DELHI PUBLIC SCHOOL, BHILAI
ANNUAL EXAMINATION – 2018
XI (ACCOUNTANCY)

21.02.2018

TIME: 3 HOURS

M.M.: 90

General Instructions:

- *This question paper contains two parts A and B.*
- *All questions in both the parts are compulsory.*
- *All parts of questions should be attempted at one place.*
- *Each question carries marks indicated against it.*
- *Answers should be brief and to the point.*

PART – A

1. Name the qualitative characteristic of accounting information which requires the use of common unit and common form of reporting. (1)
2. Name any two source documents. (1)
3. What does a credit in an asset account signify? (1)
4. What is the main objective of preparing a Trial Balance? (1)
5. Who are parties to a Promissory Note? (1)
6. State any three limitations of accounting. (3)
7. Define the following:
   (a) Revenue Expenditure
   (b) Fictitious Assets
   (c) Current Liability (3)
8. Journalise the following transactions:
   (i) Mohan, who owed ₹ 18,000, has become insolvent. He pays 60 paise in a rupee in full and final settlement.
   (ii) Sold goods purchased at list price of ₹ 25,000 less 15% trade discount sold at a profit of 20% less trade discount to Sujeet against cheque.
   (iii) An order was placed with M/s Pioneer Industries for a Lathe Machine costing ₹ 5,00,000. A cheque for ₹ 50,000 was issued as advance. (3)
9. From the following particulars provided by Gourav, prepare a cash book with suitable columns: (4)

2018		₹
Jan., 1	Bank Overdraft	12,000
	Cash in Hand	2,300
Jan., 7	Cheque received from Somu and deposited into bank on the next day	4,000
Jan., 12	Deposited into bank	200
Jan., 15	Received a money order	500
Jan., 20	Money withdrawn from bank for office use	300
Jan., 25	Bank charges debited by bank	20
Jan., 30	Interest on bank overdraft	1,000

10. On comparing the Cash Book with Bank Pass Book of M/s Sakshi Sports Emporium, it is found that on 31st January, 2018, bank balance of ₹ 40,960 (debit) showed by the Cash Book differs from the bank balance of Pass Book with regard to the following:
    (a) Bank Charges ₹ 100 on 31st January, 2018 are not entered in the Cash Book.
    (b) On 21st January, 2018, a debtor paid ₹ 2,000 into the firm's bank account in settlement of his account, but no entry was made in the Cash Book of the firm.
    (c) Cheques totalling ₹ 12,980 were issued by the firm and duly recorded by the firm in the Cash Book but had not been presented at the bank for payment until after that date.
    (d) A bill for ₹ 6,900 discounted with the bank is entered in the Cash Book without recording the discount charge of ₹ 800.
    (e) ₹ 3,520 is entered in the Cash Book as paid into bank on 31st January, 2018 but not credited by the bank until the following day.
    (f) No entry has been made in the Cash Book to record the dishonour on 15th January, 2018 of a cheque for ₹ 650 received from Angel.

    Prepare a Bank Reconciliation Statement as on 31st January, 2018. (4)
11. What is meant by Accrual Basis of Accounting? Give any three advantages of it. (4)
12. Explain the Accounting Convention/Assumption based on the premise:
    (a) Do not anticipate profits but provide for all losses.
    (b) Business units last indefinitely. (4)

