

Reg. No. :

Name :

Second Semester B.Com. Degree Examination, May 2020

First Degree Programme Under CBCSS

Foundation Course : CO 1221/CC 1221

INFORMATICS AND CYBER LAWS

(Common for Commerce/Commerce with Computer Application)

(2018 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in **one** word or to a maximum of two sentences each. **Each** question carries **1** mark.

1. Define internet.
2. What do you mean by cyber ethics?
3. What is NICNET?
4. What is DSL?
5. What do you mean by virtual reality?
6. What are E-wastes?
7. What is WAN?
8. What is localisation?

P.T.O.

9. What is data?
10. What is bus topology?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions in not exceeding one paragraph each. **Each** carries 2 marks.

11. What are the solutions to information overload?
12. What is cyber space?
13. Distinguish between internet and intranet.
14. What do you mean by broadband?
15. What is eavesdropping?
16. What is infrared communication?
17. What do you mean by virtual classroom?
18. What is Wi-Fi?
19. What do you mean by Explicit knowledge?
20. What is SMS?
21. What is digital certificate?
22. How IT is useful in weather forecasting?

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions in about **120** words. **Each** question carries 4 marks.

23. What are the different types of networks on the basis of distance?
24. What is green computing? What are the components of green computing?
25. What do you mean by cyber addiction? What are the risk factors associated with cyber addiction?

- ks) 7. What do you mean by digital divide? What are the factors that contribute to the digital divide?
28. What is INFLIBNET? What are its junctions?
29. What are the health issues related to the use of computers?
30. Explain how IT can be used for national integration.
31. What are the advantages of wireless communication?
32. What do you mean by educational software? What are the uses of educational software?

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions in not exceeding **four** pages each. **Each** question carries **15** marks.

33. What is internet? What are the business uses of Internet?
34. Describe the features of IT Act 2000.
35. What do you mean by cyber crimes? What are the different types of cyber crimes?
36. What do you mean by knowledge management? What are the features of knowledge management?

(2 × 15 = 30 Marks)

Reg. No. :

Name :

Second Year B.Com Degree Examination, December 2020

Part III

Paper VIII : ADVANCED FINANCIAL ACCOUNTING

(2006 Admission onwards)

Time : 3 Hours

Max. Marks : 100

SECTION – A

Answer **any ten** questions. **Each** question carries **2** marks.

1. What do you mean by partnership deed?
2. What is fluctuating capital?
3. What is gaining ratio?
4. What do you mean by admission of a partner?
5. What is IPO?
6. What is calls in advance?
7. What is minimum subscription?
8. what is a contingent liability?
9. What is purchase consideration?
10. What is internal reconstruction?

11. What is reinsurance?
12. What is bonus in reduction of premium?

(10 × 2 = 20 Marks)

SECTION – B

Answer **any eight** questions. **Each** question carries **5** marks.

13. Distinguish between fluctuating capital method and fixed capital method of maintaining partner's capital accounts.
14. The profit for the five years of a firm are as follows - year 2015 Rs. 4,00,000; year 2016 Rs.3,98,000; year 2017 Rs.4,50,000; year 2018 Rs.4,45,000 and year 2019 Rs.5,00,000. Calculate goodwill of the firm on the basis of 4 years purchase of 5 years average profits.
15. Anu and Nitu are partners sharing profits in the ratio of 3 : 2. They admitted Jyoti as a new partner for 3/10 share which she acquired 2/10 from Anu and 1/10 from Nitu. Calculate the new profit sharing ratio of Anu, Nitu and Jyoti.
16. A and B are partners in a firm sharing profits and losses in the ratio of 3 : 2. They decide to admit C into partnership with 1/4 share in profits. C brings in Rs.30,000 for capital and the requisite amount of premium in cash. The goodwill of the firm is valued at Rs.20,000. The new profit sharing ratio is 2 : 1 : 1. A and B withdraw their share of goodwill, Give necessary journal entries.
17. Vikas Ltd, forfeited 300 equity shares of Rs.20 each, issued at a discount of Rs.2 per share, for non payment of final call Rs.6 per share. Later 200 of these shares were reissued as fully paid at Rs.15 per share. Pass necessary journal entries to show the forfeiture and reissue of shares.
18. Following are the extracts from the draft balance sheet of Krishna Ltd as on 31st March 2019.

