

**NORTH-EX PUBLIC SCHOOL**  
**(Senior Secondary, Affiliated To CBSE)**  
**School Block, Jain Nagar, Sector-38, Rohini, Delhi 81**  
**PERIODIC-I EXAM (2023-24)**  
**SUBJECT –Economics**  
**CLASS – XII**

**TIME: 1 HOUR 20 min**

**M.M.:40 marks**

**General Instructions:**

- (i) The question paper comprises four sections A, B,C and D. There are 28 questions in the question paper. All questions are compulsory.
- (ii) Section–A - question no. 1 to 20 carries 0.5 mark each.
- (iii) Section–B - question no. 21&22 carries 3 marks each.
- (iv) Section–C - question no. 23&25 carries 4 marks each.
- (v) section-D – question no . 26 & 27 carries 6 marks each

**Section-A.**

- Q1 Aggregate demand is not.....a variable
- Q2 Monetary and fiscal policy of the government are a part of microeconomics true or false
- Q3 When a quantity measured per unit of time. Is known as:
- Q4 Give one example of flow variable
- Q5 The difference between national income and domestic income is equal to
- Q6 When nominal GDP is ₹840 crore and price indexes 120 then real GDP will be
- Q7 Operating surplus equals to
- Q8 Give one example of transfer payment
- Q9 Remittances from a relative working abroad consider as:
- Q10 Real national income means:
- Q11 When was India's first official census operation undertaken?
- Q12 Which year is known as the year of great divide in India.
- Q13 When was Planning Commission established?
- Q14 Planning Commission was established under the chairmanship of:
- Q15 Which was the last five year plan in India?
- Q16 What is another name of land reforms?
- Q17 Investment limit for small scale industry is
- Q18 Industrial policy resolution 1956 laid emphasis on the role of.....
- Q19 Suez canal was open for transport in which year
- Q20 Which industry was demolished under the British rule?

**Section-B**

- Q21 State three main features of Indian economy at the time of independence.
- Q22 Distinguish between equal and equitable distribution of income.

**Section-C**

- Q23. Read the following case study carefully and answer the questions on the basis of the same:

British interests were of several kinds. At first the main purpose was to achieve a monopolistic trading position. Later it was felt that a regime of free trade would make India a major market for British goods and a source of raw materials, but British capitalists who invested in India, or who sold banking or shipping service there, continued effectively to enjoy monopolistic privileges. India also provided interesting and lucrative employment for a sizeable portion of the British upper middle class, and the remittances they sent home made an appreciable contribution to Britain's balance of **payments and** capacity to save. Finally, control of India was a key element in the world power structure, in terms of geography, logistics and military manpower. The British were not averse to Indian economic development if it increased their markets but refused to help in areas where they felt there was conflict with their own economic interests or political security. Hence, they refused to give protection to the Indian textile industry until its main competitor became Japan rather than Manchester, and they did almost nothing to further technical education. They introduced some British concept of property, but did not push them to far when they met western interest.

- British introduced the **policy** which led to destruction of Indian.....
- India trade toward British increase due to opening of ..... canal.
- British introduce..... with an objective to expand their market in India.
- Name two notable economist who estimated India's per capita income during the colonial period.

Q24 Giving reasons, classify the following into intermediate goods and final goods:

- Machine purchased by a dealer.
- A car purchased by a household.
- Cloth used for making a sofa-set by the carpenter.

Q25 Explain three different phases in circular flow of national income.

#### Section-D

Q26 From the following data, calculate national income by (a) income method and b) expenditure method

Items

- Private final consumption expenditure-2000
- Net capital formation-400
- Change in stock-50
- Compensation of employees-1900
- Rent-200
- Interest-150**
- Operating surplus-720
- Not in direct taxes-400
- Employers contribution to Social Security schemes-100
- Net export-20
- Net factor income to abroad(-)20
- government final consumption expenditure-600
- Consumption of fixed capital-100**

Q27 Real GDP is better indicator for economic growth than nominal GDP. Do you agree with the given statement. support your answer with a suitable numerical example.

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**PERIODIC TEST- I, 2023-2024**  
**SUBJECT: ENGLISH CORE**  
**CLASS: XII**

Time: 1 hour 20 mins

M.M: 40

**General Instructions:**

1. The Question Paper contains THREE sections READING, GRAMMAR & WRITING and
2. LITERATURE.
3. Attempt all questions based on specific instructions for each part.

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**Section A**  
**(Reading)**

**I. Read the passage given below and answer the questions that follow:**

**(5)**

1. While there is no denying that the world loves a winner, it is important that you recognize the signs, of stress in your behaviour and be healthy enough to enjoy your success. Stress can strike anytime, in a fashion that may leave you unaware of its presence in your life. While a certain amount of pressure is necessary for performance, it is important to be able to recognize your individual limit. For instance, there are some individuals who accept competition in a healthy fashion. There are others who collapse into weeping wrecks before an exam or on comparing marks sheets and finding that their friend has scored better.
2. Stress is a body reaction to any demands or changes in its internal and external environment. Whenever there is a change in the external environment such as temperature, pollutants, humidity and working conditions, it leads to stress. In these days of competition when a person makes up his mind to surpass what has been achieved by others, leading to an imbalance between demands and resources, it causes psychosocial stress. It is a part and parcel of everyday life.
3. Such signs appear in the attitude and behaviour of the individual, as muscle tension in various parts of the body, palpitation and high blood pressure, indigestion and hyperacidity. Ultimately the result is self-destructive behaviour such as eating and drinking too much, smoking excessively, relying on tranquilisers. There are other signs of stress such as trembling, shaking, nervous blinking, dryness of throat and mouth and difficulty in swallowing.
4. The heart disease and depression both stress diseases are going to rank first and second in 2020. Road traffic accidents are going to be the third-largest killers. These accidents are also an indicator of psychosocial stress in a fast-moving society. Other stress diseases like ulcers, hypertension and sleeplessness have assumed epidemic proportions in modern societies.
5. When stress crosses the limit, peculiar to an individual, it lowers his performance capacity. Frequent crossings of the limit may result in chronic fatigue in which a person feels lethargic, disinterested and is not easily motivated to achieve anything. This may make the person mentally undecided, confused and accident-prone as well. Sudden exposure of unnerving stress may also result in a loss of memory. Diet, massage, food supplements, herbal medicines, hobbies, relaxation techniques and dance movements are excellent stress busters.

