ACADEMIC WORLD SCHOOL™
BEMETARA

SESSION: 2023-24
SUMMER VACATION ASSIGNMENT
CLASS: XII OPTIONAL SUBJECTS

General Instructions:

1. Write in a clear and legible handwriting.

2. Complete all the homework in a separate subject Summer Vacation Homework Notebook.

3. **DO NOT COPY AND PASTE FROM THE INTERNET**. (Assignment will be rejected)

4. In case of reference from the internet, you may:

   A. Read the content from the internet, if you wish and paraphrase (Rewrite in your own words)

   B. Mention the source of your information by providing the link from the internet for the verification by the teachers.

5. Marks awarded will be counted in the final scores at the end of the session.

6. The Summer Vacation HW will be submitted immediately upon arrival to school after Summer Vacation.

7. For any assignment related query do post your question on E-Mail Id of respective subject teacher. List of Subject Teacher's E-Mail ID attached.

Note for the Parents:

Parents are requested to guide his/her wards to complete their assignments honestly and submit by the due date.

TO BE DONE IN STICK FILE

QUESTION : Write a brief description on any one topic given below (page limit at least 10)

1. Linear programming
2. Application of derivatives
3. Numerical inequalities
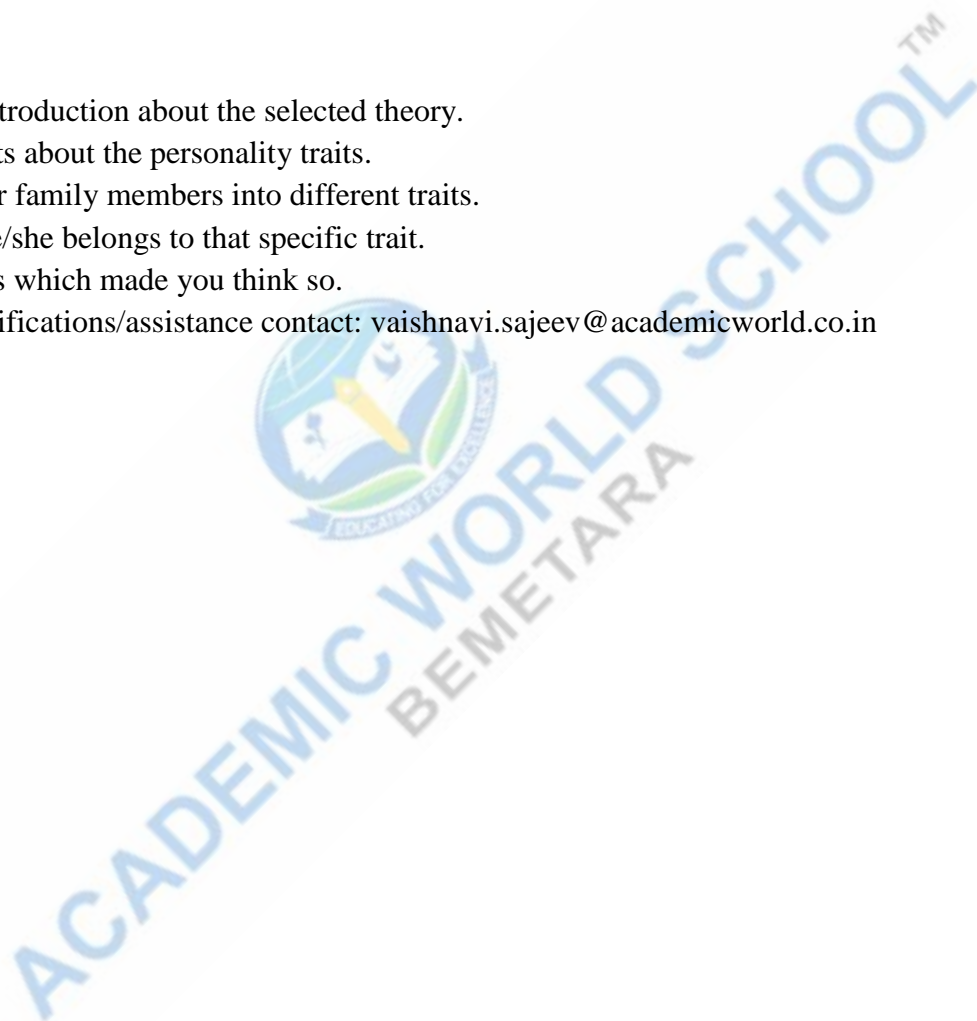4. Time series
5. Probability
6. Inferential statistics

