

SHREE VASISHTHA VIDHYALAYA

Diwali Assignment (2024 25)

STD-12 Commerce

Sr. No.	Subject	Topics
1.	English	<p><b>Note: Write in project paper and submit in separate file with Name, Class, Roll No &amp; Subject.</b></p> <p><b>Literature</b></p> <ol style="list-style-type: none"><li>Our language is part of our culture and we are proud of it. Describe how regretful M. Hamel and the village elders are for having neglected their native language, French.</li><li>'Lost Spring' explains the grinding poverty and traditions that condemn thousands of people to a life of abject poverty. Do you agree? Why/Why not?</li><li>Desire, determination and diligence lead to success. Explain the value of these qualities in the light of Douglas' experience in "Deep Water".</li><li>Our scriptures tell us that determination and perseverance are cardinal virtues of a good human being. Raj Kumar Shukla succeeded in taking Gandhiji to Champaran with the help of these two. How can young students today use these two qualities to make successful careers for themselves?</li><li>What political significance does Gemini Studios' invitation to Moral Re-Armament army and Stephen Spender show?</li><li>Science has an aura of magic. Do you agree? Why? Why not? (Third Level)</li><li>The king was callous as a ruler and behaved whimsically. Thus, the people in his kingdom suffered while he fulfilled his desire of killing a hundred tigers. Do you find leaders or politicians in the world today being indifferent to the needs of the people and behaving in the same way? Comment with relevant examples.</li><li>Why does Tishani Doshi call her trip to Antarctica a "Journey to the End of the Earth"? What experience did she have during this expedition?</li><li>What conflicting ideas arise in Dr. Sadao's mind after he has brought the wounded American soldier home? How is the conflict resolved?</li><li>Do you think Derry's chance meeting with Mr Lamb would prove meaningful to him? Answer giving valid reasons.</li></ol>
		<p><b>Writing</b></p> <ol style="list-style-type: none"><li>You are Secretary of the History Club of Vidya Mandir School. Draft a notice in not more than 50 words informing students of a proposed visit to some important historical sites in your city.</li><li>You are Srinivas / Srinidhi of D.P. Public School, Nagpur. As Student Editor of your school magazine, draft notice in not more than 50 words for your school notice board inviting article and sketches from students of all classes.</li><li>You are the Principal of Zodiac Senior Secondary School, Ooty. The school has completed 25 years of its meritorious services to the society. The Silver Jubilee Celebrations are to be held on Sunday, the 26<sup>th</sup> October, 20XX. Mrs M. Kamath, the founder Principal will preside. Draft a suitable invitation to be sent to important dignitaries of the city and the parents of students.</li><li>Highlight the importance of proper garbage disposal with an aim to create awareness among the city residents. Write a letter regarding the same to the editor of a local daily Hindustan Times. You are Rubal of Shakti Nagar, Delhi.</li><li>Recent floods in many metropolitan cities of the country during the monsoon season laid bare the hollowness of the claims of the civic authorities of their preparedness. The poor had to bear the brunt of the problem while no one was ever held</li></ol>



		accountable. Write an article in 150 – 200 words on the common man’s woes during the monsoons and the need for accountability of the officials concerned. You are Sumit / Smita Verma.  6. India is a land of diversity. One way in which it makes us feel proud of it is the number of festivals we enjoy. Write an article in 150-200 words on ‘Festivals of India’. You are Karuna / Karan.
2.	Accountancy	1. Complete the assigned Specific Project as per CBSE guidelines on the Topic “Tools of analysis of Financial Statements”. 2. Solve the short sums and Comprehensive Numericals as per <b>the worksheet in the separate sheets and submit them in a file with your Name, Class and Roll Number.</b>
3.	Business Studies	1. <b>Prepare an investigatory project as per CBSE guidelines on any one of the following topics.</b> 1. Business environment 2. Principles of management 3. Stock exchange 4. Marketing management 2. <b>Solve the assigned worksheet in separate sheets and submit in a file with your Name, Class and Roll Number.</b>
4.	Economics	Solve the assigned worksheet in separate sheet and submit in a file with Name, Class, Roll No & Subject. (PDF of the worksheet will be sent to you by the concern subject teacher.)
5.	Informatics Practices	1) Solve the Model Test Paper-Appendix-D 2) Solve Practice Paper - Appendix-E <b>From IP - Text Book – Page number -A.27 (Appendix-D) A.37 (Appendix-E)</b> <b>Write your assignment in the IP Notebook.</b>
6.	Physical Education	<b>Answer all the questions given in the pdf of question bank of following units in your PE Notebook.</b> Unit - 1: Management of Sporting Events, Unit - 2: Children and Women in Sports, Unit - 3: Yoga as Preventive Measure for Lifestyle Disease, Unit - 4: Physical Education and Sports for Children with Special Needs, Unit - 5: Sports and Nutrition
7.	Applied Math	• Write the solutions of the questions given in the worksheet in separate answer sheets and file them. • Complete your Activity book journal. (As per the shared list of 11 activities.)