(i) What is stress? What factors lead to stress?

- Y-1
- (ii) What are the signs by which a person can know that he is under stress?
  - (iii) What are the different diseases a person gets due to stress?
  - (iv) Give any two examples of stress busters.
  - (v) Which words in the above passage mean the same as 'inactive' (para 9).

**Section B  
(Writing)**

II. As the Head Boy / Head Girl of your school, you are organising a Career Counselling Session for XI and XII std. Students of your school. Write a notice giving details of it to be displayed on your school notice board. (Word limit 50) (5)

III. 'Grow more trees to reduce pollution.' Write an article in 150-200 words on the topic given above for your school magazine. (5)

**Section C  
(Literature)**

IV. Read the stanzas given below and answer the questions that follow: (4)

'...but after the airport's  
Security check, standing a few yards  
Away, I looked again at her, wan, pale  
As a late winter's moon...'

**Questions:**

- a. Who is 'I' and why is she at the airport?
- b. Who does 'her' refer to? How did she look?
- c. Why does the poet 'look at her again'?
- d. Explain 'wan, pale as a late winter's moon'?

V. Read the extract and answer the question: (4)

"My children this is the last lesson I shall give you. The order came from Berlin to teach only German in the schools of Alsace and Lorraine. The new master comes tomorrow. This is your last French lesson."

- a. Who is the speaker in the above lines?
- b. Where has the order come from?
- c. In which language is the last lesson?
- d. Speaker is speaking to \_\_\_\_\_.

(4 x 3 = 12)

VI. Answer the questions in 30 – 40 words.

- a. How did Franz's feelings about M. Hamel and school change?
- b. What is Saheb looking for in the garbage dumps? Where is he and where has he come from?
- c. How is Mukesh different from the other bangle makers of Firozabad?
- d. Franz thinks, "Will they make them sing in German, even the pigeons?" What could this mean?

(5)

VII. Answer any one of the following:

- a. What curious experience did Charlie have one day when he went to Grand Central to take the subway?
- b. What did the Maharaja do to find the required number of tigers to kill?

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**PERIODIC TEST - 1 (2023-2024)**  
**SUBJECT- MATHEMATICS**  
**CLASS- XII**

Time : 80 min.

M.M : 40

**General Instructions:**

1. This Question Paper has 5 Sections A-E.
  2. Section **A** has 15 objective type Ques out of which 10 Ques are of  $1/2$  mark each and 5 Ques are of 1mark each.
  3. Section **B** has 4 questions carrying 02 marks each.
  4. Section **C** has 4 questions carrying 03 marks each.
  5. Section **D** has 1 question carrying 4 marks.
  6. Section **E** has 2 case based integrated units of assessment (03 marks each).
- All Questions are compulsory. However, an internal choice has been provided.

**SECTION-A (10x  $\frac{1}{2}$  =5)**

1. Find the total no. Of possible matrices of order  $2 \times 2$  with each entry 2 or 0 ?  $2^4$
2. Write the principle value branch of  $\sec^{-1}$  function.
3.  $(AB)^{-1}$  will be equal to?
4. When will matrix A is said to be singular?
5. When will a relation is called equivalence relation?
6. If A is a square matrix of order 3 such that  $|A| = 6$ , Find  $|2A|$ .
7. What is the value of  $\tan^{-1}(1)$ ?
8. Define scalar matrix.
9. Find the value of  $\sin(\sin^{-1} a + \cos^{-1} a)$ .
10. If the matrix A is both symmetric and skew symmetric, then A will be?
11. Find the value of  $\cos^{-1}(\cos(\frac{13\pi}{6}))$ .
12. A be a non singular matrix of order  $3 \times 3$ , then  $|adj A|$  is equal to?
13. Find the value of  $x - y$ , if  $2 \begin{bmatrix} 1 & 3 \\ 0 & x \end{bmatrix} + \begin{bmatrix} y & 0 \\ 1 & 2 \end{bmatrix} = \begin{bmatrix} 5 & 6 \\ 1 & 8 \end{bmatrix}$ .
14. Construct a  $2 \times 2$  matrix  $A = [a_{ij}]$  whose elements are given by  $a_{ij} = i/j$ .
15. For a given set  $A = \{1,2,3\}$ , write a relation which is reflexive and symmetric.

(5x 1 =5)

**SECTION - B (4 x 2 = 8)**

16. Find the value of  $\tan^{-1}[2 \cos(2 \sin^{-1}(\frac{1}{2}))]$ .
17. Check whether the function  $f:R \rightarrow R$  defined by  $f(x) = 3x$  is one- one and onto.
18. Check whether the relation in the set  $\{1,2,3,4\}$  given by  $R = \{(1,2), (2,2), (1,1), (4,4), (1,3), (3,3), (3,2)\}$  is reflexive, symmetric and transitive.
19. If  $A^2 = A$ , then find  $(I + A)^2 - 3A$ .

**SECTION - C (4 x 3 = 12)**

20. Find the value of  $x, y, z$  if the matrix  $A = \begin{bmatrix} 0 & 2y & z \\ x & y & -z \\ x & -y & z \end{bmatrix}$  satisfy the equation  $A'A = I_3$ .

21. Express of the matrix  $\begin{bmatrix} 2 & 0 & -1 \\ 5 & 1 & 0 \\ 0 & 1 & 3 \end{bmatrix}$  as a sum of symmetric and skew symmetric matrix.

22. Determine whether the given relation  $R = \{ (x, y) : x-y \text{ is an integer} \}$  is reflexive, symmetric and transitive.

