WINTER HOLIDAY

HOMEWORK (2022-23)

ACCOUNTANCY

1. From the following Trial Balance prepare Trading and Profit & Loss Account for the year ended 31st March, 2012 and Balance Sheet as on that date :-

Dr.(`) Cr. (`)

Stock 1st April, 2011 22,300
Purchases and Purchases Return 2,30,000 5,200 Freehold Premises 1,00,000
Incidental Trade Exp. 11,200
Insurance 1,850
Audit Fees 800
Commission Received 2,700 Interest 1,400 Debtors and Creditors 32,400 24,830
Wages 30,200
Salaries 15,200
Capital 1,50,000 Drawings 12,000
Income-Tax 3,600
Investments 8,000
Discount allowed & received 7,500 4,200 Sales Return & Sales 6,400 3,17,400 B/R 5,200
Office Furniture 9,000
Rent 2,600 Cash in hand 5,080
Bank Balance __7,600_____ 5,08,330 5,08,330

2. From the following figures prepare the Trading and Profit and L:oss Account for the year ended 31st March, 2001 and the Balance Sheet as on that date :-

	`		`

Stock (1st April, 2000) 75,000 Sundry Debtors 82,000 Purchases 8,00,000 Loan from X 10,000 Sales 12,00,000 Interest on X Loan 1,500 Motor Car 1,50,000 Furniture 20,000 Car Expenses 42,000 Land and Building 2,00,000 Rent 5,500 Capital 2,50,000
Salaries 35,200 Sundry Creditors 91,300 Bad Debts 1,500 Returns Inward 7,500 Provision for bad debts 8,100 Returns Outward 6,000 Commission (Cr.) 4,600 Cash in hand 16,400 Wages 1,25,000
Insurance 8,400

3. Prepare a Trading and Profit & Loss account for the year ending March 31, 2012, from the balances extracted of M/s Rahul Sons. Also prepare a balance sheet at the end of the year

	`		`
Stock	50,000	Sales	1,80,000
Wages	3,000	Purchase return	2,000
Salary	8,000	Discount received	500
Purchases	1,75,000	Provision for bad debts	2,500
Sales Return	3,000	Capital	3,00,000
S. Debtors	82,000	Bills Payable	22,000
Discount allowed	1,000	Commission received	4,000
Insurance	3,200	Rent	6,000
Rent, rates and taxes	4,300		34,800
Fixtures and fittings	Loan		
Trade Expenses	20,000		
Bad debts	1,500		
Drawings	2,000		
Repair and renewals	32,000		
Travelling expenses	1,600		
Postage	4,200		
Telegram Expenses	300		
Legal fees	200		
Bills Receivable	500		
Building	50,000		
	1,10,000		5,51,800
	5,51,800		

4. From the following balances, prepare Final Accounts of Mr Bal Gopal :-

	`		`

Life Insurance Premium (self)   500 Capital 40,000

Stock (1-4-2-11) 7,500 Plant and Machinery 12,500 Returns Inward 1,000 Purchases 36,000 Furniture 4,600 Sundry Debtors 10,500 Freehold Property 10,000 Coal, Gas and Water 1,000 Carriage Inwards 400 Carriage outwards 100 Advertising 200 Sales 60,000 Sundry Creditors 4,850 Discount (Dr.) 400 Returns outwards 500 Rent for Premises Sublet 500
Commission (Cr.) 600 Trade Expenses 8,650 Lighting 250 Stationery 2,000 Loan from bank 5,000 Interest Charged by Bank 450 Wages & Salaries 7,500 Cash 7,900

5. From the following Trial Balance, extracted from the books of Raga Ltd., prepare a Profit and Loss Account for the year ended 31st Dec., 2005 and a Balance Sheet as on that date :

Debit Balances	`	Credit Balance	`
Drawings Account	20,000	Sales	2,20,000
Land & Building	12,000	Capital	1,01,110
Plant and Machinery	40,000	Discount	1,260
Carriage Inward	100	Apprentice premium	5,230
Wages		Bills Payable	1,28,870
Salary		Purchase Return	10,000
Sales Return	200		
Bank charges	200		
Coal, gas and water	1,200		
Purchases	1,50,000		
Trade Expenses	3,800		
Stock (Opening)	76,800		
Cash at Bank	50,000		
Rates and Taxes	870		
Bills Receivable	24,500		
Sundry Debtors	54,300		
Cash in hand	30,000		
	4,66,470		4,66,470

6. The following balances were extracted from the books of Modern Traders on 31st March, 2012 :-

	`		`
Capital Account	85,000	Printing and Stationery	800
Drawings Account	5,000	Sundry Creditors	23,000
Plant & Machinery	40,000	Sales	1,20,000
Stock on 1-4-2011	15,000	Postage and Telegram	800
Purchases	82,000	Bad-Debts	400
Sundry Debtors	20,000	Provision for Doubtful	800
Furniture	5,000	Debts Discount received	400
Freight Inward	2,000	Rent Revenue	1,200
Carriage Outward	500	Insurance	700
Rent, Rates and Taxes	4,600	Salaries	20,000
		Wages	1,300
		Cash in Hand	6,200
		Cash at Bank	25,000

Prepare Final Accounts for the year ended 31st March, 2012

1. From the following Trial Balance prepare Trading and Profit & Loss Account for the year ended 31st March, 2012 and Balance Sheet as on that date :-

Dr.(`) Cr. (`)

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Freight Inward	2,000	Rent Revenue	1,200
Carriage Outward	500	Insurance	700
Rent, Rates and Taxes	4,600	Salaries	20,000
		Wages	1,300
		Cash in Hand	6,200
		Cash at Bank	25,000

Prepare Final Accounts for the year ended 31st March, 2012

MATHEMATICS

1. In a class, 18 students took Physics, 23 took Chemistry & 24 took Mathematics. Of these 13 took both Chemistry & Maths, 12 took both Physics & Chemistry & 11 took Physics & Maths both. If 6 students took all the 3 subjects, find

   i) Total number of students in the class

   ii) How many took Maths but not Chemistry

   iii) How many took exactly one of 3 subjects

2. Using Venn diagram show the set

   i) A' ∩ (B U C)

   ii) (A − B) U ((B − A)

3. Find domain and range for the functions

   i) $f(x) = -|x|$

   ii) $f(x) = \frac{x^2}{1+x^2}$

   iii) $f(x) = \frac{|x-5|}{5-x}$

4. Draw graph of functions $f(x) = |x - 2|$

5. Draw the graph of $f(x) = 1 - |x + 3|$

   Prove the following

6. Tan 13A − tan 7A − tan 6A = tan 13A tan 7A tan 6A

7. $\frac{Cos\ 11° + Sin\ 11°}{Cos\ 11° - Sin\ 11°}$ = tan 56

8. $\frac{(Sin\ A - Sin\ B)}{Cos\ B - Cos\ A}$ = Cot $\frac{A+B}{2}$

9. Sin 10° Sin 50° Sin 60° Sin 70° = $\frac{\sqrt{3}}{16}$

10. Cos A + Cos B + Cos C + Cos (A + B + C) = 4 Cos $\left(\frac{A+B}{2}\right)$ Cos $\left(\frac{B+C}{2}\right)$ Cos $\left(\frac{C+A}{2}\right)$

11. Find conjugate of the numbers

    a) 23 + 10$\sqrt{2}$i   b) 23 - 10$\sqrt{2}i$ c) -23 - 10$\sqrt{2}i$ d) -23 + 10$\sqrt{2}$i

12. Find multiplicative inverse for the following numbers

    i) (2 − i) (3 − 1i)

    ii) $(2 − 5i)^2$

    iii) 3 + 4i

    iv) $\frac{2+3i}{3-2i}$

Solve graphically

13. x + y ≤ 6 ;x − y ≤ 2 ;3x − y ≤ 10 ;x ≥ 0 ;y ≥ 0.

