DELHI PUBLIC SCHOOL, RANCHI

ASSIGNMENT CLASS XI   (2018-2019)

ENGLISH

Section – A (Reading)

1. Read the following passage and answer the questions that follow.

    1. You may never want to fly kites so keep away evil spirits, as the Chinese have done for centuries or to make rain, as the Tibetans did, but some more modern and Western uses may tempt you to try experimenting for yourself along similar lines. The most widespread use of kites in modern times has been for meteorological investigations. Everybody knows about how Benjamin Franklin, the great American scholar and statesman, sent a kite up in 1752 during a thunderstorm to prove that lighting was caused by electricity. He produced sparks at ground level from a key hung on the wet line as the current flowed down it. A second investigator repeated Franklin's experiment shortly afterwards and was killed.

    2. By sending up instruments on kites it has been possible to make readings of air-pressure, temperature, speed, direction and humidity. Although thermometers had been sent up long before, it was not until, 1894, that a self-reading thermometer-a thermograph-was sent up by kite. The army, navy and air force have used kites in various ways for decades. Another Korean version of the invention of the kite tells how a general used one to carry a line across a stream. This line way, using kites. At sea, kites have often been used to carry a line to distressed ships in rough weather.

    3. Kites-especially box and bow-kites-have been used as gunnery targets. They are easy to make and cheap to used and will stand quite a lot of punishment before they the cease to fly. Apart from their use as targets, kites have been used by the army to fly flags, for aerial photography over enemy trenches, for suspending flares over targets, during night—fighting, for carrying man over enemy lines, for dragging torpedoes, etc. to a target area. They have been used by both wireless reception. As a matter of fact, the first long distance short wave transmission of all, made use of an aerial flown on a kite. When Marconi made the famous transatlantic transmission he raised his receiving aerial some 400 feet on a kite. Never fly an aerial in stormy weather or when there are cmulus clouds.

    4. During the last war, the R.A.F developed a 'kite flare' as part of survival equipment for airmen forced down at sea. When airborne the kite was attached to a special shock absorber which was fixed to the dinghy. It was stated that provided there was a 6m.p.h wind, the kites would stay aloft indefinitely.

    5. Some of these kites were brought to Australia and sent to the 6th Australian Division in 1944 for trials to determine whether they were of use in jungle warfare, especially in defining locations. After experiments, the authorities decided that they were of no value for this purpose.

(a) On the basis of your reading of the passage make notes on it, using headings and subheadings. Use recognizable abbreviations (wherever necessary-minimum 4) and a format you consider suitable. Also supply an appropriate title to it.

(a) Write a summary of the above passage in about 80 words.

Section- B - Writing & Grammar

1. You are Ravi/Rachna. As President of the cultural forum of your school you have organized an inter-school orchestra competition on the occasion of the Silver Jubiliee celebrations of your school. Write a notice in about 50 words, informing the students of your school about this competition.

2. Design a poster to launch 'Tree Plantation Campaign', in the area surrounding your school.

3. You are Personal Management of Greeen-Bio-Products Ltd., Sector – 18 Industrial Area. Faridabad. You need an efficient P.A./ Stenographer for your office. Write an advertisement for the situation vacant column of a local daily.

4. You want to sell your flat in Ashok Vihar. Write out an advertisement giving necessary details in about 50 words.

5. You want to let out a flat. Prepare an advertisement to this effect for publication in a newspaper, giving location of the building nature of accommodation, rent expected etc.

6. You are the member of a youth club. Recently your club has purchased some furniture from Nawab Furniture Depot, Kanpur. But after a week you have noticed some defects in the furniture. Write a letter to the Manager of Nawab Furniture asking him to replace it. You are Aman/Amisha.

7. Mandeep Sharma of 59, Sea Road, Bandre Mumbai sees an advertisement in the Every day times and decides to apply for the job of a sales executive. Write an application to the Personnel Manager, V.K. Publications, Worli, Mumbai. (100 – 150 words)

8. Write a letter to Lightways Sport, Amarapalli, Thane, placing an order for sports articles to be supplied to your school, ABC Matriculation school, Civil lines , Poona. You are Ravi/Raveena sports secretary. (100-150 words).

9. You are living in a place of scenic beauty, green, natural and refreshing. Write an article on 'The Joys of living in the lap of nature' for the Nature Column of a newspaper.
(150-200 words).

10. Write a speech on 'Modern Gadgets have made us slaves to Machines' in about 150-200 words.

11. Renu wrote the paragraph below as part of her story for the school magazine, but the editor told her to improve it by joining sentences together. Complete the revised version by filling in the spaces.

Mohit and his friends were quite tired. So they went to bed at once. They heard the deafening sound of a window pane crashing. Their sound sleep was rudely shattered. They rushed to the window. They saw a crowd. People were marching towards the rest house. They carried stones, sticks and torches. Mohit realised the danger to their lives. He contacted the police for help. He asked them to come immediately.