OR

Show that the signum function  $f : \mathbb{R} \rightarrow \mathbb{R}$ , given by  $f(x) = \begin{cases} 1, & \text{if } x > 0 \\ 0, & \text{if } x = 0 \\ -1, & \text{if } x < 0 \end{cases}$  is neither one one nor onto.

23. Show that  $\cos^{-1}(4/5) + \cos^{-1}(12/13) = \cos^{-1}(33/65)$ .

**SECTION - D (1 x 4 = 4)**

24. Prove that  $\cot^{-1} \left( \frac{\sqrt{1+\sin x} + \sqrt{1-\sin x}}{\sqrt{1+\sin x} - \sqrt{1-\sin x}} \right) = \frac{x}{2}$ .

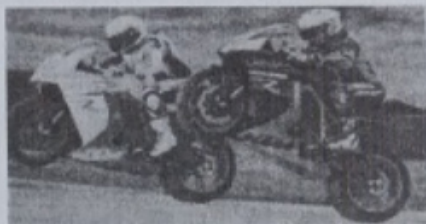
OR

Solve the given system of linear equation, using matrix method

$$x - y + z = 4, \quad 2x + y - 3z = 0, \quad x + y + z = 2.$$

**SECTION - E (2 x 3 = 6)**

25. An organisation conducted bike race under 2 different categories –boys and girls. Totally there were 250 participants. Among all of them finally three from category 1 and 2 from category 2 were selected for the final race. Ravi forms two sets B and G with these participants for this college project Let  $B = \{ b_1, b_2, b_3 \}$  and  $G = \{ g_1, g_2 \}$ , where B =boys and G =girls. Ravi decides to explore these sets for various types of relations and functions. Answer the following questions.



- Ravi wishes to form all the relations possible from B to G. How many such relations are possible?
- Ravi wants to know how many functions can be formed from B to G?
- Ravi wants to find the number of injective functions from B to G. How many numbers of injective functions are possible?

26. A farmer has a field in the shape of quadrilateral where he grows crops in the shape of triangle. For this, he needs to measure the area of field whose vertices are  $(x,y)$ ,  $(x_2,y_2)$ ,  $(x_1,y_1)$  is given by a determinant. Since area is a positive quantity, so we always take the absolute value of the determinant. Answer the following questions:



- Find the area of the triangle whose vertices are  $(-1,2)$ ,  $(2,3)$  and  $(6,1)$ .
- If the points  $(2, -3)$ ,  $(k, -1)$  and  $(0,4)$  are collinear, then find the value of  $k$ .
- If the area of a triangle  $ABC$  with vertices  $A(1,3)$ ,  $B(0,0)$  and  $C(k,0)$  is 3 sq. Units, then find the value of  $k$ ?

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PERIODIC I EXAMINATION, 2023-24  
SUBJECT – PHYSICS  
CLASS - XII

TIME: 80 min

MM: 40

**General Instructions**

- i. The question paper has four sections and 26 questions. All questions are compulsory.
- ii. Section-A has 16 questions of 1/2 marks each; Section-B has 3 questions of 2 marks each; Section-C has 4 questions of 3 marks each; Section-D has 2 questions of 5 marks each and Section-E has a case based question of 4 marks.
- iii. There is no overall choice and all questions are compulsory.

**SECTION- A**

1. What is the unit of electrical permittivity?
2. When is the torque on a dipole in a field maximum?
3. How many times the field becomes when charge of a body becomes halved?
4. How many electrons are present in 1 coulomb of charge?
5. An infinite line charge produces a field of  $18 \times 10^4$  N/C at 0.02 m. Find the linear charge density?
6. What is the electric flux through a cube of side 1 cm which encloses an electric dipole?
7. What is the work done in placing a charge of  $8 \times 10^{-18}$  C on a condenser of capacity 100 $\mu$ F?
8. How many electron volts make up one joule?
9. Draw the lines of force of an electric dipole.
10. Is flux scalar or a vector quantity?
11. A battery does 200 J of work in charging a capacitor. What is the energy stored in the capacitor?
12. What is the amount of work done in moving a charge around a circular arc of radius 'r' at the centre of which another point charge is located?
13. A point charge is lying at the centre of a cube of each side a. Calculate the electric flux emanating from each surface of the cube.
14. Write a relation for polarization **P** of a dielectric material in the presence of an external electric field.
15. Determine the electric field produced by a helium nucleus at a distance of 1 A<sup>o</sup> from it.
16. 100 J of work is done in moving an electric charge of 4C from a place where potential is -10 V to another, where potential is V volt. Find the value of V?

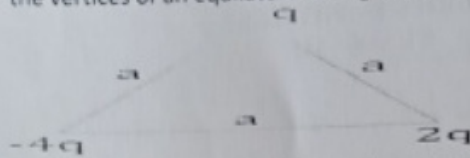
**SECTION- B**

17. Define electric flux. Write its S.I. unit.
18. Two point charges q and -2q are kept 'd' distance apart. Find the location of the point relative to charge 'q' at which potential due to this system of charges is zero.
19. The sum of two point charges is 7 $\mu$  C. They repel each other with a force of 1 N when kept 30 cm apart in free space. Calculate the value of each charge.

**SECTION- C**

20. Derive an expression for the torque experienced by an electric dipole kept in a uniform electric field.

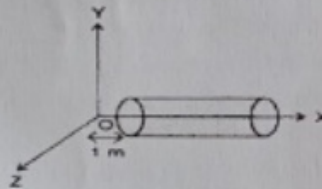
21. Derive the expression for the electric potential at any point along the axial line of an electric dipole.
22. Obtain an expression for the work done to dissociate the system of three charges placed at the vertices of an equilateral triangle of side 'a' as shown below.



23. An electric dipole of length 2 cm, when placed with its axis making an angle of  $60^\circ$  with a uniform electric field, experiences a torque of  $8\sqrt{3}$  Nm. Calculate the potential energy of the dipole, if it has a charge of  $\pm 4$  nC.

