

AVB PUBLIC SCHOOL



SUMMER BREAK ASSINGMENT (2024-25) CLASS XII

ENGLISH (301)

WRITE THE ANSWERS OF THE FOLLOWING QUESTIONS IN YOUR ENGLISH REGISTER:

Q1. You are Gabriel/Elena of BPS International School, New Delhi. Recently your school organised a cultural show as a part of a cultural exchange programme. Write a report in 120-150 words for your school magazine.

Q2. A daylight robbery took place in Gorakhpur in Khurda Tank police station limits when the Branch Staff of PNB were on their way back after collecting Rs. 50 lakh from the regional office of the Reserve Bank. As staff correspondent for 'The Indian Express', write a report in 120-150 words.

Q3. You are Health Secretary, Students Council, Citizen's Public School, Rambagh, Varanasi the council has decided to start from the 2nd of October a week long cleanliness drive around the school draught a notice in about 50 words asking the students of class 11 to enroll for the drive.

Q4. You are Ram/Rajani, a resident of Delhi. You feel students should see Internet mostly for gaining knowledge rather than wasting time merely on entertainment. Right a letter in 120 to 150 words to the editor, 'The Times of India', Rajpura Road, Delhi, pointing out how school can control students net surfing at school and enable them to use the internet truthfully.

Q5. In our society we do not give our women the respect and status that they deserve. Women are stared at, stopped and even molested. We need to change the male mind set about women. Write a letter in 120 to 150 words to the editor of a national newspaper giving your views on the problem.

Q6. Desire, determination and diligence lead to success. Explain the values of these qualities in the light of Douglas' experience in 'Deep Water'.(120-150 words)

Q7. Which two incidents in Douglas' early life made him scared of water?

Q8."I crossed to oblivion and the curtain of life fell." What was the incident which nearly killed Douglas and developed in him a strong aversion to water?

CHEMISTRY (043)

WRITE THE ANSWERS OF THE FOLLOWING QUESTIONS IN YOUR ASSIGNMENT REGISTER:

Q1. Which of the following unit is useful in relating concentration of solution with its vapour pressure? (a) Mole fraction (b) Parts per million (c) Mass percentage (d) Molality

Q2. At equilibrium the rate of dissolution of a solid solute in a volatile liquid solvent is

- (a) less than the rate of crystallisation (b) greater than the rate of crystallisation
(c) equal to the rate of crystallization (d) zero

Q3. A beaker contains a solution of substance 'A'. Precipitation of substance 'A' takes place when small amount of 'A' is added to the solution. The solution is

- (a) Saturated (b) Supersaturated (c) Unsaturated (d) Concentrated

Q4. Low concentration of oxygen in the blood and tissues of people living at high altitude is due to

- (a) low temperature (b) low atmospheric pressure
(c) high atmospheric pressure (d) both low temperature and high atmospheric pressure

Q5. Which of the following aqueous solution should have the highest boiling point?

- (a) 1.0 M NaOH (b) 1.0 M Na₂SO₄ (c) 1.0 M NH₄NO₃ (d) 1.0 M KNO₃

Q6. In comparison to a 0.01 M solution of glucose, the depression in freezing point of a 0.01 M MgCl₂ solution is 1 (a) the same (b) about twice (c) about three times (d) about six times

Q7. An unripe mango placed in a concentrated salt solution to prepare pickle, shrivels because (a) it gains water due to osmosis (b) it loses water due to reverse osmosis (c) it gains water due to reverse osmosis (d) it loses water due to osmosis

Q8. At a given temperature, osmotic pressure of a concentrated solution of a substance (a) is higher than that of a dilute solution (b) is lower than that of a dilute solution (c) is same as that of a dilute solution (d) cannot be compared with osmotic pressure of dilute solution

Q9. Which of the following statement is false?

(a) Two different solutions of sucrose of same molality-prepared in different solvents will have the same depression in freezing point.

(b) The osmotic pressure of a solution is given by the equation $\pi = CRT$ (where C is the molarity of the solution).

(c) Decreasing order of osmotic pressure for 0.01 M aqueous solutions of barium chloride, potassium chloride, acetic acid and sucrose is BaCl₂ > KCl > CH₃COOH > sucrose

(d) According to Raoult's law, the vapour pressure exerted by a volatile component of a solution is directly proportional to its mole fraction in the solution

Q10. The standard reduction potentials of three metallic cations, A, B, and C, are +0.65, -2.49, and -1.18 V, respectively. The order of the corresponding metal's reducing power is

1. B > C > A 2. A > C > B
3. C > B > A 4. C > A > B

Q11. The reaction $\frac{1}{2} \text{H}_2(\text{g}) + \text{AgCl}(\text{s}) \rightarrow \text{H}^+(\text{aq}) + \text{Cl}^-(\text{aq}) + \text{Ag}(\text{s})$ occurs in the galvanic cell

a) Ag/AgCl(s)|KCl(soln)|AgNO₃|Ag

- b) $\text{Pt}|\text{H}_2(\text{g})|\text{KCl}(\text{soln})|\text{AgCl}(\text{s})|\text{Ag}$
 c) $\text{Pt}|\text{H}_2(\text{g})|\text{HCl}(\text{soln})|\text{AgCl}(\text{s})|\text{Ag}$
 d) $\text{Pt}|\text{H}_2(\text{g})|\text{HCl}(\text{soln})|\text{AgNO}_3(\text{soln})|\text{Ag}$

Q12. Pure water does not conduct electricity because

- a) The melting point is low. b) Is easily broken down
 c) Is almost completely unionised d) Is neutral

Q13. The amount of substance liberated at an electrode is not directly proportional to: 1. Time 2. Current 3. Electrochemical equivalent 4. Conductivity

Q14. In a cell, $\text{Zn}(\text{s})|\text{Zn}^{2+}||\text{H}^+|\text{H}_2(\text{Pt})$; adding H_2SO_4 to the cathode compartment will result in 1. Decrease E_{cell} 2. Increase E_{cell} 3. Adjust the equilibrium to the left 4. Adjust the equilibrium to the right

Q15. The E^0 values for the two reduction electrode processes are as follows: 1. $\text{Ce}^{4+}/\text{Ce}^{3+} = 1.61 \text{ V}$ 2. $\text{Co}^{2+}/\text{Co} = -0.28 \text{ V}$ Calculate the cell potential and ΔG° for the cell reaction.