Mohit and his friends (a) _____ went to bed at once. Their sound sleep (b) _____ crash. On rushing to the window (c) _____ and marching towards the rest house. Mohit contacted the police for immediate help (d) _____ lives.

12. In the following passage one word is incorrect in each line. Write the incorrect word and its correction against the correct question number. The first one has been done for you as an example:

Children are fond to coconut. It is the	e.g.	to	<u>of</u>
biggest of all the nuts, and are indeed a wonderful	(a)	____	____
fruit. It grows on a tall palm tree and is find	(b)	____	____
in tropical countries round a seashore. The	(c)	____	____
name was giving to it by the Portuguese because,	(d)	____	____
with the three marks and eye-spots at the end,	(e)	____	____
it look something like monkey's face, and 'coco'	(f)	____	____
is a Portuguese word for a bugbear or a distorted mask.			

13. Rearrange the jumbled words into meaningful sentences:
    i. left me / my parents / with her / they / new city / in the / went / when / to live
    ii. they / you / speak / understand / may / clearly / so that
    iii. the / I had / little / already / money / spent / I've

SECTION- C (Literature)

1. **Read the extracts given below and answer the questions that follow:**

    (i) Father and son, we both must live
    On the same globe and the same land,
    He speaks: I cannot understand
    Myself, why anger grows from grief.
    We each put out an empty hand,
    Longing for something to forgive.

       a. Why does the speaker become angry?

       b. Explain: "We each put out an empty hand".

       c. What do they yearn for?

(ii)   Where did my childhood go?
        It went to some forgotten place,
        That's hidden in an infant's face,
        That's all I know.

          a.   How does the speaker feel about the loss of his childhood?

          b.   Why does the poet feel it has gone to some forgotten place?

          c.   Where could it be hiding? Why?

3. Answer the following questions in 30-40 words each:

   a. Shahid was " an intermittent but first hand witness to the mounting violence" in Kashmir. How did it influence his poetry and personality?

   b. How did the audience react to Professor Gaitonde's remarks: "as unchaired lecture is like Shakespeare's 'Hamlet' without the prince of the Denmark"?

   c. Why did the night at the guest house in Darchen turn out to be another troubled one?

   d. The Tale Of Melon City is an irony. Describe giving instances from the poem.

   e. Why did the narrator call Ile Amsterdam 'the most beautiful island in the world'?

   f. Why does Taplow say Mr.Crocker Harris cannot be a sadist ?

4. Answer the following questions in 120-150 words:

   a. "For the first time in human history we see a transcending concern – the survival not just of the people but of the planet". Elucidate.

   b. Man is "the eye of the landscape" says Francois Cheng. Discuss this concept on the basis of reading 'Landscape Of The Soul'.

5. **Answer the following questions in 120-150 words:**

   a. Comment on the significance of the title of the story 'The Address'.

   b. The play 'Mother's Day' is a humorous and satirical depiction of the status of the woman in a family. Do you agree with the statement? Give reasons for your answer.

6. Answer the following questions in 120-150 words:

   a. What do you learn about the system of education in old British schools from the play 'The Browning Version'?

   b. Is scientific invention necessary to unearth buried mysteries? Express your opinion with reference to the chapter 'Discovering Tut: the Saga Continues'.

PHYSICS

1. A circular plate of uniform thickness has a diameter of 56 cm. A circular portion of diameter 42 cm is removed from one edge of the plate. Find the centre of mass of the remaining portion.

2. Define escape velocity. Obtain an expression for the escape velocity of a body from the surface of the earth. The radius of a planet is double that of the earth but their average densities are the same. If the escape velocities at the planet and at the earth are V_p and V_e respectively, then prove that $V_p = 2 V_e$.

3. Define orbital velocity of a satellite. Derive expression for the orbial velocity of a satellite. Show that the escape velocity of a body from the earth's surface is $\sqrt{2}$ times its velocity in a circular orbit just above the earth's surface.

4. Obtain an expression for a stationary wave formed by two sinusoidal waves travelling along the same path in opposite directions and obtain the positions of nodes and antinodes. The transverse displacement of a string (clamped at its two ends) is given by

   $$Y (x , t) = 0.06 \ \sin \frac{2\pi}{3} x \ \cos 120 \pi t.$$

   where x, y are in m and t is in sec.

   (i) Do all the points on the string oscillate with the same

   a. Frequency   b. phase   c. amplitude?

   (ii) What is the amplitude of a point 0.375 m away from one end?

5. What are beats? Prove that the number of beats produced per second by two sound sources is equal to the difference between their frequencies. When two tuning forks (fork 1 and fork 2) are sounded simultaneously, 4 beats per second are heard. Now some tape is attached on the prong of the fork 2. When the tuning forks are sounded again, 6 beats per second are heard. If the frequency of fork 1 is 200 Hz. then what was the original frequency of fork 2?

6. Define an adiabatic process and state two essential conditions for such a process to take place. Show analytically that work done by 1 mole of an ideal gas during adiabatic expansion from Temperature T_1 to T_2 is given by $\quad W = \frac{R (T_1 - T_2)}{\gamma - 1}$

7. State and explain first law of Thermodynamics. Discuss its use in isothermal and adiabatic processes. What are the limitations of the first law of Thermodynamics?