#### SECTION- D

24. A hollow cylindrical box of length 1m and area of cross-section  $25 \text{ cm}^2$  is placed in a three dimensional coordinate system as shown in the figure. The electric field in the region is given by  $\mathbf{E} = 50x \mathbf{i}$  where E is in  $\text{NC}^{-1}$  and x is in metres. Find a) Net flux through the cylinder, b) Charge enclosed by the cylinder.



25. Answer the following

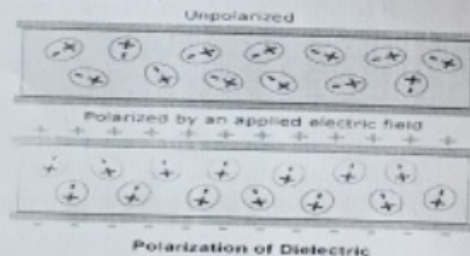
(a) Show mathematically that the electric field intensity due to a short dipole at a distance  $d$  along its axis is twice the intensity at the same distance along the equatorial axis.

(b) Two charges of  $+0.2 \text{ mC}$  and  $-0.2 \text{ mC}$  are  $10^{-6} \text{ cm}$  apart. Calculate the electric field at an axial point at a distance of 10 cm from their mid-point.

#### SECTION- E

This section has 01 case-based questions. It is followed by 04 sub-questions. All sub-questions are compulsory.

26. When an insulator is placed in an external field, the dipoles become aligned. Induced surface charges on the insulator establish a polarization field  $\mathbf{E}_p$  in its interior. The net field  $\mathbf{E}$  in the insulator is the vector sum of  $\mathbf{E}_0$  and  $\mathbf{E}_p$ .



On the application of external electric field, the effect of aligning the electric dipoles in the insulator is called polarisation and the field  $\mathbf{E}_p$  is known as the polarisation field. The dipole moment per unit volume of the dielectric is known as polarisation ( $P$ ).

For linear isotropic dielectrics,  $P = \chi E$ , where  $\chi$  = electrical susceptibility of the medium.

- i. Name any two polar molecules?
- ii. When air is replaced by a dielectric medium of constant  $K$ , calculate the change in attraction between two charges separated by a distance.
- iii. Name any two dielectrics?
- iv. When a comb rubbed with dry hair attracts pieces of paper. Explain this phenomenon.

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**PERIODIC I EXAMINATION, 2023-24**  
**SUBJECT – BIOLOGY**  
**CLASS - XII**

**TIME: 80 min**

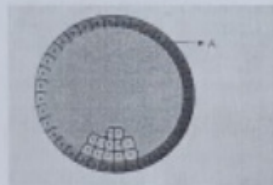
**MM: 40**

**General Instructions**

- i. All questions are compulsory.
- ii. The question paper has four sections and 26 questions. All questions are compulsory.
- iii. Section–A has 16 questions of 1/2 marks each; Section–B has 3 questions of 2 marks each; Section–C has 4 questions of 3 marks each; Section–D has 2 questions of 5 marks each and Section–E has 1 case based questions of 4 marks.
- iv. There is no overall choice and all questions are compulsory.

**SECTION- A**

1. Write the location and function of the sertoli cells in humans.
2. Give one reason to justify statutory ban on amniocentesis.
3. Why is Saheli considered to be an improved form of oral contraceptive for human female?
4. How many microspore mother cells would be required to produce 100 pollen grain in a pollen sac?and why?
5. Which are the three cells found in a pollen grain when it is shed at the three called stage ?
6. A women's husband is infertile.so the lady has decided to have baby by taking sperms from sperm Bankwhich technique will you suggest for her pregnancy?
7. Expand IUD.
8. Name the hormones produced only during pregnancy in a human female.
9. Identify the figure given below and the parts labelled A.



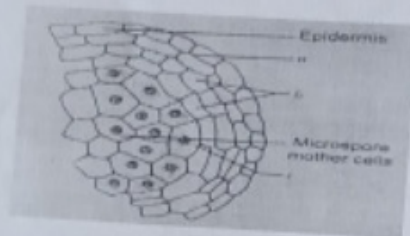
10. Name the embryonic stage that gets implanted in the uterine wall of a human female.
11. Mention the function of trophoblast in human embryo.
12. In a case of polyembryony, if an embryo develops from the synergid and another from the nucellus ,which is haploid and which is diploid?
13. Write the function of scutellum.
14. An another with malfunctioning tapetum often fails to produce viable male gametophytes. Give any one reason.
15. Name the organic material the exine and intine of an angiosperm pollen grains are made up of. Explain the role of exine.
16. A method in which a couple avoids coitus from 10<sup>th</sup> and 17<sup>th</sup> day of menstrual cycle of female is :

**SECTION- B**

17. How do copper and hormone releasing IUDs act as contraceptives? Explain.

18. Describe the endosperm development in coconut.  
 19. Given alongside is an enlarged view of one microsporangium of a mature anther.

- i. Name a, b and c wall layers.
- ii. Mention the characteristic and function of the cells forming wall layer c.



### SECTION- C

20. How are assisted reproductive technologies helpful to humans? How are ZIFT and GIFT different from intra-uterine transfers? Explain.  
 21. Explain the steps in the formation of an ovum from an oogonium in humans.  
 22. Draw a sectional view of human ovary and label the different follicular stages, ovum and corpus luteum.  
 23. Answer the following questions.
- i. Draw a labelled sketch of mature 7 called, 8 nucleate embryo sac.
  - ii. Which one of the cell in an embryo sac produce endosperm after double fertilisation.

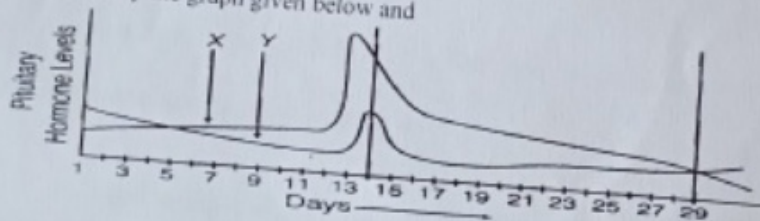
### SECTION- D

- 24.
- a) Draw a labeled diagrammatic view of human male reproductive system.
  - b) When and where do chorionic villi appear in humans? State their functions.
25. Describe the hormonal control of spermatogenesis.