Q16. Define the following: 1. Strong Electrolyte 2. Kohlraush's law 3. Molar conductivity

Q17. The standard Gibbs free energy change for the reaction shown below is -2.7 kJ/mol $\text{Sn}(\text{s}) + \text{Pb}^{2+} \rightarrow \text{Sn}^{2+} + \text{Pb}(\text{s})$ Given that $E^0(\text{Pb}^{2+}/\text{Pb})$ is -0.126 V the value of $E^0(\text{Sn}^{2+}/\text{Sn})$ in V is _____

Q18. A column of 0.05 M NaOH solution with a diameter of 1 cm and a length of 50 cm has an electrical resistance of $5.55 \times 10^3 \text{ ohm}$. Determine the resistivity, conductivity, and molar conductivity.

Q19. Why is it not possible to measure the potential of a single electrode?

Q20. Can you store copper sulphate solutions in a zinc pot?

Q21. INVESTIGATORY PROJECT ON THE TOPIC OF YOUR CHOICE.

PHYSICS 042 (TOPIC-ELECTROSTATICS)

WRITE THE ANSWERS OF THE FOLLOWING QUESTIONS IN YOUR ASSIGNMENT REGISTER:

- Q1. Can $8.6 \times 10^{-19} \text{ C}$ of charge be given to a conductor? Explain, mention at least three points in support of your answer.
- Q2. State the unit of electric permittivity in terms of S.I. units.
- Q3. The dielectric constant of a medium is unity. What will be its permittivity?
- Q4. A, B and C are three charged bodies. A and B repel each other and A attracts C, what is the nature of force between B and C?

- Q5. Two point charges, one $+5\mu\text{C}$ and other $-5\mu\text{C}$ are placed 1 mm apart. Calculate the dipole moment. Also write the direction of dipole moment.
- Q6. Find the electric intensity at a point where a charge of $5 \times 10^{-4} \text{ C}$ experiences a force of 2.25 N.
- Q7. ABC is an equilateral triangle whose each side is 0.05 m. Two charges of $+(50/3) \times 10^{-9} \text{ C}$ and $-(50/3) \times 10^{-9} \text{ C}$ are placed at A and B respectively. What will be the magnitude and direction of the resultant field at C?
- Q8. If an oil drop of weight $3.2 \times 10^{-13} \text{ N}$ is balanced in an uniform electric field of $5 \times 10^5 \text{ N C}^{-1}$, find the charge on the drop.
- Q9. A point charge of $1.8 \mu\text{C}$ is at the center of a cubical Gaussian surface of side 55 cm. Find the net electric flux through the surface.
- Q10. The net outward flux through the surface of a box is $8.0 \times 10^3 \text{ N m}^2 \text{ C}^{-1}$. What is the net charge inside the box?
- Q11. An infinite line charge produces an electric field of $9.0 \times 10^4 \text{ N/C}$ at a distance of 2.0 cm. What is the linear charge density?
- Q12. The electric field due to a charged conducting sphere of radius 10 cm, at a distance of 20 cm from the center of the sphere is $1.5 \times 10^3 \text{ N C}^{-1}$ and points radially inwards. What is the magnitude and nature of charge on the sphere?

Note :Every one has to complete his/her investigatory project in proper format as discussed in the class.

BIOLOGY

WRITE THE ANSWERS OF THE FOLLOWING QUESTIONS IN YOUR ASSIGNMENT REGISTER:

- Make an investigatory project on any topic of your choice, provided that the topic must be of Botany or Zoology or any integrated field of Biology.
- Answer the following questions:
 1. Draw the diagram of the following:
 - a) Female and Male Reproductive System
 - b) 3-D Structure of Anther
 - c) Structure of a Pollen Grain
 - d) Structure Anotropous Ovule
 - e) Steps of Double Fertilization
 - f) Artificial Hybridisation
 - g) Stages of development of an embryo in Plants
 - h) Monocot and Dicot Seeds
 - i) Structure of Sperm
 - j) Seminiferous Tubule
 2. Explain Mensrual cycle with the help of well-labelled diagram.
 3. Explain the types of Population Interactions with examples.
 4. Explain different types of Growth Models.

MATHEMATICS (041)

WRITE THE ANSWERS OF THE FOLLOWING QUESTIONS IN YOUR ASSIGNMENT REGISTER:

Answer the following questions:

Q1. A is a square matrix of order 3 and $|A| = 5$ then the value of $|2A|$

- (1) -10
- (2) 10
- (3) -40
- (4) 40

Q2. If A is a square matrix such that $A^2 = A$, then $(I - A)^3 + A$ is

- (1) I
- (2) 0
- (3) $I - A$
- (4) $I + A$

Q3. If set A contains 5 elements and the set B contains 6 elements, then the number of one-one and onto mappings from A to B is

- (1) 720
- (2) 120
- (3) 0
- (4) None of these

Q4. If A and B are the symmetric matrices, Prove that $AB - BA$ is a skew symmetric matrix.

