

Half Yearly Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 80

- Q1- N, M and S were partners in a firm. On 1st Jan 2018 M retired on M's retirement the goodwill of the firm was valued at 85,000. Pass necessary journal entry for the treatment of goodwill on M's retirement. [1]
- Q2- Anant, Gulab and Khushbu were partners in a firm sharing profits in the ratio of 5:3:2 from 1st April 2016 they decided to share the profits equally for this purpose the goodwill of the firm was valued at 24,000. Pass necessary journal entry for the treatment of goodwill on change in the profit sharing ratio of Anant; Gulab and Khushbu. [1]
- Q3- Distinguish between "Dissolution of partnership" and "Dissolution of partnership firm on the basis of settlement of assets and liabilities." [1]
- Q4- Durga and Naresh were partners in a firm. They wanted to admit five more members in the firm list any two categories of individuals other than minors who cannot be admitted by them. [1]
- Q5- Anurag and Bhawana entered into partnership on 1st April 2014. On 1st Jan 2015 they admitted Monika as a new partner for 3/10th share in the profits which she acquired equally from Anurag and Bhawana. The new profit sharing ratio of Anurag, Bhawana and Monika was 4:3:3. Calculate the profit sharing ratio of Anurag and Bhawana at the time of forming the partnership. [1]
- Q6- Give the journal entry to distribute "Workman Compensation Reserve" of 70,000 at the time of retirement of Neeti, when there is no claim or Rs 25,000 against it. The firm has three partners Raveena, Neeti and Rajal. [1]
- Q7- A and B are equal partners of a firm. They decide to dissolve their partnership on 31st March 2018 at which date their Balance Sheet stood at

Liabilities	Amount	Assets	
Capital		Building	45,000
A	50,000	Machinery	15,000
B	40,000	Furniture	12,000
General Reserve	8,000	Debtors	8,000
B's Loan	3,000	Stock	24,000
Creditors	14,000	Bank	11,000

[1] The assets realized were stock 22,000; Debtors 7,500; Machinery 16,000 and Building 35,000

[2] B took over the furniture at 9,000

[3] B agreed to accept 2,500 in full settlement of his loan account

[4] Dissolution expenses amounted to 2500. Prepare Realization Account. [3]

- Q8- From the following particulars, calculate amount of subscriptions to be credited to the Income and Expenditure Account of the year ended 31st March 2016
- Total subscriptions received during 2015-16 [including 400 for 2014-15 and 1500 for 2016-17] 35,400
 - Subscription in arrears on 1-4-2015- 600
 - Subscription received in advance on 31st March 2015- 1500
 - Subscription outstanding for 2015-16 Rs. 400 [3]
- Q9- X, Y and Z are partners in a firm sharing profit in the ratio of 3:2:1. On 1st April 2009, Y retires from the firm. X and Z agree that the capital of the new firm shall be fixed at 2,10,000 in the profit sharing ratio. The capital accounts of X and Z after all adjustments on the date of retirement showed balances of 1,45,000 and 63,000 respectively. State the amount of actual cash to be brought in or to be paid to partners. [3]
- Q10- The partners of a firm distributed the profit for the year ended March 31, 2018, 1,50,000 in the ratio of 2:2:1 without providing for the following adjustment
- A and B were entitled to a salary of 1500 per quarter
 - C was entitled to a commission of 18,000
 - A and C had guaranteed a minimum profit of 50,000 p.a. to B
 - Profits were to be shared in the ratio 3:3:2.
- Pass necessary journal entry. [3]

- Q11- Anu and Bhagwan were partners in a firm sharing profits in the ratio of 3:1. Goodwill appeared in the books at 4,40,000. Raja was admitted to the partnership. The new profit sharing ratio among Anu, Bhagwan and Raja was 2:2:1. Raja brought 1,00,000 for his capital and necessary cash for his goodwill premium. The goodwill of the firm was valued at 2,50,000. Record the necessary journal entries in the books of the firm for the above transactions. [4]
- Q12- P and Q are partners with capital 1,50,000 and 1,00,000 respectively. Interest on capital is allowed @9% p.a. Their profit for the year before following interest on capital is 15,000
 [A] Partnership deed is silent about the treatment of interest on capital
 [B] Interest on capital is charged against profit as per deed. [4]
- Q13- S, R, M and G were partners in a firm sharing profits in the ratio 2:2:3:3. On 1 April 2018 their Balance Sheet was as follows [6]

Liabilities	Amount	Assets	Amount
Capital		Fixed Assets	6,00,000
S	1,00,000	Current Assets	3,45,000
R	1,50,000		
M	2,00,000		
G	2,50,000		
Sundry Creditors	1,70,000		
Workmen compensation Res.	75,000		

From the above date the partners divided to share the future profits equally. For this purpose the goodwill of the firm was valued at 90,000. It was also agreed that

- 1- Claim against Workmen Compensation Res. Will be estimated at 1,00,000 and fixed assets will be depreciated by 10%
- 2- The capitals of the partners will be adjusted according to the new profit sharing ratio. For this necessary cash will be brought or paid by the partners as the case may be.

Prepare Revaluation Account, Partners Capital Account and the Balance Sheet of the reconstituted firm.

- Q14- Poonam, Kusum and Ranu were partners in a firm sharing profits and losses in the ratio of 2:2:1. On 31st March 2017 their Balance Sheet was as follows [6]

Liabilities	Amount	Assets	Amount
Creditors	3,00,000	Fixed Assets	4,50,000
General Reserve	1,50,000	Stock	1,50,000
Capital		Debtors	2,00,000
Poonam	2,00,000	Bank	1,50,000
Kusum	2,00,000		
Ranu	1,00,000		

Kusum died on 12-06-2017. According to the partnership deed, the legal representatives of the deceased partner were entitled to the following

- 1- Balance in his Capital Account
- 2- Interest on Capital @12%
- 3- Share of Goodwill of the firm on Kusum's death was valued at 60,000
- 4- Share in the profits of the firm till the date of his death, calculated on the basis of last year's profit. The profit of the firm for the year ended 31-3-2017 was 5,00,000

Prepare Kusum's Capital Account to be presented to his representatives.

- Q15- Pass necessary journal entries of the dissolution of a partnership firm in the following cases
- 1- Expenses of dissolution were 9000
 - 2- Expenses of dissolution 3400 were paid by a partner Vishal
 - 3- Shiv a partner, agreed to do the work of dissolution for a commission of 4500 He also agreed to bear the dissolution expanses, Actual dissolution expenses 3900 were paid from the firm's bank account
 - 4- Naveen, a partner, agreed to look after the dissolution work for which he was allowed a remuneration of 3000. Naveen also agreed to bear the dissolution expanses, Actual expenses on dissolution 2700 were paid by Naveen
 - 5- Vivek, a partner was appointed to look after the dissolution work for a remuneration of 7000 He agreed to bear the dissolution expenses,. Actual dissolution expenses 6500 were paid by Rishi, another partner on behalf of Vivek
 - 6- Gaurav, a partner, was appointed to look after the work of dissolution for a commission of 12,500 , He agreed to bear the dissolution expenses. Gaurav took over furniture of 12,500 as his commission. The furniture had already been transferred to realization account. [6]

- Q16 C and D are partners is a firm sharing profits in the ratio of 4:1. On 31-3-2018 their Balance Sheet was as follow [8]

Balance Sheet as on 31-3-2018

Liabilities	Amount	Assets	Amount
Creditors	40,000	Cash	24,000
Provision for Bad Debts	4,000	Debtors	36,000
Outstanding Salary	6,000	Stock	40,000
General Reserve	10,000	Furniture	80,000
Capitals		Plant & Machinery	80,000
C	1,20,000		
D	80,000		
	2,60,000		2,60,000

On the above date E was admitted for 1/4 share in the profits on the following terms

1. E will bring 1,00,000 as his capital and 20,000 for his share of goodwill premium, half of which will be withdrawn by C and D
2. Debtors 2,000 will be written off as bad debts and a provision of 4% will be created on debtors for bad and doubtful debts
3. Stock will be reduced by 2,000, furniture will be depreciated by 4,000 and 10% depreciation will be charged on plant and machinery
4. Investments of 7,000 not shown in the Balance Sheet will be taken into account
5. There was an outstanding repair bill of 2300 which will be recorded in the book
6. Capital of C and D will be adjusted on the basis of E's capital and actual cash to be brought in or to be paid off as the case may be.

Prepare Revaluation Account, Partner's capital accounts and the Balance sheet of the new firm.

OR

A B and C are partners in a firm sharing profits and losses in the ratio of 3:2:1. Their Balance Sheet as 31st March 2016

Liabilities	Amount	Assets	Amount
Creditors	15,000	Cash and Bank	9,000
Reserve Fund	8,000	Debtors 12,500 Less PDD 1,500	11,000
Bills Payable	6,000	Stock	9,000
Capital A	20,000	Furniture	15,000
B	20,000	Machinery	35,000
C	15,000	Goodwill	5,000
	84,000		84,000

B retires on 1st April 2016 on the following terms

- 1- Provision for Doubtful Debts be raised by 500
- 2- Stock to be depreciated by 10% and Furniture by 5%
- 3- There is an outstanding claim of damages of 550 and it is to be provide for
- 4- Creditors will be written back by 3,000
- 5- Goodwill of the firm is valued at 12,000
- 6- B is paid in full with the cash brought in by A and C in such a manner that their capitals are in proportion to their profit sharing ratio and Cash in hand remains at 5,000 . Prepare Revaluation partners Capital & Balance sheet.