### SECTION- E

This section has 01 case-based question. Each case is followed by 04 sub-questions. All sub-questions are compulsory.

26. Study the graph given below and



- (i) Name the hormones 'X' and 'Y'.
- (ii) Identify, the ovarian phases during menstrual cycle.
  - (a) 5th-12th day of the cycle.
  - (b) 14th day of the cycle.
  - (c) 16th-25th day of the cycle.
- (iii) Explain the ovarian events (i), (ii) and (iii) under the influence of hormones 'X' and 'Y'.

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PERIODIC I EXAMINATION, 2023-24  
SUBJECT – CHEMISTRY  
CLASS - XII

TIME: 80 min

MM: 40

**General Instructions:**

- a. There are 29 questions in this question paper with internal choice.
- b. SECTION A consists of 18 questions carrying  $\frac{1}{2}$  mark each.
- c. SECTION B consists of 5 very short answer questions carrying 2 marks each.
- d. SECTION C consists of 4 short answer questions carrying 3 marks each.
- e. SECTION D consists of 1 case- based questions carrying 4 marks each.
- f. SECTION E consists of 1 long answer questions carrying 5 marks each.
- g. All questions are compulsory.
- h. Use of log tables and calculators is not allowed.

**Section A.....(9)**

1. The sum of mole fractions of solute and solvent of a solution is \_
2. Ideal solutions obey \_.
3. To deposit 2 mol of Ca from  $\text{CaCl}_2$  \_\_\_\_\_ electricity is required.
4. Solid NaCl is \_\_\_\_\_ conductor of electricity.
5. Molar conductivity is related to the conductivity of the solution by the equation ( $\kappa$  is the conductivity and  $c$  the concentration)
6. When measuring conductivity with a conductivity cell, cell constant denoted by the symbol  $G^*$  is given by (electrode area of cross section equal to 'A' and separated by distance 'l')
7. Conductivity always decreases with decrease in concentration both, for weak and strong electrolytes because of the fact that
8. According to Faraday's First Law of Electrolysis 'the amount of chemical reaction which occurs at any electrode during electrolysis by a current is proportional to the
9. Give an example of solution of liquid in gas is
10. Which law shows relation between pressure and solubility of a gas in solvent
11. Why is alternating current used for measuring resistance of an electrolytic solution?
12. Raoult's law states that for a solution of volatile liquids the partial pressure of each component in the solution is
13. Two solutions have different osmotic pressures. The solution of higher osmotic pressure is called
14. At constant temperature the osmotic pressure of a solution is
15. The sum of all mole fraction for a mixture is always equal to
16. Which reference electrode is used to measure the electrode potential of other electrodes?
17. What is homogeneous mixture?
18. Under what condition is  $E_{\text{cell}} = 0$  or  $\Delta_r G = 0$  ?

**Section B.....(10)**

19. If a current of 0.5 ampere flows through a metallic wire for 2 hour then how many electrons would flow through the wire?
20. What is the relation between conductance and conductivity?
21. what is the significance of Henry's law constant  $K_H$ ?
22. Why does the conductivity of a solution decreases with dilution?
23. Suggest two material other than hydrogen that can be used as fuels in fuel cells.

**Section C.....(12)**

24. Why is the vapour pressure of an aqueous solution of glucose lower than that of water?
25. If the density of some Lake water is 1.25 g/ml and contain 92 g of  $Na^+$  ions per kg of water, calculate the molality of  $Na^+$  ions in the lake
26. The vapour pressure of water is 12.3 kPa at 300 Kelvin. Calculate the vapour pressure of 1 molal solution of a non volatile solute in it
27. Calculate the mole fraction of benzene in solution containing 30% by mass in carbon tetrachloride.

**Section D .....(4)**

**Question No. 1 to 4 are based on the given text. Read the text carefully and answer the questions:**

28. At 298 K, the vapour pressure of pure benzene,  $C_6H_6$  is 0.256 bar and the vapour pressure of pure toluene  $C_6H_5CH_3$  is 0.0925 bar. Two mixtures were prepared as follows:

- i. 7.8 g of  $C_6H_6$  + 9.2 g of toluene
- ii. 3.9 g of  $C_6H_6$  + 13.8 g of toluene

1. The total vapour pressure (bar) of solution I is:
2. Which of the given solutions have higher vapour pressure?
3. Mole fraction of benzene in vapour phase in solution I is
4. Solution I is an example of a/an

**Section E.....5**

29. Define the following terms
- a. Mole fraction
  - b. Molality
  - c. Molarity
  - d. Mass percentage
  - e. Normality

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**PERIODIC TEST I**  
SUBJECT – Accountancy  
CLASS –XII

Time:80 minutes

MM:40

General Instructions:

1. This question paper contains four sections.
2. Marks are indicated against each question.
3. Section A- (Q1 to Q20 carrying 1/2 marks).
4. Section B- (Q21, Q22 carrying 3 marks.)
5. Section C- (Q23 to 25 carrying 4 marks)
6. Section D- (Q26, Q27 carrying 6 marks)
7. Attempt all parts of the questions together.