Authorised capital	
1,00,000 Equity shares of Rs.10 each	10,00,000
Issued and subscribed capital	
25,000 Equity shares of Rs.10 each	2,50,000
Reserve fund	50,000
Profit and Loss A/c	40,000

A resolution was passed during the issue of bonus shares of 20% on equity shares to be provided as to Rs.30,000 out of Profit and Loss A/c and Rs.20,000 out of reserve fund. The bonus shares were to be issued by issuing fully paid equity shares.

You are required to pass journal entries to give effect to the resolution and show how they would affect the balance sheet.

19. Distinguish between internal reconstruction and external reconstruction.
20. Give the accounting treatment of rebate on bills discounted.
21. What are the different types of Non- performing assets?
22. On 31st March 2019, the Best Bank Ltd. Held the following bills.

Date of Bill (2019)	Amount	Terms Months	Discounted @% p.a.
Feb.9	50,000	4	18
Feb.17	60,000	3	15
Mar.6	40,000	4	16.5

Calculate the Rebate on Bills Discounted and give the journal entry.

23. A life insurance company get its valuation made once in every two years. Its Life Assurance Fund on 31st March 2019, amounted to Rs.40,00,000 before providing Rs.40,000 for the shareholders dividend for the year 2018 -19. Its actuarial valuation due on 31st March 2019 disclosed a net liability of Rs.38,00,000 under assurance annuity contracts. An interim bonus of Rs.50,000 was paid to the policy holders during the year ending 31st March 2019.

Prepare a statement showing the amount now available as bonus to policy holders.

24. Distinguish between double insurance and re-insurance.

(8 × 5 = 40 Marks)

SECTION – C

Answer **any two** questions. **Each** question carries **20** marks.

25. Following in Balance Sheet of A and B who share profits in the ratio of 3 : 2.

Balance Sheet of A and B as on April 1, 2020

Liabilities	Amount	Assets	Amount
Sundry creditors	20,000	Cash in hand	3,000
Capitals		Debtors	12,000
A 30,000		Stock	15,000
B 20,000	50,000	Furniture	10,000
	_____	Plant and Machinery	30,000
	70,000		70,000

On that date C is admitted into the partnership on the following terms:

- (a) C is to bring in Rs.15,000 as capital and Rs.5,000 as premium for goodwill for 1/6 share.
- (b) The value of stock is reduced by 10% while plant and machinery is appreciated by 10%.
- (c) Furniture is revalued at Rs.9,000.
- (d) A provision for doubtful debts is to be created on sundry debtors at 5% and Rs.200 is to be provided for an electricity bill.
- (e) Investment worth Rs.1,000 (not mentioned in the balance sheet) is to be taken into account.
- (f) A creditor of Rs.100 is not likely to claim his money and is to be written off.

Record journal entries and prepare revaluation account and capital account of partners.

26. From the following balances extracted from the books of Delux Bank Ltd., prepare the Profit and Loss Account for the year ended 31st March 2015 and the Balance Sheet as on that date.

Particulars	Rs.
Current accounts	1,60,00,000
Savings accounts	60,00,000
Fixed and time deposits	19,00,000
Acceptances	4,00,000
Unclaimed dividend	60,000
Dividend 2013-2014	1,00,000
Profit and Loss A/c (Credit) on 1-4-2015	4,20,000
Reserve fund	7,00,000
Share Capital: 20,000 shares of Rs.50 each.	10,00,000
Interest and discount received	15,00,000
Interest paid	4,00,000
Borrowings from other banks	14,00,000
Money at call	6,00,000
Investments (Market value Rs.62,00,000)	60,00,000
Premises (After depreciation upto 31-3-2014 Rs.2,00,000)	24,00,000
Sundry creditors	60,000
Bills payable	16,00,000
Bills for collection	2,80,000
Salaries	1,60,000
Rent and taxes	40,000

