Maximum Marks : 20

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A. Read the extract given below and answer the questions that follow.

[1x2=2]

1. *For once on the face of the Earth*
   let's not speak in any language,
   let's stop for one second,
   and not move our arms so much

   a. Which two activities does the poet want us to stop?
   b. What does the poet mean by 'let's not speak in any language'?

B. Answer the following questions in 30-40 words each.   [2x5=10]
2. Why did Franz not want to go to school that day?
3. Why has the mother been compared to the 'late winter's moon'?
4. Why can't the bangle makers of Firozabad organize themselves into a co-operative?
5. What did the psychiatrist think about Charley's stamp collection? Why did Charley not agree with him?
6. What sadness is the poet referring to in the poem 'Keeping Quiet'?

C. Answer the following question in 120-150 words.   [5]
7. What changes did the order from Berlin cause in the school that day?

D. Writing Skill   [3]
8. Design a poster creating awareness about cyber safety.[50 words]

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Maximum Marks : 20

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1. Find the value of (x+y) from the following equation
$$2\begin{bmatrix} 1 & 3 \\ 0 & x \end{bmatrix} + \begin{bmatrix} y & 0 \\ 1 & 2 \end{bmatrix} = \begin{bmatrix} 5 & 6 \\ 1 & 8 \end{bmatrix}$$

2. If $A = \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$, show that $A^2 - 5A + 7I = 0$

3. Give an example of two matrices A and B such that
$$A \neq 0, B \neq 0, AB = 0 \text{ and } BA \neq 0$$

4. Using elementary row transformations find the inverse of the
following matrix: $\begin{bmatrix} 1 & 2 \\ 3 & 7 \end{bmatrix}$

5. If A is a 3× 3 matrix such that $|A| \neq 0$ and $|3A| = k|A|$ then write
the value of k.

6. Let R= $\{(a, a^3)$: a is a prime number less than 5$\}$. Find the range of
R.

7. Show that the function f:R➔ R, f(x)= $1+x^2$ is many one into.

8. Let S be the set of all real numbers and let R be a relation in S,
defined by R= $\{(a,b):a \leq b^2\}$. Show that R satisfies none of
reflexivity, symmetry and transitivity.

9. Let A=R−{3} and B=R−{1} . Let f: A➔B , f(x)=$\frac{x-2}{x-3}$ for all values
of x∈ A. Show that f is one-one and onto.

10. Find the domain and range of the real function, defined by
$$f(x) = \frac{1}{1 - x^2}$$

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Maximum Marks : 20

Answer the following questions:

1. Solve the system of simultaneous linear equations by elimination method:
$$\frac{x}{a} + \frac{y}{b} = 2$$
$$ax - by = a^2 - b^2$$

2. The sum of the digits of a two digits number is 9. If 27 is added to the number, the digits of the number get reversed. Find the number.

3. Solve by elimination method:
$$x - y + z = 4$$
$$3x + 4y - 5z = -5$$
$$2x - y + 3z = 12$$

4. In a • ABC, angle B is 50° less than 4 times the angle A. The angle C is 40° less than the angle A. Find the angles of the $\triangle$ABC.

5. Construct a 2x3 matrix A=[a_{ij}] whose elements $a_{ij} = \frac{1}{3}|-3i + j|$.

6. Find a matrix P such that $3A - 2B + P = O$, where
$$A = \begin{bmatrix} 4 & 2 \\ 1 & 3 \end{bmatrix}, \quad B = \begin{bmatrix} -2 & 1 \\ 3 & 2 \end{bmatrix}.$$

7. If $x\begin{bmatrix} 2 \\ 3 \end{bmatrix} + y\begin{bmatrix} -1 \\ 1 \end{bmatrix} = \begin{bmatrix} 10 \\ 5 \end{bmatrix}$, find the values of x and y.

