

2020

ADVANCED ACCOUNTANCY

Time Allowed — 3 Hours

Full Marks — 100

If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.

Answers may be written either in English or in Bengali but all answers must be in one and the same language.

Group A

Answer Question No. 1 and any two from the rest.

1. From the following Trial Balance and other particulars of ABC Limited, prepare Statement of Profit & Loss and Balance Sheet as on 31.03.2019.

Debit Balances	Amount (₹)	Credit Balances	Amount (₹)
Cash in hand	1,60,000	Equity Share Capital (14,00,000 shares of ₹ 10 each)	1,40,00,000
Cash at Bank	16,00,000	Redeemable Preference Shares	6,00,000
5% Investment [Market Value: ₹ 19,20,000]	20,00,000	General Reserve	6,80,000
Stock-in-trade	24,00,000	Capital Redemption Reserve	3,20,000
Sundry Debtors	13,20,000	Interest on Investment	1,00,000
Bills Receivable	80,000	Securities Premium	4,00,000
Establishment Charges	24,00,000	Gross Profit	1,04,00,000
Advertisement	40,000	Commission	60,000
General Expenses	5,40,000	Sundry Creditors	2,60,000
Travelling Allowance	28,000	Bills Payable	60,000
Rent and Taxes	24,000	Unpaid Dividend	40,000
Insurance	68,000	Profit and Loss Balance	2,60,000
Advance payment of Income Tax	20,00,000		
Preference Share Redemption	6,60,000	Outstanding Expenses:	
Income Tax paid under dispute (31.03.2019)	12,00,000	Advertisement	20,000
Land & Building	40,00,000	General Expenses	60,000
Plant & Machinery	80,00,000	Provision of Taxation	8,00,000
Truck and Van	2,00,000		
Furniture	4,00,000		
Discount	60,000		
Depreciation	8,60,000		
Director's Fees	20,000		
	2,80,60,000		2,80,60,000

Additional Information:

- (i) Provision is to be made for income tax at 60% of the profit.
- (ii) Managing Director is entitled to a remuneration of 5% of the annual net profit.
- (iii) The Preference Shares were redeemed on 01.04.2018 at a premium of 10% but the same has not been given effect to any other account except debiting the amount in the Preference Shares Redemption Account.
- (iv) Provide 7% dividend on Equity Share Capital.
- (v) Depreciation was provided up to 31.03.2019 as per Income Tax Rules:
Land and Building – ₹ 2,00,000; Plant and Machinery – ₹ 6,00,000; Truck and Van – ₹ 20,000 and Furniture – ₹ 40,000
- (vi) Income Tax demand for the year ending 31.03.2017 – ₹ 6,00,000 has not been provided for against which an appeal is pending.
- (vii) Sundry Debtors include ₹ 1,30,000 due for a period exceeding six months and other realisable items are considered good.
- (viii) Establishment charges include ₹ 1,00,000 towards payment made to Managing Director.
- (ix) 25% of the profit adjusting to Provisions for Income Tax under dispute should be transferred to General Reserve. 10+10=20

2. X Ltd. and Y Ltd. are engaged in similar type of business. They decided to amalgamate their business as on 1st April, 2019 by forming Z Ltd., with an authorised capital of ₹ 1,00,00,000, consisting of 6,00,000 Equity shares of ₹ 10 each and 40,000 Preference shares of ₹ 100 each. The position of assets and liabilities of X Ltd. and Y Ltd. as on 31st March, 2019 are as follows:

Equity and Liabilities	X Ltd. (₹)	Y Ltd. (₹)	Assets	X Ltd. (₹)	Y Ltd. (₹)
Equity Share Capital	30,00,000	10,00,000	Land and Building	14,00,000	5,00,000
9% Preference Share Capital	15,00,000	—	Plant	31,00,000	2,00,000
General Reserve	12,00,000	4,00,000	Furniture	1,00,000	2,70,000
Balance of Profit and Loss	3,80,000	75,000	Patents	3,00,000	—
Sundry Creditors	4,20,000	1,25,000	Stock	6,40,000	4,50,000
			Trade Debtors	1,60,000	1,30,000
			Bank Balance	8,00,000	50,000
	65,00,000	16,00,000		65,00,000	16,00,000