8. Three bars of equal lengths and equal area of cross-section are connected in series. Their thermal conductivities are in the ratio of 2:4:3. If the open ends of the first and the last bars are at temperatures 200°C and 18°C respectively in the steady state, calculate the temperatures of both the junctions.

9. What is meant by coefficient of linear expansion, superficial expansion and cubical expansion? Derive the relationship among them.

10. What is capillarity? Derive an expression for the height to which the liquid rises in a capillary tube of radius r with angle of contact θ . What will happen if the length of the capillary tube is smaller than the height to which the liquid rises? Explain briefly.

11. State and Prove Bernoulli's Principle for the flow of non-viscous, incompressible liquid in streamlined flow. Give its limitations. Also write its two applications.

12. Derive an expression for the excess pressure inside a liquid drop.

13. A liquid drop of diameter 4mm breaks into 1000 droplets of equal size. Calculate the resultant change in surface energy, the surface tension of the liquid is 0.07 Nm^{-1} .

14. Two wires of diameter 0.25 cm, one made of steel and other made of brass are loaded as shown in Figure below. The unloaded length of steel wire is 1.5 m and that of brass wire is 1m. Young's modulus of steel is 2x10^{11} pa and that of brass is 0.91x10^{11} pa. Compute the elongations of steel and brass wires.

15. Discuss stress vs. Strain Graph, explaining clearly the terms elastic limit, permanent set, elastic hysteresis and tensile strength. Explain how is the knowledge of elasticity useful in selecting metal ropes used in cranes for lifting heavy loads.

16. A wire stretches by a certain amount under a load. If the load and radius both are increased to four times, find the stretch caused in the wire.

17. Define elastic collision and discuss it for two bodies in one dimension. Calculate the velocity of bodies after collision. Discuss Special Cases also.

18. A particle of mass 0.5 kg travels in a straight line with velocity v= ax$^{3/2}$ where a = 5 m$^{-1/2}$s^{-1}. What is the work done by the net force during its displacement form x = 0 to x = 2m.

19. (a) Find the moment of inertia of a sphere about a tangent to the sphere, given the moment of inertia of sphere about any of its diameters to be 2/5 MR², where M is the mass of the sphere and R is the radius of the sphere.

(a) Given the moment of inertia of a disc of mass M and radius R about any of its diameters to the MR²/4. Find its moment of inertia about an axis normal to the disc and passing through a point on its edge.

20. Two identical springs, each of force constant k are connected in (a) series   (b) parallel, and they support a mass m. Calculate the ratio of the time periods of the mass in the two systems.

21. A body of a mss 0.1 kg is executing S.H.M. according to the equation $y = 0.5$ m cos $(100\ t + \frac{3\pi}{5})$ m. Find (i) the frequency of oscillation (ii) Initial phase (iii) maximum velocity   (iv) maximum acceleration   (v) total energy.

22. Derive an expression for the apparent frequency of the sound when the observer moves towards a stationary source of sound with a uniform velocity.

23. The velocity of water in a river is 180km/hr near the surface. If the river is 5 m deep. Find the shearing stress between horizontal layers of water. Coefficient of viscosity of water = 10^{-2} poise.

24. Show that the average K.E of a gas molecule is directly proportional to the temperature of the gas. Hence give the kinetic interpretation of temperature.

25. A particle describes a horizontal circle on the smooth surface of an inverted cone. The height of the plane of the circle above the vertex is 9.8 cm. Find the speed of the particle. Take g =9.8 m/s².

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CHEMISTRY

(Chemical Thermodynamic)

1. Define First Law of thermodynamics. In a process, 701 J of heat is absorbed by a system and 394 J of work is done by the system. What is the change in internal energy of the process?

2. Enthalpies of formation of CO (g) , CO_2 (g), N_2O(g) and N_2O_4 (g) are – 110 , - 393, 81 and 9.7 KJ mol^{-1} respectively. Find the value of ΔrH for the reaction

   N_2O_4 (g) + 3 CO (g) → N_2O (g) + CO_2 (g)

3. Calculate the standard enthalpy of formation of CH_3OH (l) from the following data:

   (a) $CH_3 OH$ (l) + 3/2 O_2 (g) → CO_2 (g) + $2H_2O$(l) ; $\Delta rH° = - 726$ KJ mol^{-1}

   (b) C(s) + O_2 (g) → CO_2 (g) ; $\Delta_c H° = - 393$ KJ mol^{-1}

   (c) H_2(g) +1/2 O_2(g) → H_2O(l) ; $\Delta_f H° = - 286$ KJ mol^{-1}

4. Explain Hess's Law with the help of an example. For the reaction 2 Cl(g) → Cl_2 (g) , what are the signs of ΔH and ΔS?

5. q and w are path functions. But (q + w) is a state function, explain.