Q17- From the following Receipts and Payments Account of New City Club and from the information supplied prepare Income and Expenditure Account for the year ended 31st March 2016 and Balance sheet as at the that date [8]

Receipts and Payment Account

Receipts	Amount	Payments	Amount
To Balance b/d	700	By Salaries	2,800
To Subscription		By General Expenses	600
2014-15	500	By Electricity Charges	400
2015-16	2,000	By Books	1,000
2016-17	4,00	By Newspapers	800
To Rent	1,400	By Balance c/d	400
To Profit from Entertainment	800		
To Sale of Old Newspaper	200		

- 1- The club has 50 members each paying an annual subscription of 50. Subscriptions Outstanding on 31st March 2015 were 600
- 2- On 31st March 2016 Salaries Outstanding amounted to 200. Salaries paid in 2015-16 included 600 for the year 2014-15
- 3- On 1st April 2015 the Club owned Building valued at 20,000; Furniture 2,000 and Books 2,000
- 4- Provide depreciation on furniture at 10%

OR

The details of Receipts and Payments Account of Janta Hospital for the year ended 31st March 2018 are as follows

Receipts and Payments Account			
To Opening Balance	7,130	By Medicines	30,590
To Subscription	47,996	By Salary	36,500
To Donations	14,500	By Petty Expenses	461
To Interest on Investment	7,000	By Expenses on Charity show	750
@ 7% for full year		By Equipment	15,000
To Proceeds from	10,450	By Closing Balance	3,775
Charity Show			

	On 1st April 2017	On 31st March 2018
Additional Information:-		
Sub. Outstanding	240	280
Sub. Received in Advance	64	100
Stock of Medicines	8,810	9,740
Salaries Outstanding	-----	1,000
Equipment	21,200	31,600
Building	40,000	38,000

PART -B

Q19- The accountant of Manav Ltd. While preparing Cash Flow Statement added depreciation `provided on fixed assets to net profit for calculating cash flow from operation activities. Was he correct in doing so? Give reason . [1]

Q20- State any one objective of financial; statements analysis. [1]

Q21 JW Ltd. Was a company manufacturing geysers. As a part of its long term goal for expansion, the company decided to identify the opportunity in rural areas, Initial plan was rolled out for Bhiwani village in Haryana. Since the village did not have regular supply of electricity, the company decided to manufacture solar geysers. The core team consisting of the Regional Manager, Accountant and the Marketing Manager was taken for the Head Office and the remaining employees were selected from the village and neighborhood areas.

At the time of preparation of financial statements, the accountant of the company fell sick and the company deputed a junior accountant temporarily from the village for two months. The Balance Sheet prepared by the junior accountant showed the following items against the Major Heads and sub-heads mentioned which were not as per Schedule III of the Companies Act 2013.

Item	Major Head/ Sub- Had	
Loose Tools	Trade Receivables	
Cheques in Hand	Current Investments	
Term Loan from Bank	Other Long Term liabilities	
Computer Software	Tangible Fixed Assets	[4]

Q21- Prepare a common size Balance Sheet of KJ Ltd. From the following information [4]

Particulars	Note No.	31-3-2017	31-3-2016
I Equity and Liabilities			
Share Holder’s Funds		8,00,000	4,00,000
Non Current Liabilities		5,00,000	2,00,000
Current Liabilities		3,00,000	2,00,000
Total		16,00,000	8,00,000
II Assets			
Non Current Assets		10,00,000	5,00,000
Current Assets		6,00,000	3,00,000
Total		16,00,000	8,00,000

Q22-[a] The quick ratio of a company 1.5:1.State with reason which of the following transactions would [1] Increase [2] Decrease or [3] not change the ratio

[I] Paid rent 3000 in advance

[2] Trade receivables included a debtor Shri Ashok who paid his entire amount due 9700

[b]From the following information compute “Proprietary Ratio”

Long term Borrowings 2,00,000; Long Term Provision 1,00,000; Current Liabilities 50,000; Non Current Liabilities 3,60,000; Current Assets 90,000

[2+2]=4

Q23- Following is the Balance Sheet of Akash Ltd. As at 31-3-2014

[6]

Particular	2013-14	2012-13
I Equity And Liabilities		
[1] Shareholder’s Fund		
[a] Share capital	3,00,000	2,80,000
[b] Reserves and Surplus	50,000	22,000
[2] Non Current Liabilities		
10% Long term Borrowing	40,000	25,000
[3] Current Liabilities		
Short term Borrowing	2,400	2,000
Trade Payables	3,000	16,600
Short Term Provision	3,600	2,200
Total		
II Assets		
[1] Non Current Assets		
Fixed Assets		
Tangible Assets	3,72,000	3,22,000
Intangible Assets	10,000	6,000
[2] Current Assets		
Current Investments	1,600	1,000
Inventories	7,400	11,800
Trade Receivables	5,200	4,600
Cash and Cash Equivalents	2,800	2400
Total		

	2013-14	2012-13
1- Reserve and Surplus [Balance in statement of P&L	50,000	22,000
2- Short Term Borrowing Bank Overdraft	2,400	2,000
3- Short term Provision for Tax	3,600	2,200
4- Tangible Assets Machinery	4,00,000	3,40,000
Accumulated Depreciation	[28,000]	[18,000]
5- Intangible Assets Patents	10,000	3,000

Additional Information :-

- 1- Tax paid during the year amounted to 3200
- 2- Machine with a net book value 2000 [Accumulated Depreciation 9,00] was sold for 500.

Prepare Cash Flow Statement.

Half Yearly Examination 2018 - 19

Time: 3:00 Hrs.

M. M. 100

SECTION A-READING

Q.1 Read the following passage carefully and answers the following question

1. EdX, a system of education being introduced in India for the first time, is altering education. The system provides a world school that is not stuck in time. It offers students who enroll access to a blue-chip faculty. The system offers an open online course to students, giving them direct access to teaching from blue-chip global universities. Also, EdX course credits are now being recognized by universities, reflecting its acceptability at traditional campuses. The course creates a new kind of university that is unparalleled. It is a university without borders that blends online learning with on-campus experience and gets the best of both.
2. The education layout has a number of programmes where one can take courses on EdX and get credits from an American University. Today, a student can take a full first year of university education and if he/she passes the virtually proctored exam on EdX, one can get credits with Arizona State University. So a student could be in High School and complete one year of college on EdX and then go to the US, and transfer one year of credit wherever the student may go for further studies. Thus students taking the EdX system can save one year of stay and study in United States.
3. Founded by Harvard and MIT in 2012, this online destination for learning is the provider for massive open on line courses (Moocs). It offers courses from the world's finest universities and almost six lakh students hold EdX certificates. The biggest areas of focus in these courses are job-focused and English language courses. The popularity of these courses stems from the fact that in this fast growing economy there is huge skills gap.
4. On closer examination of the Moocs, it is established that the system has not been able to reach the lower strata of people, particularly the people with no degrees. Looking into the matter it has been found that these people are not taking the courses offered because the Moocs are of an advanced level. Thus in a correctional mood, Moocs has now included courses that are of a high school level and these courses have now brought about an increase in students in the age of 13-18.
5. To provide a wide spectrum of choices, EdX courses have been categorized into four steps. As a first step, the system moved from the courses to complete programmes and branded certificate programmes. In the second stages the system moved to credible micro credentials called micro masters. The third system is for cheating prevention by launching virtual proctoring. And finally, there are programmes for collaboration and social learning. Not satisfied with the streamlining their system, Moocs has moved a step further by making teams so that students can collaborate online.
6. The road ahead for the EdX system of education is one of completely re-imaging education. While today, students go to a university or to some online courses, in the future these students will go back and forth between campus and online education. This method of learning is being called the porous university. A student pieces together a degree by taking the best from various places and getting some campus experience as well.

1.1 On the basis of the passage answer the following questions with the help of the given options:

2

(a) The EdX system of education

- | | |
|--|--|
| (i) is being offered in India for the first time | (ii) has been offered at select places |
| (iii) is popular in South India | (iv) will take students to Harvard |

(b) The examination at EdX are.....

- | | |
|---------------------------|--------------------------|
| (i) stage managed | (ii) Harvard controlled |
| (iii) at the school level | (iv) virtually proctored |

1.2 Answer the following questions briefly:**6**

- (a) What does the EdX system of education offer its students?
- (2) What is the advantage of passing the virtually proctored examination in this system?
- (3) Why is this education term 'the best of both'?
- (4) What is special advantage in it for high school students?
- (5) What are the corrections made in the Moocs system?
- (6) What does the concept of a porous university imply?

1.3 Find words from the passage which mean:**2**

- (a) all teachers in a school or college (para 1)
- (b) joint venture (para 5)

Q.2 Read the given passage:

1. And so it happened that on a warm windy evening I drove over to East Egg to see two old friends whom I scarcely knew at all. Their houses were even more elaborate than I expected, a cheerful red and white Georgian Colonial mansion overlooking the bay. The lawn started at the beach and ran towards the front door for a quarter of a mile, jumping over sun-dials and brick walks and burning gardens- finally when it reached the houses drifting up the side in bright vines as though from the momentum of its run. The front was broken by a line of French windows, glowing now with reflected gold, and wide open to the warm windy afternoon, and Tom Buchanan in riding clothes was standing with his legs apart on the front porch.