The following terms were agreed upon by the parties:

- (i) Z Ltd. to allot 4,50,000 Equity Shares @ ₹ 10 each to X Ltd, and pay cash ₹ 13,50,000 as consideration of all assets except bank balance.
- (ii) Y Ltd. to receive 1,20,000 Equity Shares of ₹ 10 each and ₹ 2,50,000 in cash for whole of assets except the bank balance.
- (iii) All assets are taken over at book value.
- (iv) Both X Ltd. and Y Ltd. are to pay their own liabilities and preference shareholders individually.
- (v) Z Ltd. is to issue remaining equity shares and preference shares in cash. This issue is fully subscribed and paid up.
- (vi) The liquidation expenses of ₹ 30,000 and ₹ 50,000 for X Ltd. and Y Ltd. were also paid by Z Ltd.

Show necessary journal entries in the books of Z Ltd. and prepare Balance Sheet after the amalgamation.

10+6=16

3. From the following particulars, prepare the Balance Sheet of M Ltd.

Current Ratio	2
Working Capital	₹ 4,00,000
(Net worth + Debenture) to Current Assets	3 : 2
Fixed Assets to Turnover	1 : 3
Cash Sales/Credit Sales	½
Creditors Velocity	2 months
Stock Velocity	2 months
Debtors Velocity	3 months
Net Profit	10% of Turnover
Reserves	2½% of Turnover
Debenture/Share Capital	1 : 2
Gross Profit Ratio	25%

16

4. (a) Differentiate accounting concepts with accounting conventions.
 (b) What are the demerits of harmonisation of accounting standards?
 (c) Are the convention of full disclosure and the convention of materiality contradictory to each other? Justify.

4+6+6=16

Group B

Answer any three questions.

5. B Ltd. was registered with an authorised capital of ₹ 5,00,000 divided into 30,000 equity shares of ₹ 10 each and 4,000, 10% Preference Shares ₹ 50 each. The company made an issue of 15,000 equity shares at a premium of ₹ 5 per share payable as follows:

On application	₹ 5 per share (including ₹ 2 as premium)
On allotment	₹ 6 per share (including ₹ 3 as premium)
On first Call	₹ 2 per share
On final Call	Balance

Applications were received for 24,000 shares. No allotment was made to the applicants of 4,000 shares and the amount received thereon was refunded. The rest of the applicants were issued shares on prorata basis. Mr. A, who had applied for 120 shares, failed to pay the money of allotment and calls. Mr. B, who had applied for 80 shares, failed to pay two calls and Mr. C, to whom 45 shares were allotted, failed to pay the final call money. Shares of Mr. A, Mr. B and Mr. C were forfeited after the final call was made. 160 of the forfeited shares (including whole of Mr. A and balance of Mr. B) were re-issued to Mr. D at 12 per share.

Show the journal entries (Narrations are not required) in the books of the company and prepare Balance Sheet.

12+4=16

6. D and K were working in partnership sharing profits or losses equally. On March 31st, 2019, D decided to retire and in her place, it was decided that L would be admitted as partner from 1st April, 2019 and her share in profit will be 1/3. Balance Sheet of the firm as on March 31st, 2019 is as follows:

Liabilities	₹	₹	Assets	₹	₹
Sundry Creditors		22,050	Goodwill		22,500
Partners Capitals':			Land and Building		60,075
D	81,450		Motor Car		18,000
K	72,000	1,53,450	Furniture		13,950
			Sundry Debtors		36,225
			Cash		24,750
		1,75,500			1,75,500

It was further decided as follows:

- The Goodwill should be raised to ₹ 30,000.
- The Motor Car would be taken over by D at its book value.
- The value of Land and Building would be increased by ₹ 12,420.
- K and L would introduce sufficient capital to pay off D and to leave thereafter a sum of ₹ 11,025 as working capital in a manner that the capitals of the new partners will be in proportion to their profit sharing ratio.
- The capital payable by L was to be gifted to her by D.
- The new partners decided not to show goodwill as an asset.