**Section A**

- Q1. The excess amount which the firm gets on selling its business over and above the net value is \_\_\_\_\_.
- Q2. Goodwill under Average Profit Method means \_\_\_\_\_.
- Q3. How does goodwill arise?
- Q4. How does the factor 'quality of product' affect the goodwill of a firm?
- Q5. State any two occasions on which a firm can be reconstituted.
- Q6. What is meant by change in Profit-Sharing Ratio?
- Q7. What do you understand by New Profit-Sharing Ratio?
- Q8. If Assets are increasing but liabilities decreasing; in such a case Revaluation A/c will show \_\_\_\_\_.
- Q9. The partner whose share has increased as a result of change is called \_\_\_\_\_.
- Q10. Annual profit shown by a business is Rs.20,000. Normal rate of return 10%. Total assets of the business firm Rs.2,40,000 and liabilities Rs.80,000. Value of Goodwill will be \_\_\_\_\_.
- Q11. A, B and C are partners sharing profits in the ratio of capitals (old 5:3:2 and new 2:3:5). Their capital after adjustment in new capital ratio are ` 20,000, ` 30,000, ` 50,000. Who will bring the amount of actual cash for adjustment?
- Q12. Give the formula of calculation of goodwill by capitalisation of super profit method.
- Q13. Increase and decrease in the value of assets and liabilities are recorded through \_\_\_\_\_.
- Q14. \_\_\_\_\_ are the assets which have physical existence.
- Q15. What is meant by number of year's purchase?
- Q16. Manager's commission is a \_\_\_\_\_ against profits.
- Q17. Which Section of the Partnership Act defines Partnership as the relation between persons who have agreed to share the profits of a business carried on by all or any of them acting for all?
- Q18. Identify a situation when fixed capitals of the partners may change?
- Q19. In the absence of a partnership deed, how are mutual relations of partners governed?
- Q20. List the items that may appear on the debit side and credit side of a partner's fluctuating capital account.



### Section B

Q21. The partnership deed provides that Anjali, the partner will get Rs. 10,000 per month as salary. But, the remaining partners object to it. How will this matter be resolved?

Q22. What is Revaluation Account? How it is differ from Profit & Loss Appropriation A/c?

### Section C

Q23. Amit, Babita and Sona form a partnership firm, sharing profits in the ratio of 3: 2: 1, subject to the following:

Sona's share in the profits, guaranteed to be not less than Rs 15,000 in any year.

Babita gives guarantee to the effect that gross fee earned by her for the firm shall be equal to her average gross fee of the proceeding five years, when she was carrying on profession alone (which is Rs 25,000).

The net profit for the year ended March 31, 2017, is Rs 75,000. The gross fee earned by Babita for the firm was Rs 16,000.

You are required to show Profit and Loss Appropriation Account (after giving effect to the alone)

Q24. The profits and losses for last five years were

1st year - Rs 3,000 (including an abnormal gain of 1,000)

2nd year - Rs 7,000 (excluding Rs 2,000 as insurance premium)

3rd year - Rs 2,000 (after charging an abnormal loss of Rs 1,000)

4th year - Rs 3,000

5th year - Rs 1,000 (Loss)

Calculate the amount of Goodwill on the basis of 3 years purchase of last 5 years profits and losses.

Q25. A business has earned average profits of Rs 1,00,000 during the last few years and the normal rate of return in a similar business is 10%. Find out the value of goodwill by Capitalisation of super profit method.

Super profit method, if the goodwill is valued at 3 years' purchase of super profit.

The assets of the business were Rs 10,00,000 and its external liabilities Rs 1,80,000.

### Section D

Q26. X, Y and Z share profits as 5 : 3 : 2. They decide to share their future profits as 4 : 3 : 3 with effect from April 1, 2019. On this date the following revaluations have taken place:

	Book Value (Rs.)	Revised Value
Investments	22000	25000
Plant and Machinery	25,000	20,000
Land and Building	40,000	50,000
Outstanding Expense	5600	6,000
Sundry Debtors	60,000	50,000
Trade Creditors	70,000	60,000

Pass necessary adjustment entry to be made because of the above changes in the values of assets and liabilities. However old values will continue in the books.

Q27. Anant, Gulab and Khushbu were partners in a firm sharing profits in the ratio of 5 : 3 : 2. From 1st April, 2014, they decided to share the profits equally. For this purpose, the goodwill of the firm was valued at 2,40,000.

Pass necessary journal entry for the treatment of goodwill on change in the profit sharing ratio of Anant, Gulab and Khushbu.

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**PERIODIC TEST I**  
SUBJECT – Business studies  
CLASS –XII

**Time: 80 minutes**

**MM:40**

General Instructions:

1. This question paper contains four sections.
2. Marks are indicated against each question.
3. Section A- (Q1 to Q20 carrying 1/2 marks).
4. Section B- ( Q21, Q22 carrying 3 marks.)
5. Section C- (Q23 to 25 carrying 4 marks)
6. Section D- (Q26, Q27 carrying 6 marks)
7. Attempt all parts of the questions together.

**Section A**

Q1. Assertion (A): Coordination emphasizes unifying the efforts of different individuals.

Reason (R): Conflicting efforts may cause damage to the organization.

- (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.

Q2. Assertion (A): External environments such as social, economical, technical and political have great influence over the management.

Reason (R): Management is a dynamic Function.

- (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.

Q3. Sana suggested that they should keep the silk bed covers for special festive occasions and offer the cotton bed covers on a regular basis to keep costs under control.

Which function of management is highlighted in this context?

Q4. Vipin is working as a marketing manager in Abc Ltd. State the level of management at which he is working.

Q5. Interpretation of the policies are done by \_\_\_\_\_ level of management.

Q6. The welfare and survival of an organization are the main functions performed by \_\_\_\_\_ level of management.

Q7. Management does not require teamwork and coordination of individual efforts in a common direction. (True/False)

Q8. Management does not help in achieving personal objectives. (True/False)

Q9. Principles of management equip the managers to foresee the cause and effect relationships of their decisions and actions so that the wastages associated with a trial and error approach can be overcome. Identify the point of significance of principles of management highlighted here.

Q10. \_\_\_\_\_ study seeks to eliminate wasteful and unnecessary movements so that it takes less time to complete a job efficiently.

Q11. The objective of \_\_\_\_\_ suggested by Taylor is to increase the efficiency of workers by selecting standard tools and equipment and maintaining standard working conditions.

Q12. Taylor is known as the father of \_\_\_\_\_.