13. Give the journal entries to rectify the following errors using Suspense Account where necessary:
    (i) Goods of the value of ₹ 2,000 returned by Gupta were entered in the Sales Book and posted there from to the credit of his account.
    (ii) Goods worth ₹ 1,500 bought by the proprietor for his personal use without any payment being made as yet, was wrongly entered in the Purchases Book.
    (iii) A cheque for ₹ 500 received from Ashok was dishonoured and has been posted to the debit of Sales Returns Account.
    (iv) The total of one page of the Sales Book was carried forward to the next page as ₹ 680 instead of ₹ 860.
    (v) An item of ₹ 500 relating to Prepaid Insurance Account was omitted to be brought forward from the previous year's books.
    (vi) A purchase of ₹ 670 had been posted to the Creditor's Account as ₹ 600. (6)
14. On 1st January, 2014, Arihant Ltd. purchased machinery for ₹ 2,40,000 and on 30th June, 2015, it acquired additional machinery at a cost of ₹ 40,000. On 31st March, 2016, one of the original machinery (purchased on 1st January, 2014) which had cost of ₹ 10,000 was found to have become obsolete and was sold as scrap for ₹ 1,000. It was replaced on that date by a new machine costing ₹ 16,000. Depreciation is to be provided @ 15% per annum on the written down value. Accounts are closed on 31st December each year. Show the Machinery account for the first 3 years. (6)
15. Journalise the following transactions:
    (a) Mohan's acceptance to Sohan for ₹ 20,000 renewed at 3 months together with interest @ 18% p.a. Pass entries in the books of Mohan.
    (b) Shyam requests Mohan to renew his acceptance for ₹ 15,000 for 2 months. Mohan agrees to it provided interest is paid @ 10% p.a. in cash. Shyam agrees to it. Pass entries in the books of Mohan.
    (c) Ganesh informs Kamal that Sahani's Promissory Note for ₹ 75,000 has been dishonoured and that noting charges ₹ 250 have been paid. Kamal sends a cheque to Ganesh and withdraws the Promissory Note. Pass entries in the books of Kamal. (3+3+2=8)

OR

Ram owed to Hari ₹ 1,20,000 on 1st January, 2017. On the same date, Hari drew upon Ram a bill for the amount for 2 months and Ram returned the bill duly accepted. Hari got the bill discounted at his bank @ 15% per annum.

Before the bill was due for payment, Ram told Hari that he was not able to pay the full amount and requested Hari to accept ₹ 40,000 immediately and drew upon him another bill for the remaining amount for 2 months together with interest @ 18% per annum, Hari agreed. The second bill was duly met on its maturity. Pass necessary Journal Entries in the books of Hari. (8)

PART – B

16. What do you mean by humanware as an element of a computer system? (1)
17. Calculate Closing Stock from the following details:
    Opening Stock ₹ 20,000; Cash Sales ₹ 60,000; Purchases ₹ 70,000; Credit Sales ₹ 40,000; Rate of Gross Profit on Cost 33⅓%. (3)
18. Explain any three features of Not-for-Profit Organisation. (3)
19. Explain any three capabilities of a computer system. (3)
20. Sanjay started a firm on 1st April, 2016 with capital of ₹ 1,00,000. On 1st July, 2016 he borrowed from his wife a sum of ₹ 40,000 @ 9% p.a. (interest not yet paid) for business and introduces a further capital of his own amounted to ₹ 15,000. On 31st March, 2017 his position was as follows:
    Cash ₹ 6,000; Stock ₹ 94,000; Debtors ₹ 70,000 and Creditors ₹ 60,000.
    Ascertain his Profit or Loss taking into account ₹ 20,000 for his drawings during the year. (4)
21. Following is the Receipts and Payments Account of a Recreation Club for the year ended 31st March, 2017:

Dr. Receipts and Payments Account *for the year ended 31st March, 2017* Cr.

Receipts	Amount	Payments	Amount
	₹		₹
To Cash in Hand	500	By Salaries	24,000
To Cash at Bank	5,650	By Rent	7,200
To Subscriptions	45,500	By Postage	300
(including ₹ 1,000 for 2015-16 and ₹ 1,500 for 2017-18)		By Printing and Stationery	2,550
		By Electricity Charges	3,000
To Interest on Investments	20,000	By Meeting Expenses	1,500
To Bank Interest	250	By Library Books	10,000
To Sale of Furniture	3,000	By Investments in Bonds	10,000
		By Cash in Hand	1,550
		By Cash at Bank	14,800
	74,900		74,900

Following additional information is also supplied to you:

(a) On 1st April, 2016, the club had the following assets and liabilities:
Investments ₹ 4,00,000; Furniture ₹ 30,000; Library Books ₹ 50,000; and Liability for Rent ₹ 600 and for Salaries ₹ 2,000.

(b) On 31st March, 2017, Rent of ₹ 800 and Salaries of ₹ 2,500 were in arrears.