6. Is the C- Cl bond dissociation energy in CCl_4 equal. If not , then why? How is C-Cl bond energy reported?

7. What is the reversible process in thermodynamics?

8. What is the relation between $\Delta G°$ and equilibrium constant?

9. Define the following

   (a) State Variables   (b) State and Path functions

    (c) Reversible and irreversible process   (d) Spontaneity

10.   What is free energy and free energy change? Show that the change in free energy is equal to the useful work done.

11. Define entropy and free energy. How are these related to enthalpy?

12. State first law of thermodynamics and derive a mathematical expression for it.

13. What do symbols ΔH, ΔS and ΔG signify? How are they inter related? What is the importance of relation formed?

14. Define extensive and intensive properties, with example.

15. What are the conditions when $\Delta H = \Delta U$.

EQUILIBRIUM

1. Explain why pure liquids and solids can be ignored while writing the equilibrium constant expression.

2. At 450 K, $Kp = 2.0 \times 10^{10}$ / bar for the given reaction at equilibrium:

   $2 SO_2 (g) + O_2 (g) \rightleftharpoons CO (g) + 3 H_2 (g)$ What is Kc at this temperature?

3. Dihydrogen gas is obtained from natural gas by partial oxidation with steam as per the following endothermic reaction:

   $CH_4 (g) + H_2 O(g) \rightleftharpoons CO (g) + 3 H_2 (g)$

   (a) Write an expression for K_P for the above reaction.

   (b) How will the value of K_P and composition of the equilibrium mixture be affected by

       (i)   Increasing the pressure

       (ii)   Increasing the temperature

       (iii)   Using a catalyst

4. Give two examples of equilibrium gaseous reactions in which there is no effect of adding inert gas at constant pressure.

5. What conclusion do you draw when:

   (b) Qc = Kc   (b) Qc > Kc   (c) Qc < Kc?

6. What is the relation between equilibrium constant and standard Gibbs energy.

7. The species : H_2O , HCO_3^- , HSO_4^- and NH_3 can act both as Bronsted acids and bases. For each case give the corresponding conjugate acid and base.

8. Ksp of AgCl is 4.7×10^{-10} . Now 20 ml of 2×10^{-6} M $AgNO_3$ and 20ml of 2×10^{-5} M NaCl are Mixed together. Will AgCl precipitate out?

9. What are conjugate acid –base pair. Explain with examples.

10. Explain the teams :

   (a) Solubility product.   (b) Ionic Product   (c) Common ion effect

11. P^H value of a solution is 4. What is the concentration of H^+ and OH^- ions?

12. What is Salt hydrolysis?

13. Give example of

(i) salts of strong acid and strong base

(ii) Salts of weak acids and weak bases.

14. Define the following with the help of an example.

(a) common ion effect   (b) Buffer solutions and its type

(c) Ksp (solubility product) constant   (d) Ionic Product

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BIOLOGY

CELL THE UNIT OF LIFE

1. Mention a single membrane bound organelle which is rich in hydrolytic enzymes?
2. Name the membrane of vacuole.
3. What are fimbriae?
4. What is the chemical composition of middle lamella?
5. What is cytoskeleton?
6. Differentiate between cilia and flagella.
7. What is the function of inclusion bodies in prokaryotic cells? Where are they present?
8. Briefly describe the cell theory.
9. Name and explain the function various types of plastids.
10. Draw a well labeled diagram of Singer & Nicholson model of Plasma membrane.
11. Write the functions of the following
    (a) Centromere   (b) Smooth ER   (c) Centrioles

12. With neat labeled diagram describe the structure and function of chloroplast.

BIOMOLECULES

1. Name the constituent monosaccharide of
   (a) Sucrose   (b) Maltose and   (c) Lactose
2. What is an unsaturated fatly acid? Give an example.
3. Mention the function of GLUT – 4
4. Name two toxins which are secondary metabolites .
5. What are competitive inhibitors.
6. What is the method to find out the inorganic elements and compounds in living tissue.
7. Differentiate between fats and oils.
8. During chemical analysis of organic compounds found in living organism
   (a) Name the acid used   (b) Name the two fractions obtain during straining.
   (c) Why lipids are considered as biomacromolecules
11. Starch shows Iodine test but cellulose does not. Explain.
12. Based on the nature of the R group explain the structure of glycine, alanine and serine.

13.   Explain the six classes of enzyme.

CELL CYCLE AND CELL DIVISION

1.   What is Go (quiescent phase) of cell cycle?
2.   Why is mitosis called equational division?
3.   Which type of cell helps in regeneration?
4.   How does cytokinesis in plant cell differ from that in animal cells?
5.   What is meant by 'crossing over'?
6.   Distinguish between metaphase of mitosis and metaphase I of meiosis.
7.   What are chiasmata? State their significance.
8.   Why is meiosis essential in sexually reproducing organisms?
9.   Describe briefly the various stages of cell cycle during the interphase preceding mitosis.

10.   With the help of diagrams only depict the events that occur during prophase I of meiotic division.
11.   Anaphase I of meiosis differs from anaphase of mitosis in one essential way. Describe the difference and explain how it affects the daughter cells.
12.   With the help of illustration , explain the various stages of meiosis I. What is the biological significance   of first meiotic division.