14. x+ y ≤ 6 ;x ≥ 4 ;y ≥ -3

15. In how many ways 6 men and 5 women can sit in a row if women occupy even places

16. How many of the natural numbers from 1 to 1000 have none of their digits repeated

17. Find the number of arrangements of the letters of the word DAUGHTER if all vowels occur together

18. Find the number of 5 card combinations out of a deck of 52 cards if each combination has one ace

19. If $^nP_r = \ ^nP_{r+1}$ & $^nC_r = \ ^nC_{r-1}$ find n & r

20. Find the distance between the lines 3x + 4y = 9 & 6x + 8y = 15
21. If p is the length of perpendicular from origin to the line bx + ay = ab, show that $\frac{1}{a^2} + \frac{1}{b^2} = \frac{1}{p^2}$
22. Find points on the line x + y = 4, which lie at a distance of 1 unit from the line 4x + 3y = 10
23. Find k if the line 2x + 3y + k (6x − y − 12) = 0 is perpendicular to 7x + 5y = 4
24. Find image of (-8, 12) with respect to line 4x + 7y + 13 = 0 as mirror
25. A line is such that its segment between the lines 5x − y + 4 = 0 & 3x + 4y − 4 = 0 is bisected at (1, 5) Find its equation
26. Find equation of line passing through the origin and making 60 angle with line x + $\sqrt{3}$y + $3\sqrt{3}$ = 0
27. Reduce x + $\sqrt{3}$y + 4 in the slope intercept form
28. Reduce 2x − y − 3 = 0 in the slope intercept form
29. Find the equation of line through the intersection of x − 3y + 1 = 0 & 2x + 5y − 9 = 0 whose distance from the origin is $\sqrt{5}$
30. Find the foot of perpendicular & length of perpendicular from (3, -4) on theline x + 3y =7
31. Transform the line $\sqrt{3}$x + y = 8 into
    i) Slope intercept form
    ii) Intercept form

ENGLISH

Q I Read the passage given below.

1 Mankind's fascination with gold is as old as civilization itself. The ancient Egyptians esteemed gold, which had religious significance to them, and King Tutankhamen was buried in a solid – gold coffin3300years ago. The wandering Israelites worshipped a golden calf, and the legendary King Midas asked that everything he touched be turned into gold.

2 Not only is gold beautiful, but it is virtually indestructible. It will not rust or corrode. Gold coins and products fabricated from the metal have survived undamaged for centuries. Gold is extremely easy to work with. One ounce, which is about the size of a cube of sugar, can be beaten into a sheet nearly 100 square feet in size, and becomes so thin that light passes through it. An ounce of gold can also be stretched into a wire 50 miles long. Gold conducts electricity better than any other substance except copper and silver and it is particularly important in the modern electronics industry.

3 People have always longed to possess gold. Unfortunately, this longing has also brought out the worst in the human character. The Spanish conquerors robbed palaces, temples and graves and killed thousands of Indians in their ruthless search for gold. Often the only rule in young California during the days of the gold rush was exercised by the mob with a rope. Even today, the economic running of South Africa's gold mines depends largely on the employment of black labourers who are paid about 40 pounds a month, plus room and board, and who must work in conditions that can only be described as cruel. About 400 miners are killed in mine accidents in South Africa each year, or one for every two tons of gold produced.

4 Much of gold's value lies in its scarcity. Only about 80,000 tons have been mined in the history of the world. All of it could store in a vault 60 feet square, or a super tanker. Great Britain was the first country to adopt the gold standard, when the Master of the Mint, Sir Isaac Newton, established a fixed price for gold in 1717. But until the big discoveries of gold in the last half of the nineteenth century – starting in California in 1848 and later in Australia and South Africa – there simply wasn't enough gold around for all the trading nations to link their currencies to the precious metal.

5 An out – of – work prospector named George Harrison launched South Africa into the gold age in 1886 when he discovered the metal on a farm near what is now Johannesburg. Harrison was given a 12 Pounds reward by the farmer. He then disappeared and reportedly was eaten by a lion.

6 One of the big gold – mining areas in the Soviet Union is the Kolyma River region, once in famous for its prison camp. The camp has gone, but in a way nothing has changed. Many ex –prisoners have stayed on to work in the mines and are supervised by ex– guards.

7 Despite the current rush to buy gold, 75 per cent of the metal goes into jewellery. Italy is the biggest user of gold for this purpose, and many Italian jewellers even tear up their wooden floors and burn them to recover the tiny flecks of gold. Historically, the desire to hoard gold at home has been primarily an occupation of the working and peasant classes, who have no faith in paper money. George Bernard Shaw defended their instincts eloquently: "You have to choose between trusting the natural stability of the honesty and intelligence of the members of the government," he said „and with due respect to these gentlemen, I advise you….to vote for gold."(From an article in News week)

Based on your understanding of the passage, answer the questions given below. 1x10

i According to the passage the fact that Mankind's fascination with gold is as old as civilization itself by giving some examples. Pick the option which is NOT mentioned

(a) King Tutankhamen was buried in a solid – gold coffin (b) Story of legendary King Midas

(c) King Ravana had his palace in Lanka built with pure gold (d) Israelites worshipped a golden calf

ii Read the lines and find three words defining the properties of metal gold "One ounce, which is about the size of a cube of sugar, can be beaten into a sheet nearly 100 square feet in size, and becomes so thin that light passes through it. An ounce of gold can also be stretched into a wire 50 miles long"

a)Malleable, Transparent , Ductile (b) Malleable , Translucent, Fragile (c) Transparent , Opaque , Ductile (d) Transparent, Fragile , Ductile

iii The reason of ruthless and cruel human nature (as mentioned in para 3) is the result of –

(a) Colonial expansion (b) Mining (c) Longing to possess gold (d) Industrialization

iv The person who established a fixed price for gold was –

(a) George Harrison (b) George Bernard Shaw (c) Sir Isaac Newton (d) King Tutankhamen

v Pick the option which has NOT been matched correctly

A. South Africa in Gold age – 1886   B. Fixed price for gold in Great Britain – 1717

C. Kolyma River Region is in California   D. Gold Rush – 1848

vi. Complete the sentence. The desire to hoard gold at home popular among --------------------------- ----classes is the result of -----------------------------------

vii What scientific conclusion one can draw from the line below

Gold conducts electricity better than any other substance except copper and silver

(a) Gold is not a good conductor of electricity, only copper and silver are

(b) Copper are silver are better conductor of electricity than gold

(c) Gold is equally a good conductor of electricity when we compare it with copper

(d) All the above statements are incorrect

viii Which option showcases an example of Action(A) – Result (R) from the passage

1. Longing for gold (A) Worst human character (R)

2. Faith in paper money (A) Hoarding of gold (R)

3. Longing for gold (A) Hoarding of gold (R)

4. No faith in gold (A) Hoarding of paper money (R)

(a) Option 1 (b) Option 2 (c) Option 3 (d) Option 4

ix What is Kolyma river region special for?

x Quote the line from the passage which proves that gold is valuable because it is not found in abundance.

Q2) Read the following passage carefully and answer the questions that follow:

Fashion is a force- a powerful force of constantly altering patterns of change and growth. Its constant movement affects the fate of designers and manufacturers who distribute it, and of course the lives of the consumers, who follow what it dictates. All these facts taken together add up to a multimillion-dollar industry. Fashion today means mega bucks.

Fashion is also a Science. Surprising, isn't it? However, it is well known that it involves well known facts and principles. Fashion is one of those distinct and unique trades that is highly dependent on the environment and the changes that are continuously taking place in it. These must be understood by the designers if they want to be successful.

For one to make it to the top in the fashion business and to stay there, one has to continue to discover and innovate to fulfil the need and wants of the customers. For this, one of the top designers such as Yves Saint Laurent, Karl Lagerfeld, Liz Claiborne, etc. all rely upon their creativity backed by years of invaluable experience. In this line of work, instinct and intuition play a major role besides the knowledge of past successes and failures.

As the power of fashion to influence our lives grows, a number of misconceptions about it continue to abound. The most common of these is that the designers and retailers dictate what fashion will be, by accepting or rejecting the styles and trends that are offered. They are truly, as one 'fashion guru' once said, "Variety Vultures". However, it is not so- actually, it's the customers who dictate the trends.

The second misconception is that fashion acts as an influence on women only. However, actually, men today are as much influenced by, and responsive to, fashion, as women. In fact, the male fashion industry has been growing at a dizzying pace.

Fashion today is more lifestyle oriented and quite practical. The modern male and female want to dress differently for office and leisure. Designers are becoming more daring so as to give us a wider choice. There are different designs for every moment of a busy work schedule- from work, lunch to afternoon tea, cocktails, dinner and gala banquets.