(c) The book value of furniture sold was ₹ 2,500.

Prepare Income and Expenditure Account of the Club for the year ended 31st March, 2017 and calculate the amount of Capital Fund in the beginning of the year 2016-17. (6)

22. Explain any six advantages of computerised accounting. (6)

23. Do as directed:

(a) Calculate the amount to be debited to Stationery Account in Income and Expenditure Account for the year ended 31st March, 2017:

	₹
Stock of Stationery on 1st April, 2016	3,000
Creditors for Stationery on 1st April, 2016	2,000
Amount paid for Stationery during 2016-17	10,800
Stock of Stationery on 31st March, 2017	500
Creditors for Stationery on 31st March, 2017	1,300

(b) How are the following items accounted in case of a Not-for-Profit Organisation for the year ended 31st March, 2017?
Sports Fund as on 1.4.2016 ₹ 1,00,000; Sports Fund Investments ₹ 1,00,000; Interest on Sports Fund Investments ₹ 10,000; Donation for Sports Fund ₹ 40,000; Sports Prizes Awarded ₹ 30,000; Expenses on Sports Events ₹ 10,000.

(c) Define Endowment Fund and Legacies. (2+2+2=6)

24. Prepare Trading and profit and Loss Account for the year ended 31st March, 2017 and a Balance Sheet as on that date from the following Trial Balance:

Name of Accounts	Dr. Amount	Cr. Amount
	₹	₹
Stock on 1st April, 2016	32,000	
Purchases/Sales	76,000	2,20,000
Wages	15,400	
Carriage Inwards	2,600	
Carriage Outwards	1,500	
Salaries	40,000	
Advertisements	9,000	
Trade Expenses	4,800	
Rent	12,000	
Establishment Expenses	5,400	
Stable Expenses	2,100	
Interest on Mortgage Loan	600	
Mortgage and Interest to date		15,600
Sundry Debtors and Sundry Creditors	43,000	30,000
Cash in hand	2,500	
Machinery	87,500	
Capital		67,800
Rent Outstanding		1,000
	3,34,400	3,34,400

Additional Information:

(a) Closing Stock was ₹ 46,000.

(b) Provision for doubtful debts be created on Sundry Debtors @ 5% and a provision for discount on Sundry Debtors at 2%.

(c) Debtors include Salary of ₹ 3,000 paid to an employee of the firm which was wrongly debited to his personal account instead of Salary account.

(d) A stationery bill of ₹ 200 remains unpaid and unrecorded.

(e) Write off one-third of advertisement expenses for the current year.

(f) Sundry creditors include ₹ 10,000 loan taken from Ghanshyam on 1st September, 2016 bearing interest @ 12% p.a. (8)

OR

(a) Following is the extract from a Trial Balance:

Particulars	Debit (₹)	Credit (₹)
Machinery Account	2,00,000	
Furniture Account	1,00,000	
Provision for Depreciation: On Machinery		60,000
On Furniture		27,100

Additional Information:

Depreciation is to be charged on machinery @ 10% p.a. on original cost and on furniture @ 10% p.a. by diminishing balance method. Show relevant extract from the Profit and Loss Account and the Balance Sheet.

(b) Following are the extracts of a Trial Balance as on 31st March, 2017:

Particulars	Debit (₹)	Credit (₹)
Sundry Debtors	26,500	
Bad Debts	700	
Provision for Doubtful Debts		1,700

Additional Information:

(1) Write off further bad debts ₹ 500.

(2) Create provision for doubtful debts @ 5% on debtors.

(3) Create a provision for discount @ 2% on debtors.

You are required to pass necessary adjustment entries and show the relevant items in the Profit and Loss Account and the Balance Sheet. (3+5=8)

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)

DATE :21-02-2018 | **ANNUAL EXAMINATION, 2018** | **Time : 3 Hours**

CLASS : XI | **PHYSICS** | **M.M. : 70**

General Instructions -

1) All questions are compulsory.