TRANSPORT IN PLANTS

1.   What is facilitated diffusion?
2.   When is a cell said to be flaccid?
3.   Name 2 elements that are readily mobilized in plants.
4.   What is solute potential?
5.   Which form of sugar is transported through phloem?
6.   Differentiate between symport & antiport.
7.   What is plasmolysis? When does it occur?
8.   What is turgor pressure? How does it help the cell?
9.   When any dry plant material or seeds is/are kept in water. They swell up.
10.   What is mycorrhiza? How is the mycorrhizal association helpful in absorption of water and minerals in plants?
11.   Describe an experiment to demonstrate osmosis.
12.   Explain the process of transpiration driven ascent of xylem sap.

MINERAL NUTRITION

1.   Define hydroponics.
2.   Name two microorganisms that are free living in soil, but as symbionts can fix atmospheric nitrogen.
3.   What are chemoautotrophs.
4.   What do you understand by the term 'flux'.
5.   What is critical concentration of Essential Element?
6.   What is toxicity of micronutrients. Explain with example.
7.   What do you mean by
       (a) Chlorosis   (b) Necrosis

8.   In form is magnesium taken by plants. Give the important role it plant in plant life.
9.   Mention the criteria for essentiality of an element.
10. Explain the role of potassium and calcium in plant life.
11. Give any three categories of essential element based on its diverse function.
12. Trace the events starting from the coming in contact of Rhizobium to leguminous root till nodule formation. Add a note on importance of leghaemoglobin.

PHOTOSYNTHESIS IN HIGHER PLANTS

1.   Differentiate between absorption spectrum and action spectrum.
2.   Name the first stable product of C_4 cycle?
3.   State Blackman 's Law of limiting factors.
4.   Name the reaction centres of PS I and PS II.

5.   How many molecules of ATP are required for synthesis of any molecule of glucose in C_3 and C_4 pathways.
6.   Specify how a pentose phosphate is a CO_2 acceptor in the dark reaction of photosynthesis.
7.   What is RuBisCo? Explain its role in C_3 and C_4 photosynthesis.

8.   Give the importance of C_4 plants.
9.   Describe the mechanism of Hatch& Slack pathway in C_4 plants.
10. What is Krantz anatomy? Write a note on photosynthesis of those plants in which this anatomy Is found?
11. List three advantages of C_4 cyclic over C_3 cycle.
12. Describe the cyclic photophosphorylation. What is the purpose of proton gradient during the process in thylakoids?

RESPIRATION IN PLANTS

1.   Name the final electron accepter in terminal oxidation.
2.   What is oxidative phosphorylation.
3.   What is Fermentation?
4.   Why respiratory pathway considered as amphibolic pathway?
5.   One molecule of $NADH_2$ yields how many ATP?
6.   Differentiate between aerobic respiration and anaerobic respiration.
7.   Mention two steps of glycolysis in which ATP is utilized.
8.   Define Respiratory Quotient. What is its value for fat and protein?
9.   Give the schematic representation of an overall view of TCA cycle.
10. Where does electron transport system operative in mitochondria? Explain the system giving the role of oxygen?
11. Give a brief account ATP molecules produced in aerobic respiration in eukaryotes.
12. Give the schematic representation of glycolysis.

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Business Studies

1. Why are e-business and outsourcing referred to as the emerging modes of business?

2. Explain any two elements of business ethics.

3. Define the following:-

    (a) GDRs   (b) IDRS   (c) ADRs

4. "Small industries promote industrialisation and also generate employment".How?

5. Discuss the features of a departmental store?

6. Explain Bill of Lading and Mate's Receipt.

7. An exporter under-invoices export goods to a foreign country and deposits the money from the importer in a foreign bank without the permission of government authorities. Later he brings that amount as foreign debt to avoid that amou8nt as foreign debt to avoid income tax. Is it justified? Give reason.

8. "Wharesales are integral part of the chain between manufactures and retailers". Comment.

9. Rani wants to start a small business unit to manufacture and sell auto parts. Name any two institutional agencies which can approach for guidance and support.

10. A company requires funds to meet its working capital requirements. Discuss three merits and demerits of public deposits for this purpose.

11. "There is a strong case for the assumption of social responsibilities by business. Do you agree? Give four arguments in support of your answer.

12. Outline any four limitations of electronic mode of doing business. Are these limitations severe enough to restrict its scope? Elaborate your view point.

13. Explain the term 'BPO' and 'KPO'.

14. What is business finance? Why do business need funds?

15. Discuss the problems faced by SSI.

16. Distinguish between single line stores and specialty stores with one example of both.

17. Explain briefly the process of clearance of export goods.

18. You are a businessman and want to implement e-commerce. Briefly explain any four resources which you world require for its successful implementation.

19. Several business houses have shown concern for social responsibility through education, health and development programmers. Like Usha Martin Set up KGV Kendra in Ranchi to reduce disparity, TRSDS launched community development project.