2. He had changed since his New Haven years. Now he was a sturdy, straw haired man of thirty with a rather hard mouth and a supercilious manner. Two shining, arrogant eyes had established dominance over his face and gave him the appearance of always leaning aggressively forward. Not even the effeminate swank of his riding clothes could hide the enormous power of that body – he seemed to fill those glistening boots until he strained the top lacing and you could see a great pack of muscle shifting when his shoulder moved under his thin coat. It was a body capable of enormous leverage –a cruel body.

3. His speaking voice, a gruff husky tenor, added to the impression of fractiousness he conveyed. There was a touch of paternal contempt in it, even toward people he liked –and there were men at New Haven who had hated his guts.

4. 'Now, don't think my opinion on these matters is final,' he seemed to say, 'just because I'm stronger and more of a man than you are.' We were in the same Senior Society, and while we were never intimate I always had the impression that he approved of me and wanted me to like him with some harsh, defiant wistfulness of his own.

5. We talked for a few minutes on the sunny porch.

6. 'I've got a nice place here,' he said, his eyes flashing about restlessly.

7. Turning me around by one arm he moved a broad flat hand along the front vista, including in it sweep a sunken Italian garden, a half acre of deep pungent roses and a snub-nosed motor boat that bumped the tide off shore.

8. 'It belonged to Demaine the oil man.' He turned me around again, politely and abruptly. 'We'll go inside.'

9. We walked through a high hallway into a bright rosy-colored space, fragilely bound into the house by French windows at either end. The windows were ajar way into the house. A breeze blew through the room, blew curtains in at one end and out the other like pale flags, twisting them up towards the frosted wedding cake of the ceiling –and then rippled over the wine-colored rug, making a shadow on it as wind does on the sea.

10. The only completely stationary object in the room was an enormous couch on which two young women were buoyed up as though upon an anchored balloon. They were both in white and their dresses were rippling and fluttering as if they had just been blown back in after a short flight around the house. I must have stood for a few moments listening to the whip and snap of the curtains and the groan of picture on the wall. Then there was a boom as Tom Buchanan shut the rear windows and the caught wind died out about the room and the curtains and the rugs and the two young women ballooned slowly to the door.

11. The younger of the two was a stranger to me. She was extended full length at her end of the divan, completely motionless and with her chin raised a little as if she were balancing something on it which was quite likely to fall. If she saw me out of the corner of her eyes she gave no hint of it- indeed, I was almost surprised into murmuring an apology for having disturbed her by coming in.

2.1 On the basis of your reading of the passages answer the following questions with the help of the given options: **4**

- (a) The writer had driven to East Egg to.....
 - (i) buy a cottage (ii) do some fishing
 - (iii) meet old friends (iv) meet some cousins
- (b) The lawn of the house stretched from.....
 - (i) end to end (ii) from beach to the bay
 - (iii) from beach to the front door (iv) for a mile
- (c) The wind played on the curtains.....
 - (i) till they looked like pale flags (ii) as they are burgundy red
 - (iii) towards the French doors (iv) along the verandah
- (d) Of the two women on the couch
 - (i) none appeared to know him (ii) the older one did not know the writer
 - (iii) one held a balloon (iv) the younger was a stranger to him

2.2 Answer the following questions briefly: **6**

- (a) What two landmarks did the writer pass on his way across the garden?
- (b) Describe Tom Buchanan's looks when the writer first saw him?
- (c) What did the writer notice about his eyes?
- (d) What was the quality of Tom Buchanan's voice?
- (e) What was the effect of the wind in the room that the writer had entered?
- (f) What was noticeable about the posture of the younger woman on the couch?

2.3 Find words from the passage which mean the opposite of the following: **2**

- (a) humble (para 2) (b) moving (para 10)

Q.3 Read the following passage:

Petty corruption can be checked, but not the sophisticated variety. It is incorrect to suppose that corruption is best fought through investigation and punishment. Our experience with law enforcement and the judiciary suggests otherwise. Corruption is better addressed through transparency, clear rules decision-making and e-governance. The RTI Act is probably an answer to corruption.

Limiting the role of government does not limit corruption. Most people associate corruption with government. They believe that if the role of government is restricted, it will limit the scope of the corruption. This is astonishingly naïve. Corruption thrives in the corporate sector as well. And some of the biggest opportunities for graft relate to the sale of government land and natural resources to the private sector. A state that mishandles ownership of public assets is also likely to mishandle their transfer to private hands. Privatization is no answer to corruption. It only creates another avenue for graft.

Corruption has more to do with the economic structure of society than with individuals being good or bad. The crucial point is that corruption is manifestation of an underlying malaise, namely, an iniquitous economic structure.

"The surest way to corrupt a youth is to instruct him to hold in higher esteem those who think alike than those who think differently", said Friedrich Nietzsche, German philosopher, poet and composer.

In such a structure, those at the top will benefit from both legal and illegal corruption. Any answer to corruption must attack the economic structure itself. Addressing inequalities in society may be a more sensible way of tackling corruption than bringing in tough anti-corruption laws or appealing to your values. Yet people who profess revulsion at corruption have no qualms about supporting economic measures that widen inequalities or criticizing measures aimed at reducing these.

Corruption is not just about bad guys who give or take bribes; the greater corruption involves nice guys who are comfortably ensconced in predatory economic structure. That structure is as old as mankind; it only keeps changing its forms. Anti-graft crusades can slow down the wheels of the economy in the short –run, as decision making in government is paralyzed. In the long run, such crusades end up delegitimising the institutions of democracy and pave the way for dictatorship, which makes corruption even worse.

3.1 **On the basis of your reading of the above passages, make notes on it using headings and sub headings. Use recognizable abbreviations wherever necessary. Also apply an appropriate title to it.** 5

3.2 **Write a summary of the above passage in about 80 words.** 3

SECTION –B (WRITING)

Q.4 You want to sell off your car as you are leaving the country. Draft a suitable advertisement to be inserted in The Hindu. Write the **advertisement** in not more than 50 words. 4

OR

You are Smitha/Sunil, Secretary of AVM Housing society. You are going to organize a Blood Donation Camp. Write a **notice** in not more than 50 words, urging the members of your society come in large numbers for this noble cause. Invent all the necessary details.

Q.5 The youth of the country are very vigilant these days and feel concerned about the problems being faced by the people .Write a **letter to the editor** of a national daily urging him to highlight the role of the youth in eradicating the problems of poverty, unemployment and corruption. You are Rani/Rohit, 15 Gulbarga Society, and Surat. 6

OR

You are Ramesh/Ramola of 37, Raj Nagar, Delhi. Write a letter to the General Manager, DTC **complaining** about inadequate bus service in your area and urging him to take urgent steps in the matter.

Q.6 You are Raman/Ruchika .Write an **article** in 150-200 words for your school magazine on the topic, “Life without Modern Gadgets”. 10

OR

Write an **article** in 150-200 words on the topic ”Poverty is the Cause of all”

Q.7 A number of your classmates bunk their classes in order to attend coaching centers. Write a **debate** in 150-200 words on ‘Tuition at coaching centres is not essential.’ 10

OR

You are a student of National Literacy Mission (NLM) wing of your school involved in the Adult Literacy Campaign, ‘Each One, Teach one’. Write out the **speech** you will deliver at each Adult Literacy Centre you visit. (150-200 words)

SECTION-C (LITERATURE)

Q.8 **Read the extract given below and answers the questions that follow:** 4

It would be an exotic moment
Without rush, without engines,
We would all together
In a sudden strangeness.

- What does it refer to?
- Who is the poet speaking to?
- What would be the moment like?
- Explain: sudden strangeness.

OR

For lives that slyly turn in their cramped holes,
From fog to endless night? On their slag heap, these children

- Explain: ‘from fog to endless night’
- Why does the poet call these children ‘a slag heap’?
- Who do ‘they’ refer to?
- Name the poem and poet?

- Q.9 Answer any four of the following in about 30-40 words: 12**
- (1) The crofter can be called a 'good host'. Why?
 - (2) "The instructor was finished. But I was not finished." Explain
 - (3) What did Gandhi do for social and cultural upliftment of the people of Champaran?
 - (4) How did the Tiger king celebrate his victory over the killing of 100th tiger?
 - (5) Why does Jack insist that it was the wizard that was hit and not the mother?
 - (6) How did the Governor locate Evans in his hotel?
- Q.10 Answer the following in about 120-150 words: 6**
- Dr Sadao was a patriotic Japanese as well as a dedicated surgeon. How could he honour both the values?
- OR**
- 'And survival in the Seemapuri means rag picking' in the light of these remarks write an **article** on the fact that no work is mean and that survival is the most important thing in life.
- Q.11 Answer the following in about 120-150 words: 6**
- Self-reliance, Indian Independence and help to sharecroppers were all bound together. Elucidate with reference to the excerpt 'Indigo'
- OR**
- What benefits did Derry reap from his association with Mr. Lamb?
- Q.12 Answer the following in about 120-150 words: 6**
- Describe the stranger, the protagonist of the novel, in the light of the various activities and changing moods throughout the novel?
- OR**
- Give the character sketch of Marvel, the tramp?
- Q.13 Answer the following in about 120-150 words: 6**
- How did Kemp react to the arrival of Griffin and what did Griffin tell him about his journey from being a normal man to this state of invisibility?
- OR**
- The story of the novel revolves around Griffin and his conflict with the society. Discuss.