**NOTE:**

- ❖ Students need to complete the subject specific assignments as per the instructed norms.
- ❖ Detailed guidelines are explained in the classes.
- ❖ **Worksheets and Sample Question Papers will be shared on Class WhatsApp Broadcast group and School App. You are advised to take the printout of the same and use the hard copies for doing the homework.**
- ❖ **Submission date for all assignments is 18<sup>th</sup> November, 2024, Monday.**
- ❖ These assignments are a part of the Internal Assessments and will be marked for the same. It is mandatory for the students to complete the assignments and submit it to the concerned **teachers**.
- ❖ Students are requested to get their doubts regarding the assignments during regular classes.

*May the divine light of Diwali spreads into your life and bring peace, prosperity, happiness,  
good health and grand success.*





# DIWALI WORKSHEET: 2024-25

## STD – XII COMMERCE

### ACCOUNTANCY (054)

- Weighted average method of calculating goodwill is used when:
  - profits are not equal
  - profits are fluctuating
  - profit shows trend
  - none of the above.
- Name any two factors affecting goodwill of the firm.
- Which of the following is incorrect?
  - Old Ratio = New Ratio + Sacrifice Ratio
  - Old Ratio = New ratio – acquired share
  - Old Ratio = Sacrifice Ratio - New Ratio
  - Old ratio = Surrendered share + New Ratio
- Ram, Shyam and Mohan are partners sharing profits and losses in the ratio of 6:3:1. They decided to share future profits in the ratio of 3:2:1. At the end of the year their balance sheet shows the following:

Profit and loss (Dr.)	40,000 Rs.
Accumulated Reserves	70,000 Rs.
Deferred revenue expenditure	30,000 Rs.
Contingency reserve	10,000 Rs.
Loss on revaluation	6,000 Rs.

You are required to pass necessary journal entry/entries without affecting their balances.

- On 1-4-2010, Sahil and Charu entered into partnership for sharing profits in the ratio of 4:3. They admitted Tanu as a new partner on 1-04-2012 for  $\frac{1}{5}$ <sup>th</sup> share which she acquired equally from Sahil and Charu. Partners earned profits at a higher rate than the normal rate of return for the year ended 31-03-2013. Therefore they decided to expand their business. To meet the requirements of additional capital they admitted Punit as a new partner on 1-04-2013 for  $\frac{1}{7}$ <sup>th</sup> share in profits which he acquired from Sahil and Charu in 7:3 ratio.

**Calculate:**

- New profit sharing ratio for Sahil, Charu and Tanu for the year ended 2012-13
  - New profit sharing ratio for Sahil, Charu, Tanu and Punit on Punit's admission.
- A firm has earned a profit of Rs.5,00,000 during the current year. The net assets of business are Rs.50,00,000 and liabilities are Rs.15,00,000. Normal rate of return is 10%.

You are required to calculate value of goodwill by capitalisation of average profit.

- A and B are partners in a firm. They admit C as a new partner for  $\frac{1}{4}$ <sup>th</sup> share in the profits of the firm. C brings Rs.2,00,000 as his share of capital. Value of the assets and outside liabilities were Rs.5,40,000 and Rs.1,00,000 respectively on that date.

Pass journal entry to record goodwill on the admission of C. Show your workings clearly.

- Ram, Ramesh and Raju are partners in a firm, sharing profits and losses in the ratio of 5:3:2. Ranveer is admitted at the share of  $\frac{1}{5}$ <sup>th</sup> and on the same date, Raju retires. The new Profit-sharing ratio between Ram and Ramesh is agreed on 2:1. All assets are revalued at Rs.11,25,000 to Rs.13,50,000.
  - Calculate new profit-sharing ratio.
  - Pass necessary journal entry.

- Suraj, Amir and Sur are partners in a firm, their profit and loss sharing ratio is 2:1:2. The following are the book values and revised values at the end of the year:

Particulars	Book values	Revised Values
Goodwill	0	50,000
Stock	90,000	20% less than book value
Outstanding wages	0	3,500
Building	1,50,000	2,50,000
Provision for Doubtful debts	1,000	Increased by 1,000 than book value
Furniture	15,000	10% less than book value

They decided to keep their future profit-sharing ratio as 2:2:1.

You are required to pass single adjustment entry without affecting their balances.



10. The profits earned by a firm during last 5 years are as follows:

Years	Profits/loss
I	Rs.10,000 (include personal expenses of Rs.1,000)
II	(Rs.2,000) loss –(includes abnormal loss of Rs.4,000)
III	Rs. 15,000 – (repair of plant was ignored Rs.5,000)
IV	Rs.24,000
V	Rs.10,000 - (includes abnormal gain of Rs.5,000)

The normal rate of return is 10% and assets of business are Rs.1,00,000 and liabilities are Rs.20,000. You are required to calculate goodwill on the basis of 3.5 years of Purchases.