(a) Will you justify the concern for SR by business houses? Give three reasons.

(b) Identify the activates in the above para which you feel are part of SR.

20. Meena wants to install a new plant to raise its production capacity. But it does not have adequate resources to meet the cat of new plant which is Rs. 4 crore. What other sources of finance may be tapped by the company?

21. Explain briefly any three documents used in Interval trade.

22. Define WTO also write down its three objectives and features too.

23. An importer is passing on local goods as imported goods to customers and making under profits. Is it justified?

24. Explain Automatic Vending Machines as a mode of retail selling state any three circumstances where it is useful.

25. List any four incentives to small units in the rural backward and hilly areas.

26. What are the limitations of issuing debentures ?

27. Briefly explain the scope of e-Business towards:-

(b) B2C   (b) C2C

28. Write down briefly the steps of an Online transaction.

29. What are Retained carryings with its 3 merits ad demerits?

30. A small entrepreneur has started a cottage industrial unit in rural area at concessional rates. He has engaged five workers from the locality for getting inputs for his units.

(a) What role the entrepreneur is paying for rural development?

(b) What values are being pursued by him?

1. What is the Slope of PPC? What does it show?
2. When can PPC be a straight line?
3. Do all attainable combination of two goods that can be produced in an economy point to same level of output?
4. Is free medicine given to patients in Govt. Hospital a scarce commodity?
5. Does PPC indicate actual level of output or potential level of output?
6. If more and more resources are constantly explored, will a day come when our central problems will be solved?
7. "only scarce good attract price" comment
8. Production in an economy is below its potential due to unemployment. Government starts employment generation schemes' explain its effect by using PPC.
9. Economic slowdown in some parts of the world has led to a fall in demand for exports from India. what will be its effect on PPF of India?
10. State two features of resources that give rise to economic problem.
11. State whether the following statements are True or False. Give reason
    (i) An economy cannot operate beyond PPF.
    (ii) Study of cotton textile industry is a macroeconomic study.
12. Why is PPC called Transformation curve?
13. What will be the shape of PPC if resources are equally efficient in production of both the goods?
14. For those working under MGNREGA, the govt. has raised minimum employment from 100 to 150 day during a year. How would it impact the actual and potential level of output in the economy?
15. Giving reason comment on the shape of PPC based on the following schedule
    Good X (Unit) 0   1   2 3 4
    Good Y (Unit) 20 18 14 8 0

Unit II

Consumer's Equilibrium and Demand
1. How many chocolate will a consumers consume, if they are available free of cost?
2. How is law of Diminishing Marginal utility applied with regard to education/Knowledge?
3. Derive the law of demand from single commodity equilibrium condition "Marginal utility= Price
4. Starting from an initial condition of consumers equilibrium state, how does an increase in marginal utility of one rupee affect the quantity demanded of a product?
5. Why is the budget line negatively sloped?
6. Explain the concept of market rate of exchange.
7. Price of the two goods remaining constant with the increase in income of the consumer why does the budget line make a rightward parallel shift?
8. Why does an indifference curve always slope downward to the right?
9. For a consumers to be in equilibrium, why must marginal rate of substitution be equal to ratio of prices of the two goods?
10. Briefly explain the factors which lead to an increase in demand of a commodity.

11. Explain why
    (a) A consumer's equilibrium is always formed at a point on the given budget line
    (b) A consumer's equilibrium will shift to a higher I C with an increase in income of the consumer.
12. What is the horizontal intercept of the budget line?
13. Explain the concept of cross price effect.
14. A piece of good is an "inferior' good for one and at the same time 'normal' good for another consumer. Explain
15. Suppose there are two consumers in the market for a piece of good and their demand functions are as follows:
    D1(p) = 20- P for any price less than or equal to 15, and d1 (p) = O at any price greater than 15. D2 (p) = 30 – 2 P for any price less than or equal to 15 and d2 (P) = O at any price greater than 15
    Find out the market demand function.
16. A family spending on a product has to increase if product price increases.Defend or refute.
17. When two demand curves intersect, the elasticity of demand of the flatter demand curve will be more than the steeper demand curve. Defend or refute.
18. Let slope of demand curve = -.5. Calculate Ed when initial price is Rs. 20 per unit and initial quality is 50 units of the commodity.
19. Consider the demand curve D (P) = 10-3 P. What is the elasticity at price 5/3 ?
20. Will two parallel straight line demand curve have equal elasticity?
21. The Elasticity of demand of all points on a straight line demand curve is equal. Defend or refute.
22. How will the consumer move along his IC in a situation when MRSXY > Px/Py?
23. What will be the elasticity of demand of a commodity if a 7% increase in price of the commodity leads to a rise in its expenditure by 7%?
24. Draw demand curve with equal elasticity at all point on the curve.
    Unit III
    Producer Behaviour and Supply
1. Why does MP curve cut AP curve from above?
2. What can you say about MP if TP is rising?
3. Why is it that AP continues to rise even when MP is falling?
4. Let us take a production function Q= 3 L1/3 K1/3 find out the maximum possible output that the firm can produce with 125 units of Labour and 125 units of Capital.
5. Can AC and AVC curves intersect each other? Why?
6. AC may continue to decline even when MC is rising. Why?
7. Why does the minimum point of AC Lie at a higher level of output than minimum point of AVC?
8. Find out TC, given the following information on MC for a firm which has spent Rs. 60 thousand on its establishment even when output was zero
    Output (unit)   1 2 3 4 5 6
    MC (Rs. Thousand) 7 6 5 7 9 10
9. Complete the following table
    Output (units) 1 2 3 4
    A T C 54 __ __ 33
    A V C 30 24 __ __
    M C 30 __ 24 __