Q5. Let $A = \{1, 2, 3\}$ and consider the relation $R = \{(1, 1), (2, 2), (3, 3),$

$(1, 2), (2, 3), (1, 3)\}$. Find whether R is reflexive, symmetric and transitive.

Q6. The following relation is defined on the set of real numbers.

- (1) aRb if $a - b > 0$
- (2) aRb if $1 + ab > 0$

Find whether relation is reflexive, symmetric or transitive.

Q7. If $A = \begin{bmatrix} 1 & 1 & 1 \\ 1 & 0 & 2 \\ 3 & 1 & 1 \end{bmatrix} \begin{bmatrix} 1 & 1 & 1 \\ 1 & 0 & 2 \\ 3 & 1 & 1 \end{bmatrix}$, find A^{-1} . Hence, solve the system of equations

$$X + y + z = 6$$

$$X + 2z = 7$$

$$3x + y + z = 12$$

Q8. Find the value of λ so that the points $(1, -5)$, $(-4, 5)$ and $(\lambda, 7)$ are collinear.

Q9. If $f : \mathbb{R} \rightarrow \mathbb{R}$ is defined by $f(x) = x^3 + 1$. Find whether function is injection, surjection or bijection.

Q10. Solve the system of equation by matrix method:

$$(2/x) + (3/y) + (10/z) = 4,$$

$$(4/x) - (6/y) + (5/z) = 1,$$

$$(6/x) + (9/y) - (20/z) = 2, \quad x, y, z \neq 0$$

Q11. Find the inverse of the matrix A and $\begin{bmatrix} a & b \\ c & \frac{1+bc}{a} \end{bmatrix}$ show that $aA^{-1} = (a^2 + bc + 1)I - aA$.

Q12. Find the product

$$\begin{bmatrix} 1 & -1 & 2 \\ 0 & 2 & -3 \\ 3 & -2 & 4 \end{bmatrix} \begin{bmatrix} -2 & 0 & 1 \\ 9 & 2 & -3 \\ 6 & 1 & -2 \end{bmatrix}$$

Hence, solve the system of linear equations:

$$x - y + 2z = 1, \quad 2y - 3z = 1, \quad 3x - 2y + 4z = 2.$$

Q13. If $f : \mathbb{R} \rightarrow \mathbb{R}$ is defined by $f(x) = x^3$. Find whether function is injection, surjection or bijection.

CASE STUDY TYPE QUESTION:

Q14. A manufacture produces three stationery products Pencil, Eraser and Sharpener which he sells in two markets. Annual sales are indicated below



<u>Market</u>	<u>Products (in numbers)</u>		
	<u>Pencil</u>	<u>Eraser</u>	<u>Sharpener</u>
A	10,000	2000	18,000
B	6000	20,000	8,000

If the unit Sale price of Pencil, Eraser and Sharpener are Rs. 2.50, Rs. 1.50 and Rs. 1.00 respectively, and unit cost of the above three commodities are Rs. 2.00, Rs. 1.00 and Rs. 0.50 respectively, then, based on the above information answer the following:

1. Total revenue of market A

a. Rs. 64,000

b. Rs. 60,400

c. Rs. 46,000

d. Rs. 40600

2. Total revenue of market B

a. Rs. 35,000 b. Rs. 53,000 c. Rs. 50,300

d. Rs. 30,500

3. Cost incurred in market A

a. Rs. 13,000 b. Rs.30,100 c. Rs. 10,300

d. Rs. 31,000

4. Profit in market A and B respectively are

a. (Rs. 15,000, Rs. 17,000) b. (Rs. 17,000, Rs. 15,000)

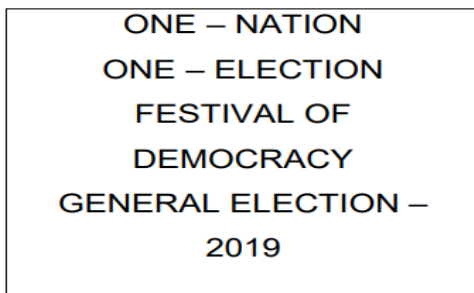
c. (Rs. 51,000, Rs. 71,000) d. (Rs. 10,000, Rs. 20,000)

5. Gross profit in both market

a. Rs.23,000 b. Rs. 20,300 c. Rs. 32,000

d. Rs. 30,200

Q15. A general election of Lok Sabha is a gigantic exercise. About 911 million people were eligible to vote and voter turnout was about 67%, the highest ever



Let I be the set of all citizens of India who were eligible to exercise their voting right in general election held in 2019. A relation 'R' is defined on I as follows: $R = \{(V1, V2) : V1, V2 \in I \text{ and both use their voting right in general election – 2019}\}$

1. Two neighbours X and $Y \in I$. X exercised his voting right while Y did not cast her vote in general election – 2019. Which of the following is true?

a. $(X, Y) \in R$

b. $(Y, X) \in R$

c. $(X, X) \notin R$

d. $(X, Y) \notin R$

2. Mr. 'X' and his wife 'W' both exercised their voting right in general election -2019, Which of the following is true?

- a. both (X,W) and $(W,X) \in R$
- b. $(X,W) \in R$ but $(W,X) \notin R$
- c. both (X,W) and $(W,X) \notin R$
- d. $(W,X) \in R$ but $(X,W) \notin R$

3. Three friends F1, F2 and F3 exercised their voting right in general election-2019, then which of the following is true?