2) Questions 1 to 5are very short answer questions and carry one mark each, questions 6 to 10are short answer questions carry two marks each, questions 11 to 22are also short answer questions and carry three marks each and question no. 23 is a value based questions and carries 4 marks. Questions 24 to 26 are long answer questions and carry 5 marks each.

3) Use of calculator is not permitted.

SECTION A

1) What is the angle made by vector $\vec{A} = 2\hat{\imath} + 2\hat{\jmath}$ with X axis. 1

2) The net acceleration of a particle in circular motion is always along the radius of the circle towards the centre. True or False give reason to your answer. 1

3) Draw a graph showing variation of spring force with displacement of a spring. 1

4) Define intensity of gravitational field and write its SI unit. 1

5) What is geostationary satellite write one of its use. 1

SECTION B

6) A police van moving on a highway with a speed of 30 km/hr fires a bullet at a thief's car speeding away in the same direction with a speed of 192 km/hr. If the muzzle speed of the bullet is 150 m/s what speed does the bullet hit the thief? 2

7) What is elastic collision. Write formula for coefficient of restitution and give its value for one dimensional elastic collision. 2

8) a) Write necessary conditions of an oscillatory motion to be simple harmonic motion. 2

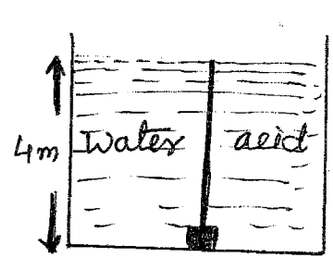
b) Explain forced and resonant oscillations.

9) Define degree of freedom. Give its value for a triatomic non linear molecule. 2

10) A copper block of mass 2.5 kg is heated in a furnace to a temperature of 500°C and then placed on a large ice block. What is the maximum amount of ice that can melt? Sp. Heat of Cu. 0.39 J/g/°C and heat of fusion 335 J/g. 2

(OR)

A tank with square base of area 1.0 m^2 is divided by a vertical portion has a small hinged door of area 20 cm^2. The tank is filled with water in one compartment and an acid of relative density 1.7 in the other both to height of 4 m. Compute the force necessary to keep the door closed (take g = 9.8 m/sec^2 density of water = 10^3 kg m^{-3})



SECTION C

11) a) How is random error eliminated? 3

b) Taking velocity, time and force as the fundamental quantities. Find the dimensions of mass.

12) A food packet is released form a helicopter which is rising steadily at 2 m/s. After two seconds (i) What is the velocity of packet? (ii) How far is it below the helicopter? Take g = 9.8 m/s^2 3

13) With the help of neat diagram derive expression for trajectory of a projectile in oblique projection. What will be the shape of trajectory. 3

14) What do you mean by banking of road. Derive expression for permissible velocity of car to negotiate a rough banked curve with minimum wear and tear. 3

15) A man weighs 70 kg. He stands on a weighing machine in a lift which is moving a) upwards with uniform speed 10 m/s. b) downwards with uniform acceleration 5 m/s^2 c) upwards with uniform acceleration 5 m/s^2. Calculate apparent weight of man. (g = 10 m/s^2) 3

16) A bullet weighing 10 g is fired with a velocity of 800 m/s. After passing through a mud wall 1m thick its speed decreases to 100 m/s find the average resistance offered by the mud wall. 3

17) State law of conservation of angular momentum. Write the formula to give its geometrical meaning and hence explain Kepler's 2nd law of planetary motion. 3

PTO

18) Define radius of gyration and derive its expression for an 'n' particle system. What will be its value for a solid sphere rotating about its diameter. 3

(OR)

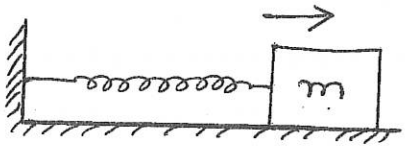
Define centre of mass and derive its expression for a two particle system.