11. Nishu and Vishu are partners sharing profits in the ratio of 3:2. Their balance sheet as at 31<sup>st</sup> March 2009 was as follows:

Liabilities	Rs	Asset	Rs
Creditors	66,000	Cash at bank	87,000
General reserve	10,000	Debtors	42,000
Investment fluctuation fund	4,000	Less provision for D.D	7,000
Nishu capital		Investments (market price Rs.19,000)	21,000
Vishu capital	1,19,000	Building	98,000
	1,12,000	Plant and machinery	70,000
	3,11,000		3,11,000

Ishu was admitted on that date for 1/6<sup>th</sup> share in the following terms:

1. Ishu will bring Rs.56,000 as his share of capital.
2. Goodwill of the firm is valued at Rs.84,000 and Ishu will bring his share of goodwill in cash.
3. Plant and machinery be appreciated by 20%.
4. All debtors are good.
5. There is a liability of Rs.9,800 included in sundry creditors that is not likely to arise.
6. Capitals of Nishu and Vishu will be adjusted on the basis of Ishu’s capital and any excess or deficiency will be made by withdrawing or bringing in cash by the concerned partners.

Prepare revaluation account, partner’s accounts and balance sheet of the new firm.

12. Mohan and Mahesh were partners in a firm sharing profits in the ratio of 3:2. On 1<sup>st</sup> April 2012, they admitted Nusrat as a partner in the firm. The balance sheet of Mohan and Mahesh as on that date was as follows:

Liabilities	Rs.	Assets	Rs.
Creditors	2,10,000	Cash	1,40,000
Workmen compensation fund	2,50,000	Debtors	1,60,000
General reserve	1,60,000	Stock	1,20,000
Mohan capital	1,00,000	Machinery	1,00,000
Mahesh capital	80,000	Building	2,80,000
	8,00,000		8,00,000

It was agreed that

1. Value of building and stock be appreciated to Rs.3,80,000 and Rs.1,60,000 respectively.
2. The liabilities of workmen’s compensation fund was determined at Rs.2,30,000.
3. Nusrat brought in her share of goodwill Rs.1,00,000 in cash.
4. Nusrat was to bring further cash as would make her capital equal to 20% of the combined capital of Mohan and Mahesh after above revaluation and adjustments are carried out.
5. The future profit sharing ratio will be Mohan 2/5<sup>th</sup>, Mahesh 2/5<sup>th</sup> and Nusrat 1/5<sup>th</sup>.

Prepare revaluation account, partner’s accounts and balance sheet of the new firm.

## BUSINESS STUDIES (054)

### Identify The Characteristics

1. Directing is performed by all managers at all levels of the organization.
2. Planning, Organizing, staffing and controlling functions prepares a base for action, directing start it
3. Directing is an ongoing process. It takes place throughout the lifetime of an organization



4. Every manager can direct his immediate subordinate and take instruction from his immediate boss.

### **Identify The Importance**

5. Directing helps to achieve balance among various groups, activities and the department
6. A good leader can always identify the potential of his employees and motivate them to utilize their full potential.
7. People have a tendency to resist changes in the organization but effective directing develop required cooperation in introducing changes in the organization
8. Good manger convinces the employees working under him that individual efforts and team efforts will lead to achievement of organizational goals.

### **Identify The Needs Highlighted in The Statement**

9. Informal groups are also formed to satisfy this need.
10. This need is satisfied when one becomes what he is capable of becoming.
11. Status, power, achievements, prestige etc. help to satisfy the need.
12. These needs include need for love, affection, friendship, companionship etc.
13. Motivator like pension plan, life Insurance, job security etc. help to satisfy these needs.

### **Identify The Types of Incentives**

14. It means involving employees in decision making of the issues related to them.
15. Benefits like car allowance, housing, medical are offered to an employee.
16. Appropriate skill development programme, and sound promotion policy will help employees to achieve promotion.
17. It indicates the characteristics which describe an organization and distinguish one organization from the other.
18. Displaying on the notice board about the achievement of employee.
19. The negative aspects of this incentives is that when the people are assured that their job is secured they may become complacent and lazy.

### **Elements of Communication Process**

20. A division X' sent an encoded message to division Y' through internet. What is the role of internet here?
21. Tarun is making gestures so that he can send a message to Arman. What is Tarun doing here?
22. Sagar picks his phone and finds a message on it. He reads message carefully. What is the role of sagar here?