- a. $(F1,F2) \in R$, $(F2,F3) \in R$ and $(F1,F3) \in R$
- b. $(F1,F2) \in R$, $(F2,F3) \in R$ and $(F1,F3) \notin R$
- c. $(F1,F2) \in R$, $(F2,F2) \in R$ but $(F3,F3) \notin R$
- d. $(F1,F2) \notin R$, $(F2,F3) \notin R$ and $(F1,F3) \notin R$

4. The above defined relation R is _____

- a. Symmetric and transitive but not reflexive
- b. Universal relation
- c. Equivalence relation
- d. Reflexive but not symmetric and transitive

ECONOMICS (030)

PROJECTWORK

Students are supposed to make a project & art integration as discussed in class.

➤ The project should be of 25-30 Pages (approx), preferably handwritten.

- Collection of the research material/data

Steps to follow-:

- Organization of material/data
- Present material/data
- Analyzing the material/data for conclusion
- Draw the relevant conclusion
- Presentation of the Project Work

✓ Expected Checklist-:

- Introduction of the topic/title
 - Identifying the causes, consequences and/or remedies
 - Advantages and Disadvantages of situations or issues identified
 - Short term and long term implications of economics strategies
 - Validity, reliability , appropriateness and relevance of data used for research work and for presentation in the project file
 - Presentation and writing that is succinct and coherent in project file
- Citation of the materials referred to, in the file in footnotes ,resource section, bibliography etc.

➤ Answer the following questions in your assignment register

1. Read the following statements: Assertion (A) and Reason (R)

.Choose one of the correct alternatives given below:

Assertion (A): The opening of Suez canal in 1869 reduced the cost of transportation.

Reason (R): Suez Canal provided a direct trade route for ships operating between British and India.

Alternatives:

- a. Both Assertion (A) and Reason are true and Reason (R) is the correct explanation of Assertion(A).
- b. Both Assertion and Reason are true and Reason (R) is not a correct explanation of Assertion(A).
- c. Assertion(A) is true but Reason(R) is false.
- d. Assertion(A) is false but Reason(R) is true.

2. If total deposits created by Commercial Bank is Rs.10,000 crores and legal reserve requirements is 40%, then amount of Initial Deposits will be:

- a. Rs. 2,000 crores
- b. Rs. 3,000 crores
- c. Rs.4,000 crores
- d. Rs.14,000 crores

3. Define Money Supply.

4. "Demand for Indian Handicrafts in Indian market as well as foreign market was systematically destroyed by Britishers." Defend or Refute.

5. Discuss the main reasons for India's agricultural stagnation during the colonial period.
6. Currency is issued by the Central bank, yet we say that commercial banks create money. Explain.
7. Calculate Domestic income.

S.NO.	PARTICULARS	Rs.(in crores)
1	GNP at MP	60000
2	Depreciation	4500
3	Subsidies	1520
4	Net indirect tax	3230
5	NFIA	-4010

8. Read the following article and answer the questions given below:

India has scaled back expenditure, including on productive assets that aid Economic Growth, as the government is confronted with the risk of its budget deficit blowing out. Capital Expenditure—the money spent on creating, maintaining, or improving fixed assets like road and factories—stood at 40% of the budgeted amount in the six months to September, down from 55.5% in the year ago period, data from the government's controller General of Accounts show. The overall spending during the period was 49 % of the budget aim compared to 53% last year. That's despite Prime Minister Mr. Narendra Modi's government outlining measures worth more than 21 trillion rupees to counter the social and economic fallout of the COVID-19 outbreak. A closer look at the number shows the bulk of the spending was directed toward the poor and the farmers, with the crucial sector such as coal, power, shipping, and steel receiving less than a third of their annual budget allocation. Spending on capital assets has so far trailed the so called revenue expenditure that includes interest payments and overheads such as salaries, the data released last week showed. Modi's Government places spending curbs on some ministries from April through December to manage its cash flow.

Source: Business Standard, Nov 5, 2020

- a) Are reduction in capital expenditure i.e. the money spent on creating, maintaining or improving fixed assets is done to reduce the risk of ____ deficit.
(revenue/budget)
- b) Allocation of resources in the budget in the six months to September 2020 is directed towards _____
 - i. Economic upliftment of the economy
 - ii. Social upliftment of the economy
 - iii. The poor and the farmers

iv. All of these

C) Capital expenditure refers to the estimated expenditure of the Government in a fiscal year which _____ (reduces/increases) liabilities of the Government.

ACCOUNTANCY (055)

- **Do all questions in assignment note book.**

Part: A - Short Answer Type Questions

Q1. i) Give two circumstances in which the fixed capital of partners may change.

ii) In the absence of a partnership deed, how are mutual relations of partners governed?

Q2. Ramesh, a partner in the firm has advanced a loan of a Rs. 1,00,000 to the firm and has demanded on interest @ 9% per annum. The partnership deed is silent on the matter. How will you deal with it?

Q3. i) Under _____ method, goodwill is the excess of capitalized value of business over actual capital employed.

ii) The value of goodwill is based on _____ judgment of the valuer.

Part : B - Long Answer Type Questions

Q4. X, Y, and Z are partners sharing profits in the ratio of 5: 4: 1. Z is given a guarantee that his share of profit in any given year would be Rs. 10000. Deficiency if any would be borne by X and Y equally. The profits for the year 2016 amounted to Rs.80000. Pass necessary entries in the books of the firm.

Q5. P and M are partners in a firm sharing profits in the ratio of 3:2. The partnership deed provided that P was to be paid salary of Rs. 2,500 per month and M was to get a commission of Rs. 10,000 per year. Interest on capital was to be allowed @5% per annum and interest on drawings was to be charged @ 6% per annum. Interest on P's drawings Rs. 1,250 and on M's drawings Rs. 425. Capital of the partners were Rs. 2,00,000 and Rs. 1,50,000 respectively, and were fixed. The firm earned a profit of Rs. 90,475 for the year ended 31.03.2014. Prepare Profit and Loss Appropriation Account of the firm.