Half Yearly Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 80

Question No. 1 to 8 carry One Mark each :

- Q.1 “A collection of diverse Individuals with different needs but working towards fulfilling the common organization goals”. This statement highlights which characteristic of management?
- Q.2 Seema, a student of management likes to relate what she learnt in class to real life situation. She observed many situations while watching educational programs on TV that reminded her the concept of scientific management. In one such programe, factories manufacturing components for products like Automobile, computers and mobile phones were shown.

Name the concept of scientific management that should be adhered to, while manufacturing components for such products.

- Q.3 “The decision made by Britain to exit European Union came as a shock to stock markets with the equities and currency market briefly going in to tailspin”.

Identify the dimension of business environment highlighted by the statement.

- Q.4 “To see whether plans are being Implemented and activities are being performed according to schedule”, is a step of planning, Identify.

- Q.5 “The employee of Manik Ltd., a software company, have formed a dramatic group for their recreation.” Name the type of organization.

- Q.6 “An organization provides security services. It requires such candidates who are reliable and don't leak out secrets of their clients. What step should be incorporated in selection process?

- Q.7 “Beauty product Ltd. is a natural and ethical beauty brand famous for offering organic beauty product of men and women. The company uses plant based material for its products and is the No. 1 beauty brand in the country. It not only satisfies its customers but also believes in overall protection of the plant.

Identify the marketing management philosophy being followed by beauty products Ltd.

- Q.8 Harsh asked for a bottle of mineral water from a shopkeeper. The MRP printed on the bottle was Rs. 20 only where as the shopkeeper was charging Rs. 35. In spit of many arguments the shopkeeper was not ready to sell the bottle for less than Rs. 35. Harsh was in need of it and had no option except to buy? Identify the “Right” which Harsh can exercise?

Question No. 9 to 13 carry Three Marks each :

- Q.9 Harish purchased a medicine from “Gupta Medical Store” for his son who had high fever. Even after giving the medicine his son's condition did not improve and he had to be hospitalized. Doctor informed Harish that the medicine given to his son was spurious. Harish complained about this to “Gupta Medical Store”. As a result, Gupta Medical Stores decided to file a complained against the manufacturer in the consumer court.

Can “Gupta Medical Store” do this? Give reason in support of your Answer?

- Q.10 “Branding adds to cost e.g., to the cost of packaging, lelabelling, legal protection and promotions however, it provides several Advantages to the sellers as well as the customers”. Do you Agree? State any three reasons in support of your Answer?

- Q.11 It helps manager to extend his area of operations as without it, his activities would be restrected to only what he himself can do.

Identify the activity referred to, in the above statement and state its elements.

Q.12 The oil marketing public sector undertakings are going to be allowed by Government of India, to fill their own prices for petrol, Diesel.

Which Economic reform is the reason for this change in the Government's policy?

Q.13 A technique proposed by Taylor aims at motivating a worker to reason at least the standard performance. Name and explain it.

Question No. 14 to 19 carry Four Marks each :

Q.14 Mr. David the MD of H. Zinc Ltd. at times get involved in activities like procurement of raw material, production and quality control of goods, employee discipline etc.

On the basis of above information Answer the following Question :

(i) Name the level of management which Mr. David belongs to.

(ii) Do you think David must be involved in such activities? Give reason.

(iii) List two important functions, Mr. David must performed. 1+1+2=4

Q.15 (i) Name and explain the principle of management which requires judicious application of penalties by the management?

(ii) Name and explain the technique of scientific management which help in establishing interchangeability of manufactured parts and products. 2+2=4

Q.16 Shine cosmetics has been producing various cosmetics products and has attained a prominent position in the cosmetics market. It has come to this position by analyzing the needs of customers before others cosmetic producers companies did it and by providing new and improved products to its customers. It has procured best of technology from Japan and keeps its process up to date, whenever a better technique is brought about in the field, it is adopted by the company.

It's top level management are quite aware and alert about external environment changes and incorporate them in the working of the company in a timely manner.

In light of the above case, explain the importance of business environment.

Q.17 The Journey of world's most favoured Basmati brand was embarked upon by two enterprising brothers Khushi Ram and Behari Lal who founded KRBL in 1889 at Layllpur, known now as Faisalabad in Pakistan. Over the year, from agricultural commodities such as wheat, cotton and oil the company's main business, has shifted to rice. Since the year 1947 until today. Company had time and again relocates and restructured out business. So, whether it was shifting Bose to Naya Bazaar, Lahori Gate, Delhi in 1947 or restructuring business to focus sharply on rice in the early 70's or in 1985 when it is started exporting rice directly and capturing international markets, KRBL has always strived to evolve in its rice business. Besides being focused in its business, company corporate Governance has been designed to make itself more transparent. To ensure uninterrupted operations company's uninformed leave by the Employees in its factory premises.

On the basis of above case. Give Answer of following Questions :

(i) Specify which type of plan to be prepared by the MD of KRBL.

(ii) State the three features of the plan adopted by the MD. 1+3=4

Q.18 Ajay was appointed as a marketing head of "Alfa enterprises" manufactures of toothpaste and brush. His target sale was 2,000 units a month. Apart from thinking about various channel of distribution to achieve the target he himself started visiting schools in backward areas. He found that even after taking various steps and counseling, some school children had not started brushing their teeth. He investigated and found that they could not afford to buy it. So, with due permission he started donating 200 toothbrushes and paste every month to school.

(i) Identify the channel of distribution "Ajay" would adopt for distribution of toothpaste and brush and justify your Answer by giving one reason.

(ii) State any two values which "Ajay" wants to communicate to the society? 2+2=4

- Q.19 What kind of tests will primarily be used to select candidates for the following vacancies and why?
- (i) An interior decorator 1×4=4
 - (ii) A computer operator
 - (iii) A public dealing officer
 - (iv) A school Teacher.

Question No. 20 to 22 carry Five Marks each :

- Q.20 Kamal, Khan and Mr. David are partner in a firm engaged in the distribution of Dairy products, in MP. Kamal is holder of 12 class certificate with B.St one of his elective subjects. Khan had done his PG in Hindi literature and David in Dairy farming.

One day there was a serious discussion between Khan and David regarding the nature of “mgt. as a Science”. Khan argued that mgt. was not a Science where as David was of the opinion that mgt. was a Science. Kamal intervened and corrected Both Khan and David about the nature of management as a Science with the help of his knowledge of Business Studies.

Explain how Kamal would have been able to satisfy both Khan and David.

- Q.21 An auto company C Ltd. is facing a problem of declining market share due to increased competition from other New and Existing players in the market. Its competitors are introducing lower price models for mass consumers who are price sensitive. For quality conscious consumers, the company is introducing New models with Aded features and New technological Advancement.
- (i) Prepare a model business plan for C Ltd. to meet the existing challenge. You need not be very specific about quantitative parameters. You may specify which type of plan you are preparing?
 - (ii) Identify the limitation of that plan.
 - (iii) How will you seek to remove these limitations? 1+2+2=5
- Q.22 Ms. Jaya recently completed her PG in HRM. A few months from now a large steel company appointed her as HR manager. As of new, the company employs 800 persons and has expansion plan in hand which may required another 200 persons for various types at additional requirement. Ms. Jaya has been given complete charge of the company’s HR Department.
- (i) Point out, what functions is she supposes to perform.
 - (ii) What problems do you forcesee in her job?
 - (iii) What steps is she going to take to perform her job efficiently?
 - (iv) How significant is her role in the organization? 1+1+2+1=5

Question No. 23 to 25 carry Six Marks each :

- Q.23 Vashi purchased a bottle of pickle from the local shop. The information provided on the bottle was not clear. She fell sick on consuming it. She filed as case in dist. Forum under consumer protection act and got relief?
- (i) Identify the aspect neglected by marketer in the above case.
 - (ii) Explain briefly the functions of the aspects identified in (i) above. 1+5=6
- Q.24 Explain the differences between delegation and decentralization with examples. 6
- Q.25 Explain the differences in contribution of Taylor and Fayol in management. 1×6=6

Half Yearly Examination 2018 – 19

Time: 3:00 Hrs.

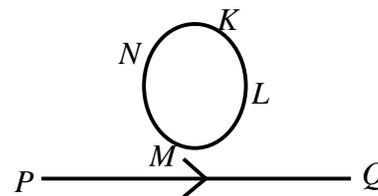
M. M. 70

General Instructions :

- (i) **All** questions are compulsory. There are **27** questions in all.
- (ii) This question paper has **four** sections : Section A, Section B, Section C, and Section D.
- (iii) Section A contains **five** questions of **one** mark each, Section B contains **Seven** questions of **two** marks each, Section C contains **twelve** questions of **three** marks each, Section D contains **three** questions of **five** marks each.
- (iv) There is no overall choice. However, an internal choice has been provided in **one** question of **two** marks, **one** question of **three** marks and all the **three** questions of **five** marks weightage. You have to attempt only **one** of the choices in such questions.

