NOTE:
i. Part-II is to be attempted on the separate Answer Book.
ii. Attempt ONLY FOUR questions from PART-II by selecting TWO questions from EACH SECTION. ALL questions carry EQUAL marks.

PART-II
(SECTION-A)

Q. No. 2
a. What is octet rule in chemical in chemical bonding? Explain covalent bond in detail.
b. Why water molecule is angular in structure?
c. Write a note on structure and functions of Human Brain.
d. Describe the 'Cell Structure'. Write down the functions of at least three Subcellular Organelles.

Q. No. 3
a. What is Polio? What are the causes and the symptoms of polio? Differentiate between IPV and OPV.
b. Name the two parts of the Nervous System? Briefly describe CNS. Describe Alzheimer Disease.
c. Carbohydrates are the major source of energy for the cells. Describe their structure, function and classification.
d. Discuss importance of preservatives and antioxidants in food.

Q. No. 4
a. What is solid waste management? What is the National Solid Waste Management Strategy in Pakistan? Suggest methods to improve the abysmal situation of SWM in Pakistan.
b. What is GIS? What are the components of GIS?
c. Pakistan is the fifth most populous country of the world. What are the causes of population explosion in Pakistan? What can be the control measures?
d. What are Montreal and Kyoto protocols? What is carbon market?

Q. No. 5
a. Write a note on Networking & Internet Standards.
b. What is 'Artificial Intelligence'? Write its pros and cons.
c. How is an 'Optical Fiber' constructed? How is it helpful in transmitting the electromagnetic radiations?
d. Write a comprehensive note on 'Bioavailability of Nutrients.

(SECTION-B)

Q. No. 6
a. Divide $370 into three parts such that second part is 1/4 of the third part and the ratio between the first and the third part is 3: 5. Find each part.
b. Kashif required Rs. 800 for paying his fees. He borrowed 20 % from his brother and 30 % of the remaining was funded by his mother. In his bank he had Rs. 200. How much more does he need (in Rs.)?
c. Three bags contain 3 red, 7 black; 8 red, 2 black, and 4 red & 6 black balls respectively. 1 of the bags is selected at random and a ball is drawn from it. If the ball drawn is red, find the probability that it is drawn from the third bag.

Rs.)?

c. Three bags contain 3 red, 7 black; 8 red, 2 black, and 4 red & 6 black balls respectively. 1 of the bags is selected at random and a ball is drawn from it. If the ball drawn is red, find the probability that it is drawn from the third bag.

d. The traffic lights at three different road crossings change after every 24 sec., 36 sec. and 72 sec. respectively. If they all change simultaneously at 8 : 20 : 00 hrs; at what time will they again change simultaneously?

Q. No. 7

a. Ishaq can do a tailoring job in 6 hours. Abbas does the same job in 4 hours. Irfan does it in 8 hours. Ishaq and Abbas start doing the work. Abbas leaves after 2 hours and Irfan replaces him. How long would it take to complete the work?

b. A farmer needs to build a boundary wall around his farm. If the area of the farm is 576m^2, what will be the area of the wall, if it's 2 meters high on 3 sides and 3 meters high on one side?

c. There are 7 students in a group having ages 18, 18, 19, 19, 19, 21, 21. Calculate the mean, median, mode and range of their ages. Also, define these mentioned terms.