19) What is orbital speed of a satellite. Derive expression for it and write its relation with escape speed of planet. 3

20) Draw stress-strain graph for a metal wire and define **a** Permanent set **b** Breaking stress 3

21) On the basis of kinetic theory derive an expression for average pressure exerted by enclosed ideal gas. 3

22) A spring of force constant 1200 N/m is mounted on a horizontal table as shown in figure. A mass of 3.0 kg is attached to the free end of the spring pulled side ways to a distance of 2.0 cm and released. Determine frequency maximum acceleration and maximum speed of mass. 3



SECTION D

23) Two boys 'A' and 'B' jumped from a certain height Boy 'A' fell on a cemented floor and got injured Boy 'B' fell on a heap of sand was not injured Boy 'B' started laughing at Boy 'A'. Satish was also watching both the boys. He immediately took 'A' to nearby dispensary. The doctor treated boy A. 4

a) Why was boy 'A' injured and not boy 'B'

b) What values are shown by Satish

SECTION E

24) Draw PV diagram for Carnot's cycle. Write steps of working of Carnot's Heat engine and hence derive expression for its efficiency 5

(OR)

What is adiabatic process and write equation of state and expression for work done in an adiabatic process by ploting a graph show that slope of adiabatic curve is ' γ' than the slope of isothermal curve ($\gamma = \frac{c_p}{c_v}$)

25) State and prove Bernaullis principle and write any two limitations. 5

(OR)

What is capillarity? Derive ascent formula when a capillary is immersed in liquid. What happens if the capillary is of insufficient height ?

26) a) Write Newton's formula for speed of sound in gases why and what correction was applied by laplace in the formula.

b) Discuss any '2' factors affecting speed of sound. 5

(OR)

a) Discuss the formation of standing waves in stretched string and show that first three harmonics are in the ratio 1:2:3. Draw the figure to show 1st three modes of vibration.

b) Write any two difference between stationary waves and progressive waves.

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)
ANNUAL EXAMINATION, 2018
CHEMISTRY

Time: 3 hrs. **26.02.2018**
Class: XI **M.M. : 70**

General Instructions:-

1. ***All questions are compulsory.***
2. ***Question Nos. 1 to 5 are very short answer questions and carry 1 mark each.***
3. ***Question Nos. 6 to 10 are short answer questions and carry 2 marks each.***
4. ***Question Nos. 11 to 22 are also short answer questions and carry 3 marks each.***
5. ***Question No. 23 carries 4 marks.***
6. ***Question Nos. 24 to 26 are long answer questions and carry 5 marks each.***

1. State Hund's rule of Maximum Multiplicity. **(1)**
2. Which of the following will have the most negative electron gain enthalpy and which the least negative? P, S, Cl, F. **(1)**
3. Discuss the shape of PH_3 using VSEPR model. **(1)**
4. Give statement of Hess's Law of constant heat summation. **(1)**
5. What is meant by Limiting Reagent? **(1)**
6. Calculate the wavelength of an electron (in metres) moving with velocity of $2.05\times10^{7} m/s$. **(2)**
   (mass of $e^- = 9.1\times10^{-31} kg,\ h = 6.626\times10^{-34} Js$)
7. Calculate the molarity of nitric acid in a sample which has a density, $1.41 g\ ml^{-1}$ and mass percent of nitric acid in it being 69%. **(2)**
8. Derive the relationship between K_p & K_C. **(2)**
9. Balance the following redox reaction in acidic medium by ion-electron method. **(2)**
   $Cr_2O_7^{2-} + Fe^{2+} + H^+ \rightarrow Cr^{3+} + Fe^{3+} + H_2O$