Q13. Which principle of management is followed by the company by creating a separate department?

Q14. Assertion (A): One of the major contributions of FW Taylor is the 'Piece Rate System'.

Reason (R): He has also published various books and research papers on Industrial Organisation and Management.

(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.

Q15. Coordination is called \_\_\_\_\_ of the management.

Q16. Effectiveness is concerned with \_\_\_\_\_ result.

Q17. Function of foremanship is an extension of \_\_\_\_\_ principle of Fayol.

Q18. State the role of 'inspector' in functional foremanship.

Q19. Why it is said that principles of management are flexible?

Q20. List two important function of management.

#### Section B

Q21. Distinguish between Time study and motion study.

Q22. Give three objectives of standardisation of work.

#### Section C

Q23. Ajay Kumar is a sales manager in a Soap company. He is given the responsibility of meeting a sales target of 1500 detergents in a month. To achieve this target, Ajay Kumar needs 30 sales executives. However, he has just 18 executives under him and he is not given the authority to employ 12 more executives. Ajay Kumar is able to sell only 900 Soap only. The General Manager of the company blames Ajay Kumar for not achieving the target results.

a. Do you think Ajay Kumar can be blamed for this?

b. Which principle suggests that the interests of an organization should take priority over the interests of any one individual employee?

Q24. Write five characteristics of Principle of Management.

Q25. Why did Taylor develop the technique of different piece wage system?

#### Section D

Q26. Explain the following principles of Fayol with the help of one example of each.

(a) Division of work

(b) Unity of direction

Q27. Management of Parco Ltd. emphasizes only on economic objectives. Identify and explain the objectives which are being ignored. State any two values which are being communicated to the society while fulfilling these objectives.

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**PERIODIC I EXAMINATION, 2023-24**  
**SUBJECT – POLITICAL SCIENCE**  
**CLASS - XII**

TIME: 80 min

MM: 40

**General Instructions**

- i. All questions are compulsory.
- ii. The question paper has four sections and 22 questions. All questions are compulsory.
- iii. Section–A has 12 questions of 1/2 marks each; Section–B has 4 questions of 2 marks each; Section–C has 2 questions of 4 marks each; Section–D has 2 questions of 3 marks each and Section–E has 2 questions of 6 marks.

**Section-A**

- 1 league of nations was established in-----
- 2 Sri Lanka became independent state in-----
- 3 Write the full form of SAARC.
- 4 India and Soviet friendship Treaty for 20 years signed in-----
- 5 Write the full form of ASEAN.
- 6 In which year socialist Revolution took place in Russia.
- 7 In which year disintegration of so with Union took place.
- 8 Which socialist Republic was the first Republic to declare its independence?
- 9 Who was the first elected president of Russia?
- 10 On which ideology was the Soviet political system based.
- 11 Under which plan the organisation for European economic cooperation was established.
- 12 When did First World War took place?

**Section-B**

- 13 What is Shock Therapy?
- 14 What are the objectives of establishing regional organisation?
- 15 How India can improve its relations with Pakistan?
- 16 What is Veto power?

**Section C**

- 17 Analyse the common problems of South Asian countries.
- 18 How China modernise it's economy?

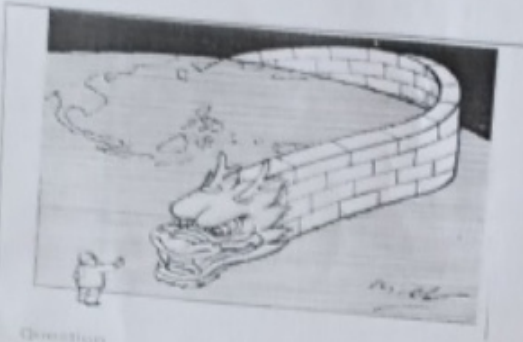
**Section D**

- 19 Study the following passage carefully and answer the questions those are following

The lack of genuine international support for democratic rule in Pakistan has further encouraged the military to continue its dominance. The United States and other Western countries have encouraged the military's authoritarian rule in the past, for their own reasons. Given their fear of the threat of what they call 'global Islamic terrorism' and the apprehension that Pakistan's nuclear arsenal might fall into the hands of these terrorist groups, the military regime in Pakistan has been seen as the protector of Western interests in West Asia and South Asia.

- (i) What is meant by 'Global Islamic Terrorism'?
- (ii) Why did Pakistan lack genuine international support for a democratic rule?
- (iii) Why was the military regime in Pakistan considered as the protector of Western interests in West Asia and South Asia?

20



Question

- 1. The given cartoon is related to which country?
- 2. Which two symbols in this cartoon helped in identifying the country?
- 3. What message does this cartoon convey to the world?

**Section-E**

21 Write the factors which led to the disintegration of the Soviet Union. What were its consequences?

22 Explain the formation of European Union.

OR

Explain any three Agencies of UNO.

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**PERIODIC I EXAMINATION, 2023-24**  
**SUBJECT – HISTORY**  
**CLASS - XII**

**MM: 40**

**TIME: 80 min**

**General Instructions**

- i. All questions are compulsory.
- ii. The question paper has four sections and 28 questions. All questions are compulsory.
- iii. Section-A has 22 questions of 1/2 marks each; Section-B has 3 questions of 3 marks each; Section-C has 2 questions of 8 marks each; Section-D has 1 questions of 4 marks

**Section A**

- 1 Who was known as the Devanama Piyadasi?
- 2 Who deciphered the Brahmi and Kharosthi scripts?
- 3 Who is the first director general of Archaeological Survey of India?
- 4 Ashoka belongs to which dynasty?
- 5 Allahabad pillar is also known as-----
- 6 Indus valley civilization is also called-----
- 7 The Harappan civilization is dated between-----
- 8 Seals of Harappan civilization were made up of which stone?
- 9 How many forms of marriages have been recognised in Dharamshastra?
- 10 What is polygamy?
- 11 When did critical addition of Mahabharata started?
- 12 Among whom the war of Mahabharata was fought?
- 13 Where the stupas of Sanchi situated?
- 14 Who preserve the super of Sanchi?
- 15 Who is the founder of Buddhism?
- 16 Write any one teaching of Jainism.
- 17 Models Of plough have been found at the sites in .....
- 18 A land granted to a Brahmana is called .....
- 19 Who wrote Arthashastra?
- 20 What is Matriliny?
- 21 Write the name of group whose social practices were not influenced by the Brahmanical ideas.
- 22 When was Rigveda compiled?

