Navyug Vidyalaya, Bhagalpur

Class-XII

Assignment-IV Session (2020-21)

(Summer Vacation)

Subject- Accountancy

NIRAJ KUMAR SHARMA (7992259899)

1. X, Y and Z are partners sharing profits and losses in the ratio of 5:3:2. They admit A into partnership and give him $1/5^{th}$ share of profits. Find the new profit-sharing ratio.

2. Ravi and mukesh are sharing profits in the ratio of 7:3.They admits Ashok for $3/7^{th}$ shares in the firm which he takes $2/7^{th}$ from Ravi and $1/7^{th}$ from mukesh.
   Calculate new profit-sharing ratio.

3. A and B are partners sharing profits and losses in the proportion of 7:5. They agree to admit C,their manager, into partnership who is to get $1/6^{th}$ share in the profits. He takes this share as $1/24^{th}$ from A And $1/8^{th}$ from B. calculate new profit-sharing ratio.

4. A, B and C were partners in a firm sharing profits in the ratio of 3:2:1. They admitted D as a new partner for $1/8^{th}$ share in the profits, which he acquired $1/16^{th}$ from B and $1/16^{th}$ from C. calculate the new profit-sharing ratio of A,B,C and D.

5. Bharati and Astha were partners sharing profits in the ratio of 3:2. They admitted Dinkar as a partner for $1/5^{th}$ share in the future profits of the firm which he got equally from Bharati and Astha. Calculate the new profit –sharing ratio of Bharati, Astha and Dinkar.

6. Pass journal entries to record the following arrangements in the books of the firm:
   (a) B and C are partners sharing profits in the ratio of 3:2. D is admitted paying a premium (goodwill) of ₹2, 000 for $1/4^{th}$ share of the profits, shares of B and C remain as before.
   (b) B and C are in partnership sharing profits in the ratio of 3:2.D is admitted paying a premium of ₹2, 100 for $1/4^{th}$ share of profits which he acquires $1/6^{th}$ from B and $1/12^{th}$ from C.

7. A and B are in partnership sharing profits and losses in the ratio of 5:3. C is admitted as a partner who pays ₹40, 000 as capital and the necessary amount of goodwill which is valued at ₹60, 000 for the firm. His share of profits will be $1/5^{th}$ which he takes $1/10^{th}$ from A and $1/10^{th}$ from B.
   Pass journal entries and also calculate future profit-sharing ratio of the partners.

8. A and B are partners in a business sharing profits and losses in the ratio of 1/3rd and 2/3rd .on 1st April, 2020,their capitals were ₹8,000 and ₹10,000 respectively. On that date, they admit C in partnership and give him $1/4^{th}$ share in the future profits. C brings ₹8, 000 as his capital and ₹6, 000 as goodwill. The amount of goodwill is withdrawn by the old partners in cash. Pass the journal entries and show the capital Accounts of all the partners. Calculate proportion in which partners would share profits and losses in future.

9. A and B are partners sharing profits in the ratio of 2:1. They admit C for $1/4^{th}$ share in profits. C brings in ₹30, 000 for his capital and ₹8, 000 out of his share of ₹10, 000 for goodwill. Before admission, goodwill existed in the book at ₹18, 000. Pass journal entries to give effect to the above arrangement.

10. A and B are partners sharing profits and losses in the ratio of 3:2. They admit C as partner in the firm for $1/4^{th}$ share in profits which he takes $1/6^{th}$ from A and $1/12^{th}$ from B. C brings 60% of his share of firm's goodwill. Goodwill of the firm was valued at ₹1, 00,000. Pass necessary journal entries to record this arrangement.

11. On the admission of Rao, goodwill of Murty and shah is valued at R 30,000. Rao is to get $1/4^{th}$ share of profits. Previously Murty and shah shared profits in the ratio of 3:2. Rao is unable to bring amount of goodwill. Give journal entries in the books of Murty and shah when: (a) goodwill does not exist in the books; and (b) goodwill exists in the books at ₹10, 000.

12. A, B and C are in partnership sharing profits in the ratio of 5:4:1. Two new partners D and E are admitted and the new profit-sharing ratio is 3:4:2:2:1.D is to pay ₹90, 000 for his share of goodwill but E is unable to bring his share of goodwill. Both the new partners introduced ₹1.20.000 each as their capital. You are required to pass necessary journal entries.