The partners introduced capital on 1st April, 2019. Show necessary ledger accounts and prepare the Balance Sheet as on 1st April, 2019.

4+6+6=16

7. The position of Assets and Liabilities of H. Ltd. as on 31st March, 2018 and 2019 are given below:

Liabilities	31.03.2018	31.03.2019	Assets	31.03.2018	31.03.2019
	₹	₹		₹	₹
Share Capital (Face Value ₹ 10 per share)	4,00,000	3,00,000	Fixed Assets	5,70,000	5,50,000
General Reserves	1,70,000	1,00,000	Marketable Securities	1,00,000	25,000
Capital Redemption Reserve	—	1,00,000	<i>Current Assets:</i>		
Balance of Profit and Loss	60,000	85,000	Stock	1,80,000	1,90,000
Debentures (Face Value ₹ 100 each)	2,00,000	1,40,000	Debtors	1,50,000	1,40,000
Current Liabilities	1,30,000	1,20,000	Cash and Bank	57,000	60,000
Provision for Tax	85,000	90,000	Preliminary Expenses	20,000	10,000
Proposed Dividend	30,000	36,000			
Unclaimed Dividend	2,000	4,000			
	10,77,000	9,75,000		10,77,000	9,75,000

The following informations for 2018-2019 is given:

- Bought back 10,000 equity shares @ ₹ 15 per share.
- The provision for depreciation (accumulated) was ₹ 2,90,000 on 31.03.2019 which was ₹ 60,000 more than that on 31.03.2018.
- Some Debentures were redeemed @ ₹ 103.
- Fixed Assets costing ₹ 14,000 which were fully depreciated were written off.
- Marketable Securities were sold at a profit of ₹ 10,000 which was duly reflected in the statement of profit and loss.
- Sold one machine for ₹ 25,000, the cost of which was ₹ 50,000 and the depreciation provided on it was ₹ 21,000.
- Decided to value stock at cost on 31.03.2019 whereas previously it was valued at cost less 10% on 31.03.2018.

You are required to prepare a Cash Flow Statement for the year 2018-2019.

8. M & Co. has taken out a policy against consequential loss, the amount of the policy being ₹ 60,000 for 2018-19 and the indemnity period being 18 months. A fire occurred on September 01, 2018 in the premises of M & Co. which interrupted business for a period of 12 months. The Profit & Loss Account of the year ended March 31, 2018 showed a sale of ₹ 2,40,000 and a profit of ₹ 20,000 after debiting ₹ 30,000 standing charges, of which ₹ 2,000 were not insured. Turnovers for the various periods were as follows:

Year	5 Months ended August 31 (₹)	7 Months ended March 31 (₹)
2017	1,00,000	1,40,000
2018	1,10,000	1,40,000
2019	20,000	10,000

Additional expenses totalled ₹ 7,800 and the saving in expenses was ₹ 1,500. Compute the claim for loss or profit in respect of the policy.

2020

AUDITING

Time Allowed — 3 Hours

Full Marks — 100

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Answers may be given either in **English** or in **Bengali** but all answers must be in one and the same language.

Answer any five questions.

1. (a) How is the work of an auditor different from that of an investigator?
- (b) "In a good system of internal check, the work of one is checked indirectly by the work of another". Explain the above statement.
- (c) What is the process of test checking in auditing? How is test checking different from routine checking? 5+7+(4+4)=20

2. (a) How will the following matters be included in Auditor's Report under CARO, 2016:
 - (i) Private placement of preferential issue
 - (ii) Approval of managerial remuneration
 - (iii) Net worth erosion
 - (iv) Fixed assets
 - (v) Contingent Liability
- (b) What would be the effect of the following circumstances on the audit opinion?
 - (i) The company has changed the method of depreciation from *Straight Line Method* to *Written Down Value Method*.
 - (ii) The Balance Sheet of the company has not been prepared as per Schedule III of the Companies Act.
 - (iii) The hard disk of the office computer crashed and substantial financial information relating to cash expenses were destroyed. (2½×5)+(2½×3)=20

3. (a) What are the conditions applicable for the appointment of internal auditor in a company?
- (b) To what extent can the statutory auditor rely on the work of another auditor?
- (c) What are the conditions to be fulfilled for payment of dividend out of reserves?
- (d) What are the duties of the auditor regarding interim dividend? 5+5+5+5=20

