a\*t;**

**s=u\*t+0.5\*a\*t\*t;**

**printf(“%d,%f”,v,s);**

**return 0;**

**}**

**Q18. (Sum of four digit )**

**#include<stdio.h>**

**#include<conio.h>**

**int main()**

**{**

**int n=08060098,s,r;**

**for(int i=1;i<=4;i++)**

**{**

**r=n%10;**

**S=s+r;**

**n=/10;**

**}**

**Printf(“%d”,s);**

**}**

**Q19.**

**#include<stdio.h>**

**#include<conio.h>**

**int main()**

**{**

**float h,w,hf,wp;**

**printf(“height in cm and weight in kgs);**

**scanf(“%f,%f”,&h,&w”);**

**hf=0.3937\*h;**

**wp=2.2046\*w;**

**printf(“weight in pound=%f,height in feet=%f”,wp,hf);**

**}**

**Q20.**

**a- Char option;**

**b- Int sum=0;**

**c- Float product=1;**

**Q21.**

**#include<stdio.h>**

**#include<conio.h>**

**int main()**

**{**

**int a,b,c,d,e,f,g,h,i;**

**printf(“enter the 9 integer”);**

**scanf(“%d,%d,%d%d,%d,%d,%d,%d,%d,%d”,&a,&b,&c,&d,&e,&f,&g,&h,&i);**

**printf(“%d,%d,%d\n,%d,%d,%d\n%d,%d,%d”,a,b,c,d,e,f,g,h,i);**

**}**

**Q22. (header file)**

**n C language, header files contain a set of predefined standard library functions. The .h is the extension of the header files in C and we request to use a header file in our program by including it with the C preprocessing directive “#include”.**

**And it can make easier to program in c language.**

**Q23.(output)**

**50 70 38**

**Q24.**

**Output- GLA UNIVERSITY**

**Q25. (Library function)**

**Library functions in C language are inbuilt functions which are grouped together and placed in a common place called library.**

**Each library function in C performs specific operation**

**Q26.**

**C is placement oriented language 22 26 16**

**Q27.**

**The statement is a bit unconventional and not recommended**

**Q28.**

**“ C % FOR % PLACEMENT”**

**Q29. (Speed of bus)**

**#include<stdio.h>**

**#include<conio.h>**

**int main()**

**{**

**float m,s;**

**printf(“ enter the distance between Delhi and GLA”);**

**scanf(“%f”,&m);**

**s=m/4;**

**printf(“ the speed of bus %2f km/hr”,m);**

**}**

**Question-30**

**#include<stdio.h>**

**#include<conio.h>**

**int main()**

**{**

**int suman=70,satyam=50,shyam=80,avg;**

**avg=(suman+satyam+shyam)/3;**

**printf(“avg marks is %f”,avg);**

**}**

**Question-31**

**#include<stdio.h>**

**#include<conio.h>**

**Void main()**

**{**

**int a=;5,b=3,temp;**

**//printf(“The value of a before swipping is %d”,a);**

**Temp=a;**

**a=b;**

**b=temp;**

**printf (“the value of a is %d”,a);**

**printf (“the value of b is %d”,b);**

**return 0;**

**}**

**Question-32**

**#include<stdio.h>**

**#include<conio.h>**

**int main()**

**{**

**float s=4.0,t=3,d,T;**

**T=3/60;**

**d=s\*T;**

**Printf(“speed %f”,d);**

**}**

**Question-33**

**YES**

**Question-34**

**Comments are used to add explanatory notes to the code and put in a last in lie , ignored by complier it is not affect the program.**

**Question-35**

**In this case it is not use & so ,address should not be passed “number”**

**Question-36**

**Yes**

**Question-37**

**Gross-salary,avg.**

**Question-38**

**#include<stdio.h>**

**int main()**

**{**

**int tanksize=175;**

**Float drainrate=25.0;**

**Float time required =tanksize/drainrate;**

**Printf(“the time required to completely clean the tank is %.2f hr/n”,time required);**

**}**

**Question-39**

**#include<stdio.h>**

**Int main()**

**{**

**float battery power =0.75;**

**Float hours ;**

**Hours=(1- battery power)**

**Printf(“ the battery power will be at 75%% after %.2 hours \n” hours);**

**Return o;**

**}**

**Question-40**

**Complie(a)**

**Question-41**

**%o**

**Question-42**

**%.2e**

**Question-43**

**Array**

**Question-44**

**“hell”8**

**Question-45**

**The code given ha s a syntax error because printf function is missing**

**Question-46**

**Basic-pay**

**Question-47**

**C1**

**Q48.**

**(A) (365.55)10 = (101101101.10011)2**

**(B) (453.65)10 = (705.51)8**

**(C) (5164.12)10 = (1420.21)16**

**(D) (23.65)10 = (43.3)5**

**(E) (772)10 = (2045)7**

**Question-49**

**Covert the following numbers to decimal number system-**

**A0 (325.54)6 = (151.8)10**

**a) (1001010110101.1110101)2 = (9645.90625)10**

**b) (742.72)8 = (386.5625)10**

**c) (AC94.C5)16 = (44244.7737375)10**

**Q50.Perform the following conversion from Hexadecimal to other number as directed-**

**(DB56.CD4)16 = (1101101101010110.1100110100)2,**

**= (333526.638)8**

**= (133266.3232)4**

**Q51. Perform the following conversion from octal to other number as directed-**

**(473.42)8 = (100111011.010)2, (315.25)10, (IDB.68)16, (1333.3)5**

**Q52. Find the value of A?**

**a) (23)10 = (17)A A=8**

**b) (21)16 = (41)A A=10**

**c) (32)8 = (101)A A=2**

**Q53: What will be the output of following program? Assume integer is of 2 bytes**

**void main(){**

**int a=32770;**

**printf(“%d”,a);**

**}**

**Output- -32766**

**Size of an integer is 2 bytes , the max value that can be stored is 2767 value greater than max positive value is assigned to an integer it wraps around the minimum negative value**

**Q54: #include <stdio.h>**

**int main()**

**{**

**float c = 5.0;**

**printf ("Temperature in Fahrenheit is %.2f", (9/5)\*c + 32);**

**return 0;**

**}**

**Output – Temperature in Fahrenheit is 32.00**