Lastly, fashion is the force that causes women to raise or lower her skirt length, straighten or fizz her hair and change from sporty to dressy clothes. It's also that force which influences men to grow or shave off their moustaches and beards, choose wide or narrow ties and change from casual denims to formal tuxedos. Fashion is dynamic and adds colour and spice to our lives.

a) Based on your reading of the passage above, make notes using points only, use abbreviations wherever necessary. Supply a suitable title.

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

SECTION-B-Writing & Grammar

1. You are Vishal / Veena, a student of class XII of 10, Green Park, New Delhi. You are extremely interested in learning languages. You come across an advertisement in The Times of India issued by The Institute of Foreign languages, New Delhi about the certificate course in Japanese offered by them. You decide to write a letter to the Director of the Institute seeking more information about the course duration, working hours, fee structure, etc. Write a letter of enquiry seeking answers.

2. Your school is celebrating 'Anti - Corruption Day'. Write a speech in 150- 200 words on the topic--- Minimization of Human Wants is the only way to cleanse society of all kinds of corruption. You are Avni / Anuj of class XI**.**

3.Look at the instructions given below. Then use the information given to complete the paragraph using Passive voice.

> *i) Start the scooter in neutral gear.*
>
> *ii) Press the clutch lever and change the gear.*
>
> *iii) Now gradually give a raise and release the clutch lever.*
>
> *iv) Keep a steady hand on the brake.*

First of all the scooter a)…… , the clutch lever b)…..and the gear is changed. Then gradually   c)……. and the clutch lever d)………… A steady hand is kept on the brake.

Q4. Re-arrange the words/ phrases to form meaningful sentences.

a) I'll be having/ Shah Khan/ at a five-star hotel/ next week/ dinner/ with
b) The man / was dead / the letter / addressed / to whom / had/ he

SECTION-C- Literature

Father to Son

"Father to Son" deals with an estranged relationship, lack of understanding and an absence of a rapport between a father and his son. The father's longing for the same relationship they enjoyed during the son's childhood is very touching. Ready to forgive him, he helplessly watches the gap between the two becoming increasingly unbridgeable.

Q1) With reference to the given extract read the following and answer the questions:

"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".

    i)   Explain the phrase, 'We each put out an empty hand.'

               ………………………………………………………………………………………….

    ii)   Why is the father angry?

               …………………………………………………………………………………………..

    iii)   Who does 'we' refer to?

               …………………………………………………………………………………………..

Q2.) "We speak like strangers, there's no sign
      Of understanding in the air.
      This child is built to my design
       Yet what he loves, I cannot share."

    a)   Who does 'we' refer to here?

        …………………………………………………………………………………………

    b)   Why does the poet say, 'we speak like strangers'?

        …………………………………………………………………………………………

    c)   What has happened between the father and son?

        …………………………………………………………………………………………

Q3.) Answer the questions in 40 – 50 words:

1. What is the outcome of the father and son's efforts to restore amicable relationship between

   them?

   ....

   ....

   ....

   ....

   ....

2. Explain: "why anger grows from grief".

   ....

   ....

   ....

   ....

BIOLOGY

SECTION-A

Q.1 Supply a specific scientific term for any four of the following: 2   i. The period between two successive mitotic divisions.

ii. Process of cell division by which chromosome number is halved.

iii. Point at which two sister chromatids are held together.

iv. Nuclear division in mitosis.

v. Phase in the cell cycle when proteins and RNA are synthesized.

Q.2 Name the two important enzymes of C_3 and C_4 pathways, respectively. What important role do they play in fixing CO_2.   2

Or Give scientific reasons of the following statements.

i) Adrenals are called glands of emergency.

ii) Chlorophyll-b and other accessory pigments are necessary for photosynthesis.

Q.3 Differentiate between Cerebrum and cerebellum.   2

Q.4 What would be expected to happen if –   2

i) GA_3 is applied to rice seedlings

ii) dividing cells stop differentiating

iii) a rotten fruit gets mixed with unripe fruits

iv) you forget to add cytokinin to the culture medium

Or Mention the factors which prove that phytohormones act synergistically or antagonistically.

Q.5 Write a short explanation of the Crossing over process.   2

Q.6 What are the hormones of adenohypophysis and also write their target organs.   2

Or Describe the three phases of Calvin cycle in chloroplasts?

SECTION – B

Q. 7 Draw a labeled diagram of the human Respiratory system and write –   3

i) What prevents the trachea from collapsing?

ii) A person dies in an accident in which his chest cavity was punctured, but no lung damage was there. Point out the cause of death.

Or Give diagrammatic representation of exchange of gases at the alveolus and the body tissues with transport of O_2 and CO_2. Also, explain how does exchange of gases occur between blood and tissue cells.

Q.8 Draw a diagram to show the internal structure of human heart. Label six parts in all including three valves. Also describe the process of blood clotting in detail.   3

Q.9 Observe the given diagram of Nephron and Describe the process of urine formation.   3
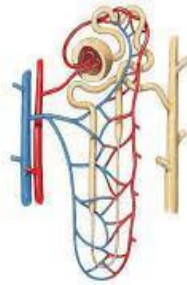
Q.10 Explain Sliding Filament theory of muscle contraction with neat sketches.   3

Q.11 Describe output of TCA cycle in terms of its end products. Also discuss its importance in the metabolism of living cell.   3

Or Give an account of Glycolysis and its significance.

Q.12 Define any three of the following terms-   3

i) Vital Capacity

ii) Coronary Artery Disease

iii) Diabetes Insipidus

iv) Saltatory Conduction

v) Corpus callosum

SECTION – C

Q.13 Read the following passage and answer the questions that follow-   5

Electron transport system is a metabolic pathway through which electrons pass from one carrier to another. It is a part of aerobic respiration in which electrons removed from intermediate compounds in glucose catabolism are accepted by the final electron acceptor at the end of ETC. It consists of four large multi protein complexes and two small diffusible electron carriers. The electrons passing through ETC gradually lose energy. The end products of ETC are water and ATP

Electron Transport Chain
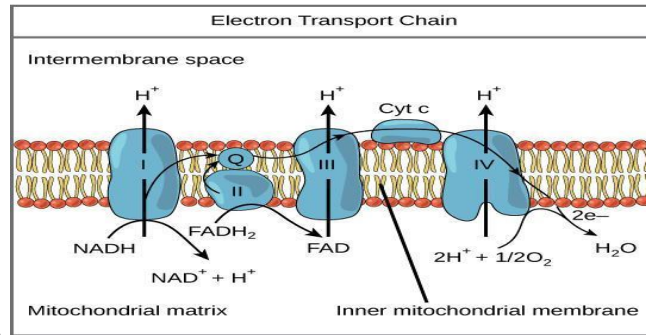
i) The main purpose of electron transport chain is to –

a. Release and utilize energy stored in NADH + H$^+$ and FADH$_2$

b. Use the intermediate from TCA cycle

c. Breakdown pyruvic acid

d. All of the above

ii) In the electron transport system present in the inner mitochondrial membrane, complexes – I and IV are, respectively

a. NADH dehydrogenase and FADH$_2$

b. NADH$_2$ and NADH dehydrogenase

c. NADH dehydrogenase and cytochrome oxidase complex

d. NADH dehydrogenase and ATP synthetase

iii) How many cytochromes are involved in the electron transport chain?

a. Five   b. Two   c. Six   d. Four

iv) The fourth complex of ETC has –

a. Cytochrome – b only

b. Cytochrome –a only

c. Cytochrome – a, c and a$_3$

d. Cytochrome – a and b

v) In mitochondria, protons accumulate in the –

a. Outer membrane

b. Inner membrane

c. Intermembrane space

d. Matrix

UNIT-8 -REDOX REACTIONS

1 MARK QUESTIONS

1. **MnO_4^{2-}** undergoes disproportionation reaction in acidic medium but **MnO_4^-** does not. Give

 reason.