8. Show by an example that matrix multiplication is non- commutative.

9. If A is a square matrix such that $A^2 = I$, then find the simplified value of $(A - I)^3 + (A + I)^3 - 7A$.

10. If $\begin{vmatrix} x - 2 & -3 \\ 3x & 2x \end{vmatrix} = 3$, find the integral values of x.

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Maximum Marks:20

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1. Plot the variation of electric field verses distance for :
   (i) a positive point charge.
   (ii) a negative point charge   2

2. Two identical balls each having a density •, are suspended from a common point by two insulating strings of equal length. Bothe the balls have equal mass and charge. In equilibrium each strings makes an angle • with the vertical. Now both the balls are immersed in liquid of density •. Find the dielectric constant of the liquid.   2

3. A thin fixed ring of radius a has a positive charge q uniformly distributed over it. A particle of mass m, having a negative charge Q, is placed on the axis at a distance of x (x<<a) from the center of the ring. Show that the motion of the negatively charged particle is almost simple harmonic. Calculate the time period of oscillation.   2

4. A system consist of a thin charged wire ring of radius R and a very long uniformly charged thread oriented along the axis of the ring, with one of its end coinciding with the center of the ring. The total charge of the ring is equal to q. The charge of the thread (per unit length) is equal to •. Find the interaction force between the ring and the thread.   2

5. Charges +q and -2q are fixed at a distance d apart.
   (a) Sketch roughly the pattern of electric field lines showing the position of neutral points.
   (b) Where a charge particle q should be placed so that it experiences no force?   2

6. Five point charges each of +q are placed on five vertices of a regular hexagon of length L. Find the magnitude of force on a point charge of –q placed at the center of the hexagon.   2

7. Derive the expression of electric field due to a ring shaped conductor of radius "a" carrying a total charge "q" uniformly distributed around it at a distance of "x" from its center. Also plot the graph of electric field verses x.   3

8. A uniform electric field E exists between two metal plates, one negative and other positive. The plate length is l and the separation between the plates is d.

(a) An electron and a proton start from the negative plate and positive plate, respectively, and go to opposite plates. Which one of them wins this race?

(b) An electron and a proton start moving parallel to the plates towards the other end from the midpoint of the separation of plates at one end of the plates. Which of the two will have greater deviation when they come out of the plates if they start with
(a) same initial velocity
(b) same initial K.E.
(c) same initial momentum   5

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Maximum Marks : 20

1. Assertion: No compound has both schottky and frenkel defects.
Reason: Both defects change the density of the solid.

2. X- ray diffraction shows that unique length of NaCl is 0.5627nm. The density of NaCl is 2.164 gram per centimetrecube.What type of defect exists in the crystal ? Calculate the percentage of Na^+ and Cl^- ions missing.

3. What is meant by the term 'Pseudo solid' ?

OR

What is meant by semiconductor?

4. What type of stoichiometric defect is shown by ZnS?

5. Copper crystallizes with fcc unit cell. If the radius of the copper atom is 127.8pm, calculate the density of copper metal. (Atomic mass of Cu- 63.5u and Avogadro's number, $N_A = 6.02 \times 10^{23}$ mol^{-1})

6.What type of substances would make better permanent magnets: ferro or ferromagnetic substances?

7. The metal crystallizes in fcc unit cell with edge length 500 nm. Calculate the density of the metal, if it contains 5% Frenkel defect and 25% schottky defect At. Mass of Ca-40 g/mol.

8.A sample of ferrous oxide has actual formula $Fe_{0.93}O_{1.00}$. In this sample what fraction of metal ions are Fe^{2+} ions ? What type of nonstoichiometric defect is present in this sample ?

9.What is forbidden zone?

10.Vinegar is used as preservative but now a days it is used as food item indifferent restaurants, in small amount it is not harmful but controlled use is required. In the Long run it may cause many diseases. Mr. Henry always buy fish and meat from market and usually wash it using vinegar which is not expected, because after using vinegar if it is not washed properly then it may harm our health.

a) What are the different types of vinegars sources?

b) Why it is harmful for our body?

c) Why raw meat or fish are washed with vinegar?

d) How it can be removed from fish and meat?