4. (a) What is Tax Audit? Examine the nature of the organizations for which Tax Audit is mandatory.
(b) "Forensic Audit has gained its importance, especially after the series of accounting scams in India and abroad". Explain how far the statement is justified.
(c) Write short notes on "Environmental Audit". $(2+5)+7+6=20$
5. (a) Give a detailed explanation of the provisions under the Companies Act, 2013 with regard to the following:
(i) Removal of an auditor
(ii) Remuneration of auditor
(b) What are objectives and advantages of Cost Audit? $(6+6)+(4+4)=20$
6. (a) Why is it important in an organization to have a sound internal control system?
(b) Can the auditors be held responsible if they rely on such internal control system and the company suffers a loss, thereby?
(c) To what extent can the statutory auditor rely on the work of internal auditor? $7+6+7=20$
7. (a) Draft an audit programme for examining the accounts of an educational institution.
(b) What services must an auditor not provide to the company in accordance with Section 144 of the Companies Act 2013?
(c) What is peer review in auditing? What are its advantages? $8+6+(2+4)=20$
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2020

BENGALI ESSAY, PRÉCIS WRITING AND COMPOSITION

Time Allowed—3 Hours

Full Marks—100

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The figures in the margin indicate marks for each question.

Do not write your name, address etc. anywhere inside the answer book. Write X, Y, Z if necessary.

- ১। যে কোনো একটি বিষয় অবলম্বনে প্রবন্ধ রচনা করুন : ৩৫
- (ক) আজকের পরিবর্তমান জীবনযাত্রা ও মধ্যবিত্ত মন
- (খ) প্লাস্টিক ব্যবহারের সমস্যা ও প্রতিকার-ভাবনা
- (গ) সাম্প্রতিক জলবায়ু পরিবর্তন ও আমাদের পরিবেশ-ভাবনা
- ২। যে কোনো একটি বিষয় অবলম্বনে কাল্পনিক সংলাপ রচনা করুন : ১০
- (ক) খবরের কাগজে একটি বৃদ্ধাবাসের বিজ্ঞাপন পড়ে কিশোর বয়সের নাতির সঙ্গে সেই বিশেষ কাগজটি পাঠরত একজন প্রবীণ নাগরিকের কথোপকথন
- (খ) বইমেলায় প্রাঙ্গণে হঠাৎ-দেখা-হয়ে-যাওয়া একজন বাল্যবন্ধুর সঙ্গে অপর বন্ধুর কথোপকথন
- ৩। (ক) পদ পরিবর্তন করুন : ৫
- সীমা, প্রত্যাগমন, উজ্জ্বল, গঙ্গা, হর্ষ
- (খ) নিম্নোক্ত বাগধারাগুলিকে সার্থক বাক্যে প্রয়োগ করুন : ৫
- কপাল ফেরা, ঘাট মানা, চোখের বালি, দাঁও মারা, পরের মুখে ঝাল খাওয়া
- ৪। সার্থক শিরোনামসহ গদ্যাংশটির সারসংক্ষেপ করুন : ২৫
- কথা জিনিসটা মানুষেরই, আর গানটা প্রকৃতির। কথা সুস্পষ্ট এবং বিশেষ প্রয়োজনের দ্বারা সীমাবদ্ধ, আর গান অস্পষ্ট এবং সীমাহীন ব্যাকুলতায় উৎকণ্ঠিত। সেইজন্যে কথায় মানুষ মনুষ্যলোকের এবং গানে মানুষ বিশ্বপ্রকৃতির সঙ্গে মেলে। এইজন্যে কথার সঙ্গে মানুষ যখন সুরকে জুড়ে দেয়, তখন সেই কথা আপনার অর্থকে আপনি ছাড়িয়ে গিয়ে ব্যাপ্ত হয়ে যায়—সেই সুরে মানুষের সুখদুঃখকে সমস্ত আকাশের জিনিস করে তোলে। তার বেদনা প্রভাত-সন্ধ্যার দিগন্তে আপনার রঙ মিলিয়ে দেয়, জগতের বিরাট অব্যক্তের সঙ্গে যুক্ত হয়ে একটি অপরূপতা লাভ করে মানুষের সংসারের প্রাত্যহিক সুপরিচিত সংকীর্ণতার সঙ্গে তার ঐকান্তিক ঐক্য আর থাকে না।