2. Calculate the oxidation no. of sulphur and chromium and nitrogen in

 H_2SO_5, $Cr_2O_7^{2-}$ and NO_3^-

3. Assign the oxidation number to the underline elements in each of the following species

   a)$NaH_2\underline{P}O_4$ b) $\underline{S}O_4^{2-}$ c)Li$\underline{Al}H_4$ d) $\underline{Cr_2}O_7^{2-}$

4. Hydrogen peroxide behaves as oxidizing agent as well as reducing agent. Why?

5. What is salt bridge? Give its two uses.

6. Nitric acid behaves as good oxidizing agent while nitrous acid acts as both oxidant and reductant. Explain.

7. If SHE acts as anode and given metal acts as cathode, what is the sign of   reduction   potential of metal?

2 MARKS OR 3 MARKS QUESTIONS

8. Balance the following equation in basic medium by ion electron method;

 $Cl_2O_7(g) + H_2O_2(aq) \rightarrow ClO_2^-$ (aq) $+ O_2(g)$

9. Consider the elements K,Ar, Br and F

   a) Identify the element that exhibits only negative oxidation state.

   b) Identify the element that exhibits only positive oxidation state.

 c) Identify the element that exhibits negative as well as positive oxidation states.

  d) Identify the element that exhibits neither positive nor negative oxidation state.

10. Identify the substance oxidized, reduced, oxidizing agent and reducing agent; (on the basis of change in oxidation no.)

 $N_2H_{4(l)} + 2H_2O_{2(l)} \rightarrow N_{2(g)} + 4H_2O_{(l)}$

 $4 NH_{3(g)} + 5O_{2(g)} \rightarrow 4NO_{(g)} + 6H_2O_{(l)}$

11. The standard potentials of few metals are given below;

 Al(-1.66V), Cu(+.34V), Ag(+.80V), Fe(-.44), Mg(-2.37V)   Which of these behave as strongest oxidizing agents & which as the strongest   reducing agent?

12. What is disproportanation reaction? Identify the element which undergoes disproportionation in the following equation-

$P_4 + 3NaOH + 3H_2O \rightarrow PH_3 + 3NaH_2PO_2$
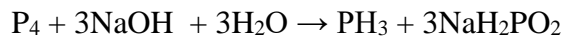
13. The cell is $Mg/ Mg^{2+}(aq //Al^{3+}(aq) /Al$ The reduction potential of these two half cells are -2.36V & -1.66V respectively.Calculate the cell potential. Write the cell reaction also.

14. Balance the following equations by oxidation number method;

a) $H_2S + HNO_3 \rightarrow H_2O + NO +S$

b) $NH_3 + O_3 \rightarrow NO +H_2O$
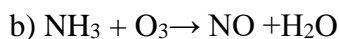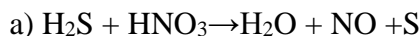
15. Balance the following equations by ion electron method;

a) $Cr_2O_7^{2-} + H^+ + Fe^{2+} \rightarrow Cr^{3+} + Fe^{3+} + H_2O$
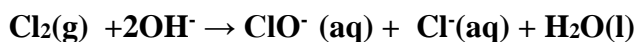
b) $AsO_3^{3-} + IO_3^- \rightarrow AsO_4^{3-} + I^-$
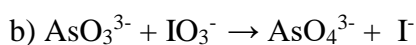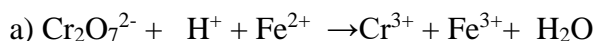
16. An iron rod is immersed in a solution containing NiSO$_4$ and ZnSO$_4$. When the   concentration of each salt is 1 M , predict giving reasons which of the following   reaction is likely to proceed ?

a) Iron reduces Zn^{2+} ions

b) iron reduces Ni^{2+} ions   (Given $E^0_{(Zn2+/Zn)} = -0.76V$, $E^0_{(Fe2+/Fe)}=-0.44V$, $E^0_{(Ni2+/Ni)}=-0.25V$)

17. The reaction;

$Cl_2(g) +2OH^- \rightarrow ClO^- (aq) + Cl^-(aq) + H_2O(l)$

 Representsthe process of bleaching. Identify and name the species that bleaches the   Substances due to its oxidizing action.

18. The Mn^{3+} ion is unstable in solution and undergoes disproportionation to give Mn^{2+}, MnO_2 and H^+ ion. Write the balanced chemical equation for the reaction.

19. Depict the galvanic cell in which the reaction

 $Zn_{(s)} + 2Ag^+_{(aq)} \rightarrow Zn^{2+} + 2Ag_{(s)}$ (aq) takes place. Further show;
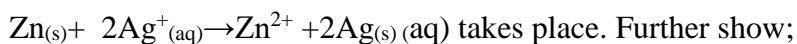
 i) Which of the electrode is negatively charged.

 ii) the carriers of the current in the cell, and

    iv)   individual reaction on each electrode

PHYSICS

<u>**VERY SHORT ANSWER QUESTIONS(1 Mark)**</u>

1.Which is more elastic-rubber or steel ? Explain your answer.

2.What is the value of Y for a perfectly rigid body?

3.Why do spring balances show wrong readings after they have been use for a long time? 4.A wire stretches by a certain amount under a load. If the load and radius are both increased to four times, find the stretch caused in the wire.

<u>**SHORT ANSWER QUESTIONS (2 Marks)**</u>

5. Compute the bulk modulus of water from the following data : Initial volume = 100.0 litre. Pressure increase = 100.0 atm (1 atm = 1.013 x 10^5 Pa). Final volume = 100.5 litre. Compare the bulk modulus of water with that of air (at constant temperature). Explain in simple terms why the ratio is so large.

6. The Marina trench is located in the pacific ocean, and at one p lace it is nearly eleven km beneath the surface of water. The water pressure at the bottom of the trench is about 1.1 x 10^8 Pa. A steel ball of initial volume 0.32 m^3 is dropped into the ocean and falls to the bottom of the trench. What is the change in the volume of the ball when it reaches to the bottom? Bulk modulus for steel = 1.6 x 10^{11} N m^{-2}.

7. A material has a Poisson's ratio 0.20. If a uniform rod of it suffers a longitudinal strain of $2x10^{-3}$, then find the percentage change in volume.

8. When the tension in a mental wire is T_1, its length is l_1. When the tension is T_2 its length is l_2. Find the natural length of wire.

<u>**SHORT ANSWER QUESTIONS (3 Marks)**</u>

9. In a human pyramid in a circus, the entire weight of the balanced group is supported by the legs of a performer who is lying on his back (as shown in Fig.18.31). The combined mass of all the persons performing the act, and the tables, plaques, etc. involved in280 kg. The mass of the performer lying on his back at the bottom of the pyramid is 60 kg. Each thighbone (femur) of this performer has a length of 50 cm and an effective radius of 2.0 cm. Determine the amount by which each thighbone gets compressed under the extra load. Given : Young's modulus for bone = 9.4 x 10^9 N m^{-2}.

10. A cube of aluminium of each side 4 cm is subjected to a tangential (shearing) force. The top face of the cube is sheared through 0.012 cm with respecat to the bottom face. Find (i) shearing strain (ii) shearing stress and the shearing force. Given : G = 2.08 x 10^{11} dyne cm^{-2}.

11. Anvils made of single crystals of diamond with the shape as shown in the following figure, are used to investigate behavior of materials under very high pressures. Flat faces at the narrow end of the anvil have a diameter of 0.50 mm2,and the wide ends are subjected to a compressional force of 50,000 N. What is the pressure of the tip of the anvil.

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POLITICAL SCIENCE

FREEDOM

Short Answers: 1. Why do we need constraints to enjoy liberty?

2. What is liberalism? Analyze its influence on the Indian constitution.

3. What are self and other regarding actions?

4. Analyze the `Harm Principle'.

5. Differentiate between freedom for the individual and freedom for the nation.

6. What is negative liberty?

7. Who is Aung San Suu Kyi? What is her idea of freedom?

8. Discuss the characteristics of liberty?

9. Mention two ways of safeguarding freedom?

Long Answers

1. Discuss the relationship between liberty and authority?

2. What is Freedom of expression? What in your view would be a reasonable restriction on this freedom? Give examples.

3. Discuss Political, Economic and Moral liberty?

4. Explain the relationship between Political and Economic liberty?

EQUALITY

Short Answers

1. What is Civil Equality?

2. Define the term Equality?

3. What are the different forms of social inequality seen in India?

4. Mention any 4 constitutional safeguards that ensure socio-political equality to the masses.

5. Is Equality the same as Uniformity? 6. Define affirmative action.

Long Answers

1. What is Equality? Discuss the relationship between the two concepts of Liberty and Equality.

2. "It is argued by some that inequality is natural, while some feel it is created by society" which view do you support, give reasons.