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BURNPUR RIVERSIDE SCHOOL
ASSIGNMENT – I [2021-2022]
BIOLOGY
Class – XII

Maximum Marks : 20

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1. Higher organisms have resorted sexual reproduction in spite of its complexity.Why?
(1)

2. Why is apple called a false fruit? Which part(s) of the flower forms thefruit?
(1)

3. Mention the function of sperm tail andacrosome.
(1)

4. Why is sex education necessary in schools?
(1)

5. Differentiate between homozygous andheterozygous.
(1)

6. What is vegetative propagation ? Give two examples.
(2)

7. What is triple fusion? Where and how does it take place.
(2)

8. Write two major functions each of testis and ovary.
(2)

9. What are the measures one has to take to prevent from STDs?
(2)

10. How is sex determined in human beings?
(2)

11. Briefly mention the contribution of T.H. Morgan in genetics.
(5)

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Maximum Marks : 20

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1   Name the account which shows the classified summary of transactions of a Cash   1
Book in a not-for-profit organization.

(a) Receipts and Payments A/c (b) Income and Expenditure A/c   (c) Balance Sheet
(d) none of these

2   In the absence of partnership deed, the allowable rate of interest on partner's loan   1
account will be
(a) 6% Simple Interest (b) 6% pa Simple Interest   (c) 12% Simple Interest (d) 12%
Compounded annually.

3   In which account the excess of income over expenditure is added in case of a not-for-   1
profit organization. (a) Receipts and Payments A/c (b) Income and Expenditure A/c
(c) Balance Sheet (d) Capital Fund

4   Salary paid by Royal Club for the year ended 31.03.2020 amounted Rs2,50,000. How   1
much amount will be recorded in the Income and Expenditure A/c in the following
case:

	01.04.2018 (Rs.)	31.03.2019 (Rs.)
Outstanding Salary	5,000	4,000
Prepaid Salary	7,000	10,000

(a) Rs. 2,52,000(b) Rs.2,48,000(c) Rs. 2,46,000 (d) none of these

5   If the Partners' Capital A/c are fixed 'salary payable to partners' will be recorded: 1
(a) On the debit side of Partners' Current A/c
(b) On the debit side of Partners' Capital A/c
(c) On the credit side of Partners' Current A/c
(d) none of these

6 How much amount will be shown in Income and Expenditure A/c in the following case: 1

Rs.
Stock of Stationery on 01.04.2020   4,000
Stock of Stationery on 31.03.2021   14,000
Creditors for Stationery on 01.04.2020   6,000
Creditors for Stationery on 31.03.2021   8,000
Amount paid for stationery purchased during 2020-21   1,30,000
(a) Rs.1,42,000 (b) Rs.1,22,000(c) Rs.1,18,000 (d) none of these

7 R and S are partners in the ratio of 2:3. Before profit distribution, R is entitled to 5% 1
commission of the net profit (after charging such commission). Before charging such
commission, firm's profit was Rs.84,000. S's share of profit will be:
(a) Rs.48,000   (b) Rs.47,880   (c)Rs.47,500(d) none of these

8 Darjeeling Sports Club had received in 2020-21 Rs.70,000 as subscription. Show 3
Subscription A/c for calculating what amount will be credited to Income and
Expenditure A/c for the year ending 31.03.2021 from the following information.
(a)Subscription received in advance on 1.4.2020   Rs. 2,500
(b) Subscription due but not received on 1.4.2020   Rs. 5,000
(c) Subscription due but not received on 31.3.2021   Rs. 4,000
(d) Subscription received in advance on 31.3.2021   Rs. 7,000

9 A and B entered into partnership on 1.4.2020, contributing Rs.5,00,000 and 4
Rs.2,00,000 respectively. B also introduced Rs.1,00,000 as additional capital on
1.7.2020. They agreed to share profits and losses in the ratio 3:2. Following
information is provided regarding the partnership: (a) A and B each are allowed a
salary of Rs.5,000 per quarter. (b) Interest is to be allowed on capitals @8% pa and
charged on drawings at 10%pa.
Drawings of A and B during the year were Rs.12,000 and Rs.10,000 respectively.
Profit as at 31.03.2021 before the above mentioned adjustments was Rs. 1,96,000.

Pass necessary journal entries relating to appropriation of profits.