13. Anil and sunil are partners in a firm with fixed capitals of ₹3, 20,000 and₹2, 40,000 respectively. They admitted charu as a new partner for 1/4th share in the profits of the firm on 1st April 2012. Charu brought ₹3, 20,000 as her share of capital. Pass journal entry for Goodwill.

14. Given below is the Balance sheet of A and B, who are carrying on partnership business on 31st March, 2020.A and B share profits and losses in the ratio of 2:1.

BALANCE SHEET OF A AND B as at 31st March, 2020

Liabilities		`	Assets	`
Bills Payable		10,000	Cash in Hand	10,000
Creditors		58,000	Cash at Bank	40,000
Outstanding Expenses		2,000	Sundry Debtors	60,000
Capital A/cs:			Stock	40,000
A	1,80,000		Plant	1,00,000
B	1,50,000	3,30,000	Building	1,50,000
		4,00,000		4,00,000

C is admitted as a partner on 1st April, 2020 on the following terms:

(a) C will bring ₹1, 00,000 as his capital and ₹60, 000 as his share of goodwill for 1/4th share in the profits.

(b) Plant is to be appreciated to ₹1, 20,000 and the value of building is to be appreciated by 10%.

(c) Stock is found overvalued by ₹4, 000.

(d) A provision for doubtful debts is be created at 5% of sundry debtors.

(e) Creditors were unrecorded to the extent of ₹1, 000.

Pass the necessary journal entries, prepare the Revaluation Account and partners' capital Accounts, and show the balance sheet after the admission of C.

15. X and Y are partners sharing profits in the ratio of 2:1. Their balance sheet as at 31st March, 2020 was:

Liabilities		`	Assets	`
Sundry Creditors		25,000	Cash/Bank	5,000
General Reserve		18,000	Sundry Debtors	15,000
Capital A/cs:			Stock	10,000
X	75,000		Investments	8,000
Y	62,000	1,37,000	Printer	5,000
			Fixed Assets	1,37,000
		1,80,000		1,80,000

They admit Z into partnership on 1st April, 2020 on the following terms:

(a) Z brings in ₹40, 000 as his capital and he is given 1/4th share in profits.

(b) Z brings in ₹15, 000 for goodwill, half of which is withdrawn by old partners.

(c) Investments are valued at ₹10, 000. X takes over Investments at this value.

(d) Printer is to be reduced (depreciated) by 20% and fixed Assets by 10%.

(e) An unrecorded stock on 31st March, 2020 is ₹1, 000.

(f) By bringing in or withdrawing case, the capitals of X and Y are to be made proportionate to that of Z on their profit- sharing basis.

Pass journal entries; prepare Revaluation Account, capital Accounts and new balance sheet of the firm.

16. A and B were partners in a firm sharing profits in 3:1 ratio. They admitted C as a partner for 1/4th share in future profits. C was to bring ₹60, 000 for his capital. The Balance sheet of A and B as at 1st April.2020. The date on which C was admitted, was:

Liabilities	`		Assets		`
Capital A/cs			Land and Building		40,000
A	50,000		Plant and Machinery		70,000
B	80,000	1,30,000	Stock		30,000
General Reserve		10,000	Debtors	35,000	
Creditors		70,000	Less : Provision for Doubtful Debts	1,000	34,000
			Investments		26,000
			Cash		10,000
		2,10,000			2,10,000

The other terms agreed upon were:
(a) Goodwill of the firm was valued at ₹24, 000.
(b) Land and Building were valued at R 65,000 and plant and Machinery at ₹60, 000.
(c) Provision for Doubtful Debts was found in excess by ₹400.
(d) A liability of ₹1, 200 included in sundry Creditors was not payable.
(e) The capitals of the partners be adjusted on the basis of C's contribution of capital to the firm.
(f) Excess or shortfall, if any, be transferred to current Accounts.
Prepare Revaluation Account, Partner' Capital Accounts and Balance sheet of the new firm.