3. Discuss the three dimensions of equality?

4. What are the element characteristics of Equality?

5. What steps has the Government taken to eradicate economic/social and gender inequality in India?

SOCIAL JUSTICE

Short Answers

1. Discuss John Rawls theory of justice?

2.. Explain the geometrical concept of justice.

3. Differentiate between liberalists' and Marxists' views of justice?

4. Define free market? Give one argument in its favor?

5. Is State Intervention a good option for newly independent countries give reasons for your answer. 6. How is recognition of special needs justice?

7. Give the characteristics of Justice?

8. Why is justice a blindfolded figure?

9. What is proportionate justice?

Long Answers

1. What is a Market Economy, giving any advantage of the same?

2. How does Rawls use the idea of a veil of ignorance to argue that fair and just distribution can be defended on rational grounds?

3. What is social justice? How far has it been implemented in India?

4. Write a short note on the following after researching:

1.Greek view of Justice

 2. Marxian view of Justice

3. Liberal view of Justice.

4. What does "giving each his/her due mean" ?

5.How has the meaning changed over time?

6. Briefly discuss the 3 principles of justice outlined in the chapter? Give examples

HISTORY

I.   Answer the following questions in about 30-40 words.   (2 marks)

Q.1   Why is the 6th century B.C. regarded as a major turning point in early Indian history?

Q.2   What were the two forms of government which prevailed in 6th century B.C. India?

Q.3   What was the role of the *Dhamma Mahamatta*?

Q.4   Who was Megasthenes? Name the book written by him.

Q.5   Explain briefly the term *janapada*.

Q.6   Name the three chiefdoms of the Deccan and South India during the Mauryan age.

Q.7   Who was Prabhavati Gupta?

Q.8   Mention any two strategies which were used to increase agricultural production from the 6ht century B.C.E.

Q.9   What role did guilds play in the 6th century B.C.?

Q.10   Give any two limitations of inscriptional evidence to reconstruct the past.

Q.11   Mention any two ways in which the inscriptions of land grants help us to understand rural society in ancient times.

Q.12   Mention any two principles of Asoka"s Dhamma.

Q.13   Mention any two features of the administration of the Mauryan Empire.

II.   Answer the following questions in about 100 words.   (4 marks)

Q.1   What are the different explanations offered by early writers and present day historians for the growth of Magadhan power?

Q.2   Analyse the various sources which have been used to reconstruct Mauryan history.

Q.3   Why were land grants given? Who were the recipients of these grants?

Q.4   Who was James Princep? How did his discovery give a new direction for studying early Indian history?

Q.5   In what ways did the Mauryan kings encourage trade and commerce?

Q.6   Discuss the advantages and problems of using inscriptions to reconstruct history.

Q.7   Explain the growth of Puranic Hinduism from 600 BCE to 600 CE. (2015)

Q.8   "There are limits to what epigraphy can reveal." Justify with suitable arguments. (SQP 2019)

Q.9   Describe the economic and social conditions of the people living in rural areas from c. 600 BCE to 600 CE. (2018)

III.   **Answer the following questions in about 500 words.**

Q1. Explain the system of land grants and trade from c.600 BCE to 600CE. (2016)

Q2. Explain any four sources to reconstruct the history of the Mauryas.

Examine the system of Mauryan administration. (2016)

IV.   **Passage Based Question**   **(8 marks)**

Q.1   Here is an excerpt from Megasthenes" Indica:

Of the great officers of state, some ..... superintend the rivers, measure the land, as is done in Egypt, and inspect the sluices by which water is let out from the main canals into their branches, so that everyone may have an equal supply of it. The same persons have charge also of the huntsmen, and are entrusted with the power of rewarding or punishing them according to their deserts. They collect the taxes, and superintend the occupations connected with land; as those of he woodcutters, the blacksmiths and the miners.

    a.   List the jobs done by the officers of the state. 2
    b.   Give any three features of Mauryan administration under Ashoka
    c.   To what extent does this extract help us to understand about the Mauryan Empire?   1
    d.   What are some of the other sources for studying this empire?   1

Q.2   This is an excerpt from the *Prayaga Prashasti*:

He was without an antagonist on earth; he, by the overflowing of eh multitude of (his) many qualities adorned by hundreds of good actions, has 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 suffering; (he is) resplendent and embodied kindness to mankind; (he is) equal to (the gods) Kubera (the god of wealth), Varuna (god of the ocean), Indra (the god of rains) and Yama (the god of death)....

    a.   What is a *prashati*? Who wrote the above *prashasti*?   2

    b.   Give any four qualities of the rulers as mentioned in this *prashasti*.   2

    c.   Why did rulers identify themselves with a variety of deities?   (2)

    d.   Name two other sources for studying about the Guptas.   1

V.   Map Question

Q.1   On a map of India, mark and name five major states which existed in the 4th century B.C.

Q.2   On a map of India, mark and name five places where Ashokan inscriptions have been found.

COMPUTER SCIENCE

General Instructions:
-   **Attempt all the questions**

Q1. Find the output of the following:
```
L1 = [10,9,3,4,5]
START = 1
SUM = 0
for  C in range(START,4):
    SUM = SUM + L1[C]
    SUM = SUM + L1[0]*10
    print(SUM)
```

Q2. Which is the correct form of declaration of dictionary?
Day={1:'ramit',2:'ayush',3:' arpan'}
Day=(1;' ramit',2;'ayush',3;' arpan')
Day=[1:' ramit',2:'ayush',3:' arpan']
      iv. Day={1' ramit',2'ayush',3'arpan']

Q3. Rewrite the following code in python after removing all syntax error(s). Underline each
   correction done in the code.
   x = int(input("Enter a number:"))
   if (ab(x)== x):
       print("Positive Number")
   else:
    x* = -1
    print("Number made positive,x)

Q4. How many times is the word "HELLO" printed in the following statement?
S = "Welcome All"
for ch in S[3:8]:
   print("HELLO")

Q5. What is the difference between break and continue statements?
Q6. Can tuple be used as a key to dictionary? State yes or no. Also, justify.
Q7. What is the difference between break and continue statements?
Q8. Consider the string str = "Open Source". Write statements in Python to implement the following:
To display the last 3 characters
To repeat the string 5 times

Q9. Write the output of the following:
L = [2, 4, 5, 6, 2, 3, 4, 4, 7]
count = L.count(4)
print(count)
L.sort( )
print(L)

Q10. What type of error will be produced when you type:
Result = "Hello" + 5
Name the error and state the error message.

Q11. Write a program to display the sum of even numbers up to number n entered by user.
Q12. What will be the output of the following program:
a, b = 5, 7
a, b = a + 2, b + a
print(a,b)

Q13. Find and write the output of the following python code :
Text = "Cbse@exam"
L = len(Text)
ntext = " "
for i in range (0,L) :
    if Text[i].isupper( ):
        ntext = ntext + Text[i].lower( )
    elif Text[i]. isalpha( ):
        ntext = ntext + Text[i].upper( )
   else :
       ntext = ntext + '@@'
print(ntext)

Q14. Write a program to obtain temperatures of 07 days and then display average temperature of the week.
Q15. Write a program that input a List 'L' of 6 elements, add 5 in all the odd values and 10 in all the even values of the list L. Also display the List.

Q16. Write a program to input number from the user and check whether a number is divisible by 5 and 11 or not.
Q17. Write a program that prints out the index of every 'i' in 'Mississippi'.
Q18. Convert the following while loop into for loop:
X = 15
while (X < 50) :
   print(X + 10)
    X += 5
Q19. In python we do not specify types, it is directly interpreted by the compiler, so consider the following operation to be performed.
>>>x = 17 ? 2
objective is to make sure x has a integer value, select all that apply
(python 3.xx)
a) x = 17 // 2   b) x = int(17 / 2)
c) x = 17 % 2   d) All of the mentioned

Q20. Differentiate between Lists and Tuples objects in Python language with example.

INFORMATICS PRACTICES

General Instructions :
  - **Attempt all the questions**

Q1. Find out the output:
    L = [100, 120, "Book",3, "Computer"]
    print(L[-2])
    print(L[-4:-1])

Q2. Write a python program to input 10 numbers in a list. Print the total and average of the given
    elements.