Subject: Psychology (037)

Psychology:

Q.1. Pick any personality theory of your choice from chapter "Self and Personality". Study the theory thoroughly, and categorise which trait or type does your family member belong to in that specific theory. Justify your observation using situations. Use your creativity and write this on an A4 size paper. You may use colours to make your assignment interesting.

Guidelines:

- Write a brief introduction about the selected theory.
- Draw flowcharts about the personality traits.
- Categorize your family members into different traits.
- Explain why he/she belongs to that specific trait.
- Write situations which made you think so.
- For further clarifications/assistance contact: vaishnavi.sajeev@academicworld.co.in

CLASS: XII

Subject: Entrepreneurship (o66)

Make any business idea and draft it in a paper

CLASS: XII

Subject: INFORMATICS PRACTICES (065)

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Q 1. Write the SQL functions which will perform the following operations:

1) To display the day of the current date.
2) To display the first four letter of the text "EDUCATION".
3) To display the text "EDUCTAION" in lower case.
4) To remove spaces from the beginning and end of a string, " CBSE ".
5) To compute the sum between two numbers, n1 and n2

Q 2. In a database company, there are two tables given below

Table: SALES

SALESMANID	NAME	SALES	LOCATIONID
S1	ANITA SINGH ARORA	250000	102
S2	Y.P.SINGH	1300000	101
S3	TINA JAISWAL	1400000	103
S4	GURDEEP SINGH	1250000	102
S5	SIMI FAIZAL	1450000	103

Table: LOCATION

LOCATIONID	LOCATIONNAME
101	Delhi
102	Mumbai
103	Kolkata
104	Chennai

1) Write SQL Query for the following
2) Display all the records from sales table
3) Display the location of SIMI FAIZAL
4) Display the salesman name from Mumbai location
5) Display the salesman name with sales more than 100000
6) Display the salesman record from sales and location table with name starting with 'A'
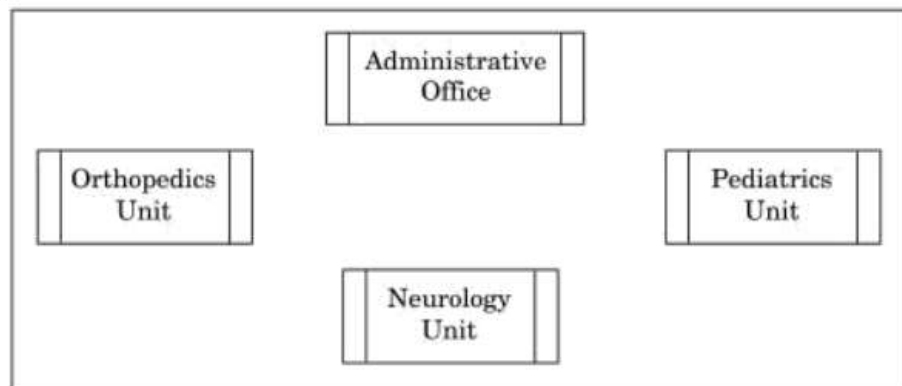
Q 3. Consider the below mentioned table of 'CLOTH'

DCODE	DESCRIPTION	PRICE	MCODE	LAUNCHDATE
10001	FORMAL SHIRT	1250	M001	12–JAN–08
10020	FROCK	750	M004	09–SEP–07
10012	INFORMAL SHIRT	1450	M002	06–JUN–08
10019	EVENING GOWN	850	M003	06–JUN–08
10090	TULIP SKIRT	850	M002	31–MAR–07
10023	PENCIL SKIRT	1250	M003	19–DEC–08
10089	SLACKS	850	M003	20–OCT–08

Write the commands for the following:

1) Display first three letters of description e.g. 'FRO' for 'FROCK'
2) Display the description after removing leading spaces if any.
3) Display number of characters taken by each description.
4) Display the number of MCODE in the table.
5) Display the day of the LAUNCHDATE. Eg. 'Monday', 'Tuesday' etc
6) Display total price of products launched in year 2008.
7) Display minimum price of product for each material code(MCODE).
8) Display the most recent LAUNCHDATE.
9) Display the description in lower case alphabets.
10) Display remainder of price divided by 10.