SECTION – A

- Q.1 What is the work done in moving a test charge q through a distance of 1 cm along the equatorial axis of an electric dipole.
- Q.2 Sketch a graph showing variation of resistivity of carbon with temperature?
- Q.3 The vertical component of earth's magnetic field at a place is $\sqrt{3}$ times the horizontal component. What is the value of angle of dip at this place.
- Q.4 What is the magnitude of the induced current in the circular loop KLMN of radius r , if the straight wire PQ carries a steady current of 1A?
- Q.5 State the conditions for the phenomenon of total Internal reflection to occur.



SECTION – B

- Q.6 What is the de-Broglie wave length associated with an electron accelerated through a potential of 50 volt.
- Q.7 An α -particle and a proton are accelerated from rest by the same potential. Find the ratio of their de-Broglie wave lengths.
- Q.8 Draw a labelled ray diagram for the formation of image of a distant object by an astronomical telescope in normal adjustment position?

OR

Can $V=IR$ Define Ohm's Law.? Justify Your Answer

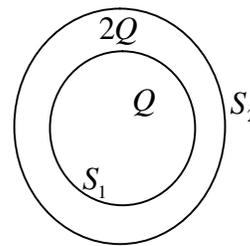
- Q.9 Show that Induced charge does not depends up on rate of change of magnetic flux?
- Q.10 An electron revolve around a nucleus in a circular path. Find magnetic moment of this electron?
- Q.11 A silver wire has resistance of 2.1Ω at 27.5°C and a resistance of 2.7Ω at 100°C . Determine the temperature coefficient of resistivity of silver.

Q.12 S_1 and S_2 are two hollow concentric spheres enclosing charge Q and $2Q$ as shown in fig.

(i) What is the ratio of flux through S_1 and S_2 .

(ii) How will the electric flux through the sphere

S_1 change if a dielectric medium of constant 5 is introduced in the space inside ϵ_1 in place of air?



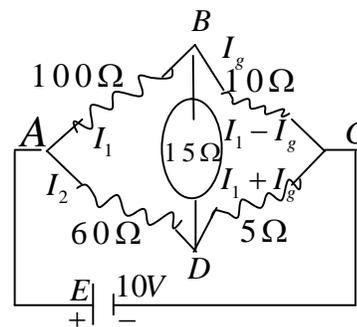
SECTION - C

Q.13 State Gauss law? Use this to find electric field intensity due to a thin non-conducting plane sheet of charge density $+\sigma$ at any point at a distance r from sheet?

Q.14 The four arms of a wheat stone bridge have the following resistance as shown in fig.

The galvanometer resistance is 15Ω .

Calculate the current through galvanometer.



Q.15 A circular current carry loop put perpendicular to the plane, find magnetic field at the axis of this loop?

Q.16 A 100Ω resistor is connected to a $220V$, $50Hz$ AC supply.

(i) What is the rms value of current in the circuit?

(ii) What is the net power consumed over a full cycle?

Q.17 In young double slit experiment, deduce the conditions for (i) constructive (ii) Destructive interference at a point on the screen.

OR

In young double slit experiment, deduce the conditions for (i) Maximum (ii) Minimum Intensity interference at a point on the screen.

Q.18 Draw a plot showing the variation of photoelectric current with collector plate potential for two different frequencies $\nu_1 > \nu_2$ of incident radiation having the same intensity. In which case will the stopping potential be higher? Justify your answer.

Q.19 A slab of material of dielectric constant k has the same area as the plates of a parallel plate capacitor, but has a thickness $3d/4$, where d is the separation of the plates. How is the capacitance changed when the slab is inserted between the plates?

Q.20 (i) Deduce ohm's law in terms of drift velocity?

(ii) Find ohm's law in vector form?

Q.21 A long straight wire of a circular cross-section of radius "a" carries a steady current "I". The current is uniformly distributed across the cross section. Apply ampere's circuital law to calculate the magnetic field at a point "r" in the region for (i) $r < a$ (ii) $r > a$.

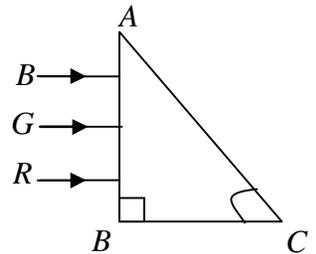
Q.22 Deduce an expression for the mutual inductance of two long coaxial solenoids but having different radii and different number of turns?

Q.23 With the help of a suitable ray diagram, derive the mirror formula for a concave mirror?

Q.24 Write all Laws of photo electric effect?

SECTION – D

Q.25 (i) Three rays of light Red, Green, Blue are incident on the face AB of a right angled prism ABC. The refractive Index of prism for Red, Green and Blue wave length are 1.39, 1.44 and 1.47 respectively.



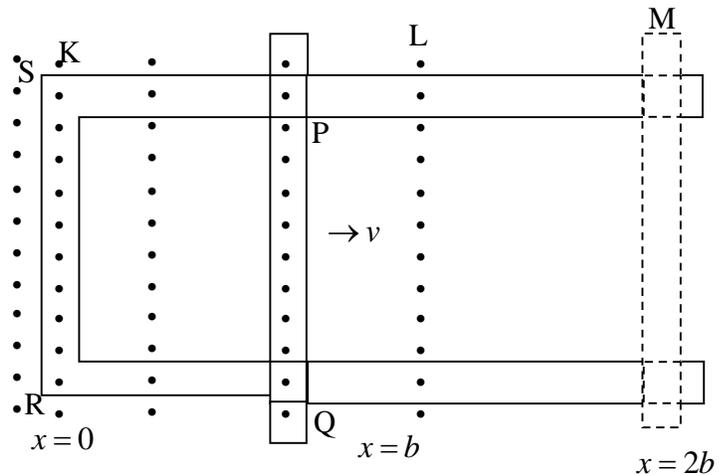
Trace the path of the rays through the prism.

(ii) A polarizer and an analyzer are so oriented that no light is transmitted. The analyzer is then rotated through 60° . What fraction of the maximum light is transmitted?

OR

(i) Use Huygen's principle, explain the refraction of plane wave front at a plane surface hence prove snell's law.

(ii) In young's double-slit experiment using monochromatic light of wave length λ , the intensity of light at a point on the screen where path difference λ , is k units. What is the intensity of light at a point where path difference is $\lambda/3$?



Q.26 (a) Show that in an ac circuit containing a pure inductor. Current lags behind the

voltage by a phase angle of $\frac{\pi}{2}$.

(b) Prove that an ideal inductor does not dissipate power in an ac circuit.

(i) State Faraday's law of electromagnetic induction?

(ii) Figure shows a rectangular conductor PQRS in which arm PQ is free to move in a uniform magnetic field k perpendicular to the plane of paper. The field extends from $x=0$ to $x=b$ and is zero for $x>b$. Assume that only the arm PQ posses resistance. When the arm PQ is pulled outward from $x=0$ to $x=2b$ with and is then moved backward to $x=0$ with constant speed v obtain the expression flux, the induce emf., power. Sketch the variations of these quantities with distance $0 \leq x \leq 2b$.

Q.27 Draw a schematic diagram of a cyclotron. Explain its underlying principle and working, Deduce an expression for the period of revolution and show that it does not depend on the speed of the charged particle.

OR

With the help of a neat and labelled diagram explain the underlying principle and working of a moving coil galvanometer. What is the function of (i) uniform radial field (ii) soft iron core in such device.

Roll. No.

Code No. 12/Biology/NLCS/18

Half Yearly Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 70

General Instructions :

- (i) There are a total of **27** questions and **four** sections in the question paper. **All** questions are **compulsory**.
- (ii) Section A contains questions number **1 to 5**, Very Short Answer Type Questions of **one** mark each.
- (iii) Section B contains questions number **6 to 12**, Short Answer Type-I Questions of **two** marks each.
- (iv) Section C contains questions number **13 to 24**, Short Answer Type-II Questions of **three** marks each.
- (v) Section D contains questions number **25 to 27**, Long Answer Type questions of **five** marks each.
- (vi) There is no overall choice in the question paper, however, an internal choice is provided in one question of **two** marks, one question of **three** marks and all three questions of **five** marks. An examinee is to attempt any one of the questions out of the two given in the question paper with the same question number.

Section – A

- Q.1 Define Clone?
- Q.2 Write the function of scutellum.
- Q.3 Write the central dogma of molecular biology.
- Q.4 What is habitat?
- Q.5 What is humification?

Section – B

- Q.6 Write two major functions of each testis and ovary.
- Q.7 What do you think is the significance of reproductive health in a society?
- Q.8 Explain co-dominance and incomplete dominance.
- Q.9 Difference between codon and Anticodon.

OR

Difference between template strand and coding strand.

- Q.10 Define population and community.
- Q.11 Draw a pyramid of biomass energy.
- Q.12 What is speciation? List any two events leading to speciation.

Section – C

- Q.13 (i) Difference between oestrus cycle and menstrual cycle,
(ii) Difference between Ovipary and vivipary?
- Q.14 Difference between microsporogenesis and megasporogenesis?
- Q.15 Distinguish between blastula and gastrula.
- Q.16 Difference between Haemophilia and sickle cell anaemia.
- Q.17 What are the three types of RNA? Mention their relation to protein synthesis.

Q.18 Write short note on Evolution of man.

Q.19 How is diapauses and hibernation?

Q.20 Outline features of carbon cycling in an ecosystem.

Q.21 Distinguish between In-situ conservation and Ex-situ conservation.

Q.22 What is ecological succession and what are the type of succession of plant.?

OR

What are the different steps of decomposition?