Q3. Write a python program to create a dictionary named Flowers add 5 flowers and its
 colours in a dictionary. Flower name as key and colour as value. Display colour of the
 flower as per the flower name given.

Q4. Write a python program to input a list of 10 integers. Count and print the total number of positive and negative numbers entered in the list.

Q5. Write a python program to input a string from the user. Count and print the number of words and vowels present in the given string.

Q6. What are variable naming conventions in Python?

Q7. Write a Python Program to input number N. Calculate and print the first 10 multiples of the given number N.

Q8. Write the output of the following:

```
P = [90,30,10,60]
K = ['A','B','C']
print (K)
P.pop( )
K.append(90)
print(P,K)
```

Q9. Differentiate between append ( ) and extend( ) functions.

Q10. What is the output produced by the following code:

```
d1 = {1:10,2:20,3:30,4:40,5:50}
del d1[3]
print(d1)
```

Q11. What is the error in following code. Rewrite the correct code and underline the correction.

```
30 = T
For I in range(7)
print(I + T)
T = + 4
```

Q12. Write the corresponding Python assignment statement.
   a) Assign True to a variable Check and 10 to a variable M .
   b) Assign Square as the square of M variable.

Q13. Start with the M[10,19,80]. Do the following using list function:
   -Add element 40 in the list M.

Q14. Python Command to insert single line comment.

Q15. Divya wants to store "XIA", Help her to choose the correct data type in Python.

Q16. Python is a/an ……………………..language.

Q17. Write a program to input a string count and print the total number of words presents in the given string.

Q18. Write a program to input a list of numbers. Print the sum of all numbers divisible by 2 and 6.

Q19, Write a program to input a dictionary of n elements. Each element consist of month name as key and number of days as value.

Q20. Write a program to input a list of numbers. Print the list in reverse order.

CHAPTER - 21

DEVELOPMENT COMMUNICATION AND JOURNALISM

Objective questions -

1.   The full form of ICT is_____

a.   Insight challenge Technology

b.   Intelligent Communication Technology

c.   Information and Communication technologies

d.   Informative communicative Technology

2.   The aspects covered under ICTs are_____

a.   Role play

b.   Computer hardware and software

c.   Radio

d.   Literature

3.   A brief 10-60 second message that is broadcast between programmes is called as_____.

a.   Public Social Announcement

b.   Public Service Announcement

c.   People Service Approach

d.   Public Service Announcement

4.   ICTs are not providing better lives to poor by_____

a.   Providing door to door services

b.   Setting up of tele centres

c.	Opening major companies

d.	By giving cash

5.	The full form of SEWA is_____

a.	Self Employed Women's Association

b.	Saving and Engineering Welfare Association

c.	Socially Empowered Women's Association

d.	Social Economic Women's Association

6.	The aim of SEWA is to_____

a.	Earn money and profit

b.	Empower businesses

c.	Provide self-employment and self-reliance

d.	Improve formal sector

7.	In current world_____ is the most common ICT tool used.

a.	Television

b.	Mobile

c.	Radio

d.	Fax machine

8.	In the recent times, the focus of Development journalist has shifted to _____.

a.	Fights

b.	War

c.	Struggles

d.   Developmental activities

9.   Newspapers in local languages does not help in_____

a.   Connecting people

b.   Covering local themes

c.   Understanding local people's problems

d.   Bridging distance at macro level

10.   An enterprising reporter gives detailed stories of village Chhatera's people for bringing various_____

a.   Leaders for political campaign

b.   Services and benefits

c.   Tourist to the village

d.   Producers for shooting film

11.   Use of _____ ensures attention and interest in campaigns.

a.   Pamphlets

b.   Dramatics

c.   Banners

d.   Lectures

12.   A conducive environment for adoption of practices is created by_____.

a.   Watching television

b.   Listening to Radio

c.   Campaigning

d.   Reading newspaper

13. Rahul has joined media house where he needs _____ to deliver the entertaining programs smoothly.

a. Presentation skill

b. Creative skills

c. Cognitive skills

d. Computer skill

14. Sumi is running a campaign 'Girl Safety'. For effective communication, she has to develop a video for which knowledge of camera techniques and video production is required. This kind of knowledge comes under _____.

a. Technical skills

b. Creative skills

c. Cognitive skills

d. Editing skills

15. To understand people's views on issues affecting their lives and find workable solutions for them, the skill which is most required among the professionals of DCJ s_____.

a. Questioning ability

b. Interpersonal skills

c. Intra-personal skills

d. Leadership skills

16. One of your friends wants to contribute in the campaign of RRE (Red Ribbon Express) by puppet show. _____ will not be required by him.

a. Command on the language

b. Leadership skills

c. Awareness of current issues

d.   Ability of being people centric

17.   _____ is not required among DCJ professionals.

a.   Ability to interact in local language

b.   Interpersonal skills to develop rapport

c.   Intra personal skills

d.   Good listening skills

18.   _____ combination is most suitable for a career in DCJ.

a.   Speaking and listening skills

b.   Technical and computer skills

c.   Editing and marketing skills

d.   Journalistic and presentation skills

19.   RRE (Red Ribbon Express) was a nationwide campaign for generating awareness about –

a.   HIV/AIDS

b.   Tuberculosis

c.   Safe child birth

d.   Prevention of smoking

20. Development means bringing _____changes in the society.

a.   Positive

b.   Alternative

c.   All types

d.   Few

Fill in the blanks

1.   Press is called the fourth pillar of democracy as it supports right to _____and _____.

2.   _____is the foundation of democracy.

3.   DCJ continues to evolve due to its conceptual_____ . _____is a social activity where various forms of media are used to communicate feelings of community.

4.   The term development communication was first coined by _____in the year_____.

5.   ICT as an effective tool helps in saving _____ and _____

6.   SARI stands for _____

7.   Mobile phone usage has enabled and facilitated the expansion of _____ and _____

8.   _____ and _____ are different communication methods used during campaigns.

   10 The motive of a campaign is to create_____ about a specific message.

   11 . In development communication journalism, the passion for _____ are added advantages among the development journalists.

12. _____ is used to meet the demand for an interactive satellite based distance education system in India.

13 The local radios with interactive format in which feedback can be received is called _____ .

14 _____ is a mobile medium of communication i.e. it can move with the listener at work or rest

15._____ is a combination of the usage of different communication methods and materials about a theme for a predefined period of time.

16   _____ is the 'art and science of human communication'.

17   _____is an umbrella term that includes computer hardware and software.

18. A direct approach to the use of ICT for improving the lives of poor has been through setting up of _____

19 Communication creates a link between _____and _____

20 _____ is called fourth pillar of democracy.

21 ._____&_____ are given licence to set up a local community radio in our country.

22 The bulk of news appearing in the _____ and _____dailies is urban in its approach.

23 Campaign creates _____ and provides _____.

24 Delhi University FM and Vanasthali VidyaPeeth are example of _____.

25. PSA provide_____ or _____.

Q Write full form of the following-

1. RRE –

2. SEWA -

3. ITC -

4. NACO --

5. NYKS –

6. UNICEF –

7. UNAIDS -

8. EDUSAT –

9. SARI –

10. DCJ -

11. PSA –

12. HIV –

Q 1. Define Development

Q 2. Define Development journalism .

Q3 Define Development communication

Q 4 Define Campaign

Care and maintenance of fabrics in institutions

One Mark

Q.1 Two aspects of care and maintenance of fabrics in institutions are keeping them free from (a)_____ and retaining and refreshing the (b)_____.

Q.2 Care and maintenance requirements of different fabrics depends upon

      i.   Fibre content and type of yarn

      ii.   Fabric construction

      iii.   Finishes and purpose for which they are used

      iv.   All of the above

Q.3 Which type of washing-machines have the type of setting

a) Fully automatic	i. 50% or more work done by operator
b) Semi-automatic	ii. These machines have single time settings of each control
c) Manually operated	iii. These machines require intervention of operators at frequent intervals

Q.5 Which method of water extraction provides best results in washing machines?

    a)   Spinning

    b)   Bottom-drain

    c)   Combination of spinning and bottom-drain

    d)   None of the above

Q.6 _____ rpm is the optimum speed of spinning in the washing machine.