Subject- Business Studies
NIRAJ KUMAR SHARMA (7992259899)

1. Which of the following is not an element of delegation?
    (a) Accountability   (b) Responsibility
    (c) Authority   (d) Informal organisation

2. A network of social relationship that arise spontaneously due to interaction at work is called :
    (a)Formal organisation   (b) Informal organsiation
    (c) Decentralisation   (d) Delegation

3. Which of the following does not follow the scalar chain?
    (a) Functional structure   (b) Divisional structure
    (c) Formal organisation   (d) Informal organisation

4. A tall structure has a
    (a) Narrow span of management   (b) Wide span of management
    (c) No span of management   (d) Less levels of management

5. Cenetralisation refers to
    (a) Retention of decision making authority
    (b) Dispersal of decision making authority
    (c) Creating divisions as profit centres
    (d) Opening new centres or branches

6. For delegation to be effective it is essential that responsibility be accompanied with necessary
    (a) Authority   (b) Manpower
    (c) Incentives   (d) Promotions

7. Span of management refers to
    (a) Number of mangers
    (b) Length of term for which a manager is appointed
    (c) Number of subordinates under a superior
    (d) Number of members in top management

8. The form of organsiation known for giving rise to rumors is called
    (a) Centralised orgainsation   (b) Decentralised organisation
    (c) Informal organisation   (d)Formal organisation

9. Grouping of activities on the basis of product lines is a part of
    (a) Delegated organisation   (b) Divisional organisation
    (c) Functional organisation   (d) Autonomous organisation

10. Grouping of activities on the basis of functions is a part of
        (a) Decentralised organisation   (b) Divisional organisation
        (c) Functional organisation   (d) Centrealised organisation

Short Answer Type Questions-

11. Define organising.
12. What are the steps in the process of organising.
13. Discuss the elements of delegation.
14. What is divisional structure? Discuss its advantages & limitation.
15. Can responsibility be delegated? Justify your answer.
16. Distinguish between punctual and divisional structure.
17. Distinguish betweenformal and informal organisation.
18. Explain the importance of decentralisation.

Subject- Economics
SHASHI SHEKHAR SUMAN (9934228288)

Answer the following questions:-

Q.1 What is barter exchange?
Q.2 What do you mean by money?
Q.3 What is supply of money(Money supply)?
Q.4 Define Repo rate and Reverse Repo Rate.
Q.5 What is cash reserve ratio?
Q.6 Define open market operation and margin requirements.
Q.7 What is Flat money and fiduciary money?
Q.8 Define legal tender money.
Q.9 Give the formula for money creation.
Q.10 What are "Online transactions"?
Q.11 Explain any three function of Money.
Q.12 Give component of money supply.
Q.13 Explain the process of credit creation by commercial banks.
Q.14 Explain any four functions of commercial banks.
Q.15 Define Central Bank Explain any six functions of Central Bank.
Q.16 Calculate National Income from the following data by Income method and expenditure method:-

		in crore
(i)	Wages and Salary	205
(ii)	Private Pension	65
(iii)	Consumption Expenditure	75
(iv)	COE paid by govt.	85
(v)	Import	25
(vi)	Employer's contribution to S.S.S.	85
(vii)	Mixed income	105
(viii)	Rent	55
(ix)	Net domestic Fixed Capital formation	125
(x)	Inventories	35
(xi)	Consumption of fixed capital	20
(xii)	Subsidy	15
(xiii)	Income to Row	33
(xiv)	Dividend	45
(xv)	Retained Profit	38
(xvi)	Profit Tax	16
(xvii)	Net Export	80
(xviii)	Roylaty	32

Subject- Maths
AJAY KUMAR MISHRA (9472288312)