Note: Solve the above-mentioned questions and take the snap-shot of SQL queries with their output and paste on A4 sheet along with the mentioned table.

Q 3. Ayurveda Training Educational Institute is setting up its centre in Hyderabad with four specialized departments for Orthopedics, Neurology and Pediatrics along with an administrative office in separate buildings. The physical distances between these department buildings and the number of computers to be installed in these departments and administrative office are given as follows. Answer the queries as raised by

them in (i) to (v).

Shortest distances between various locations in metres :

Administrative Office to Orthopedics Unit	55
Neurology Unit to Administrative Office	30
Orthopedics Unit to Neurology Unit	70
Pediatrics Unit to Neurology Unit	50
Pediatrics Unit to Administrative Office	40
Pediatrics Unit to Orthopedics Unit	110

Number of Computers installed at various locations are as follows :

Pediatrics Unit	40
Administrative Office	140
Neurology	50
Orthopedics Unit	80

1) Suggest the most suitable location to install the main server of this institution to get efficient connectivity.

2) Suggest the best cable layout for effective network connectivity of the building having server with all the other buildings.

3) Suggest the devices to be installed in each of these buildings for connecting computers installed within the building out of the following: Gateway, switch, Modem

4) Suggest the topology of the network and network cable for efficiently connecting each computer installed in each of the buildings out of the following: Topologies: Bus Topology, Star Topology

   Network Cable: Single Pair Telephone Cable, Coaxial Cable, Ethernet Cable.

5) The university is planning to connect its admission office in Delhi, which is more than 1250km from university. Which type of network out of LAN, MAN, or WAN will be formed? Justify your answer.

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Class - XII

SUBJECT: Computer Science (083)

1. What is the difference between interactive mode and script mode in Python?
2. Differentiate between mutable and immutable objects in Python language with example.
3. What is indexing in context to Python strings? Why is it also called two-way indexing?
4. How are tuples different from lists when both are sequences?
5. How are objects stored in lists and dictionaries different?
6. Create a Report file with your last class programming experience in python make solutions and write it.

Note: Do all Questions on notebook Except Q.6.
For Q.6 You can submit your report file including any 8 quality questions of basic python in your practical file with proper output & explanation.