## **ECONOMICS (030)**

### **MACROECONOMICS**

- Q1. Read the following statements carefully: (1)**

**Statement 1:** Ex-post savings and Ex-post investments are equal at all levels of income.

**Statement 2:** Under the effective demand principle, the equilibrium output is equal to ex-ante Aggregate Demand (AD).

In the light of the given statements, choose the correct alternative from the following:

- (a) Statement 1 is true and statement 2 is false
- (b) Statement 1 is false and statement 2 is true
- (c) Both statements 1 and 2 are true
- (d) Both statements 1 and 2 are false

- Q2. Identify, which of the following is not considered as 'Normal Resident' of India? (1)**

- (a) An Indian citizen working in USA embassy located at New Delhi
- (b) An Indian officials working in Indian embassy in China
- (c) An Indian diplomats visiting Canada for a summit
- (d) An Indian working in an American Company located in New York for a period of more than 1 year

- Q3. In a hypothetical economy, if entire additional income is consumed, the value of investment multiplier would be \_\_\_\_\_. (Fill up the blank with correct alternative) (1)**



- (a) One (1) (b) Zero (0)  
(c) Between zero (0) and one (1) (d) Infinity ( $\infty$ )

**Q4.** If in an economy the Balance of Trade is showing a deficit of ₹200 crore and the value of import is ₹900 crore, then the value of exports would be ₹\_\_\_\_\_ crore. (Fill up the blank with correct alternative) **(1)**

- (a) 200 (b) 1100 (c) 700 (d) 900

**Q5.** “Mr. Sahotra borrowed funds from bank for purchasing a new house.” From the given statement, identify the indicated function of money. **(1)**

- (a) Medium of exchange (b) Store of value  
(c) Unit of account (d) Standard of deferred payments

**Q6.** From the given table, identify that level of income, where Average Propensity to Save (APS) becomes zero: **(1)**

Income (₹ crore)	0	50	100	200	300	400
Consumption (₹ crore)	50	75	100	150	200	250

**Alternatives:**

- (a) 50 (b) 100 (c) 200 (d) 0

**Q7.** If in an economy the initial deposits are ₹4,000 crore and Reserve Ratio (RR) is 10%. The value of total deposit created would be ₹\_\_\_\_\_ crore. (Fill up the blank with correct alternative) **(1)**

- (a) 4,000 (b) 40,000 (c) 2,000 (d) 20,000

**Q8.** From the following, identify the correct reasons that may affect the supply of foreign exchange in an economy: **(1)**

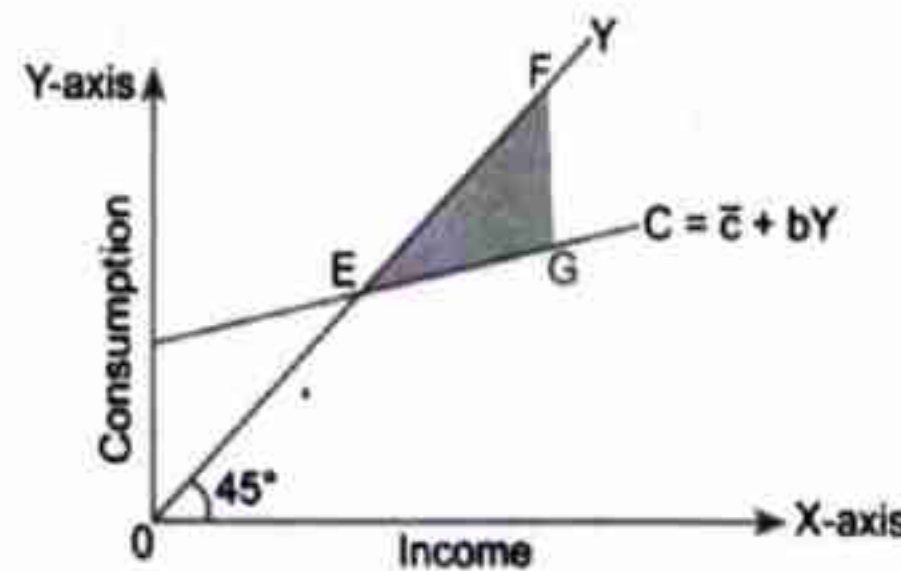
- (i) Purchase of land in England by an Indian  
(ii) Foreign tourists visiting Taj Mahal  
(iii) Donation of \$ 500 million from Microsoft  
(iv) Indian students going to Australia for studies

**Alternatives:**

- (a) (i) and (a) (b) (ii) and (iv) (c) (ii) and (iii) (d) (i) and (iv)

**Q9.** Identify, what does the shaded area (AEFG), in the given figure indicate? **(1)**

- (i) Consumption > Income  
(ii) Saving = Zero (0)  
(iii) Consumption < Income  
(iv) Saving < Zero (0)



**Alternatives:**

- (a) (i) and (ii) (b) (ii) and (iii) (c) (iii) and (iv) (d) (i) and (iv)

**Q10.** The measurement of Balance of Payments deficit is based on \_\_\_\_\_ transactions. (Fill up the blank with correct alternative) **(1)**