Audit fee	4,000
Printing	10,000
General expenses	6,000
Cash in hand	1,20,000
Cash with R.B.I.	30,00,000
Cash with other banks	26,00,000
Bills discounted and purchased	12,00,000
Loans, overdrafts and cash credits	1,40,00,000

Adjustments :

- Authorised share capital is Rs.20,00,000 divided into 40,000 shares of Rs.50 each.
- Rebate on bills discounted amounted to Rs.10,000.
- Create a provision for taxation Rs.2,00,000.
- Provision for bad and doubtful debts is required to be made at Rs.60,000.
- Provide 5% depreciation on the original amount of premises.

27. On 1st April 2015, Asian Ltd., purchased a machine on hire purchase system from Sunshine Ltd., The Cash price of the machine was Rs.74,500/- and the payment was to be made as follows:

Rs.20,000/- was to be made on signing to agreement and the balance in three annual instalments of Rs.20,000/- each at the end of each year. 5% interest is charged by Sunshine Ltd., per annum. Asian Ltd., was decided to write off 10% depreciation per annum on reducing value of the machine. Prepare necessary ledger accounts in the books of Asian Ltd.

3. Smart & Company Limited acquired the business of M/s. Johnson Brothers. The balance sheet of M/s. Johnson Brothers as on 31st December 2019 was as below:

Balance Sheet

Assets		Liabilities	
Creditors	1,00,000	Good will	10,000
Loans	80,000	Machinery	70,000
B/P	40,000	Patents	70,000
Capital	30,000	Debtors	40,000
		Stock	50,000
		Bank	10,000
	<u>2,50,000</u>		<u>2,50,000</u>

The values put on the assets taken over excluding bank were: Goodwill Rs. 25,000 Machinery Rs.80,000 Patents Rs.60,000 Debtors Rs.40,000 Stock Rs.60,000

The company did not agree to take loans but agreed to pay the creditors and bills payable. In payment of consideration the company issued 10,000 equity shares of Rs.10 each and 250 debentures of Rs.100 each.

Pass journal entries of acquisition of business in the books of the company and its balance sheet.

(2 × 20 = 40 Marks)

Reg. No. :

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Second Semester B.Com. Degree Examination, May 2020

First Degree Programme under CBCSS

Complementary Course/Core Course

BUSINESS REGULATORY FRAMEWORK

(Common for CO 1231/CX 1231/CC 1231(2014 to 2017 Admission)
and CO 1242/CC 1243 (2018 Admission onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions. Each question carries **1** mark.

1. Name the regulatory authority of Insurance sector.
2. Who is a lunatic?
3. Define agreement.
4. What is past consideration?
5. Who can demand performance?
6. In which year sale of Goods Act came into existence?

7. What do you mean by trade mark?

8. Define mercantile law.

9. Who is a pawnor?

10. What is mistake?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions. Each question carries **2** marks.

11. What do you mean by Quantum meruit?

12. What is meant by a contingent contract?

13. Define duress.

14. Who is an unpaid seller?

15. What is meant by free consent?

16. Define warranty.

17. Define contract of sale.

18. What do you mean by plagiarism?

19. State any two objectives of Right to information Act, 2005.

20. What do you mean by stranger to contract?

21. What is general lien?

22. Write any two functions of Central Information Commission.

(8 × 2 = 16 Marks)

SECTION - C

Answer any **six** questions. Each question carries **4** marks.

23. State the differences between condition and warranty.
24. What are the exceptions to the rule "No consideration, No contract"?
25. Explain the Doctrine of Caveat Emptor. State the exceptions to this rule.
26. Explain the objectives of IRDA.
27. Distinguish between void contract and voidable contract.
28. Write a note on copy right.
29. Explain doctrine of frustration.
30. Explain the duties of an agent.
31. What are the essentials of a valid offer?