10. Distinguish between short run and long run production function.
11. Complete the following table

Units of Labour: 1 2 3 4 5 6
Average Product: 8 10 __ 9 __ 7
Marginal Product: __ __ 10 __ 4 __

12. State whether following statements are true or false. Give reasons
    (i) When there are diminishing returns to factor, TP first increases & then starts falling
    (ii) TP will increase only when MP increases
    (iii) AP will increase only when MP increases
    (iv) When AP=MP, MP is at its maximum.
13. Why is TVC inverse s-shaped curve?
14. Give reasons for the following
    (i) AFC is rectangular hyperbola
    (ii) MC curve is U-shaped curve
    (iii) While MC rises, AC can be falling for some range
15. What is social cost?
16. An industrialist is both the owner and manager of a shop taken on rent.
    Identify implicit cost and explicit coast from this information. Explain
17. Find out (a) explicit coast and (b) Implicit cost from the following data
    (i) Investment in fixed assets 2000
    (ii) Borrowings at 12% interest per anum 1500
    (iii) Wages paid during the year 120
    (iv) Annual rental values of owner's factory building 180
    (v) Annual depreciation 100
    (vi) Estimated annual value of the management services of owner 240
18. Calculate TVC, TFC, TC, AFC, AV& ATC
    (i) Rent 10,000
    (ii) No. of workers employed 50
    (iii) Salary paid to each worker 200
    (iv) Interest on Capital 5000
    (v) Raw Material purchased 6000
    (vi) Total quantity produced 100
    (vii) Insurance premium paid 1500
19. Why are TC & TVC curves parallel to each other?
20. Why is market supply curve flatter?
21. Under what condition, producer would like to supply more at a given price?
22. Explain the concept of time horizon and supply.
23. What will be effect of subsidy on supply of commodity?
24. What will be the elasticity of supply of an upward sloping straight line supply curve?
25. Complete the following table

Price (Rs.) 12 10 8 6
Output (units) 1 2 3 4
T R (Rs.) __ __ __ __
M R (Rs.) __ __ __ __

26. Complete the following table
    Price (Rs.) : 10 11 12 13 14 15 16
    Units Sold : __ 9 __ 7 __ 5 __
    T R : 100 __ 96 __ 84 __ 64
    M R : __ __ __ __ __ __ __
27. State whether the following statement are true or false. Give reasons
    (i) When MR is zero, AR is constant
    (ii) MR is always the price at which last unit of output is sold.
    (iii) When TR is Maximum, MR is also constant
    (iv) When MR is positive and constant , AR and TR will increase at constant rate
28. What will be the shape of MR curve when
    (i) TR is positively sloped straight line
    (ii) TR is horizontal straight line
    (iii) TR first increases at diminishing rate and then falls.
29. From the following schedule calculate the level of output at which the
    producer maximises his profit. Also calculate the profit at that level. Give reasons.
    Output : 1 2 3 4 5 6 7
    Price (Rs) : 24 24 24 24 24 24 24
    Total Cost (Rs.) : 26 50 72 92 115 139 165
30. What is firm's price line? What is its shape?
31. Distinguish between gross profit and Net profit.
    Unit IV
    Forms of Market and Price Determination
    Under Perfect competition with
    Simple applications
1. Downward sloping Market Demand curve is a constraint faced by Monopolist .Explain
2. Explain how price remains higher than marginal cost under monopoly and
    monopolistic competition.
3. What is the relationship between elasticity of demand and price under monopoly?
4. Why is patent right granted?
5. What makes it possible to exercise partial control over price under monopolistic competition?
    Why full control over price is not possible?
6. Why is a firm's demand curve indeterminate under oligopoly?
7. Does price never change under perfect competition, given the fact that a firm under perfect
    competition firm is a price taker.
8. Increase in demand always causes the rise in price. Comment.
9. Analyse the impact of (a) increase in consumer's income, and (b) increase in number of
    consumer's on market equilibrium.
10. A situation of excess demand or excess supply is automatically corrected under perfect
    competition.Comment.
11. Equilibrium price of an essential medicine is too high. Explain what possible steps can be
    taken to bring down the equilibrium price but only through the market forces. Also explain the
    series of changes that will occur in the market.