**Section-B**

- 23 Write the different reasons for the decline of Harrapan civilization.
- 24 Describe the main teachings of Buddhism.
- 25 Write the features of Mahajanapadas.

**Section-C**

- 26 Write the different features of Mohenjodaro.
- 27 Describe the main features of administration of Chandragupta Maurya.

OR

How important were gender differences in early society give reasons of your answer?

**Section D**

**28 Source based Questions**

In the praise of Samudragupta He was without an antagonist on Earth; he, by the overflowing of the multitude of (his) many good qualities adorned by hundreds of good actions, he wiped off the fame of other kings with the soles of (his) feet (he is) Purusha (the Supreme Being), being the cause of the prosperity of the good and the destruction of the bad (he is) incomprehensible; (he is) one whose tender heart can be captured only by devotion and humility; (he is) possessed of compassion; (he is) the giver of many hundred thousands of cows; (his) mind has received ceremonial initiation for the uplift of the miserable, the poor, the forlorn and the suffering; (he is) resplendent and embodied kindness to mankind; (he is) equal to (the Gods) Kubera (the God of wealth), Varuna (the God of the ocean), Indra (the God of rains) and Yama (the God of death).

1. Who wrote the above Prashasti? (1)
2. Mention any three qualities of the ruler described in the excerpt. (2)
3. How far are these values shown by the rulers, relevant in the contemporary society? Explain. (2)

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**PERIODIC I EXAMINATION, 2023-24**  
**SUB-PHYSICAL EDUCATION**  
**CLASS-XII**

MM:40

Time:80 minutes

**General instructions: - All questions are compulsory**

**Section-A ½ Marks questions**

**Section-B 3 Marks questions**

**Section-C 5 Marks questions**

**Section-A**

- Q1. How many function of management are there?
- Q2. What is role of technical committee?
- Q3. What is elimination tournament?
- Q4. What is objective of planning?
- Q5. What is role of finance committee?
- Q6. When national sports day is celebrated?
- Q7. Inter school competition are called?
- Q8. Sports help to develop \_\_\_\_\_.
- Q9 posture is an index of \_\_\_\_\_.
- Q10. What is a structural disability?

**Section-B**

- Q11. Discuss the objective of intramural tournament.
- Q12. What do you mean by community sports?
- Q13. What do you mean by kyphosis?
- Q14. Explain flat foot with precautions and remedies.
- Q15. Describe knock-knee with it's cause.

**Section-C**

- Q16. Explain the exercise guidance for different age groups.
- Q17. Explain female athlete triad with symptoms. Describe eating disorders.
- Q18. Describe psychological and social benefits of women participation in sports.
- Q19. Answer the following questions:-  
knock-out tournament

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2

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5

6 Bye

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7 Bye

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10 Bye

11 Bye



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  2. What is second Bye?
  3. What is third Bye?
  4. What is fourth Bye?
  5. What is fifth bye?
- SP

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**PERIODIC-I EXAM (2023-24)**  
SUBJECT – IP  
CLASS - XII

TIME: 30 minutes

M.M.: 20

General Instructions:

- Attempt all the Questions.

Q1. Very Short Questions /Answers.

$\frac{1}{2} \times 10 = 5$

- To get the number of elements in a series object ..... attribute may be used.
- To check if the series object contains NAN values , ..... attributes is displayed.
- The axis 0 identifies a dataframe 's .....
- To extract row /column from a dataframe ..... function may be used .
- To delete a column from a Data frame ,you may use ..... statement.
- ..... is a popular data – science library of Python .
- You can use numpy ..... for missing data.
- Series is not ..... mutable.
- A series object is value mutable . T/F
- A data frame object can store only homogenous elements .....

Q2. Answer the following questions in short.

$1 \times 5 = 5$

- What is the use of numpy . Nan?
- What is the syntax of slice object ?
- Define Pandas.
- What are the common dataframe objects ?
- What is vector operations ?

Q3. Answer the following questions in detail .

$2.5 \times 4 = 10$

- What is Pandas library of Python ?
- How is series data structure different from a dataframe data structure ?
- What is the following statement doing ?  
`df . drop [{"Total " , "Order " },axis = 1 ]`
- Create a Python program with output.

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PERIODIC-I EXAM (2023-24)  
SUBJECT – CS  
CLASS - XII

M.M.: 20

TIME: 30 minutes

General Instructions:

- Attempt all the Questions.

$\frac{1}{2} \times 10 = 5$

Q1. Very Short Questions /Answers.

- Which of the following cannot be a variable .....
- ..... value type does input `()` return ?
- Which of the following is valid arithmetic operator in Python .....
- A token is also called a .....
- The data types whose values cannot be changed in place are called .....
- The ..... statement is an empty statement in Python .
- Python's ..... cannot be used as variable name .
- The value of the expressions  $4/3 * (2-1)$  and  $4/3 * (2-1)$  is the same T / F.
- Variables can be assigned only once T/F.
- Python loops can also have else clause . T/F.

$1 \times 5 = 5$

Q2. Answer the following questions in short .

- What are statements ?
- What is the use of Break statements ?
- What are loops ?
- Define compound statement .
- Define keyword .

$2.5 \times 4 = 4$

Q3. Answer the following questions in detail .

- What are literals in Python ? How many types of literals are allowed in Python ?
- What are data types of Python handle numbers ?
- What do you understand by the term Iteration ?
- There are two types of else clauses in Python . What are those two types of else clauses.