1. If $\sin y = x\sin(a+y)$, show that
$$\frac{dy}{dx} = \frac{\sin^2(a+y)}{\sin a}$$

2. If $\sqrt{1-x^6}+\sqrt{1-y^6} = a(x^3-y^3)$, Prove that
$$\frac{dy}{dx} = \frac{x^2}{y^2}\sqrt{\frac{1-y^6}{1-x^6}}$$

3. If $x\sqrt{1+y}+\sqrt{1+x} = 0$, Prove that $\frac{dx}{dy} = \frac{-1}{(1+x)^2}$

4. If y= x+ $\cfrac{1}{\bar x + \cfrac{1}{\bar x + \cfrac{1}{\bar x} + \ldots\ldots\ldots\ldots\alpha}}$

   Prove that $(x^2-y^2+3)\frac{dy}{dx} = 1$

5. Find $\frac{dy}{dx}$ if (i)$x^m y^n = (x-y)$

   (ii) $y=\log_7(\log 7^x)$

6. Find $\frac{dy}{dx}$ if (i)$y = 10^{5\log_{10}x}$

   (ii) $y=e^{-ax^2}.\sin(x\log x)$

   (iii) $y=(\log x)^x+(x)^{\log x}$

7. If $xy= e^{x-y}$, Prove that $\frac{dy}{dx} = \frac{y(x-1)}{x(y+1)}$

8. If $y^x= e^{y-x}$, Prove that $\frac{dy}{dx} = \frac{(1+\log y)^2}{\log y}$

9. If $\log\sqrt{x^2+y^2} = \tan^{-1}\left(\frac{x}{y}\right)$, prove that $\frac{dy}{dx} = \frac{y-x}{y+x}$

10. If $x=e^\theta\left(\theta+\frac{1}{\theta}\right), y = e^{-\theta}\left(\theta-\frac{1}{\theta}\right)$

    Find $\frac{dy}{dx}$

11. If $x=\sqrt{a^{\sin^{-1}t}}$, $y=\sqrt{a^{\cos^{-1}t}}$, Find $\frac{dy}{dx}$

12. If $x=a\sin t$, $y=a\left(\cos t + \log\tan\frac{t}{2}\right)$

    Find $\frac{d^2y}{dx^2}$

13. If $x=\frac{\sin^3 t}{\sqrt{\cos 2t}}, y = \frac{\cos^3 t}{\sqrt{\cos 2t}}$

    Prove that $\frac{dy}{dx} = -\cot 3t$

Subject- Physics
VIJAYANT SINHA (7717789015)

1. Complete the notes of semi-conductor in your fair copy.
2. Solve all the numericals from NCERT of the
   Chapter – (i) Photoelectric effect and
   (ii) Radioactivity
   in your H.W copy

Subject- Chemistry
CHANDRA BHUSHAN JHA (9430451504)

1. Arrange the following metals in the order in which they displace each other from the solution of their salts.

Al, Cu, Fe, Mg and Zn.

2. Given the standard electrode potentials,
    $K^+/K = -2.93V$, $Ag^+/Ag = 0.80V$,
    $Hg^{2+}/Hg = 0.79V$
    $Mg^{2+}/Mg = -2.37 V$, $Cr^{3+}/Cr = -0.74V$
    Arrange these metals in their increasing order of reducing power.

3. Depict the galvanic cell in which the reaction
    $Zn(s) + 2Ag^+(aq) \rightarrow Zn^{2+}(aq) + 2Ag(s)$ takes place. Further show:
    (i) Which of the electrode is negatively charged?
    (ii) The carriers of the current in the cell.
    (iii) Individual reaction at each electrode.

4. Calculate the standard cell potentials of galvanic cell in which the following reactions take place:
    (i) $2Cr(s) + 3Cd^{2+}(aq) \rightarrow 2Cr^{3+}(aq) + 3Cd$
    (ii) $Fe^{2+}(aq) + Ag^+(aq) \rightarrow Fe^{3+}(aq) + Ag(s)$
    Calculate the $\Delta_r G^\ominus$ and equilibrium constant of the reactions.

5. Write the Nernst equation and emf of the following cells at 298 K:
    (i) $Mg(s)|Mg^{2+}(0.001M)||Cu^{2+}(0.0001 M)|Cu(s)$
    (ii) $Fe(s)|Fe^{2+}(0.001M)||H^+(1M)|H_2(g)(1bar)| Pt(s)$
    (iii) $Sn(s)|Sn^{2+}(0.050 M)||H^+(0.020 M)|H_2(g) (1 bar)|Pt(s)$
    (iv) $Pt(s)|Br^-(0.010 M)|Br_2(l)||H^+(0.030 M)| H_2(g) (1 bar)|Pt(s)$.

6. In the button cells widely used in watches and other devices the following reaction takes place:
    $Zn(s) + Ag_2O(s) + H_2O(l) \rightarrow Zn^{2+}(aq) + 2Ag(s) + 2OH^-(aq)$ Determine $\Delta_r G^\ominus$ and $E^\ominus$ for the reaction.