Q6. P and Q are partners with capitals of Rs. 6,00,000 and Rs. 4,00,000 respectively. The profit and Loss Account of the firm showed a net Profit of Rs. 4, 26,800 for the year. Prepare Profit and Loss Appropriation account after taking the following into consideration :-

(i) Interest on P's Loan of Rs. 2,00,000 to the firm

(ii) Interest on 'capital to be allowed @ 6% p.a.

(iii) Interest on Drawings @ 8% p.a. Drawings were; P Rs. 80,000 and Q Rs. 50,000.

(iv) Q is to be allowed a commission on sales @ 3%. Sales for the year was Rs. 10,00,000

(v) 10% of the divisible profits is to be kept in a Reserve Account.

Q7. The goodwill of a firm was to be valued at two years' purchase of the average profits of the last three years. The profits were as under:

- **2014– 2015:** Rs. 20,000 (including an abnormal gain of Rs. 5,000)
- **2015– 2016:** Rs. 40,000 (after charging an abnormal loss of Rs. 10,000)
- **2016– 2017:** Rs. 40,000

Calculate the amount of goodwill.

Q8. Capital invested in a firm is 5,00,000. Normal rate of return is 10% . Average profit of the firm are 64,000 (after an abnormal loss of 4,000). What will be the value of goodwill at four times the super profits?

- **Prepare a specific Project according to CBSE Guidelines on A 4 size sheets.**

COMPUTER SCIENCE (083)

Note: Do all the question in Assignment Note Book

Q1 MULTIPLE CHOICE QUESTIONS:

- (i) Find the invalid identifier from the following
a. none b. address c. Name d. pass
- (ii) Consider a declaration $L = (1, 'Python', '3.14')$.
Which of the following represents the data type of L?
a. list b. tuple c. dictionary d. string
- (iii) Given a Tuple $tup1 = (10, 20, 30, 40, 50, 60, 70, 80, 90)$.
What will be the output of `print (tup1 [3:7:2])`?
a. (40,50,60,70,80) b. (40,50,60,70) c. [40,60] d. (40,60)
- (iv) The return type of the `input()` function is
a. string b. integer c. list d. tuple
- (v) Which of the following operator cannot be used with string data type?
a. + b. in c. * d. /
- (vi) Consider a tuple $tup1 = (10, 15, 25, \text{and } 30)$.
Identify the statement that will result in an error.
a. `print(tup1[2])` b. `tup1[2] = 20` c. `print(min(tup1))` d. `print(len(tup1))`
- (vii) Which one of the following is the default extension of a Python file?
a. .exe b. .p++ c. .py d. .p
- (viii) Which of the following symbol is used in Python for single line comment?
a. / b. /* c. // d. #
- (ix) Which of these about a dictionary is false?
a) The values of a dictionary can be accessed using keys

- b) The keys of a dictionary can be accessed using values
 c) Dictionaries aren't ordered
 d) Dictionaries are mutable
- (x) Identify the output of the following Python statements.
`x = [[10.0, 11.0, 12.0],[13.0, 14.0, 15.0]]`
`y = x[1][2] print(y)`
 a. 12.0 b. 13.0 c. 14.0 d. 15.0
- (xi) Identify the output of the following Python statements.
`lst1 = [10, 15, 20, 25, 30]`
`lst1.insert(3, 4)`
`lst1.insert(2, 3)`
`print (lst1[-5])`
 a. 2 b. 3 c. 4 d. 20
- (xii) Evaluate the following expression and identify the correct answer.
`16 - (4 + 2) * 5 + 2**3 * 4`
 a. 54 b. 46 c. 18 d. 32

Q2 Which of the following is an invalid variable?
 (a) My_day_2 (b) 2nd_day (c) Day_two (d) _2

Q3 Evaluate the expression given below if A=16 and B=15
 (a) A%B//A (b) (A%B)**A

Q4 Rohan is learning to work upon Relational Database Management System (RDBMS) application. Help him to perform following tasks:

- (a) To open the database named "LIBRARY"
 (b) To display the structure of the table "Books" stored in the opened database "LIBRARY"

Q5 Find the error. State reason.
`T=(1,"a",9.2)`
`T[0]=6`

Q6 Write the most appropriate list method to perform the following tasks:

- (a) Add an element in the beginning of the list.
 (b) Delete 3rd element from the list.

Q7 What will be the output of the following code snippet?

```
values=[ ]
for i in range(1,5):
    values.append(i)
print(values)
```

Q8 Differentiate between fetchone() and fetchall() methods with suitable examples for each.

Q9 Consider the following table PLAYER
Table : PLAYER

PNO	NAME	SCORE
P1	RISHABH	52
P2	HUSSAIN	45
P3	ARNOLD	23
P4	ARNAV	18
P5	GURSHARAN	42

- (a) Identify and write the name of the most appropriate column/attribute from the given table PLAYER that can be used a Primary Key.
- (b) Define the term Degree in relational data model. What is the degree of the given table Player?

Q10 Write the output of SQL queries (a) to (d) based on the table Vaccination_Data given below :

VID	NAME	AGE	DOSE1	DOSE2	CITY
101	JENNY	27	2021-12-25	2022-01-21	DELHI
102	HARJOT	55	2021-07-14	2021-10-14	MUMBAI
103	SRIKANTH	43	2021-04-18	2021-07-20	DELHI
104	GAZALA	75	2021-07-31	NULL	KOLKATA
105	SHIKSHA	32	2022-01-01	NULL	MUMBAI

- (a) SELECT NAME, AGE FROM VACCINATION_DATA WHERE DOSE2 IS NOT NULL AND AGE >40;
- (b) SELECT CITY , COUNT(*) FROM VACCINATION_DATA GROUP BY CITY;
- (c) SELECT DISTINCT CITY FROM VACCINATION_DATA;
- (d) SELECT MAX(DOSE1),MIN(DOSE2) FROM VACCINATION_DATA ;

Q11 Write **Python Code using Database connectivity** that deletes the records of History Department Male Students from **History Dept** table .The program code retrieve / display all the records before deletion and after deletion .