- (a) Autonomous (b) Accommodating (c) Current account (d) Capital account

**Q11.** Calculate Gross Value Added at Market Price from the given data: **(3)**

Sr. No	Particulars	Amount (₹ in lakhs)
(i)	Depreciation	20
(ii)	Domestic sales	200
(iii)	Change in stock	(-)20
(iv)	Exports	10
(v)	Single use producer goods	120

**Q12.** Give the meanings of Balance of Trade and Balance on Current Account of Balance of Payments Account. **(3)**



- Q13.** An economy is in equilibrium. Calculate the value of Marginal Propensity to Save from the following data: (4)  
 National income = ₹1000 crores  
 Autonomous consumption = ₹100 crores  
 Investment = ₹120 crores
- Q14.** Read the following text carefully: (4)  
 As per the news report published in The Economic Times on 9<sup>th</sup> October, 2020, RBI has kept the repo rate unchanged at 4.00% and reduced reverse repo rate to 3.35%. In addition to that, the bank rate stands 4.65%. This has been done to limit the damage to the economy caused by the COVID-19 and subsequent lockdowns.  
 Based on the given text and common understanding, answer the questions that follow:  
 (a) What does RBI monetary policy mean?  
 (b) What does the bank rate mean?
- Q15.** (A) Explain the 'Banker Bank' function of the Central Bank. (4)
- Q16.** (a) What is the difference between Real and Nominal GDP?  
 (b) Explain the method in which PFCE and GFCF are taken into consideration for calculating the national income of the country? (3+3=6)
- Q17.** (A) The Government, under Ujjwala Yojana, is providing free LPG kitchen gas connections to the families 'below the poverty line'. What objective the government is trying to fulfil through the government budget and how? Explain.  
 (B) Explain the 'redistribution of income' objective of government budget. (3+3)

## PHYSICAL EDUCATION (048)

### WORKSHEET (MCQ)

#### Chapter-1: Management in Sports

- Below given is the Tournament fixture procedure of a CBSE Volley ball National competition.  
 1-2  
 1-3 2-3  
 1-4 2-4 3-4  
 1-5 2-5 3-5 4-5  
 1-6 2-6 3-6 4-6 5-6  
 On the basis of the above data, answer the following questions:  
 (a) What is the formula for calculating number of matches in Round Robin tournament? (where 'N' is number of teams)  
 (b) Who decides the winner in League tournaments?  
 (c) Name the number of Rounds in above fixture.  
 (d) If nine teams are participating in league fixture of cyclic method then how many matches will be played?
- There are \_\_\_\_\_ basic functions of Management.  
 (a) four (b) five (c) six (d) eight
- The basic function of management is  
 (a) Controlling (b) Budgeting (c) Planning (d) Organising
- Which of the following is the first step in a sports programme?  
 (a) Staffing (b) Budgeting (c) Planning (d) Directing
- What is the most important prerequisite for a successful competitive event to happen?  
 (a) Publicising the event (b) Appropriate Planning  
 (c) Coordinating the event (d) None of the above
- Planning in sports leads to  
 (a) Increase in expenditure (b) Better coordination  
 (c) Increase in mistakes (d) Increase in last minute pressures
- \_\_\_\_\_ is a process of setting objectives and deciding how to accomplish them.  
 (a) Planning (b) Directing (c) Staffing (d) Organising



8. \_\_\_\_\_ is a process of establishing authority relationships among selected people, work and work-places so that the group can work together efficiently.  
(a) Planning (b) Directing (c) Staffing (d) Organising
9. Which of the following can be defined as filling and keeping filled positions in the organisation structure?  
(a) Planning (b) Directing (c) Staffing (d) Organising
10. If  $n = 25$  so teams in lower half will be  
(a) 12 (b) 14 (c) 13 (d) 11
11. \_\_\_\_\_ is a privilege given to outstanding players to straight away compete in quarterfinals.  
(a) Seeding (b) Bye  
(c) Special seeding (d) Knockout cum league
12. Name different types of league fixture.  
(a) Cyclic (b) Staircase (c) Tabular (d) All of these
13. How many rounds will be there if  $n=7$  in league matches (cyclic)?  
(a) 5 (b) 6 (c) 7 (d) 8
14. If  $n = 29$ , then how many byes will be there in knock out?  
(a) 5 (b) 4 (c) 3 (d) 2
15. In the placement of byes, fourth bye is given to  
(a) First team of lower half (b) First team of upper half  
(c) Last team of lower half (d) Last team of upper half