Q.7 Principle of washing machines is to keep _____ in wash solution to carry away the dirt.

Q.8 Agitation and pulsation methods are used in -----_____ machines and tumbling are done in _____ machines.

Q.9 Air at high temperature is circulated slowly in a drier than relative humidity of exhausted air is _____.

Q10. In institutions, usually washing machines have _____ kg capacity per load.

2 and 3 marks

1. What are the basic characteristics of the fabrics required by the institutions like -hotels and hospitals? Any two.

2. Why is care and maintenance of the fabrics required?
3. What is the laundry process?
4. Define - Laundry.
5. Why is laundry important in hotels?

6. What is the outcome of laundering?

7. Write the factors affecting care and maintenance of the fabrics.

8. Name the main types of equipment used for care and maintenance of the fabrics.

9. Differentiate between - agitation and pulsation .

10. Predict how the speed of the tub of the washing machine is related to the water extraction or spinning?

11. After washing the delicate curtains of a reputed hotel,, Reema is confused a little bit for choosing the drying equipment. Discuss the type of circulation system she should choose for the same.

12. Your friend's father was working in the ironing department of a commercial laundry. Summarize the points he had worked upon during earlier times in the ironing department.

13.Explain to your friend about the requirements of the field of care and maintenance of the fabrics in institutions.

PHYSICAL EDUCATION

M.M: 70 TIME: 3 Hrs

General Instructions:

(i) The question paper consists of 30 questions and all are compulsory • Question 1-12 carry 01 mark each and are Multiple Choice Questions • Questions 13-16 carry 02 marks each and shall not exceed 40-60 words • Questions 17-26 carry 03 marks each and shall not exceed 80 -100 words • Questions 27 - 30 carry 05 marks each and shall not exceed 150-200 words

1. The first Modern Olympic games took place in

   a) New Delhi

   b) Rome

   c) Tokyo

   d) Athenes

2. Inclusive Education aims to –

   a) Increase Self Esteem

   b) Create Better Social Skills

   c) Enhance Academic Performance

   d) All of the above

3. Indian Super League is associated with which Sport?

   a) Cricket
   b) Football

   c) Kho kho

   d) Hockey

4. Sarcopenia means

   a) Low Bone Density

   b) Too much body fat

   c) Decreased Muscle mass

   d) Low blood Pressure

5. Given below are the two statements labeled (A) and Reason (R)

   (A): Assertion- Muscles are soft tissues made of cells containing actin and myosin

   Proteins.

(R): Reason – Based on stability, equilibrium can be stable, unstable or neutral. In the context of above two statements, which of the following is correct? a) Both (A) & (R) are true and (R) is the correct explanation of (A)

b) Both (A) & (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.

6. In treating a fresh Sports injury we need to apply –

   a) Ice

   b) Heat

   c) Oil

   d) Al of the above

7. Repetition Maximum Testing I done for

   a) Muscle Endurance

   b) Muscle Flexibility

   c) Muscle Strength

   d) None of the above

   8. Waist Hip Ratio is used to assess being overweight for people taller than how many feet?

2

   a) 5

   b) 6

   c) 4

   d) 2

9. The muscles which are under our conscious control are –

   a) Cardiac Muscles

   b) Smooth Muscles

   c) Skeletal Muscles

   d) All of the above

10. Thumb is a type of _____joint.

   a) Saddle Joint

   b) Hinge Joint

   c) Pivot Joint

d) Gliding Joint

11. Psychoanalysis was introduced by –

    a) Watson

    b) Sigmund Freud

    c) Avicenna

    d) Woodsworth

12. Democratic method of coaching is –

    a) Laissez faire

    b) Coach Centric

    c) Athlete Centric

    d) Dictatorial

13. Identify the Yoga Pose given in the images-
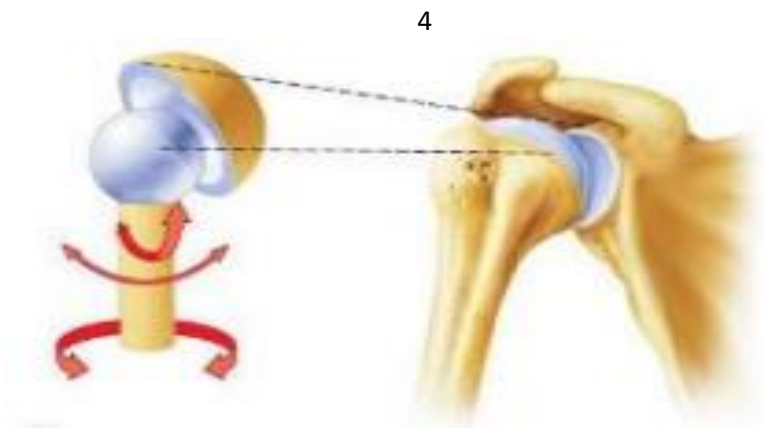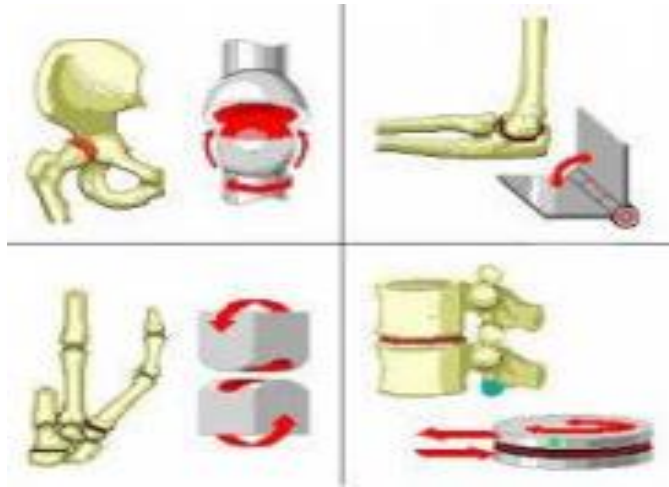
3

A B

C D

14. Identify the type of joint shown in the images and also mention where can we find them in human body?
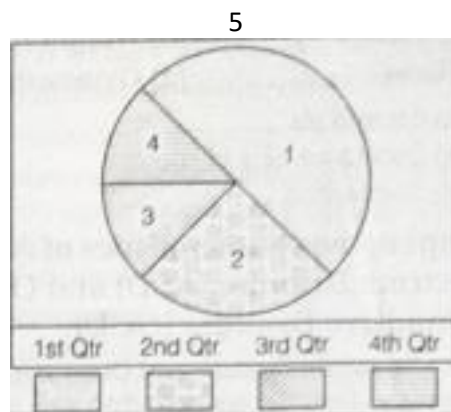
4

A

B

15. State the benefits and Contradictions of Naukasana.

16. How does Sports Psychology benefit a Sports Person? Support your answer with a flowchart.

17. Given below is the BMI Data of a School's health check up- 3

5

18.5-24.9 <18.5 25-29.9 30-34.9

On the basis of above data answer the following questions:

(i) In which category does the major student population falls into? (a) Obese (b) Normal weight (c) Under weight (d) Over weight (ii) The school has to develop an activity based program to decrease the number of (a) Normal weight (b) Under weight (c) Over weight (d) Obese (iii) Which category is related to under weight?

(a) 1ˢᵗ Qtr (b) 2ⁿᵈ Otr (c) 3ʳᵈ Otr (d) 4ᵗʰ Otr

18. Khelo India is a National Programme for the development of Sports. It is an initiative of the Government of India to strengthen the Sports Ecosystem by encouraging mass participation and promotion of excellence.

a) What is the purpose of Khelo India

i) Only about winning medals

6

ii) Mass Movement for playing more

iii) Motivate Players to win

iv) To prepare for Olympics

b) Under Khelo India, A Pan India Sports Scholarship scheme would cover _____ young Athletes.

i) 10

ii) 100

iii) 1000

iv) 2000

19. State the Olympic motto in three latin words and explain in short about Olympic flag and its rings. Also tell where is torch of the modern Olympic Games originally lit before it is brought to the host city?

20. Classify the human Physical Types (Somatotype) as classified by W H Sheldon in detail.

21. What do you understand by the term BMI? Why is it used? Calculate the BMI of a Person with Weight 64 Kg and Height 128 Cms.