Consider :

user ="learner " ,password = "1234" , Database = "University"

Q12 Consider the following SQL table MEMBER in a SQL Database CLUB.
Table : MEMBER

M_ID	Name	Activity
M1001	AMINA	GYM
M1002	PRATIK	GYM
M1003	SIMON	SWIMMING
M1004	RAKESH	GYM

M1005	AVNEET	GYM
-------	--------	-----

Assume that the required library for establishing the connection between Python and MYSQL is already imported in the given Python Code. Also assume the DB is the name of the database connection for table MEMBER stored in the database CLUB.

Predict the Output of the following code :

```
MYCUR=DB.CURSOR( )
MYCUR.execute("USE CLUB")
MYCUR.execute("SELECT * FROM MEMBER WHERE ACTIVITY='GYM' ")
R=MYCUR.fetchone( )
for i in range (3):
    R=MYCUR. fetchone( )
    print(R[0], R[1], sep="#" )
```

Q13 Write a program in python named SwapHalfList(Array), which accepts a list Array of numbers and swaps the elements of 1st Half of the list with the 2nd Half of the list ONLY if the sum of 1st Half is greater than 2nd Half of the list.
Sample Input Data of the list:

Array= [100, 200, 300, 40, 50, 60],

Output Arr = [40, 50, 60, 100, 200, 300]

Note: Assume the content is entered in the Array variable.

Q14 Consider the following tables DOCTOR and write SQL queries for (i) to (iv)

TABLE : DOCTOR				
ID	NAME	DEPT	EXPERIENCE (yrs)	SEX
101	JOHN	ENT	12	M
104	SMITH	ORTHOPEdic	5	M
107	GEORGE	CARDIOLOGY	10	M
114	LARA	SKIN	3	F
109	JOHNSON	MEDICINE	9	F

- (i) Increase experience of all the male doctors by 5 yrs.
- ii) Display the name of male doctors whose experience is in the range 5 to 10 .
- iii) Display the list of doctors in descending order of experience
- iv) Delete all the record of female doctors belongs to skin department.

Q15 Complete Your Project Work as per CBSE guideline.

INFORMATION TECHNOLOGY (802)

NOTE: DO ALL THE QUESTIONS IN ASSIGNMENT NOTEBOOK.

Q1 Multiple Choice Questions:

- (i) The contents of cell A1, A2, A3, and A4 in a Spreadsheet application are 10, 15, 20, 25 respectively. If the formula =COUNT(A1:A4) is entered in cell A5, What will be the value displayed in A5.
a. 70 b. 4 c. 45 d. 65
- (ii) What will be displayed, if the following formula is entered in cell A1 in a spreadsheet application
 $= 6^2 + 15/3 * 2 - 7$
a. 39 b. 15 c. -14 d. -38
- (iii) Which of the following is a disadvantage of web-based applications:
a. They do not need be installed.
b. They are available 24X7.
c. They are slow as compared to software-based applications.
d. They offer cross platform compatibility.
- (iv) Internet transactions are susceptible to frauds. Creating a strong password is vital. A strong password has:
a. 6-8 Alphanumeric characters
b. Special symbols
c. Only numbers
d. Both a and b
- (v) DEITY stands for:
a. Department of Electrical and Information Technology
b. Department of Electronics and Information Technology
c. Department of Electronics and Informatics Technology
d. Department of Electrical and Informatics Technology
- (vi) The National Portal of India provides a single window access to information and services being provided by the various Indian Government entities Which of the following is the website for the National Portal of India:
a. india.gov.in b. india.gov.org c. indian.gov.in d. indian.gov.org
- (vii) Online shopping is an e-commerce application where the customer can purchase goods over the Internet. There are several websites where the customer can go for online shopping. Select from the options given below which of the following is not an online shopping website:
a. snapdeal.com b. myntra.com c. coursera.org d. infibeam.com
- (viii) There are four main phases of development a Web Application Project. **Statement 1:** The scope of the application is decided in the first phase.

Statement 2: The data connectivity is established between the Front-End interface and Back-End Database in the implementation phase.

Select the correct option:

- a. Only Statement 1 is correct
b. Only Statement 2 is correct
c. Both Statement 1 and Statement 2 are correct
d. None of the above statements are correct

- (ix) Which of the following is NOT an advantage of DBMS approach:
- All the data is stored at one place. There is no repetition of the same data.
 - There is a single copy of data that is accessed or updated by all the users.
 - The DBA can provide security to the database by controlling users' database access rights.
 - Designing the database specifications and writing application programs is a time-consuming process.

(x) Online reservation systems are advantageous both for the company providing reservation services and for the consumer who uses the online reservation system for booking.

- User can read reviews posted by people while making choices during reservation.
- More man-power is required by providers to ensure smooth functioning.

Choose the correct justification to the statement given above:

- a. Only i b. Only ii c. Both i and ii d. Neither i nor ii

(xi) **Read the following statements carefully about E-governance**

- It is the use of electronic tools for governance.
- It has decreased the transparency in the system.
- E-governance empowers the citizens socially and economically.
- It enables citizens to access information after paying money.