Q.23 What do you understand by “**Altitude sickness**”.

Q.24 What is difference between exponential and logistic growth with its equation?

Section – D

Q.25 (i) What is semi conservative DNA replication?

(ii) What is an operon? Who proposed this? What are their steps?

OR

Describe the mechanism of translation?

Q.26 (i) Difference between Monohybrid and Dihybrid.

(ii) Explain the chromosomes theory of inheritance.

OR

Describe Law of Independent Assortment?

Q.27 (i) Explain biomagnifications.

(ii) What are the causes of global warming?

OR

Describe all events of Sexual Reproduction.

Roll. No.

Code No. 12/Chemistry/NLCS/43

Half Yearly Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 70

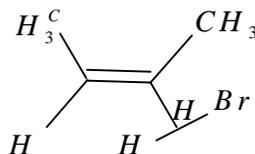
General Instructions :

- (i) **All questions are compulsory. There are 27 questions in all.**
- (ii) **This question paper has four sections : Section A, Section B, Section C, and Section D.**
- (iii) **Section A contains five questions of one mark each, Section B contains Seven questions of two marks each, Section C contains twelve questions of three marks each, Section D contains three questions of five marks each.**
- (iv) **There is no overall choice. However, an internal choice has been provided in one question of two marks, one question of three marks and all the three questions of five marks weightage. You have to attempt only one of the choices in such questions.**

Section – A

- Q.1 What is the formula of a compound in which the element y forms ccp lattice & atoms of X occupy $\frac{1}{3}$ rd of tetrahedral voids?
- Q.2 CaCl_2 is used to clear snow from roads on hill station. Explain.
- Q.3 Define emulsions.

Q.4 Write IUPAC name

Q.5 Write IUPAC name $[\text{CoBr}_2(\text{en})_2]^+$.**Section – B**

- Q.6 Explain - (i) Schottky defect (ii) Frenkel defect
- Q.7 A reaction is 2nd order with respect to a reactant. How is the rate of reaction affected if the concentration of the reactant is – (i) doubled (ii) reduced to $\frac{1}{2}$
- Q.8 Define – (i) Peptization (ii) electrophoresis

OR

What do you mean by Activity and Selectivity of catalysts?

- Q.9 State briefly – (i) Froth –Flotation process (ii) Zone refining
- Q.10 Which is stronger reducing agent Cr^{2+} or Fe^{2+} & why?
- Q.11 $[\text{Cr}(\text{NH}_3)_6]^{3+}$ is paramagnetic while $[\text{Ni}(\text{CN})_4]^{2-}$ is diamagnetic why?
- Q.12 Give reason – (i) Racemic mixture is optically inactive.
(ii) n-butyl bromide has higher boiling point than t-butyl bromide.

Section – C

Q.13 What is a semiconductor? Describe the two main types of semiconductors.

ORThe density of lead is 11.35g/cm^3 and the metal crystallizes with fcc unit cell. Calculate the radius of lead atom. (Atomic mass of lead=207g/mol)

- Q.14 Urea forms an ideal solution in water. Determine the vapour pressure of an aqueous solution containing 10% by mass of urea at 40°C . V.P. of water at 40°C =55.3mm of kg.
- Q.15 Calculate ΔG° & K_C for the $r \times n$
 $2\text{Cr}(s) + 3\text{Cd}^{2+}(\text{aq}) \rightarrow 2\text{Cr}^{3+}(\text{aq}) + 3\text{Cd}(s)$
 $E^\circ\text{Cd}^{2+} / \text{Cd} = -0.40\text{V}, E^\circ\text{Cr}^{3+} / \text{Cr} = -0.74\text{V}$

- Q.16 Explain why primary allylic & benzylic halide show greater reactivity through S_N1 mechanism than primary allyl halide.
- Q.17 Describe hydridiation, shape & magnetic property 1½×2
- (i) $[Fe(H_2O)_6]^{2+}$ (ii) $[Fe(en)_2Cl_2]Cl$
- Q.18 (a) Complete the reaction : 2+1
- (i) $Fe^{2+}(aq) + MnO_4^-(aq) + H^+(aq) \rightarrow$
- (ii) $Cr_2O_7^{2-}(aq) + I^-(aq) + H^+(aq) \rightarrow$
- (b) The actinoids exhibit a greater range of oxidation state than lanthanoids.
- Q.19 (a) Cu^+ is colourless whereas Cu^{2+} is blue in aqueous solution. Why?
- (b) (i) Draw the structure of CrO_4^{2-} (ii) MnO_4^-
- Q.20 (a) Which allotrope of phosphorous is more reactive & why?
- (b) F_2 has lower bond dissociation enthalpy than Cl_2 why?
- (c) Draw structure of - (i) ClF_3 (ii) XeF_4
- Q.21 State reason :
- (a) All P-Cl bonds in PCl_5 molecules are not equivalent.
- (b) PH_3 has lower boiling point than NH_3 .
- (c) What happens when H_3PO_3 is heated.
- Q.22 (a) How is leaching carried out in case of low grade copper ores? 1½+1½
- (b) Why is zinc not extracted from zinc oxide through reduction using CO.
- Q.23 (a) Why delta is formed when river meets ocean?
- (b) Define electrokinetic potential.
- Q.24 The rate constant for the decomposition of hydrocarbons is $2.418 \times 10^{-5} s^{-1}$ at 546K. If the energy of activation is 179.9 KJ/mol. What will be the value of pre exponential factor?

Section – D

- Q.25 (a) Explain the mechanism of rusting. Write the reaction taking place.
- (b) If a current of 0.5 ampere flows through a metallic wire for 2 hours then how many electrons would flow through the wire.
- OR**
- (a) The conductivity of $0.001028 \text{ mol/l } CH_3COOH$ is $4.95 \times 10^{-5} S \text{ cm}^{-1}$. Calculate K_c if Λ^0 m for CH_3COOH is $390.5 S \text{ cm}^2 \text{ mol}^{-1}$.
- (b) Λ^0 m for NaCl, HCl and NaAc are 126.4, 425.9 & 91.0 $S \text{ cm}^2 \text{ mol}^{-1}$ respectively calculate Λ^0 m for HA_C.
- Q.26 (a) Define Molarity & Molality. 2+3
- (b) Concentrated HNO_3 used in laboratory work is 68% HNO_3 by mass in aqueous solution. What should be molarity of such sample of acid if density of solution is 1.504 g/ml.
- OR**
- (a) Calculate the amount of KCl which must be added to 1 kg of water so that the freezing point is depressed by 2K. ($k_f = 1.86 \text{ K kg mol}^{-1}$)
- (b) What is anoxia?
- Q.27 (a) Why phosphorous is more reactive than nitrogen? 2+2+1
- (b) Complete the reaction : (i) $Ca_3P_2 + H_2O \rightarrow$ (ii) $P_4 + SO_2Cl_2 \rightarrow$
- (c) Helium is used in diving apparatus.
- OR**
- (a) Draw structure of (i) H_3PO_2 (ii) $H_2S_2O_7$ 2+1+2
- (b) Fluorine does not show any positive oxidation state.
- (c) Complete the reaction : (i) $NaOH(aq) + Cl_2(g) \rightarrow$ (ii) $XeF_6(s) + H_2O(l) \rightarrow$

Roll. No.

Code No. 12/Physical Ed./NLCS/80

Half Yearly Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 70

Section -A

Q. No. 1 to 14 Very short type Answer Questions carrying One Marks each.

- Q.1 What are specific sports programmes?
Q.2 What do you mean by 'planning'?
Q.3 What do you mean by 'Non-nutritive components of diet'?
Q.4 Define 'Nutrition'.
Q.5 What do you mean by 'Asanas'?
Q.6 What do you mean by 'Hypertension'?
Q.7 What do you mean by 'disability etiquettes'?
Q.8 What is 'OCD'?
Q.9 What do you mean by 'spinal curvature'?
Q.10 What is 'knock-knee'?
Q.11 What do you mean by 'bulimia'?
Q.12 What is anorexia nervosa?
Q.13 Define 'Test'?
Q.14 What do you mean by 'Muscular strength'?

Section -B

Q. No. 15 to 21 Short type Answer Questions carrying Three Marks each.

- Q.15 Explain the Administration of 'AAHPERD' youth fitness test.
Q.16 Discuss any three female Athlete Triads. 1+1+1=3
Q.17 Define motor development. Explain three types also. 1+2=3
Q.18 Discuss any three types of disorder. 1+1+1=3
Q.19 What do you mean by 'obesity, diabetes and asthma? 1+1+1=3
Q.20 What do you mean by macro and micro nutrients? 1½+1½=3
Q.21 Draw a fixture of 11 teams on knock-out basis.

Section -C

Q. no. 22 to 28 Long type Answer Questions carrying Five Marks each.

- Q.22 What do you mean by "Intramurals"? Explain their objectives. 5×1=5
Q.23 What do you mean by 'Healthy-weight'? Explain methods to control healthy body weight to lead healthy living. 5×1=5
Q.24 Discuss Asans as preventive measures in detail. 5×1=5
Q.25 What do you mean by 'Disability'? Discuss three types also. 1+4=5
Q.26 What is 'weight-training'? Discuss its advantage and disadvantages. 1+2+2=5
Q.27 Discuss only five reasons of low participation of women in sports and games. 5×1=5
Q.28 Describe the procedure for administering Rikli and Jones senior citizen fitness test. 5×1=5

Roll. No.