(6 × 4 = 24 Marks)

SECTION - D

Answer any **two** questions. Each question carries **15** marks.

32. Define contract. What are the essential elements of a valid contract?
33. Explain the remedies for breach of contract of sale.
34. Who are the persons incompetent to make a contract by status? Explain.
35. What are the rights of an unpaid seller?

(2 × 15 = 30 Marks)

Reg. No. :

Name :

Second Semester B.Com. Degree Examination, May 2020

First Degree Programme Under CBCSS

Core Course : CO 1241/CX 1241/CC 1242/HM 1241/TT 1241

FINANCIAL ACCOUNTING

(Common for Commerce/Commerce and Tax Procedure and Practice/Commerce and Tourism and Travel Management/Commerce and Hotel Management and Catering/Commerce with Computer Applications)

(2018 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in **one** or **two** sentences each. **Each** question carries **1** mark.

1. Define accounting
2. What is Ledger?
3. What is a debit note?
4. What is trade discount?
5. What is an opening entry?
6. What do you mean by fixed assets?
7. What is a balance sheet?

8. What are bonus shares?
9. What is hire Purchase?
10. What is address commission?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions in not exceeding one paragraph each. **Each** question carries **2** marks.

11. Distinguish between Journal and Ledger.
 12. Name any two objectives of preparing the Trial Balance.
 13. What do you understand by wasting assets? Give an example.
 14. What do you mean by diminishing balance method of providing depreciation?
 15. Give a brief account of returnable packages.
 16. Journalise the following transactions in the books of Sri. P.N. Muthayya of Coimbatore
- 2019 March 1 Commenced business with Rs. 2,00,000
2019 March 4 Purchased goods for cash for Rs. 50,000 at 5% trade discount.
2019 March 9 Paid carriage Rs. 500
2019 March 11 Purchased machinery for Rs. 75,000
7. On January 1, 2020 the position of Mrs. Bindu Das was as follows:

Stock on hand, Rs. 10,000; Owing to Creditors, Rs. 8,000; Owing from Debtors, Rs. 20,000; Building at cost, Rs. 80,000; Bank Overdraft, Rs.32,000; Loan to Mr. Das, Rs. 20,000; Investments (Govt. Bonds), Rs. 15,000; Cash in hand, Rs. 4,000.

What was the amount of Bindu Das' capital on this date? Construct journal entry to open her books.

18. Journalise the following transactions of a trader:
- January 1, 2020 Sold goods to Hashmi on credit Rs. 6000.
 - January 11, 2020, Hashmi became insolvent and could pay only 50% of the amount.
19. What adjustments are required to be made in the books for the following? Goods in stock worth Rs. 1,100 are destroyed by fire. Insurance company accepts the claim of Rs. 800.
20. Pass necessary journal entries for the following adjustments:
- Depreciation at 5% is to be charged on Plant and Machinery standing in the books at Rs. 50,000.
 - Insurance unexpired Rs. 2,000.
21. Show the personal account of Mr. Kuttly and Company from the following transactions:
- | | |
|-----------|--|
| 1-1-2019 | Opening balance (Credit), |
| 10-1-2019 | Purchased from them goods for Rs. 1,000 and was allowed trade discount 5%. |
| 15-1-2019 | Returned to them goods worth Rs. 40. |
| 23-1-2019 | Accepted a bill drawn by them for Rs. 200. |
| 31-1-2019 | Paid cash in full settlement and was allowed Rs. 20 cash discount. |
22. A trader intends to take a loss of profit policy with indemnity period of 6 months; however, he could not decide the policy amount. From the following details, suggest the policy amount:
- | | |
|---|----------|
| | Rs. |
| Turnover in last financial year | 4,50,000 |
| Standing charges in last financial year | 90,000 |
- Net profit earned in last year was 10% of turnover and the same trend expected in subsequent year.
- Increase in turnover expected 25%.
- To achieve additional sales, trader has to incur additional expenditure of Rs. 31,250.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions, in not exceeding 120 words. **Each** question carries 4 marks.