৫। বাংলায় অনুবাদ করুন :

২০

Once there lived a mosquito in a pond. The pond was her favourite place. She was living a peaceful life there. But one day she came to the pond and found that her dear dirty pond was not there. It had turned into a very clean pond. She was shocked. The homeless mosquito did not know what to do. She had nowhere to go. She began to cry. Suddenly she saw her friend-the fly. She also looked very sad, "Whats the matter?" asked the mosquito. "Please do not ask me," answer the fly with tears in her eyes. "I am hungry, I visited many kitchens. The food was all covered and I could not eat anything."

"That's very bad," said the mosquito, "I am also unhappy. Look my favourite pond is gone, Where should I lay my eggs?"



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2020

BUSINESS MANAGEMENT

Time Allowed — 3 Hours

Full Marks — 100

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*Answers may be written either in **English** or in **Bengali** but all answers must be in one and the same language.*

Answer Question No. 1 which is compulsory and any four from the rest.

1. Write short notes on the following: 5×4=20
 - (a) Contribution of Elton Mayo to the Development of Management Thought.
 - (b) Herzberg's two-factor theory.
 - (c) Management by objectives.
 - (d) Hawthorne Experiment.

2.
 - (a) Describe in short, the different elements of management.
 - (b) Describe the evolution of Management Thoughts.
 - (c) What are the 14 principles of Management of Henri Fayol? 5+10+5=20

3.
 - (a) Explain what is understood by organization.
 - (b) What are the different types of organization? 8+12=20

4.
 - (a) What are the components of organization structure?
 - (b) What are the relationships between these components? 10+10=20

5.
 - (a) What are the different approaches to the study of leadership?
 - (b) How does trait theory explain leadership? 10+10=20

6.
 - (a) What is the primary distinction between content and process theories of motivation?
 - (b) In your own words, briefly explain Maslow's theory of motivation. Evaluate the theory. 8+12=20

7.
 - (a) Define 'Budget' and 'Budgetary Control'.
 - (b) What is Zero Base Budgeting?
 - (c) What are the behavioural aspects which should be borne in mind by those who are designing budgetary control system? 5+5+10=20

2020

BUSINESS MATHEMATICS AND STATISTICS

Time Allowed — 3 Hours

Full Marks — 100

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Answer may be given either in **English** or in **Bengali** but all answers must be in one and the same language.

Group-A

1. Answer the following questions:

4×5=20

- (a) If the first and tenth term of a geometric sequence are 3 and 30 respectively, find the 40th term of the series.
- (b) Find the sum of all even numbers between 31 and 87.
- (c) The government has decided on a tax rebate program to stimulate the economy. Suppose that you receive Rs. 1200 and you spend 80% of this, and each of the people who receive what you spend also spend 80% of what they receive, and this process continues without end. According to multiplier principle in economics, the effect of your Rs. 1200 tax rebate on the economy is multiplied many times. What is the total amount spent if the process continues as indicated?

Or,

Consider the set of digits {1, 2, 3}. How many two digit numbers can be formed from this set if two different digits have to be used? Justify your answer by the rule of permutation.

- (d) In how many ways can you choose 5 out of 10 friends to invite to a dinner party?

Or,

Solve for x in the following equation

$$\log_a x + \log_a (x+1) = \log_a 6$$

- (e) Find the value of

$$\sum_{x=0}^{24} 3(0.8)^x$$

Or,

Suppose you have 4 pairs of trousers, 3 different shirts and 2 pairs of shoes. Assuming that you must wear trousers, a shirt and shoes, how many different ways can you get dressed?

Group-B

2. Answer the following questions:

8×6=48

- (a) How long will it take for Rs. 5000 to grow to Rs. 15,000 if the money is invested at 8.5% compounded quarterly?

Or,

How much money must you deposit now at 6% interest compounded quarterly in order to be able to withdraw Rs. 3000 at the end of each quarter year for two years?