Choose the correct option from the following:

- a. Both i and ii are correct b. Both ii and iii are correct
c. Both i and iii are correct d. Only iv is correct

(xii) Rajat is compiling a detailed list with a clear description of application features of his project and recognizing the limitations that are placed on the project. Out of the given options choose the phase of the project in which Rajat is currently in:

- a. Requirements Definition Phase b. Testing Phase
c. Implementation Phase d. Design Phase

Q2 Hira wants to store values in a table but the command below is giving errors. Write correct MYSQL command for creating table.

```
CREATE employee (name VARCHAR, id INTEGER)
```

Q3 **Write complete MYSQL syntax for the following statements:**

- To create a database ‘ ‘ School’
- To display all the tables, present in the data base ‘ ‘School’
- To remove the data base ‘ ‘School’

Q4 **COMPETENCY BASED QUESTIONS**

(i) Ravi received a mail from IRS department on clicking “Click –Here”, he was taken to a site designed to imitate an official looking website, such as IRS.gov. He uploaded some important information on it.

Identify the cybercrime being discussed in the above scenario.

- i) Plagiarism ii) Spam iii) Cyber Theft iv) Phishing

(b) An organization is planning to connect its new office in Delhi, which is more than 1250 km current location.

Which type of network will be formed?

- i) LAN ii) MAN iii) WAN iv) Internet

(c) =A\$3 is an example of

- i) Absolute address ii) Relative address
iii) Mixed address iv) None of these

Q5 Short Questions:

- (a) Which command is used to remove the data from table.
(b) Write query to add column DOB of datatype date in student table.
(c) Write query to remove the primary key constraint from Roll from student table

Q6 Consider the given table EXAM and write SQL queries for the following:

Table: EXAM

No.	Name	Stipend	Subject	Average	Division
1	Babita	400	English	15	FIRST
2	Silky	680	Maths	24	FIRST
3	Jyoti	500	Accounts	35	FIRST
4	Archana	200	IP	20	SECOND
5	Sugandha	400	History	10	THIRD
6	Suparna	550	Geo	5	THIRD
7	Ankit	400	History	10	THIRD

- A) To list the names of those students, who have obtained Division as FIRST.
B) To display records listing NAME, SUBJECT for stipend between 400 to 800.
C) Remove the column division
D) To create a database by the name SCHOOL.

Q7 PROJECT WORK & PRACTICAL FILE

Complete your project work & Practical file as per CBSE Guidelines .

PSYCHOLOGY (037)

Q1. Who among the following psychologists have suggested that an intelligent individual not only adapts to the environment, but also actively modifies or shape it?

- I. Gardner
II. Sternberg
III. Carl Jung
IV. Guilford

Q2. Which psychologist believed that there is a common structure on which people differ from each other?

- (a) Gordon Allport
- (b) Raymond Cattell
- (c) Sigmund Freud
- (d) HJ Eysenck

Q3. In the following question, a statement of Assertion (A) is followed by a statement of the Reason (R). Mark the correct choice.

Assertion (A) An individual intelligence test is one which can be administered to one person at a time. A group intelligence test can be administered to several persons simultaneously.

Reason (R) Individual tests allow people to answer orally or in a written form or manipulate objects as per the tester's instructions. Group tests generally seek written answers usually in a multiple-choice format.

Codes

- (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A)
- (b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A)
- (c) Assertion (A) is true, but Reason (R) is false
- (d) Assertion (A) is false, but Reason (R) is true

Q4. Monika has to be assessed for her abilities of creativity and original thinking. The test to be used by the psychologist will involve the following.

- (a) Convergent thinking
- (b) Divergent thinking
- (c) Both convergent and divergent thinking
- (d) Memory and logical thinking

Q5. Anna's application for admission to the college of her choice got rejected. When talking about the admission to the college with others, she tells everyone that she was never interested in studying in that college. Identify the defence mechanism used by Anna.

- (a) Repression
- (b) Reaction formation
- (c) Denial
- (d) Rationalisation

Q6. Priyanka is considered as a gifted child who shown early signs of intellectual superiority since childhood, she show larger attention span, good recognition memory, sensitivity to environmental changes, and early appearance of language skills.

What type of traits a gifted child adhered with?

- I. Advanced logical thinking
- II. High level of intrinsic motivation
- III. Solitary academic activities
- IV. Passive generalisation

Choose the correct option.

- (a) I and II
- (b) II and III
- (c) I, II and III
- (d) II and IV

Q7. Which among the following provides us necessary information that may be used to change, modify, or strengthen certain aspects of self?

- (a) Self-instruction
- (b) Self-reinforcement
- (c) Observation of others' behaviour
- (d) Observation of own behaviour

Q8. In the following question, a statement of Assertion (A) is followed by a statement of the Reason (R). Mark the correct choice.

Assertion (A) When you say, "I know who I am", the self is being described as a knower as well as something that can be known.

Reason (R) As a subject (actor) the self actively engages in the process of knowing itself. As an object (consequence) the self gets observed and comes to be known.

Codes

- (a) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A)
- (b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A)
- (c) Assertion (A) is true, but Reason (R) is false
- (d) Assertion (A) is false, but Reason (R) is true

Q9. Jaqueline is very open minded teenage girl. She loves party, outing and enjoys being at the centre of attention among her peer group. Which personality characteristics associated with her?

Q10. Technologically advanced societies adopt child rearing practices that foster skills of generalisation and abstraction, speed, minimal moves and mental manipulation among children. What type of behaviour, these societies promotes?

Q11. Read the case and answer the questions that follow.

As in the case of other mental and physical characteristics, such variations can be attributed to the complex interaction of heredity and environment. There is no disagreement that creativity is determined by both heredity and environment. Limits of the creative potential are set by heredity, environmental factors stimulate the development of creativity. How much of the creative potential can be realised, when and in what specific form and direction is largely determined by environmental factors such as motivation, commitment, family support, peer influences, training opportunities, etc. Although no amount of training can transform an average person to the level of Tagore, Shakespeare, etc. but it is also true that every individual can raise her/his level of creative potential beyond its present level.