23. What are the differences between a trial balance and a balance sheet?
24. Define depreciation. Why is it necessary to provide depreciation?
25. Distinguish between Hire Purchase and Instalment Payment.
26. From the following figures, you are required to prepare:

(a) Provision for Doubtful Account; and

(b) Bad Debts Account

January 1, 2019	Provision for Bad Debts	Rs. 2500
December 31, 2019	Bad Debts	Rs. 1870
	Debtors	Rs. 20,000

27. On 1st January, 2017 A Ltd. acquired a machine of which the cash price was Rs. 25,800. The purchase of machine was financed by X Finance Corporation to whom Rs. 4,000 was payable by A Ltd. on 1st January, 2017 and installments of Rs. 8,000 on 31st December, 2017, 2018 and 2019 respectively. The rate of interest was 5% p.a. On 1st January, 2019, the machine was sold for Rs. 17,200 and the debt of X Finance Corporation was discharged on the date.

Show the account of X Finance Corporation in A Ltd's ledger.

28. From the following details prepare the Profit and Loss Account of Messrs John and Sons for the year ending 31st March 2019.

	Rs.
Salaries	86,000
Discount allowed	4,200
Discount received	5,000
Bad debts	17,000
Printing and stationery	1,400
Depreciation	15,000
Insurance	11,500
Carriage outward	3,100
Interest received	6,700
Rent paid	24,000

Gross profit transferred from Trading Account – Rs. 1,97,500.

29. On 31st January, 2019 X purchased for cash from Y four 6% Rs. 100 Debentures of Mehta Ltd at Rs. 110.50% cum-interest; interest being payable on 1st June and 1st December each year.

How will you record the transactions in the books of X if each party had to pay bank commission of 25 paisa percent on face value?

30. From the following particulars prepare Containers Stock Account for the year 2019:

Opening stock @ Rs. 4 each:	Nos.		Nos.
On hand	10,000	Containers sold as scrap (for Rs. 700)	1,000
With customers (all returnable)	25,000	Containers destroyed	500
Purchases during the year @ Rs. 5 each	30,000	Containers with customers at end	20,000
Containers sent out during the year	50,000	Cost of repairs to cases	Rs. 200
Containers returned by customers	45,000		

Containers are valued in the books at cost and are charged out to customers at Rs. 8 each, and credited at Rs. 6 each, if returned within the stipulated time.

31. A seller sells goods on hire purchase adding 60% to cost. From the following particulars prepare hire purchase trading account and ascertain profit or loss made by him:

	Rs.	
2019 January, 1		21,600
2019 December 31		87,120
Stock with customers at selling price		
Goods sold on hire purchase during the year at selling price		57,720
Cash received during the year		48,000
Stock with customer at selling price		5,000
Installments due but not received		

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions in not exceeding four pages each. **Each** question carries **15** marks.

32. Discuss in detail the different types of accounting errors.

33. From the following figures extracted from the books of Mr. Y. V. Bhushan you are required to prepare a Trading and Profit and Loss account for the year ended 31st December, 2019 and a Balance Sheet as on that date after making necessary adjustments

	Rs.		Rs.
Debit balances		Credit Balances	
Purchases	1,20,500	Capital	52,000
Stock on 1 st January	21,500	Sales	1,86,000
Salaries	14,000	Sundry debtors	10,900
Rent and rates	3,000		
Insurance	800		
General expenses	3,100		
Wages	25,000		
Machinery	31,000		
Sundry debtors	20,000		
Cash at bank	3,000		
Drawings	7,000		

Adjustments:

- (1) Salaries for the month of December still unpaid Rs. 1,600.
- (2) Insurance prepaid to the extent of Rs. 250.
- (3) Depreciate machinery by 10%.
- (4) Closing stock was valued at Rs. 26,000.

34. Due to a fire in the godown of a company on 30th September, 2019, the entire stock was burnt except some stock costing Rs. 70,000. The books were, however, saved.