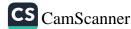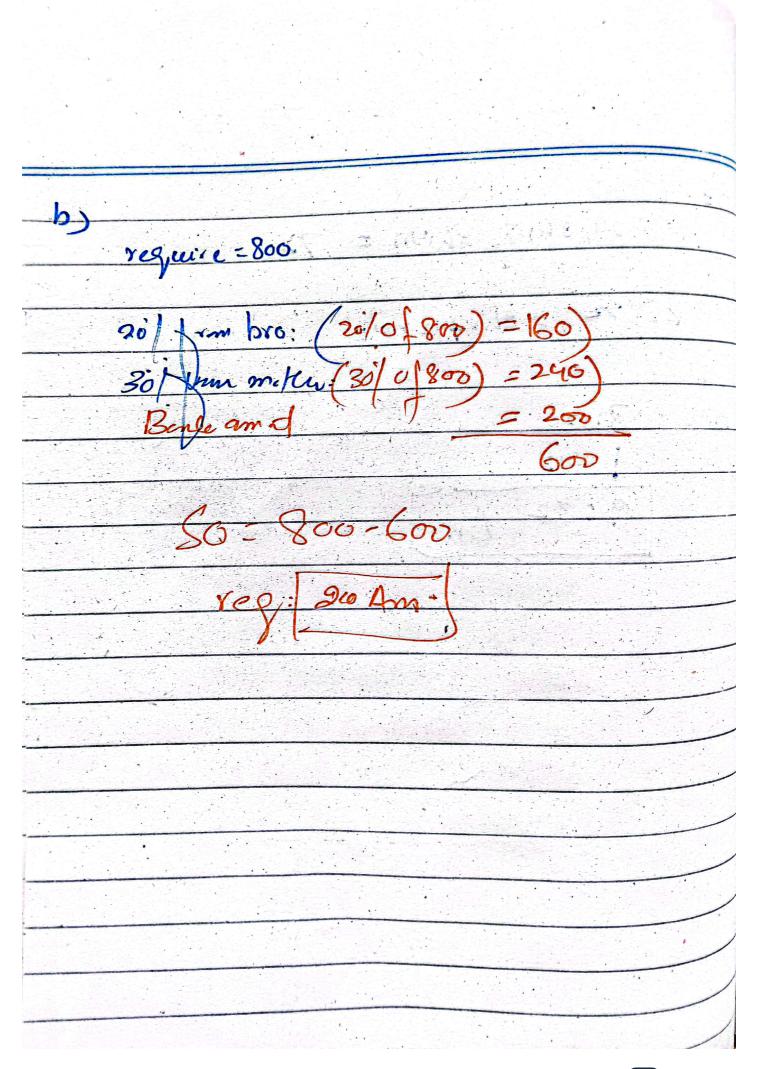d. How does a mental ability skill differ from IQ test?

Q. No. 8

a. A car runs at a speed of 40 km/h during first half of the journey and at the speed of 60km/h the 2nd half of journey. What is the average speed of a car?

b. If ROSE is coded as 6821 CHAIR is coded as 73456, PREACH is coded as 961473, what will be code for SEARCH?

c. If A is the brother of B and B is the sister of C, C is the father of D. How D is related to A, D being a male member?

d. Kashmala travels 35 km towards the west, takes a right turn and travels 50 km more next, she takes another right turn and travels 35 km in that direction. How far is she from her original position?

***** We wish you Good Luck for Special CSS & CSS-2024*****

Q6:

a) $370 = 3$ parts

$2nd = \frac{1}{4}$ of $3rd$

ratio: $1st : 3rd$

$3 : 5$

Solution:

$$Share\,of\,A = \frac{Total\,Am:}{T.\,Ratio} \times A(ratio)$$

$$\frac{370}{\left(\frac{37}{4}\right)} \times 3$$

$$\frac{\overset{10}{\cancel{370}} \times 4}{\cancel{37}} \times 3$$

$3 + 5 + 5$, $\frac{}{4}$

after:-
L.CM = $\frac{37}{}$
Soluti- $\frac{37}{4}$

$1st$ $40 \times 3 = 120$

$2nd$ $40 \times 5 = 200$

Ans: 120, 50, 200
$1st$ / $2nd$ / $3rd$

$2nd$ $now = 370 - 320$
$= 50$ ($\frac{1}{4}$ of $2nd$)

b)

require = 800

20% from bro: (20% of 800) = 160)
30% from mother: (30% of 800) = 240)
Bank amd   = 200
                                      ‾‾‾‾‾
                                        600

So = 800 - 600

req := | 200 Am. |

c)

1) 3 red

7 black

2) 8 red

2 black

3) 4 red

6 black صحیح answer کے لیے ہمیں باقی method میں سے کرکے گا۔

Solution = $\frac{4}{10} = \frac{2}{5} = 0.4$

Answer

d)

ƒ=

24, 36, 72 = LCM = 72

60) 72 = 1hr ⫽ 12 min

now   8 : 20

1 + 12

| 9 : 32   Ans. |