Code No. 12/Economics/NLCS/88

Half Yearly Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 80

General Instructions :

- All Questions are compulsory.
- Marks are indicated against each Question.
- Answer should be brief and to the point.

SECTION A- Introductory Micro Economics

- Q.1 Why is demand for water inelastic? 1
- Q.2 What are the subject matter of economics? 1
- Q.3 Define Budget Set . 1
- Q.4 Write production function? 1
- Q.5 What do you mean by movement along in supply curve .Explain with example. 3

OR

What do you mean by shift in supply curve? Explain with example.

- Q.6 What is a production possibility frontier? 3
- Q.7 When price of a good is 12per unit the consumer buys 24 units of that good. When price rises to 14 per unit, the consumer buys 20 units. calculate price elasticity of demand. 4
- Q.8 Explain any four factors influencing elasticity of demand? 4
- Q.9 States law of demand .Also write exceptions to the law of demand. 4

OR

Explain the concept of demand with the help of schedule and diagram. 4

- Q.10 Explain law of variable proportion with the help of diagram 6
- Q.11 Complete the following table 6

Output	Avg. fixed cost	Marginal cost	Avg .variable cost	Avg. Cost
1	60	20		
2			19	
3	20		18	
4		18		
5	12			31

- Q.12 Explain the concept of indifference analysis with help of diagram and schedule. 6

OR

Explain utility analysis with the help of diagram and schedule 6

SECTION B- Introductory macro economics

- Q.13 Define money supply 1

- Q.14 The central bank can increase availability of credit by 1
 (a) Raising repo rate (b) Raising reverse repo rate
 (c) buying government securities (d) Selling government securities
- Q.15 Which of the following affect national income? 1
 (a) G.S.T (b) corporation tax (c) subsidies (d) none of the above
- Q.16 Define government Budget 1
- Q.17 Explain “difficulty in storing wealth” problem faced in barter system of exchange. 3

OR

Explain the “medium of exchange “ function of money.

- Q.18 Explain how government budget can be helpful in bringing economic stabilization in economy. 3
- Q.19 Differentiate between accommodating and autonomous items in balance of payment account. 4
- Q.20 Explain the components of government budget. 4
- Q.21 What do you mean by balance of payment account. What are its components. 4

OR

How foreign exchange rate are determine. Explain with suitable example and diagram.

- Q.22 Calculate (a) National income and (b) Gross domestic product at market price 6
- | | |
|---------------------------------|------|
| (a) Compensation of employees | 2000 |
| (b) Rent | 400 |
| (c) Profit | 900 |
| (d) Dividend | 100 |
| (e) Interest | 500 |
| (f) Mixed income | 7000 |
| (g) Net factor income to abroad | 50 |
| (h) Net indirect tax | 300 |
| (i) Depreciation | 150 |

OR

Explain the precaution that should be taken while estimating national income by expenditure method. 6

- Q.23 Explain the various tools of Central bank use for controlling money supply. 6
- Q.24 “Rate of GDP is true indicator of economic and social prosperity of a country” comment. 6

Roll. No.

Code No. 12/Computer Sc./NLCS/33

Half Yearly Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 70

- Q.1 (a) What is the difference between call by value and call by reference with respect to memory allocation? Give suitable example to illustrate using C++ code. 2
- (b) Find the correct identifiers out of the following:
For, while, INT, New, delete, 1stname, Add+Subtract, name1 2
- (c) Observe the following C++ code and write the name(s) of the header file(s), which will be essentially required to execute the following code: 1
- ```
void main()
{ char ch, str[20];
 cin >> str;
 ch = toupper(str[0]);
 cout << str;
}
```
- (d) Rewrite the following C++ code after removing all the syntax errors. Underline each correction done by you in the code. Assume all the header files are already included. Logic of the program should not be changed. 1
- (i) void main() 1
- ```
{
const int i = 20;
const int *const ptr = &i;
*ptr++;
int j = 15;
ptr = &j;
}
```
- (ii) typedef char[80] str; 2
- ```
void main()
{
txt str;
gets(txt);
cout << txt[0] << '\t' << txt[2];
cout << txt << endl;
}
```
- (e) Observe the following C++ code carefully and obtain the output, which will appear on the screen after execution: 2
- (i) void main() 2
- ```
{
char *text = "ajanta";
int *p, num[] = {1, 5, 7, 9};
p = num;
cout << *p << text << endl;
text++; p++;
cout << *p << text << endl;
}
```
- (ii) class mausam 3
- ```
{ int city, temp, humidity;
public:
 mausam(int c=1){city=c; temp=10;; humidity=63;}
void sun(int T){temp += T;}
void rain(int H){humidity += H;}
```

```

void checkout()
{
cout<<city<<":":<<temp<<"$"<<humidity<<"%"<<endl;}
};
void main()
{ mausam M, N(2);
M.sun(5);
M.checkout();
N.rain(10);
N.sun(2);
N.checkout();
M.rain(15);
M.checkout();
}

```

3

```

(iii) typedef char txt80[80];
void main()
{ char *ptext;
txt80 txt = "Ur2GReAt";
int n = 6;
ptext=txt;
while(N>=3)
{
txt[N] = (isupper(txt[N])? tolower(txt[N]) : toupper(txt[N]));
cout<<ptext<<endl;
N--; ptext++;
} }

```

(f) Based on following C++ code, find out the expected correct output(s) from the options (i) to (iv).Also, find the minimum and maximum value that can be assigned to variable guess, when value of turn is 3.

2

```

void main()
{
char result [] [10]={"GOLD", "SILVER", "BRONZE"};
int getit=9,guess;
for(int turn=1; turn<4; turn++)
{guess = random(turn);
cout<<getit-guess<<result[guess]<<"*"; }
}

```

(i) 9GOLD\*9GOLD\*8SILVER\*

(iii) 9GOLD\*8SILVER\*9GOLD\*

(ii)9GOLD\*7BRONZE\*8GOLD\*

(iv)9GOLD\*8SILVER\*8GOLD\*

Q.2 (a) write any two differences between constructor and destructor. Write the function headers for constructor and destructor of a class MEMBER. 3

(b)Consider the following class Shop: 4

```

class Shop
{ protected:
 unsignedint count;
public:
 counter() //1
 { ball=0; }
 void inc_count() //2
 { ball++; }
 int get_count(//3
 { return ball; }
 ~shop(){ cout<<" Gone with the wind";} //4
}; void main()

```

```
{ Shop ramonds; //line1
} //line2
```

- (i) Make a parameterized constructor to initialize the value of count to the value of parameter passed.
- (ii) Define a Reset() to set the value of datamember ball to 0.
- (iii) What is 4, what is its use.
- (iv) At what line no. "Gone with the wind" will be printed.
- (c) define a class Train in C++ with following description:

5

private members

- src of type string
- Tnm of type string
- dest of type string
- charges of type float
- Class of type string
- A member function GetData to assign the following values for charges:

| dest    | charges | Class   |
|---------|---------|---------|
| Mumbai  | 1000    | General |
| Chennai | 2000    | A.C.    |
| Kolkata | 3000    | Deluxe  |

public members

- A parameterized constructor to initialize the data members.
- A function InputData() to allow user to enter the values and invoke GetData() to assign charges, also user gives 'G' for General, 'A' for A.C. and 'D' for Deluxe.
- A function displayData() to display all and call GetData ()).

(d) Consider the following C++ code and answer the following questions:

```
class Personal
```

```
{ int class,Rno;
 char Section;
 protected:
 char name[20];
 public:
 void Pentry();
 void Pdisplay();
};
```

```
class Marks : private Personal
```

```
{ float M[5];
 protected:
 char Grade[5];
 public:
 void Mentry();
 void Mdisplay();
};
```

```
class Result : public Marks
```

```
{ float Total, agg;
 public:
 char FinalGrade, Comments[20];
 Result();
 void Rcalculate();
 void Rdisplay(); };
```

- (i) Which type of inheritance is shown in the above example? 1
- (ii) Write the names of those data members, which can be directly accessed from the objects of class Result. 2
- (iii) Write the names of those member functions, which can be directly accessed from the objects of class Result. 1½
- (iv) Write the names of those data members, which can be directly accessed from Mentry() function of class Marks. 1½

Q.3 (a) Fill in the blanks marked as statement 1 and statement 2 in the program segment given below with appropriate functions for the required task. 3

```
class stock
{
 int Ino, qty; char item[20];
public:
 void enter() { cin>>Ino; gets(item); cin>> qty;}
 void issue(int q) {qty +=q;}
 void purchase(int q) {qty -= q;}
 int getIno() (return Ino;}
};
void PurchaseItem(int pno, int pqty)
{
 fstream file;
 file.open("STOCK.dat", ios:: binary | ios:: in| ios :: out);
 Stock S;
 int success = 0;
 while(success == 0&&_____ // statement 1-to read the file in completely)
 {
 if(pno == S.getIno())
 { S.purchase(pqty);
 _____ ; //statement2- to position the file pointer to appropriate place, so that the data
 updation is done for the required item.
 _____ ; //statement3- to perform the write operation so that updation is done in the
 binary file.
 }
 }
 if(success==1)
 cout<<"purchase updated"<<endl;
 else
 cout<<"wrong item no"<<endl;
 file.close();
}
```

(b) What is "this" pointer ?Give an example to illustrate the use of it in C++. 3