From the information available, it was found that

- (a) The company's average gross profit was 25% on sales.
- (b) The stock on 31st March, 2019 valued at 10% above cost was Rs. 2,20,000.
- (c) The purchase and sales from 1st April, 2019 upto the date of fire were Rs. 3,00,000 and 6,80,000 respectively.
- (d) The wages for the period amounted to Rs. 1,44,000.
- (e) The company got the stock insured for Rs. 1,20,000.
- (f) The policy had an average clause.

You are required to prepare a statement showing the amount of stock lost by fire and the amount of claim to be lodged with the insurance company.

35. On 1st January, 2016, machinery was purchased by X for Rs. 50,000. On 1st July, 2017, additions were made to the extent of Rs. 10,000. On 1st April, 2018, further additions were made to the extent of Rs. 6,400. On 30th June, 2019, machinery, the original value of which was Rs. 8,000 on 1st January, 2016, was sold for Rs. 6,000. Depreciation is charged at 10% p.a. on original cost.

Show Machinery Account for the years from 2016 to 2019 in the books of X. X closes his books on 31st December.

(2 × 15 = 30 Marks)

(Pages : 3)

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Reg. No. :

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Second Semester B.Com. Degree Examination, May 2020

First Degree Programme Under CBCSS

Foundation Course : CO 1221/CC 1221

INFORMATICS AND CYBER LAWS

(Common for Commerce/Commerce with Computer Application)

(2018 Admission Onwards)

Time : 3 Hours

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SECTION - A

Answer all questions in one word or to a maximum of two sentences each. Each question carries 1 mark.

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P.T.O.

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10. What is bus topology?

SECTION – B

(10 × 1 = 10 Marks)

Answer any **eight** questions in not exceeding one paragraph each. Each carries 2 marks.

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20. What is SMS?
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22. How IT is useful in weather forecasting?

SECTION – C

(8 × 2 = 16 Marks)

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- What are the advantages of wireless communication?
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SECTION - D

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Second Semester B.Com. Degree Examination, May 2020

First Degree Programme under CBCSS

Complementary Course II : CO 1231/CX 1231/CC 1231

BUSINESS MATHEMATICS

(Common for Commerce/Commerce and Tax Procedure and
Practice/Commerce with Computer Applications)

(2018 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION - A

Answer all questions. Each question carries 1 mark.

1. What is quadratic equation?
2. What is pie-diagram?
3. What is combination?
4. What do you mean by integration?
5. What do you mean by complement of a set?
6. Solve: $5X^2 - 125 = 0$.
7. What is skew symmetric matrix?

8. What is discriminant of quadratic equation?
9. What is interpolation?
10. What do you mean by present value?

(10 × 1 = 10 Marks)

SECTION – B

Answer any **eight** questions. Each question carries **2** marks.

11. Prove that the determinant of the following matrix is non-singular

$$A = \begin{bmatrix} 3 & 1 & 2 \\ 4 & 3 & 1 \\ 1 & 1 & 5 \end{bmatrix}$$

12. State the distributive law of set.
13. If the demand function for a commodity is given by the equation $p^2 + 4q = 1600$ and the supply function is given by the equation $550 - p^2 + 2q = 0$, find the equilibrium quantity and equilibrium price.
14. Define intersection of two sets.
15. In how many different ways can be letters of the word 'CORPORATION' be arranged so that the vowels always come together?

6. Differentiate the following with respect to x ?

$$(4x - 3)^5$$

7. What is the effective rate of interest corresponding to a nominal rate of 5% p.a. If interest is compounded quarterly.

- Monthly incomes of two persons are in the ratio of 5:7 and their monthly expenditures are in the ratio of 7:11. If each saves Rs. 150 a month, find their monthly incomes.
19. From the following information, calculate Average payment period:
 Total purchases: Rs. 2,00,000, Cash purchases: Rs. 20,000, Purchase returns: 34,000,
 Trade creditors at the end: Rs. 70,000, Bills payable at the end: 40,000.
20. Find the present value of an amount of Rs. 8,000 deposited now in a commercial bank for a period of years @12% rate of interest.
21. Briefly explain the Double Declining Balance method.
22. If Rupee Dollar rate is 46/ 46.15, Dollar Pound rate is 1.71/1.74, What is Rupee Pound rate?