## Chapter-2: Children and Women in Sports

1. Frequent menstruation known as \_\_\_\_\_ [CBSE Handbook]  
(a) Metrorrhagia (b) Oligomenorrhea (c) Polymenorrhea (d) Menorrhagia
2. Lordosis is a problem of \_\_\_\_\_.  
(a) Lower back (b) Middle back (c) Upper back (d) Shoulders
3. Advantages of correct posture is/are \_\_\_\_\_.  
(a) Increases flexibility (b) Improves physical appearance  
(c) More energy (d) All of these
4. What is the cause of osteoporosis in woman?  
(a) High blood pressure (b) Menarche  
(c) Excessive exercise (d) Lack of calcium and Vitamin
5. Deformity of legs is known as \_\_\_\_\_.  
(a) Scoliosis (b) Lordosis (c) Knock knees (d) Kyphosis
6. In which type of anorexia does an individual lose weight by taking laxatives or diuretics?  
(a) Bulimia nervosa (b) Purging type (c) Restricting type (d) Anorexia nervosa
7. Weakening of bone due to loss of bone density and improper bone formation is \_\_\_\_\_.  
(a) Amenorrhea (b) Bulimia (c) Osteoporosis (d) Calcium deficiency
8. Mirabai chanu belonged to very simple family but she always used to dream big. Which medal did she won in tokyo olympics 2020?  
(a) Gold (b) Silver (c) Bronze (d) All these
9. A healthy normal menstrual period is called \_\_\_\_\_.  
(a) Menarche (b) Menopause (c) 28 day cycle (d) None of the above
10. If menstruation cycle does not begin at puberty, the condition is called \_\_\_\_\_.  
(a) Primary amenorrhea (b) Secondary amenorrhea  
(c) Oligomenorrhea (d) Dysmenorrhea
11. In which eating disorder a person binges and purges \_\_\_\_\_.  
(a) Anorexia nervosa (b) Bulimia nervosa  
(c) Osteoporosis (d) Anemia



12. Walking barefoot on sand or rough ground helps to correct
  - (a) Flat feet
  - (b) Club feet
  - (c) Curved feet
  - (d) Outward pointing feet
13. Horse riding and oil messaging of knees towards outer side are required to cure \_\_\_\_\_.
  - (a) Bow legs
  - (b) Knock knees
  - (c) Scoliosis
  - (d) Flat foot
14. No arc in the foot is called \_\_\_\_\_.
  - (a) Arch
  - (b) Flexible
  - (c) Cause Hindrance
  - (d) Flat foot
15. Rope skipping, walk on heels is suitable exercise for \_\_\_\_\_.
  - (a) Flat foot
  - (b) Bow legs
  - (c) Knock knees
  - (d) Round shoulders

### Chapter-3: Yoga as Preventive Measure for Lifestyle Disease

1. What are the symptoms of Asthma?
  - (a) Extra production of mucus
  - (b) Excessive coughing
  - (c) Wheezing and shortness of breath
  - (d) All of these
2. The advantage for Vajrasana is
  - (a) Relieves stomach ailments
  - (b) Tones up the body
  - (c) Get the blood sugar stable
  - (d) Control your habits
3. \_\_\_\_\_ asana resembles the face of a cow.
  - (a) Bhujangasana
  - (b) Halasana
  - (c) Padmasana
  - (d) Gomukhasana
4. Choose the odd one out. Asanas helps to improve
  - (a) Blood circulation
  - (b) Digestive system
  - (c) Depth of respiration
  - (d) Speed
5. A disease associated with respiratory tracts is known as
  - (a) Diabetes
  - (b) Asthma
  - (c) Obesity
  - (d) Hypertension
6. Which asanas is not done when a person is suffering from diabetes?
  - (a) Bhujangasana
  - (b) Tadasana
  - (c) Paschimottasana
  - (d) Ardh Matsyendrasana
7. Hazardous consequences of obesity is/are
  - (a) Prone to injuries
  - (b) More likely to get various lifestyle diseases
  - (c) Pollution decrease
  - (d) All of these
8. Which asana can be practiced immediately after eating food?
  - (a) Hastottanasana
  - (b) Trikonasana
  - (c) Ardhamatsyendrasana
  - (d) Vajrasana
9. \_\_\_\_\_ asana assists in releasing trapped digestive gas from the stomach and intestines.
  - (a) Paschimottanasana
  - (b) Pavan Muktasana
  - (c) Shavasana
  - (d) Sarvangasana
10. Symptoms such as coughing, wheezing, shortness of breath and / or chest tightness are caused in patients suffering from
  - (a) Diabetes
  - (b) Obesity
  - (c) Asthma
  - (d) Back pain
11. One of the possible causes for Obesity could be
  - (a) Heredity
  - (b) Excessive eating
  - (c) Fast metabolism
  - (d) Both (a) and (b).
12. Which asana is helpful in maintaining normal blood pressure?
  - (a) Shavasana
  - (b) Padmasana
  - (c) Shalabhasana
  - (d) Anulom-vilome
13. Gomukhasana, Anulom Vilome and Matsyasana are helpful in curing which disease?
  - (a) Diabetes
  - (b) Backpain
  - (c) Asthama
  - (d) Obesity
14. According to Patanjali, the definition of Asana is
  - (a) control of sense organs
  - (b) sitting in a cross-legged position
  - (c) sitting in a comfortable position
  - (d) control of diet and water intake