7. Define conductivity and molar conductivity for the solution of an e
    electrolyte. Discuss their variation with concentration.

8. The conductivity of 0.20 M solution of KCl at 298 K is 0.0248 S cm^{-1}. Calculate its molar conductivity.

9. The resistance of a conductivity cell containing 0.001M KCl solution at 298K is 1500 Ω. What is the cell constant if conductivity of 0.001M KCl solution at 298 K is 0.146×10^{-3} S cm^{-1}

10. The conductivity of sodium chloride at 298 K has been determined at different concentrations and the results are given below: Concentration/M   0.001   0.010   0.020   0.050   0.100
    $10^2 \times \kappa$/S m^{-1} 1.237   11.85   23.15   55.53   106.74
    Calculate Λ_m for all concentrations and draw a plot between Λ_m and $c^{1/2}$. Find the value of Λ^0_m.

Subject – Biology
RAHUL JHA (9631022032)

Q1. Is sex education necessary in schools? Why.
Q2. Is the use of contraceptives Justified? Give reason.
Q3. Removal of gonads cannot be considered as a contraceptive option. Why?
Q4. Amniocentesis for sex determination is banned in our country. Is this ban necessary? Comment.
Q5. What are the measures one has to take to prevent from contracting STDs?
Q6. Comment on the Reproductive and child Health care program me of the government to improve the reproductive health of the people.
Q7. The present population growth rate in India is alarming. Suggest ways to check it.
Q8. STDs can be considered as self- invited diseases. Comment.
Q9. Mention the primary aim of the "Assisted Reproductive Technology" (ART) program me.

Q10. What is the significance of progesterone- estrogen combination as a contraceptive measure?
Q11. Mention two advantages of lactational amenorrhea as a contraceptive method.
Q12. Copper ions releasing IUDs are more efficient than non-medicated methods. Why?
Q13. Briefly explain IVF and ET. What are the conditions in which these methods are advised?
Q14. What are the conditions in which medical termination of pregnancy is advised?
Q15. Comment on the essential features required for an ideal contraceptive.

Subject- Physical Education
MD KHURRAM SHOAIB (9472536507)

Multiple Choice Question (MCQS)

Q.1 Planning in sports help
    (a) Effective Programme   (b) Cooperation
    (c) Reducing Errors   (d) All of the above

Q.2 Pre works of organising secretary are
    (a) Good planning   (b) Staff grouping and their cooperation
    (c) Raising Funds   (d) All of the above

Q.3 Technical committee works are
    (a) To look after the stay arrangements of players.
    (b) To provide transportation to the players.
    (c) To conduct matches as per rules of the game.
    (d) To provide first-aid to the players during match.

Q.4 In knock-out tournament team has to
    (a) Play large number of matches   (b) Play one match
    (c) Gets Bye   (d) Play till they are winning

Q.5 Bye is given when
    (a) There is large number of teams
    (b) League tournament
    (c) Advantage to play in second round
    (d) There is odd number of teams

Very short answer type questions (20 to 30 words)

Q.6 What do you understand by planning in sports?
Q.7 Mention the objectives of planning?
Q.8 Explain briefly the planning considered in sports tournament.
Q.9 What do you understand by fixture?
Q.10 In which conditions knock-out tournaments are better than round Robin?

Short answer type questions (50 to 60 words)

Q.11 What are the objectives of planning?
Q.12 Explain the planning process in sports?
Q.13 Define the term fixture. Explain briefly various types of tournaments?
Q.14 State the merits and demerits of knock-out tournaments?
Q.15 Explain the procedure of giving bye in fixture?

Long answer type questions (100 to 120 words)

Q.16 How is planning considered in sports?
Q.17 Define the term fixture. Bye and seeding?
Q.18 Make a knock-out fixture for 7(seven) teams?
Q.19 State the merits and demerits of league round?
Q.20 Write the meaning of Intramurals and write its principles?

Students are instructed to complete the assignment-4(Summer Vacation) carefully and submit it till 5th July,2020 on the Whatsapp no. of your respective subject teachers. It is compulsory to attempt all questions.

In case of any doubt, you can call the concerned subject teacher on the provided contact number. The marks obtained will be counted in your Internal Assessment. For any problem related to school app or downloading of assignment please contact: - 9470283176