- (b) A survey of 100 college students who exercise regularly found that 45 jog, 30 swim, 20 cycle, 6 jog and swim, 1 jogs and cycles, 5 swim and cycle and 1 does all three. How many of the students do not do any of these three activities?

- (c) Given n pairs of values (x_i, y_i) $i=1 \dots n$ of two correlated variables (X, Y) , define the correlation coefficient r . Show that

$$-1 \leq r \leq 1$$

Or,

For 20 students, the regression line of weight of kidneys (y) on weight of heart (x) is $y=0.399x+6.934$ and the regression line of weight of heart on weight of kidneys is $x=1.212y-2.461$. Find the correlation coefficient between the two variables and also their means.

- (d) Given the following table determine the value of $\log 261.8$ by Newton's forward interpolation formula.

x	$\log x$
261	2.4166405
262	2.4183013
263	2.4199557
264	2.4216039
265	2.4232459
266	2.4248816
267	2.4265113
268	2.4281384

(e) Define arithmetic mean, median and mode as measures of central tendency. Give practical examples where

(i) Median is the best measure of central tendency

(ii) Mode is the best measure of central tendency

Or,

Let x be a variable assuming positive values only. Then show that the arithmetic mean of the reciprocal of x can not be smaller than the reciprocal of the arithmetic mean (You have to prove all necessary results).

(f) Firms A and B both claim that their tyres show better performance on the basis of tests held and result given below:

Mileage run by tyres before their rejection	Firm A	Firm B
Mean	24,800 miles	24,200 miles
Median	24,600 miles	25,000 miles
Range	4,900 miles	5,000 miles

Can you indicate which of the two firms can claim better performance? Give your reason.

Group-C

3. Answer the following questions:

8×4=32

(a) Calculate price and quantity index numbers for 2010 with 2000 as base year from the following data using Fisher's formula.

Commodity	Unit	2000		2010	
		Quantity	Price(Rs)	Quantity	Price(Rs)
A	kg	5	2.00	7	4.50
B	Quintal	7	2.50	10	3.20
C	Dozen	6	8.00	6	4.50
D	kg	2	1.00	9	1.80

(b) The median of the following frequency distribution is 127.5. Obtain the missing frequency.

Class interval:	100-109	110-119	120-129	130-139	140-149	150-159
Frequency:	5	7	?	8	4	6

- (c) The standard deviation of first n positive integers is 2. Find the value of n .

Or,

What do you mean by a link index? Discuss the relative merits and demerits of chain base and fixed base index numbers.

- (d) Compute a measure of association for the following data and comment.

Deaths from cancer in Nepal in 2010

	Male	Female
Lung cancer	3534	1313
other terms of cancer	270	252

Or,

The difference between upper face length (y) and nasal length (x) both measured in mm. is given for 15 Indian adult males.

15	13	15
15	12	19
13	12	19
14	15	19
11	15	14

Calculate the correlation coefficient between x and y given that $sd_x = 3.53$ and $sd_y = 4.30$.

2020

BUSINESS REGULATORY FRAMEWORK

Time Allowed—3 Hours

Full Marks—100

If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.

Answers may be written either in English or in Bengali but all answers must be in one and the same language.

Answer any five questions.

1. (a) Define “One Person Company” or “OPC” as per the Companies Act, 2013. Discuss the features of such a company. 5
- (b) Discuss with specific reference to sections 101 and 103 of the Companies Act, 2013, the provisions regarding issuance of notice and quorum of such meetings. 10
- (c) Discuss the provisions of the Companies Act regarding Director Identification Number. 5
2. Discuss the provisions of Section 139 of the Companies Act, 2013 regarding appointment, mandatory rotation and reappointment of auditors of a company. 20
3. (a) Distinguish between condition and warranty. 5
- (b) What is caveat emptor? What are the exceptions to the doctrine of caveat emptor? 10
- (c) What are the rights of an unpaid seller? 5
4. (a) Write a brief note on the minor’s position in the partnership firm. 5
- (b) What are the grounds for dissolution of partnership? 10
- (c) Write a brief note on Red Herring Prospectus. 5
5. (a) What do you mean by holder in due course? What are the rights of holder in due course? 10
- (b) Distinguish between a bill of exchange and a promissory note. 10
6. (a) Distinguish between void contract and voidable contract. 10
- (b) “Consideration need not be adequate”— Explain. 10
7. (a) With reference to the Consumer Protection (Amendment) Act, 2002, state the composition and jurisdiction of the district forum. 10
- (b) Discuss the provision contained in the Payment of Bonus Act, 1965 regarding payment of minimum bonus. 5
- (c) Mention the Establishments to which payment of Gratuity Act, 1972 applies. 5