15. According to WHO, the criteria for overweight as per BMI is  
(a) 18.5 – 24.9 (b) 25 – 29.9 (c) 30 – 34.9 (d) 35 – 39.9

#### **Chapter - 4: Physical Education and Sports for CWSN**

1. World Disability Day is celebrated on  
(a) 2<sup>nd</sup> April (b) 21<sup>st</sup> June (c) 29<sup>th</sup> August (d) 3<sup>rd</sup> December
2. What is the right term that should be used for children with special needs?  
(a) Viklang (b) Divyang (c) Differently-abled (d) All of the above
3. How many games are included in Special Olympics Bharat?  
(a) 15 (b) 24 (c) 20 (d) 18
4. Who started Special Olympics International?  
(a) Eunice Kennedy Shriver (b) John F Kennedy  
(c) Sir Ludwig Guttmann (d) M Mahadeva
5. When was Camp Shriver started for children with disabilities?  
(a) 1982 (b) 1964 (c) 1970 (d) 1962
6. The reason Paralympic Games got their name was because:  
(a) they were meant for athletes suffering from paraplegia.  
(b) they run alongside or parallel to the Olympic Games.  
(c) the athletes are paragons of their sports.  
(d) they are attended by a large number of paramedics.
7. Which body governs the Paralympic movement?  
(a) Special Olympics International (b) Sports Authority of India  
(c) Indian Paralympic Committee (d) International Paralympic Committee
8. Paralympic Games was a 1948 sporting Competition held at Stoke Mandeville hospital in  
(a) England (b) United States of America  
(c) Germany (d) Greece
9. When and where did the first Paralympic games took place?  
(a) Rome, 1960 (b) Mandeville, 1976 (c) Albertville, 1992 (d) Holland, 1968
10. Which among them is the value of paralympics?  
(a) Equality (b) Courage and Inspiration  
(c) Determination (d) All of them
11. First Deaflympic Games was organized in the year \_\_\_\_\_.  
(a) 1896 (b) 1960 (c) 1924 (d) 1951
12. The international paralympics committee was founded in the year.  
(a) 1960 (b) 1948 (c) 1900 (d) 1989
13. Specialists that work with special needs children include  
(a) Physiotherapists (b) Occupational therapists  
(c) Speech therapists (d) All of these
14. Special Olympics India was initiated in \_\_\_\_\_.  
(a) 2001 (b) 2003 (c) 2005 (d) 2007
15. Which of the following strategies is considered to make physical activities accessible for children with special needs?  
(a) Regular Medical check-up (b) Special environment according to their needs  
(c) Adapted Physical education activities (d) All of the above

#### **Chapter - 5: Sports and Nutrition**

1. In which of following food group/groups 'sugar and jogger' come under.  
(a) Protective food (b) Energy giving food  
(c) Body building food (d) Immunity booster
2. Which of the following is a macro mineral ?  
(a) Iodine (b) Iron (c) Copper (d) Calcium



3. "A diet which consist of all the essential food elements" is called  
 (a) Nutrition (b) Balanced diet  
 (c) Growth (d) Maintenance of Body
4. Water soluble vitamins are  
 (a) A, D (b) E, K (c) C, A (d) B, C
5. \_\_\_\_\_ contain carbon, oxygen and hydrogen in the percentage of 76, 12 and 12 respectively.  
 (a) Carbohydrates (b) Fats (c) Vitamins (d) Proteins
6. One gram of fat contains \_\_\_\_\_ calories.  
 (a) 3 kcal (b) 4 kcal (c) 5 kcal (d) 9 kcal
7. \_\_\_\_\_ is a fat that has been changed by a process called hydrogenation.  
 (a) Saturated fat (b) Trans fat  
 (c) Unsaturated fat (d) Poly unsaturated fat
8. Kwashiorkor and Marasmus diseases are caused due deficiency of \_\_\_\_\_.  
 (a) Fat (b) Minerals (c) Proteins (d) Carbohydrates
9. \_\_\_\_\_ regulates the body temperature. It is made up of hydrogen and oxygen element in 2:1.  
 (a) Carbohydrates (b) Water (c) Roughage (d) Antibodies
10. \_\_\_\_\_ is not a macro mineral.  
 (a) Magnesium (b) Potassium (c) Sulphur (d) Chromium
11. \_\_\_\_\_ element is required to keep thyroid gland healthy.  
 (a) Iron (b) Iodine (c) Cobalt (d) Copper
12. \_\_\_\_\_ helps in smooth elimination of stool or faeces.  
 (a) Carbohydrates (b) Roughage (c) Minerals (d) Vitamins
13. Balanced diet is related to  
 (a) Consuming right amount of vitamins  
 (b) Consuming correct ratio of carbohydrates and fats  
 (c) Consuming all the nutrients in right amount  
 (d) Consuming excess of protein and minerals
14. Which vitamins were consumed the most during Covid?  
 (a) Vitamin C and D (b) Vitamin B and C  
 (c) Vitamin A and B (d) Vitamin B and D
15. In which category BMI is greater than 30?  
 (a) Obesity I (b) Over load (c) Obesity II (d) Healthy weight