12. Suppose the demand and supply curves of salt are given as qd =1000-P qs = 700 + 2 P
    (a) Find the equilibrium price and quantity.
    (b) Now suppose that the price of an input used to produce salt has increased and the new supply is qs =400 + 2 p. How does the equilibrium price and quantity change?
13. Giving reasons, state, if the following are true or false:
    (i) If increase in demand is proportionately equal to the decrease in supply, equilibrium price will rise
    (ii) If decrease in demand meets with an increase in supply, equilibrium price will fall .
    (iii)Equilibrium price will not change if decrease in demand meets with proportionate decrease in supply.
    (iv) If the supply curve is horizontal straight line, change in demand will affect equilibrium quantity.
14. What do you mean by non-viable industry?
15. A Monopolist can sell any quantity he likes at a price. Give reason with true or false.
16. What is persuasive advertising?
17. What is meant by price floor? What are its implications?
18. When will an increase in demand of commodity not result in change in price? Give two reasons.

1. What do you understand by social process?
2. Explain the concept of 'Gender Stratification'.
3. What do you mean by 'cultural lag'?
4. Define structural change.
5. Why is ecology not limited only to the forces of nature?
6. Explain the term 'resource depletion'.
7. Differentiate between the 'sacred' and profane'.
8. How Marx interpreted the term alienation.
9. What is living tradition according to D.P. Mukherjee?
10. What is Endogamy?
11. Write an essay based on examples to show how conflicts get resolved.
12. Briefly discuss the role of competition in life.
13. How cooperation and conflict are two sides of the same coin?
14. How technology causes social change?
15. What are some features of social order in rural areas?
16. Describe the two way process by which social environment emerges.
17. We live in 'risk societies'. Discuss critically.
18. How was the Industrial Revolution responsible for giving rise to sociology?
19. How moral codes are indicators of social solidarity.
20. Explain Weber's concept of 'Bureausracy' ?
21. What do you understand by 'collective consciousness'?
22. Critically examine AR Desai's viewpoint related to welfare state.
23. Explain the devolvement of sociology in sociological way of thinking in India.
24. Define Social structure and discuss its main features.
25. What is competition? How is it different from conflict?
26. What is meant by contestation? Discuss the factors which facilitate non-conformity to social norms.
27. How urban communities are different from rural communities?
28. Discuss Marx's theory of social change.
29. Discuss briefly main contribution of Emile Durkeheim.
30. Discuss main features of Indian culture and society.
31. Discuss features of structural and institutional aspects of caste system from traditional perspective according to Ghurye.

DELHI PUBLIC SCHOOL, RANCHI

ASSIGNMENT CLASS XI   (2018-2019)

PHYSICAL EDUCATION

1. What is specific warming up?

2. What are argogenic aids?

3. Define skill.

4. What is overload?

5. What do you mean by development?

6. What is plateau?

7. Define biomechanics.

8. What is lever?

9. Define centre of GRAVITY.

10. What do you mean by skeletal system?

11. What is Oxygen debt?

12. What do you mean by fast twitch fibres?

13. Discuss the types of equilibrium.

14. Explain the problems of adolescence.

15. Explain the methods of warming up.

16. Explain in brief the traits of mesomorphs.

17. Elucidate the principles of sports training.

18. Explain second wind and its symptoms.

19. Write about the major types of joints.

20. Discuss the importance of anatomy and physiology in Physical Education.

21. Describe the procedure for height and weight measurement.

22. What are the objectives of adventure sports?

23. Elaborate the causes of plateaus in the field of physical education and sports.

24. Explain the importance of limbering down.

25. Differentiate between growth and development.

26. Elucidate the importance of test measurement and evaluation in the field of sports.

DELHI PUBLIC SCHOOL, RANCHI

ASSIGNMENT CLASS XI   (2018-2019)

ENGINEERING GRAPHICS

1. Projections of point. Infront of V.P. and above the H.P.

2. Projections of line, line is Perpendicular to the H.P. and Parallel to the V.P. Infront of the V.P. and above the H.P.

3. Line is inclined at (45º , 60º, 30º) to the V.P. and H.P. Find the length of the line.

4. Pentagonal plane inclined to the H.P., draw the projections. It's one side perpendicular to V.P.

5. Hexagonal plane inclined to the H.P. It's side perpendicular to V.P. draw the projections.

6. Ellipse curve, parabola curve.

7. Draw a square plane equally inclined to the V.P. draw F.V and T.V.

8. Triangular plane's one side inclined at 45º to the V.P. draw the projections.

9. Draw the projections of pentagonal, hexagonal plane and circle.

10. Projections of pyramid, inclined to the V.P. and inclined to the H.P.

11. Projections of prism, inclined to the V.P. and inclined to the H.P.

12. Projections of cone, inclined to the V.P. and inclined to the H.P.

13. Projections of cylinder, inclined to the V.P. and inclined to the H.P.

14. Section of pyramid , section of prism, section of cone, section of cylinder.

15. ISO metric Projections of plane: Square plane, triangle pentagon , hexagon, circle.

16. Isometric projections of solids: pyramid, prism, cone , cylinder.

17. Orthographic projections.