10 Following is the Receipts and Payments A/c of Mahi Club, Asansol for the year 6
ending 31.03.2021.

Receipts		Payments	
To Balance b/d	2,300	By Match Expenses	6,800
To Subscriptions	56,400	By Rent	9,600
To Interest	300	By Salaries	24,000
To Donations	6,000	By Sundry Expenses	3,600
To Donations for Building Fund	50,000	By Investment Purchased	30,000
To Match Fund	10,000	By Newspapers	750
To Miscellaneous Receipts	430	By Sports Equipment	32,000
To Sale of Grass	100	By Balance c/d	18,780
	1,25,530		1,25,530

Subscription outstanding on 1.4.2020 were Rs. 4,000 and on 31.03.2021 were Rs.6,000. Salaries outstanding on 1.4.2020 and on 31.03.2021 were Rs.2,000 and Rs. 2,500 respectively. On 1.4.2020 the club had investments worth Rs.12,000; furniture Rs.10,000 and sports equipment valued Rs.20,000.

Prepare Income and Expenditure A/c for the year ended 31.03.2021and a Balance Sheet as at that date after depreciating furniture by 20% and Sports equipment by 25%.

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BURNPUR RIVERSIDE SCHOOL
ASSIGNMENT – I [2021-2022]
BUSINESS STUDIES
Class – XII

Maximum Marks : 20

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1 S. Ltd.'s target production is 1,00,000 units in a year at Rs.100 per unit. To achieve this target Mr X, the manager has to operate on double shifts due to power failure most of the time. X is able to produce 1,00,000 units but at Rs.110 per unit. How will you describe the role of Mr. X?   **1**
(a) Effective (b) Efficient (c) Efficient but not effective(d) Effective but not efficient.

2 Which of the following is not a function of management?   **1**
   (a) Staffing (b) Controlling (c) Cooperating (d) Planning

3 Harmony, not discord principle is concerned with _____   **1**
(a) Investigation of task (b) Scientific enquiry   (c) Observation and analysis (d) Management should share the gains of company with workers

4 "In an organization employees are happy and satisfied, there is no chaos and effect of management is noticeable". Which characteristics of management is highlighted by this statement?   **1**
(a) Management is intangible (b) Management is pervasive (c) Management is continuous(d) Management is dynamic

5 S, the General Manager of D Equipment, performs the managerial functions of planning, organizing, staffing, directing and controlling as an ongoing process. Which characteristics of management is highlighted here?   **1**
(a) Group activity   (b) Dynamic Function   (c)   Continuous process(d) Multidimensional

6 Unity of Direction is concerned with   **1**
(a) One head different plans (b) One head and one plan (c) Planning by employees(d) Planning by production manager.

7 It is a force that binds all the functions of management.   **1**
(a) Planning (b) Co-operation (c) Co-ordination(d) Management hierarchy

8 Father of Mr. Jain acts as Vice-President in L.Ltd. Name the level of management, he is working. Mention any two functions ofperformed by him.   **3**

9 Explain any four characteristics of co-ordination.   **4**

10 Explain any six points which highlight the importance of principles of management.   **6**

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BURNPUR RIVERSIDE SCHOOL
ASSIGNMENT – I [2021-2022]
ECONOMICS
Class – XII

Maximum Marks : 20

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Choose the correct option :

1   The Indian economy on the eve of independence was :   1

(a) developed (b) Under-developed (c) Stagnant (d) both (b) and (c)

2   Land holdings at the time of independence were: (a) Fragmented (b) large (c) small   1
(d) both (a) and (c)

3   In which year was India's first five-year plan launched?   1
     (a) 1951 (b) 1947 (c) 1940 d) 1955

4   Which was the last five-year plan in India?   1
(a) 11th (b) 12th (c) 13th (d) 14th

5   Explain the term modernization in Indian planning.   3

6   What do you know about drain of wealth during British rule in India?   3

7   What do you know about occupational structure during British period?   4

8   Explain any two long term goals of Indian planning.   3+3

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BURNPUR RIVERSIDE SCHOOL
ASSIGNMENT – I [2021-2022]
GEOGRAPHY
Class – XII