22. Elucidate the role of Speech Therapist in the training of divyang.

23. List the parameters on the basis of which, WADA Code declare a drug illegal. Also Explain how Dope testing is done?

24. It is important to know about the development of Children and track their growth at all ages. Explain the three Principles of growth and development in detail.

25. Differentiate between Warming Up and Limbering down.

26. Define the following terms

    a) Technique
    b) Skill
    c) Style

27. Adolescence is the age of change. Explain Adolescent problems and their management in detail.

28. What do you understand by Cardiorespiratory Endurance? Name the field tests of Cardiorespiratory fitness and explain any two tests in detail.

OR

What do you understand by Muscular Endurance? Name the tests to assess muscular endurance and explain any two tests in detail.

29. Yogic Kriyas are cleansing techniques for various internal organs of the body. Name any four major yogic kriyas and explain any two in detail.

OR

Differentiate between Trekking, Mountaineering and rock Climbing.

30. What is River Rafting? More skilled raft persons do the higher class of rapids. State the factors on which rapids are classified. Also Classify rapids as per the International rating system.

OR

What are Air Sports? Explain the objectives of undertaking these Adventure Sports in detail.

ASSIGNMENT : HUMAN MEMORY

Learning Outcomes

After completing the chapter the learner will be able to explain the nature of memory and distinguish different types of memory, and describe the nature and causes of forgetting and the strategies for improving memory.

1. Describe the stage model of memory and the levels of processing model in the form of a flowchart.

2. You can remember the entire periodic table. Which of your long term memory stores would this be in?

3. When you learn something, the headings and subheadings are linked to the study material. It is easier to recall the headings and when you do you remember the rest of the content. These headings that facilitate the recalling process is called

4. Memory is a constructive process. Discuss.
5. Write short notes on the following a) flashbulb memories b) autobiographical memory 6.

Distinguish between:

a) declarative and procedural memory b) episodic and semantic memory 7. Elaborate on

the nature and causes of forgetting. How can memory be enhanced?

ECONOMICS

PRODUCTION ,COST AND REVENUE

SUBMISSION: VERY SHORT ANSWER TYPE QUESTIONS:

1. In short period there is no change in _____ factors.

2. Increase in supply due to causes other than change in price is termed as _____ supply.

3. In case _____ the supply is inelastic.

    i.   Of decreasing marginal cost

    ii.   Of increasing margianlcost

    iii. Of marginal cost remaining constant

    iv. The law of increasing return is in operation

4. If marginal product is decreasing total product will increase at the _____ rate.

    a. Short period

    b. Long period

    c. Intermediate period

    d. Market period

5. In the _____ change in all factors of production is possible

    a. Short period b. Long period   c. Intermediate period   d. Market period

6. Law of supply is _____
    a. Quantiative b. Qualitative   c. Both   d.   Neither of the two

7. Supply curve presents_____

    a. Price of the commodity

    b. Supply of the commodity

    c. Relationship between price and supply of the commodity

    d. Demand of the commodity

8. Product obtained from the additional factor of production is termed as _____

      a. Marginal product   b. Total product

    c. Average product   d. Annual product

9. If marginal product goes on increasing, it should be understood tat law of _____ is

applying.

    a. Increasing cost   b. Decreasing cost

     c.Constant cost   d. None

10. In case, law of constant return is applicable _____

    a.   Marginal product will be more than average product

    b.   Marginal product will be lesser than average product

    c.   Marginal and average product will be equal

    d.   Total marginal and average product will be equal

SHORT ANSWER TYPE QUESTIONS (3 & 4 MARKS)

1. Complete the following table and identify the 3 phases of the law of variation proportion

variation.

Unit of Variation	TPP	APP	MPP
1	10		
2	22		
3	30		
4	30		
5	25		

3. Complete the following table assuming that the law of diminishing returns is

operating throughout.

Variation Input	MPP
1	10
2	
3	

4.   Find out (a) explicit cost and (b) implicit cost from the following:

                                                               (Rs. Thousand)

(i)	Investment in fixed assets	2000
( )	Borrowings at12% interest per annum.	1500
(i)	Wages paid during the year	120
(ii)	Annual rental value of the owner's factory building	180
(iii)	Annual depreciation	100
(iv)	Estimated annual value of the management services	

State the behavior of Total Variable Cost. Draw Total Variable Cost, Total Cost and Total Fixed

Cost Curves in a single diagram   .

6.   Explain the conditions of equilibrium of a firm based on marginal cost and marginal

revenue. Use diagram.

7. Price elasticity of supply for a commodity is 5. When price of the commodity rises from Rs. 9
Per unit to Rs. 10 per unit, supply rises by 25 units. Calculate quantity supplied at Rs. 9

per unit.

8.   Explain the difference between MC and AVC. Why should AVC always look like

MC? Why is MC the same when computed from VC as from TC?

9.   Why is MC curve in the short run U shape?

10.   Why is AC curve in the short run U shaped?

11.   How does the following effect the supply curve of a firm.

(a) Technological purpose., Imposition of a unit tax.

(b) Increasing in input price., Increasing in number of firms.

12.   Is it correct to say that profit of a producer under perfect competition is maximum at

a level at which P= MC, but MC is decreasing?

12. At a particular level of output, a producer finds that MC > MR. What will a producer

do to maximize his profit?

13.   TC is not the sum total of marginal costs. TC ≠ Σ MC. Why?

15   Does MC include fixed cost? Why?

16. What change in total revenue will result in

   (a) Decrease in marginal revenue.

   (b) An increase in marginal revenue
   17. What change should take place in total revenue so that

   a.Marginal revenue is positive. (b) Marginal revenue is falling.

18. Given below is the cost schedule of a firm. Its total fixed cost is Rs. 100.

Calculate average variable cost and marginal cost at each given level of

output.

Output (units)	1	2	3	4
Total cost (Rs.)	350	450	610	820

BUSINESS STUDIES

1. Prepare the project work on the topic allotted-

Visit to a Departmental store

The students are required to observe the following:

a) Different departments and their lay out.

b) Nature of products offered for sale.

c) Display of fresh arrivals.

d) Promotional campaigns.

e) Spaces and advertisements.

f) Assistance by Sales Personnel.

g) Billing counter at store – Cash, Credit Card/ Debit Card, swipe facility. Added

   attractions and facilities at the counter.

h) Additional facilities offered to customers

i) Any other relevant aspect.

Complete assignment of chapter Internal Trade and small business

Python Coding

1. Write a program to check whether the given character is an uppercase letter or lowercase letter or a digit or a special character.
2. An electric power distribution company charges its domestic consumers as follows:

Consumption Units	Rate of Charge
0-100	Rs. 1 per unit
101-300	Rs. 100 plus Rs. 1.25 per unit in excess of 100
301-500	Rs. 350 plus Rs. 1.50 per unit in excess of 300
500 and above	Rs. 650 plus Rs. 1.75 per unit in excess of 500

Write a program that read the customer number & power consumed and prints the amount to be paid by the customer. Note that output should be well formatted.

3. Write a program to create a list of students' marks with user-defined values and find the maximum.
4. Write a program to create a list of numbers and swap the content with the next value divisible by 5.
   For example: list = [4,25,31,7,35,44,55]
   Output: [25,4,31,35,7,55,44]
5. Write a program to count the frequency of every element in a given list.
6. Write a program to represent the data on the ratings of mobile games on bar chart. The sample data is given as: Pubg, FreeFire, MineCraft, GTA-V, Call of duty, FIFA 22. The rating for each game is as: 4.5,4.8,4.7,4.6,4.1,4.3.
7. Consider the following data of a clothes store and plot the data on the line chart:

Month	Jeans	T-Shirts	Shirts
March	1500	4400	6500
April	3500	4500	5000
May	6500	5500	5800
June	6700	6000	6300
July	6000	5600	6200
August	6800	6300	4500

Customize the chart as you wish.

8. Observe the given data for monthly sales of one of the salesmen for 6 months. Plot them on the line chart.

Month	January	February	March	April	May	June
Sales	2500	2100	1700	3500	3000	3800

Apply the following customizations to the chart:

- Give the title for the chart – "Sales Stats"
- Use the "Month" label for X-Axis and "Sales" for Y-Axis.
- Display legends.
- Use dashed lines with the width 5 point.
- Use red color for the line.
- Use dot marker with blue edge color and black fill color.

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