## APPLIED MATHEMATICS (241)

1. Prove that:  $\begin{vmatrix} 1 & a & b \\ -a & 1 & c \\ -b & -c & 1 \end{vmatrix} = 1 + a^2 + b^2 + c^2$
2. If A and B are square matrices of order 3 such that  $|A| = -1$  and  $|B| = 3$  then find the value of  $|3AB|$ .
3. Without expanding, find the values of:  $\begin{vmatrix} 1 & bc & a(b+c) \\ 1 & ca & b(c+a) \\ 1 & ab & c(a+b) \end{vmatrix}$ .
4. Solve the system of equation using matrix method:  
 $x - y + 2z = 1, 2y - 3z = 1, 3x - 2y + 4z = 2$
5. Find the derivatives with respect to x. If  $y = \frac{x^2}{1 + e^{xy}}$ .
6. If  $y = (x + \sqrt{x^2 + 1})^p$  Prove that  $(x^2 + 1)y_2 + x y_1 - p^2 y = 0$ .
7. If  $x\sqrt{1+y} + y\sqrt{1+x} = 0$  show that  $(1 + x^2)\frac{dy}{dx} + 1 = 0$ .



8. Given below are the data relating to the sales of product in a district. Fit a straight-line trend by the method of least squares and tabulate the trend values.

Year	2015	2016	2017	2018	2019	2020	2021	2022
Sales	6.7	5.3	4.3	6.1	5.6	7.9	5.8	6.1

9. Calculate three – yearly moving averages of number of students studying in a higher secondary school in a particular village from the following data.

Year	Number of Students
2011	332
2012	317
2013	357
2014	392
2015	402
2016	405
2017	410
2018	427
2019	435
2020	438

10. If  $f'(x) = 4x^3 - 6$  and  $f(0) = 3$ , find  $f(x)$ .

11. Evaluate the integral  $\int \frac{dx}{x^3(x^5+1)^{3/5}}$ .

12. Evaluate the integral  $\int \frac{x^3-5x}{(x^2-9)((x^2+1))} dx$ .

13. Evaluate the integral  $\int (x^2 + 1) \log x \, dx$ .

14. A sample of random sample of 50 items from a population with  $\sigma = 6$  resulted in a sample mean of 32. Provide a 90% confidence interval for the population mean. [Use:  $Z_{(\alpha/2)}$  at 90%= 1.645 ].

15. Consider the following hypothesis test:

$H_0: \mu \geq 80$

$H_a: \mu < 80$

A sample of 100 is used and the population standard deviation is 12. Computer the p- value and state your conclusion for each sample results, use  $\alpha = 0.01$ : if  $\bar{x} = 77$ .

**Case-Study 1:**

16. Consider  $f(x)$  be a continuous function defined in  $[-a, a]$ , then  $\int_{-a}^a f(x) = 2 \int_0^a f(x)$ , if  $f(x)$  is an even function i.e.,  $f(-x) = f(x)$  and  $\int_{-a}^a f(x) = 0$  if  $f(x)$  is an odd function i.e.,  $f(-x) = -f(x)$

Based on the given information, answer the following questions.

i. Evaluate:  $\int_{-5}^5 (8x^5 - 4x^3 + 7x) dx$ .

ii. Evaluate:  $\int_{-3}^3 \log(\frac{1-x}{1+x}) dx$ .

iii. Evaluate:  $\int_{-2}^2 \log(\frac{1+12x^2}{x+4x^3}) dx$ .

**Case-Study 2:**

17. The American Association of Individual Investors (AAII) conduct an investor sentiment survey every week to determine the number of investors who are Bullish, Bearish or Neutral on the short-term prospects for the stock market. A **bullish** investor believes that price of one or more securities will rise.

A **bearish** investor believes that price of one or more securities will fall.

An investor who is neither bullish nor bearish i.e., insensitive to the market price is called **neutral**.

The poll results of AAII for the week ending November 29, 2008 are as follows:

Bullish 208, Bearish 150, Neutral 142.

Based on the given information, answer the following questions.

i. Find the point estimate of the population proportion of all AAII subscribers who are bullish.

ii. Find the point estimate of the population proportion of all AAII subscribers who are bearish.

iii. Compute the 95% confidence interval for the population proportion of AAII subscribers who are bullish.  $z_{\frac{\alpha}{2}} = z_{0.025} = 1.96$ .

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