For example-
● Determine whether a number is a perfect number, an Armstrong number or a palindrome.
● Input a number and check if the number is a prime or composite number.
● Display the terms of a Fibonacci series.
● Compute the greatest common divisor and least common multiple of two integers.
● Count and display the number of vowels, consonants, uppercase, lowercase characters in string.
● Input a string and determine whether it is a palindrome or not; convert the case of characters in a string.
● Find the largest/smallest number in a list/tuple
● Input a list of numbers and swap elements at the even location with the elements at the odd location.
● Input a list/tuple of elements, search for a given element in the list/tuple.
● Create a dictionary with the roll number, name and marks of n students in a class and display the names of students who have marks above 75.
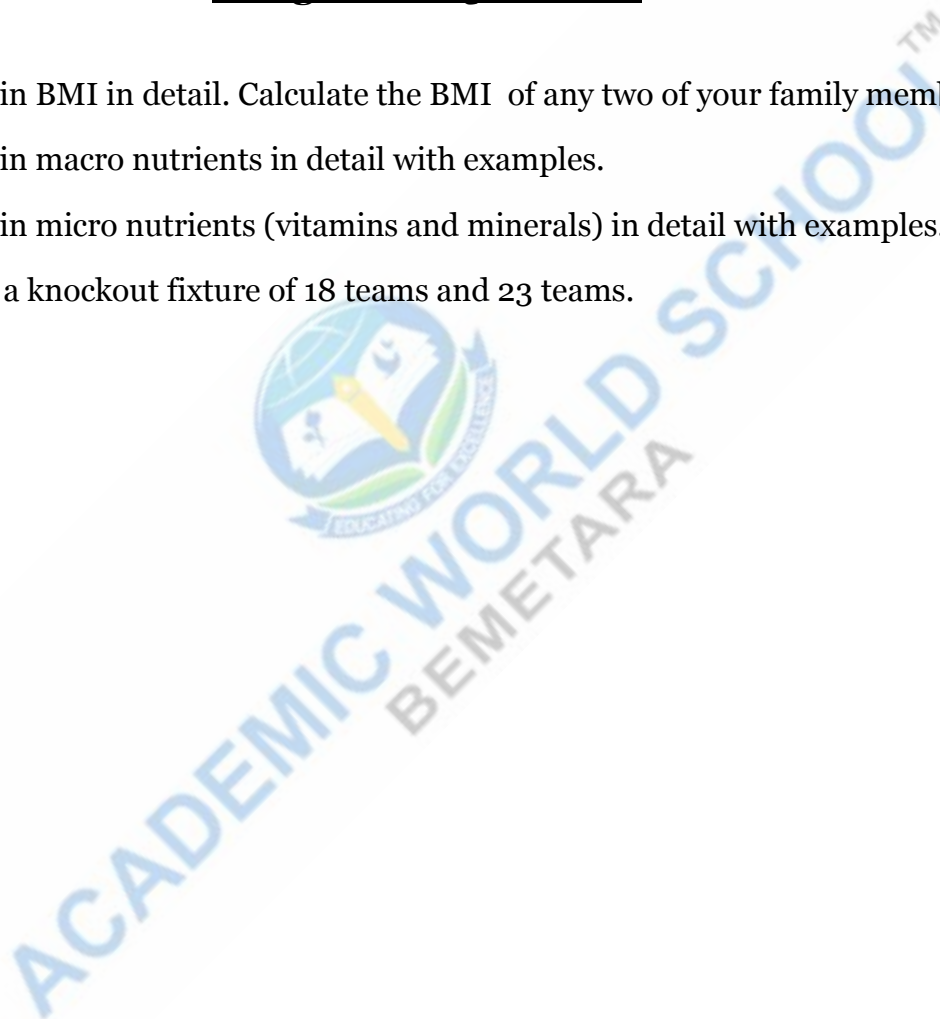
CLASS: XII

SUBJECT- PHYSICAL EDUCATION (048)

General Instructions

(i)   All questions are compulsory.

(ii)   Word Limit – should not exceed 150- 200 words

Last submission Date: 20/06/2022

Assignment Questions

1.   Explain BMI in detail. Calculate the BMI of any two of your family members.

2.   Explain macro nutrients in detail with examples.

3.   Explain micro nutrients (vitamins and minerals) in detail with examples.

4.   Draw a knockout fixture of 18 teams and 23 teams.

विषय-हिंदी (302)

कक्षा- 12

ग्रीष्म कालीन गृह कार्य-

(क) शहरी एवं ग्रामीण जीवन का चित्रण करने वाली कविता एवं कहानी लिखिए- (2-2)

(ख) ग्रीष्म ऋतु, वर्षा ऋतु और शीत ऋतु का लाभ बताते हुए तीनों ऋतु की विशेषता का वर्णन अपने शब्दों में कीजिए-

(ग) अपने पाठ्यपुस्तक से 5 कवि / कवयित्रि और 5 लेखक / लेखिका का संछिप्त जीवन परिचय

SUBJECT- HINDUSTANI MUSIC (036)

General Instructions

(i)   All questions are compulsory.

(ii) All questions belong to Unit-1 *Comparative* studies of *Talas*.

(iii) Word Limit – should not exceed 150- 200 words.

Last submission Date: 01/06/2023

Assignment Questions

1. Explain playing techniques of Tabla Varna's (Alphabets).

2. Explain similarities and dissimilarities of following mentioned Taals:-

   (a) Chautal-Ektala (b) Jhaptala-Sultana (c) Teentala-Tilwada

CLASS – XII

Subject: Painting (049)

1. Create a free choice painting that summarizes all you have learned in this class and is inspired by NATURE. Create a complex composition that illustrates a complex concept through high quality craftsmanship and realistic color rendering.

2. Create free choice studies utilizing watercolor media and direct observation.
   Apply knowledge of color theory and media techniques to paintings.