What do you understand by creativity?

Limits of the creative potential are set by heredity, environmental factors stimulate the development of creativity. Explain.

Q12. Self-esteem shows a strong relationship with our everyday behaviour. Justify this statement with the help of an example.

Q13. Harish a Passport issuing officer is known as a corrupt and greedy government employee. He treats people according to his/her capacity to pay him bribe to get their work done. When there is some external pressure, he surprisingly works honestly. Explain how consistency in behaviour, thought and emotion of an individual across situations and across time periods characterises her/his personality.

Q14. Explain the Pass model of intelligence with the help of an example?

Q15. Explain the self-report measures that are used to assess personality in detail?

Practical Work: Development of case profile: Using appropriate methods like interview, observation & psychological tests.

PHYSICAL EDUCATION (048)

Short Type Answer

Q1. Discuss about the committees that are formed for organizing a tournament smoothly.

Q2. Write a short note on community sports programme:

(a) Sports Day

(b) Run for Specific Cause

Q3. Draw of fixture of 8 teams on league tournament basis of tabular method.

Q4. Differentiate between Knock Knees and Bow Leg.

Long Type Answer

Q6. What is female athlete triad? Explain the symptoms and causes of them

Q7. What do you mean by 'Menarche' and 'Menstrual Dysfunction'.

PRACTICAL FILE WORK

PRACTICAL 1- Fitness Tests Administration. (SAI Khelo India Test)

PRACTICAL 2- anyone one IOA recognized sport/game of choice. Labelled diagram of field and equipment. also mention its rules, terminologies and skills.

SUBJECT: BUSINESS STUDIES (054)

LEARN AND WRITE ALL QUESTIONS IN ASSIGNMENT NOTEBOOK.

- Q 1 The technique of Scientific Management given by Taylor, which aims to establish interchangeability of manufactured parts and products is
- A (a) Method Study (b) Motion study
(c) Standardization (d) Differential Piece wage system.
- B Excel Publishers, a book publishing house published books on various subjects based on new CBSE question pattern before any other publishing house could print it. The importance of business environment mentioned here is:
(a) First mover advantage (b) Early warning signal
(c) Tapping useful resources (d) coping with rapid changes
- C The plans of ABC Ltd. failed as there was no Coordination between the Production, Marketing, Finance & HR Manager.
Assertion : The success of management depends on Coordination. Reason : Management is a group activity & there is a need to harmonize the efforts of all.
A. Both A & R are correct B. Both A & R are wrong
C. Only A is correct & R is incorrect D. Only R is correct & A is incorrect.
- D "Successful people do not do different things, but they do things differently" similarly successful companies do their business differently.

Assertion: Instead of doing the things as are being done traditionally, applying logic & scientific enquiry, organizations can become successful.

Reason: Logical decisions tend to produce better results.

A. A is correct but R is false

B. R is correct but A is false

C. Both A & R are correct

D. A is correct & R is the Justification of A

- Q 2 Sanjana is the branch manager of ABC Handicrafts Pvt. The company's objective is to promote the sales of Indian handloom and handicraft products. It sells fabrics, furnishings, ready-mades and household items made out of traditional Indian fabrics. Sanjana decides quantities, variety, colour and texture of all the above items and then allocates resources for their purchase from different suppliers. She appoints a team of designers and crafts people in the company, who developed some prints for bed covers in bright colour on silk. Although they looked very impressive, they were more expensive than they had planned to sell. Average customer could not afford to buy it. Praising their effort, Sanjana suggested that they should keep the silk bed covers for special occasions like Diwali and Christmas and offer the cotton bed covers on a regular basis to keep costs under control.

Identify the functions of management which Sanjana performs by quoting the lines from the above para.

Q3 Kushal Ltd. Is a leading automobile company in which the various departments are setting up their own objectives without paying any interest to the organizational objectives.

Which aspect of management the company is lacking? What will be its impact on the organization?

2.State the essence of the identified concept in management.

Q 4 Directors of Bhuvan Ltd. assigned the task of implementing the plans and policies framed by the board to all the departmental heads.

Departmental head appointed supervisors, superintendents, executives, etc. so that work can be assigned to workers as per the plan supervisors kept a check on workers as per the plan.

Enumerate and explain the feature of management highlighted in above para.

Define any two importance of Management.

Q 5 Kapil Sharma is working as the Country Head of a company which owns a chain of malls under the name of 'Virtuoso' in the various parts of India. Through an analysis report of the business environment, it has been brought to his notice that in the coming years, shopping at a mall will not be a necessity for the buyers as purchases can be made online from anywhere and at any time with ease and at the consumer's convenience. Hence, malls will have to provide much more than shopping to be able to attract customers. So, he recommends that 'Virtuoso' malls should to be restructured into recreation centres, offering more spaces to socialize, host events and concerts, and provide ample Food and Beverages options. Consequently the share of entertainment segment and Beverages segment in the overall mall space is increased by 20%. As a result, the company gains enormously by getting the first mover advantage. In context of the above case:

A Define the term 'Business Environment'.

B Explain the terms 'Threats' and 'Opportunities' by quoting lines from the paragraph.

Q 6 Sooraj works as a salesman in a company selling pet accessories and food. He has been given a target of selling 1200 units of the food packets in a month by offering a maximum of 10% discount to his customers. In order to meet his monthly sales target, on the last two days of the months, he offers 15% discount to his customers.

In the context of the above case:

Is Sooraj effective in his work? Explain by giving a suitable reason in support of your answer.

PREPARE A PROJECT AS PER CBSE NORMS.