(c) Write a function in C++ to read the content of a text file "PLACE.TXT" and display all those lines on screen, which are either starting with 'P' or starting with 'S'. 3

(d) Write a function in C++ to search for the details (Number and Calls) of those Mobile Phones, which have more than 1000 calls from a binary file 'mobile.dat'. Assuming that this binary file contains records/objects of class Mobile: 4

```
class Mobile
{
 char number[10];
 int calls;
public:
 void enter() { gets(number); cin>>calls;}
 void billing() { cout<<number<<"#"<<calls<<endl;}
 int getcalls() {return calls;}
};
```

Q.4 (a) What is the difference between degree and cardinality of a table? What is the degree and cardinality of the following table? 2

| Eno | Name | Salary |
|-----|------|--------|
| 101 | Jhon | 45000  |
| 103 | Raya | 50600  |

- Write sql queries for (b) to (g) and write outputs for the sql queries mentioned (h1) to (h4):

Table: ITEMS

| code | iname   | qty | price | company   | Tcode |
|------|---------|-----|-------|-----------|-------|
| 1001 | ipad    | 120 | 11000 | xentia    | T01   |
| 1006 | led     | 70  | 38000 | santora   | T02   |
| 1004 | car gps | 50  | 21500 | geoknow   | T01   |
| 1003 | camera  | 160 | 8000  | digiclick | T02   |
| 1005 | pen     | 600 | 1200  | storehome | T03   |

Table: TRADERS

| tcode | tname      | City    |
|-------|------------|---------|
| T01   | electronic | Mumbai  |
| T02   | busy store | Delhi   |
| T03   | disp house | Chennai |

- (b) To display the details of all the items in ascending order of item names (i.e., iname). 1
- (c) To display item name and price of all those items, whose price is in the range of 10000 and 22000 (both values inclusive). 1
- (d) To display the number of items, which are traded by each trader. the expected output should be: 1
- T01    2
- T02    2
- T03    1
- (e) To display the price, item name and quantity of those items which have quantity more than 150. 1
- (f) To display the names of those traders, who are either from DELHI or from MUMBAI. 1
- (g) To display the names of the companies and the names of the items in descending order of company names. 1
- (h) Obtain the outputs of following SQL queries: 4
- (h1) select max (price), min(price) from ITEMS;
- (h2) select price\*qty as amount from ITEMS where code=1004;
- (h3) select distinct tcode from items;
- (h4) select iname,tname from ITEMS I, TRADERS T where I.tcode=T.tcode and qty<100;

Q.5 (a) verify the following using Boolean laws:  $A+C = A+A'.C+B.C$  2

(b) Obtain the Boolean expression for the logic circuit: 2

(c) Write the product of sum form of the function  $G(U,V,W)$  for the following truth table representation of  $F$ : 2

| U | V | W | G |
|---|---|---|---|
| 0 | 0 | 0 | 1 |
| 0 | 0 | 1 | 0 |
| 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 0 |
| 1 | 1 | 1 | 1 |

(d) Obtain the minimal form for the following Boolean expression using K-map: 3

$H(P,Q,R,S) = \sum(0,1,2,3,5,7,8,9,10,14,15)$

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Roll. No. 

Code No. 12/Mathematics/NLCS/40

# Half Yearly Examination 2018 – 19

Time: 3:00 Hrs.

M. M. 100

**General Instructions :**

- (i) **All questions are compulsory.**
- (ii) **The question paper consists of 29 questions divided into four sections A, B, C and D. Section A comprises of 4 questions of **one mark** each, Section B comprises of 8 questions of **two marks** each, Section C comprises of 11 questions of **four marks** each and Section D comprises of 6 questions of **six marks** each.**
- (iii) **All questions in Section A are to be answered in one word, one sentence or as per the exact requirement of the question.**
- (iv) **There is no overall choice. However, internal choice has been provided in 3 questions of four marks each and 2 questions of six marks each. You have to attempt only one of the alternatives in all such questions**

**Section – A**

- Q.1 Find the value of  $\cos^{-1}(\cos \frac{13\pi}{6})$ .
- Q.2 If  $(\sin^{-1} \frac{1}{5} + \cos^{-1} x) = 1$  then find  $x$ .
- Q.3 Find the slope of the normal to the curve  $x = 1 - a \sin \theta$   $y = b \cos^3 \theta$  at  $\theta = \frac{\pi}{2}$ .
- Q.4 Differentiate  $\sin^2 x$  w.r.t  $e^{\cos x}$ .

**Section – B**

- Q.5 Find  $k$  if  $f(x)$  is continuous at indicated point :  $f(x) \begin{cases} kx+1 & \text{if } x \leq 5 \\ 3x-5 & \text{if } x > 5 \end{cases}$  at  $x = 5$ .
- Q.6 If  $x = \sqrt{a^{\sin^{-1} t}}$   $y = \sqrt{a^{\cos^{-1} t}}$  show that  $\frac{dy}{dx} = \frac{-y}{x}$ .
- Q.7 Use differential to approximate  $\sqrt{36.6}$ .
- Q.8 If  $\sin^{-1}(1-x) - 2 \sin^{-1} x = \frac{\pi}{2}$  then find  $x$ .
- Q.9 Find  $\int \frac{dx}{1 - \tan x}$ .
- Q.10 Form the differential equation of the family of circles having centre on  $y$  axis and radius 3 unit.
- Q.11 Find  $|\vec{a} - \vec{b}|$  if two vectors  $\vec{a}$  and  $\vec{b}$  are such that  $|\vec{a}| = 2$   $|\vec{b}| = 3$  and  $\vec{a} \cdot \vec{b} = 4$ .
- Q.12 Find the probability of getting 5 exactly twice in 7 throws of a die.

**Section - C**

- Q.13 Two cards are drawn simultaneously (or successively without replacement) from a well shuffled pack of 52 cards. Find the mean, variance and standard deviation of number of kings.
- Q.14 If A and B are two independent events, then prove that the probability of occurrence of at least one of A and B is given by  $1 - P(A')P(B')$ .
- Q.15 Three vectors  $\vec{a}, \vec{b}$  and  $\vec{c}$  satisfy the condition  $\vec{a} + \vec{b} + \vec{c} = \vec{0}$ . Evaluate the quantity  $\mu = \vec{a} \cdot \vec{b} + \vec{b} \cdot \vec{c} + \vec{c} \cdot \vec{a}$ . If  $|\vec{a}| = 1$ ,  $|\vec{b}| = 4$ ,  $|\vec{c}| = 2$ .
- Q.16 Find the general solution of the differential equation  $\frac{dy}{dx} - y = \cos x$ .

**OR**Find the general solution of the differential equation  $\frac{dy}{dx} + \sqrt{\frac{1-y^2}{1-x^2}} = 0$

Q.17 Solve the Differential equation  $\tan y dx + \sec^2 y \tan x dy = 0$

Q.18 Evaluate  $\int \frac{\sin^{-1} \sqrt{x} - \cos^{-1} \sqrt{x}}{\sin^{-1} \sqrt{x} + \cos^{-1} \sqrt{x}} dx$ .  $x \in [0,1]$  **OR** Evaluate  $\int \frac{dx}{5+4 \cos x}$

Q.19 Evaluate  $\int_{-1}^{3/2} |x \sin(\pi x)| dx$ .

Q.20 Evaluate  $\int_{-1}^2 |x^3 - x| dx$ .

Q.21 Solve  $\tan^{-1} 2x + \tan^{-1} 3x = \frac{\pi}{4}$ . **OR** Solve  $\int \frac{x+3}{x^2-2x-5} dx$

Q.22 Find  $\frac{dy}{dx}$  if  $y^x + x^y + x^x = a^b$ .

Q.23 Find the equation of the tangent line to the curve  $y = x^2 - 2x + 7$  which is perpendicular to the line  $5y - 15x = 13$ .

### **Section - D**

Q.24 Find the intervals in which the function  $f$  given by  $f(x) = \frac{4 \sin x - 2x - x \cos x}{2 + \cos x}$  is

(i) increasing (ii) decreasing.

Q.25 Evaluate  $\int (\sqrt{\tan x} + \sqrt{\cot x}) dx$ . **OR** Evaluate  $\int_0^{\pi/2} \frac{x \sin x \cos x}{\sin^4 x + \cos^4 x} dx$

Q.26 Find  $\int_1^4 (x^2 - x) dx$  as limit of sum.

**OR**

$\int_0^4 (x + e^{2x}) dx$  Evaluate the following definite integral as limit of sums.

Q.27 A man is known to speak truth 3 out of 4 times .He throws a die and reports that it is a six. Find the probability that it is actually a six.

Q.28 A dietician wishes to mix two types of foods in such a way that vitamin contents of the mixture contain at least 8 units of vitamin A and 10 units of vitamin C. Food 'I' contains 2 units/kg. of vitamin A and 1 unit/kg. of vitamin C. Food 'II' contain 1 unit/kg. of vitamin A and 2 units/kg. of vitamin C. It costs Rs. 50 per kg. to purchase food 'I' and Rs. 70 per kg. to purchase food 'II' . Formulate this problem as a L.P.P. to minimise the cost of such a mixture.

Q.29 Show that the height of the cylinder of maximum volume that can be inscribed in a sphere of radius  $R$  is  $\frac{2R}{\sqrt{3}}$ . Also find the maximum volume.

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