(8 × 2 = 16 Marks)

SECTION –C

Answer any six questions. Each question carries 4 marks.

23. Find the production for the year 2005 with the help of the following data:
- | Year | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 |
|---------------------|------|------|------|------|------|------|------|
| Production (m.tons) | 20 | 22 | 26 | 30 | 35 | ? | 43 |
24. Examine the general rules to be followed for constructing diagrams.
25. In how many ways can 5 Kannada, 3 Hindi and 3 Malayalam books be arranged if the books of each different languages are kept together?
26. Show that if the square of any integer is even, the integer itself is even.
27. Using Cramer's rule, solve the following system of equations
 $x + y + z = 6$, $2x - y + z = 3$, $x - 2y + 3z = 6$.

28. Find two natural numbers such that their sum is 24 and product 95?

29. Find X and Y if

$$X + Y = \begin{bmatrix} 4 & 5 \\ 9 & 2 \end{bmatrix} \text{ and } X - Y = \begin{bmatrix} 6 & 3 \\ 11 & 4 \end{bmatrix}.$$

30. Selling price per unit Rs.10, Variable cost per unit Rs.6, Fixed cost Rs.2,000 Actual sales Rs.20,000. Calculate Break even point in units, Break even point value and Break even point in percentage?

31. Differentiate the following w.r. to x

$$x^{\sin x} + (\sin x)^x.$$

(6 × 4 = 24 Marks)

SECTION -D

Answer any **two** questions. Each question carries **15** marks.

32. Out of 880 boys in a school, 224 played cricket, 240 played hockey and 336 played basket ball; of the total, 64 played both basket ball and hockey; 80 played cricket and basket ball and 40 played cricket and hockey; 24 played all the three games.

- How many boys did not play any game and
- How many boys played only Hockey?
- How many played only cricket?

33. Following is the Profit and Loss Account for the year ended 31-3-2019 and Balance sheet as on that date in summarized form:

Dr		Trading and P/L account		Cr	
Particulars	Amount	Particulars	Amount		
To opening stock	76,250	By sales	5,00,000		
Purchases	3,22,250	Closing stock	98,500		
Gross profit	2,00,000				
Total	<u>5,98,500</u>			<u>5,98,500</u>	

Dr	Particulars	Amount	Particulars	Amount	Cr
	Particulars		Particulars		Amount
	To selling and distribution expenses	22,000	Gross profit		2,00,000
	Loss on sale of assets	2,000	Dividend on shares		9,000
	Office expenses	98,000	Profit on sales of shares		3,000
	Net Profit	90,000			
	Total	<u>2,12,000</u>			<u>2,12,000</u>

Balance sheet as at 31.3.2019

Liabilities	Amount	Assets	Amount
Share capital 2,600 equity shares of Rs. 100 each	2,60,000	Land and Buildings	1,50,000
Reserves	70,000	Plant and Machinery	80,000
Profit and Loss A/c.	20,000	Stock in trade	98,500
Current liabilities	1,30,000	Sundry debtors	61,500
		Bills receivable	60,000
		Bank	30,000
Total	<u>4,80,000</u>		<u>4,80,000</u>

Calculate

- Turnover of fixed assets
- Operating Profit Ratio
- Operating Ratio
- Current Ratio
- Stock turnover Ratio

34. A party of 3 ladies and 4 gentlemen is to be formed from 8 ladies and 7 gentlemen. In how many different ways can the party be formed if Mrs. X and Mr. Y refuse to join the same party.

35. (a) At what time will a sum of Rs. 1234 amount to Rs. 5678 at 8% p.a. compounded quarterly, interest, payable quarterly.
- (b) A machine, the life of which is estimated to be 10 years, costs Rs. 10,000. Calculate its scrap value at the end of its life, depreciation on the reducing instalment system being charged at 10% p.a.

(2 × 15 = 30 Marks)