2020

COST MANAGEMENT AND ACCOUNTING

Time Allowed — 3 Hours

Full Marks — 100

If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.

Answers may be written either in **English** or in **Bengali** but all answers must be in one and the same language.

The figures in the margin indicate marks for each question.

Answer Questions 8 and any five from the rest.

1. In manufacturing its products, a company uses materials, P, Q and R in respect of which the following details are as follows: 16

Raw Material	Usage per unit of product (kg)	Re-order Quantity (kg)	Price per kg (₹)	Delivery Period in weeks			Re-order Level (kg)	Minimum Level (kg)
				Min.	Av.	Max.		
P	10	10000	10	1	2	3	8000	
Q	4	5000	30	3	4	5	4750	
R	6	10000	15	2	3	4		2000

Weekly production varies from 175 to 225 units. Calculate the following quantities:

- (i) Minimum stock of P
 - (ii) Maximum stock of Q
 - (iii) Re-order level of R
 - (iv) Average stock level of P
2. (a) In a factory, a job can be executed either through worker X or worker Y. X takes 32 hours to complete the job, while Y takes 30 hours to finish the same job. The standard time to finish the job is 40 hours. The raw material input cost and hourly wage rate are the same for both the workers. X is entitled to receive bonus according to Halsey plan while Y is paid bonus as per the Rowan plan. Workers' overheads are recovered on the job at ₹ 15 per labour hour worked. The factory cost of the job comes to ₹ 5,200 irrespective of worker engaged. Find out the hourly wage rate and cost of raw materials input. 16

(b) During the same period, the factory received a job order, the details of which are as follows:

Raw material cost:	₹ 5,000
Standard Labour time:	200 hours
Actual time (Job done by Y):	150 hours
Administration overhead:	15% of works cost
Selling and Distribution overhead:	10% of total cost
Profit margin:	20% on Sales

What price do you recommend for the job?

3. ABC Manufacturing Company has three production departments A, B, C and two service departments P and Q. The following is the budget for February 2019: 16

Particulars	Total (₹)	A (₹)	B (₹)	C (₹)	P (₹)	Q (₹)
Direct Materials	—	1,000	2,000	4,000	2,000	1,000
Direct Wages	—	5,000	2,000	8,000	1,000	2,000
Factory Rent	4,000					
Power	2,500					
Depreciation	1,000					
Other Overhead	9,000					

Additional information is given as under:

	A	B	C	P	Q
Area (sq. ft)	500	250	500	250	500
Capital value of Assets (₹ in lakhs)	20	40	20	10	10
Machine Hours	1000	2000	4000	1000	1000
Horse Power of Machines	50	40	20	15	25

A technical assessment of the apportionment of the costs of the service departments is as under:

	A	B	C	P	Q
Service Department P	45%	15%	30%	—	10%
Service Department Q	60%	35%	—	5%	—

Distribute the overheads to various departments and redistribute service department costs to production departments. Also compute the machine hour rates for production departments A, B and C.

4. A contractor who prepares his account on 31st December each year, commenced a contract on 1st April, 2018. The costing records concerning the said contract reveal the following information on 31st December, 2018: 16

Materials changed to site:	₹ 2,58,100
Labour engaged:	₹ 5,60,500
Foremens' salary:	₹ 79,300

Plant costing ₹ 2,60,000 had been on site for 146 days. Working life of the plant is estimated at 7 years and its final scrap value at ₹ 15,000. A supervisor who is paid ₹ 4,000 per month, has devoted approximately three-fourths of his time to this contract. The administrative and other expenses amount to ₹ 1,40,000. Materials in hand at site on 31st December, 2018 cost ₹ 25,400. Some of the materials costing ₹ 4,500 was found unsuitable and was sold for ₹ 4,000 and a part of the plant (whose written-down-value on 31st December, 2018 was ₹ 5,500) was sold at a profit of ₹ 1,000 as it was unsuited to the contract.