Maximum Marks : 20

Answer the following questions

1.	Who introduced the concept of stop and go determinism?	**1**
2.	Enlist the three components of migration.	**1**
3.	What do mean by growth of population?	**1**
4.	A main worker is a person who works for atleast _____ days (or six months) in a year.	**1**
5.	Explain the term environmental determinism.	**3**
6.	Distinguish between pull and push factor.	**3**
7.	Explain the Demographic Transition theory.	**3**
8.	How do adolescents contribute to the population growth in India?	**3**
9.	What is "Naturalisation of humans"?Explain with examples.	**5**
10.	Give an account of the factors which influence the distribution of population.	**5**
11.	Explain the consequences of migration.	**5**
12	Give an account of the occupational structure of India's population.	**5**

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Maximum Marks : 20

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1. Define the following-   2
    (a)Tokens
    (b)Keyword

2. Find the output-   2
    (a)math.fabs(1.0)
    (b)math.floor(1.03)

3. Differentiate between – break and continue   2

4. Write the type of tokens from the following-   2
    (a)   if
    (b)   roll_no

5. Write True or False-   2
    (a)   Dictionaries are mutable.
    (b)   Lists are mutable sequences of Python.

6. Write short notes on the following string manipulation methods–   2
    (a)   <str>.capitalize()
    (b)   <str>.isalnum()

7. Can tuples be nested?   2

8. Write a program to check whether a number is Positive, Negative or   2
    Zero?

9. Write a program to check whether a number is odd or even?   2

10 Write a program to print the following series-   2
    1, 8, 27 ……..upto n term.

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Maximum Marks: 20

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10X2=20

1.   Mention any two properties of a Database.

2.   Differentiate between Data Redundancy and Data Inconsistency.

3.   Mention any two characteristics of Database Management Systems.

4.   Write any four examples of DBMS.

5.   Describe Meta-data.

6.   Mention the four types of Users of DBMS.

7.   Mention the two limitations of using DBMS Approach.

8.   Differentiate between Degree and Cardinality of a relation.

9.   What do you understand by 'Primary Key' and 'Candidate Key'?

10. Write SQL commands to create a STUDENT table with the following fields:
    S_ADM_NO, S_ROLL_NO, S_NAME, S_ADDRESS.

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1	How many byes will be given in the Knockout tournament when 13 teams are participating? (a) 3 (b) 6 (c) 8 (d) 1	1
2.	Round Robin tournament is also known as ……….. (a) Challenge tournament (b) Knock out tournament (c) League tournament (d) None of the these	1
3.	What is the elimination in the tournament? (a) League cum Knockout (b) Combination tournament (c) Knock out tournament (d) ladder tournament	1
4.	The total number of matches in a knock out tournament of 34 teams are (a) 31 (b) 32 (c) 33 (d) 35	1
5.	What is Bye? (a) It is a method of drawing fixture (b) Point system for teams games (c) Advantage given to a team not to play in initial round (d) Placing of teams according to previous performance.	1
6.	Given below are the two statements labeled as Assertion (A) and Reason (R). In the context of given two statements, which one of the following is correct? (a) Both (A) and (R) are true and (R) is the correct explanation of (A). (b) Both (A) and (R) are true, but (R) is not the correct explanation of (A). (c) (A) is true, but (R) is false (d) (A) is false, but (R) is true. 1. Assertion (A): The sports planning is only limited to sports training and not to functioning of sports federation and other agencies. Reason (R): Planning done in respect of sports training is termed as sports planning.	3

7. Match List – I with –II and select the correct from the code given below: 　3

LIST I	LIST II
i. Planning	1. Provision of first aid major responsibility
ii. Fixture	2. Elimination tournament
iii. Medical Committee	3. Carries information of all matches including date, time and venue
iv. Knock out tournament	Removes confusion and stress
Code: 　　(i) (ii) (iii) (iv) (a) 4 　3 　1 　　2 (b) 2 　1 　4 　　3 (c) 4 　1 　3 　　2 (d) 3 　2 　4 　　1	

8. Define planning in your own words. 　3

9. Write any three advantage and disadvantage each of knock out tournament. 　3

10. Draw a knock out fixture for 25 teams with all steps involved. 　5

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