The contract price was ₹ 22,00,000 but it was accepted by the contractor for ₹ 20,00,000. On 31st December, 2018, two-thirds of the contract was completed. Architect's certificate had been issued covering 50 per cent of the contract price and ₹ 7,50,000 had so far been paid on account.

Prepare contract account and state how much profit or loss should be included in the financial accounts to 31st December, 2018. Depreciation is charged on time basis. Also prepare the contractee account and show how these accounts would appear in the balance sheet as on 31st December, 2018.

5. A chemical product passes through three different process to convert into a finished product. Data relating to the product for the month of January 2020 is as follows: 16

	Total (₹)	Process A (₹)	Process B (₹)	Process C (₹)
Basic Raw Materials				
(20,000 units)	20,000	20,000	—	—
Other materials (₹)	13,000	4,000	5,000	4,000
Direct wages (₹)	30,000	12,000	10,000	8,000
Direct expenses (₹)	57,590	14,000	29,140	14,450
Production overhead (₹)	15,000	—	—	—
(absolute as a percentage of wages)				
Output (units)	—	18200	17400	16400
Normal Loss (in process input)	—	10%	7.5%	5%
Scrap value per unit (₹)	—	1	2	3

There was no stock at start or at end in any process. All goods are sold at 20 per cent profit on sales. Prepare the following:

- All process accounts
- Normal Loss account
- Abnormal Loss account
- Abnormal gain account
- Finished stock account

6. A farmer asks your recommendation for optimal mix of production for the coming year. The current data are given below: 16

Particulars	Items produced			
	A	B	C	D
Area Occupied (acres)	25	20	30	25
Yield per acre (tonnes)	10	8	9	12
Sale Price per tonnes (₹)	1,000	1,250	1,500	1,350

Variable cost per acre:

Material (₹)	700	600	950	900
Labour (₹)	2,000	2,500	3,000	3,700
Variable Overhead (₹)	2,000	2,000	2,000	2,000

Fixed Overheads:

	(₹)
→ Cultivation and Growing →	1,00,000
→ Harvesting and Transport →	2,40,000
→ Land Revenue →	90,000
→ Administration →	1,10,000

The land which is being used for production of items A and B can be used for either items, but not for items C and D. The land which is being used for production of items C and D can be used for either items, but not for items A and B. In order to provide adequate market service, the farmer must produce each year at least 40 tonnes of each of A and B and 36 tonnes of each of C and D.

- Calculate the profit of the current year and prepare the profitability statement.
- Recommend a production mix and calculate the profit for the same. What would be your answer if maximum land available is 90 acres in total?

7. (a) The Standard Mix to produce one unit of a product is as follows: 16

Material A	→	60 units @ ₹ 15 per unit
Material B	→	80 units @ ₹ 20 per unit
Material C	→	100 units @ ₹ 25 per unit

During the month of July, 10 units were actually produced and consumption is as follows:

Material A	→	640 units @ ₹ 17.5 per unit
Material B	→	950 units @ ₹ 18 per unit
Material C	→	870 units @ ₹ 27.5 per unit

Calculate all material variances.

- (b) Calculate the Variable Overhead Variances and Fixed Overheads Variances from the following data:

	Budgeted	Actual
Output (units)	20,000	19,000
Hours	5000	4500
Overhead— Fixed (₹)	10,000	10,500
Variable (₹)	5,000	4,800

- Explain the concept of constraint optimization and shutdown costs with respect to Marginal Costing. (5×4)=20
- Describe the applications of 'Activity Based Costing' in the present context with appropriate examples.
- Elucidate the concept of Break Even Analysis with an appropriate Graph. In this context what is the relevance of Margin of safety?
- Distinguish between Functional Budgets and Master Budget. Explain the advantages of Zero Base Budgeting.