   OR

   Balance the following redox reaction in basic medium by ion-electron method.
   $MnO_4^- + I^- \rightarrow MnO_2 + I_2$
10. Arrange the following species in increasing order of oxidation in state. **(2)**
    $MnO_4^{2-},\ MnO_2,\ Mn_2O_7,\ KMnO_4$.
11. (i) Define molality.
    (ii) HCl and MnO_2 react in aqueous solution according to the given equation:
    $4HCl(aq) + MnO_2(s) \rightarrow 2H_2O(l) + MnCl_2(aq) + Cl_2(g)$ **(1+2=3)**
    How many grams of HCl react with 5.0g of manganese dioxide? (At. Mass of Mn = 55u)
12. (i) Can we apply Heisenberg's Uncertainity principle to a stationary electron? Why or why not.
    (ii) What will happen to the wavelength associated with a moving particle if its velocity is doubled?
    (iii) Write electronic configuration of Cr. (At. Number = 24) **(1+1+1=3)**
13. (i) What will be the IUPAC name for the element with atomic number 120?
    (ii) Write the general electronic configuration of d-block elements?
    (iii) The first Ionisation Enthalpy of nitrogen is greater than that & oxygen. Why? **(1+1+1=3)**
14. (i) State Avogadro's Law.
    (ii) Calculate the volume occupied by 8.8g of CO_2 at 31.1°C and 1 bar pressure. (Express volume in Litres)
    $\left[Given \rightarrow R = 0.083\ bar\ L\ K^{-1} mole^{-1}\right]$ **(1+2=3)**
15. (i) Define critical temperature.
    (ii) Explain the significance of Vander Waal's parameters. **(1+2=3)**
16. (a) Define Entropy. **(3)**
    (b) Enthalpies of formation of $CO(g), CO_2(g), N_2O(g)$ *and* $N_2O_4(g)$ *are* $-110,\ -393,\ 81,\ 9.7\ KJ\ mole^{-1}$ respectively. Find the value of $\Delta_r H$ for the reaction:
    $N_2O_4(g) + 3CO(g) \rightarrow N_2O(g) + 3CO_2(g)$
17. (i) Give any three properties of Ionic hydrides. Give one example. **(2)**
    (ii) What is water gas shift reaction? **(1)**
18. (i) What happens when an alkali metal dissolves in liquid ammonia? (Give two observations)
    (ii) Why does Be show anomalous behaviour from the rest of the elements of groups 2?
    (iii) Give one point of resemblance between Li & Mg. **(1+1+1=3)**
19. (a) What is inert pair effect? **(1+2=3)**
    (b) Select among the group 14 elements- C, Si, Ge, Sn and Pb the element that
    - (i) forms the most acidic oxide.
    - (ii) commonly found in +2 oxidation state.
    - (iii) used as semiconductor.
    - (iv) form $P\pi - P\pi$ multiple bond.

20. An organic compound contains 69% carbon and 4.8% hydrogen, the remainder being oxygen. Calculate the masses of carbon dioxide and water produced when 0.20g of this substance is subjected to complete combustion. **(3)**

OR

A sample of 0.50g of an organic compound was treated according to Kjeldahl's method. The ammonia evolved was absorbed in 50ml of 0.5M H_2SO_4. The residual acid required 60ml of 0.5M solution of NaOH for neutralization find the percentage composition of nitrogen in the compound.

21. (i) In the organic compound $CH_2 = CH - CH_2 - CH_2 - C \equiv CH$ the pair of hybridised orbitals involved in the formation of $C_2 - C_3$ bond is:

(a) $sp - sp^2$ (b) $sp - sp^3$ (c) $sp^2 - sp^3$ (d) $sp^3 - sp^3$

(ii) Which of the following carbocation is most stable:

(a) $(CH_3)_3 C\overset{+}{C}H_2$ (b) $(CH_3)_3\overset{+}{C}$ (c) $CH_3CH_2\overset{+}{C}H_2$ (d) $CH_3\overset{+}{C}HCH_2CH_3$

(iii) In the Lassaigne's test for nitrogen in an organic compound, the Prussian blue colour is obtained due to the formation of:

(a) $Na_4[Fe(CN)_6]$ (b) $Fe_4[Fe(CN)_6]_3$ (c) $Fe_2[Fe(CN)_6]$ (d) $Fe_3[Fe(CN)_6]_4$

(Select the correct options) **(1+1+1=3)**

22. Explain the following with chemical reactions.

(i) Friedal Craft's alkylation (ii) Wurtz reaction (iii) Dehydrohalogenation **(1+1+1=3)**

23. Amar and Kamlesh were friends. In winters, one day when they were going to school at 10.00 am, Amar felt irritation in his eyes and throat. He was also unable to breathe due to smog.

Kamlesh immediately took him to a doctor. Doctor gave him the proper medicines. **(1)**

(i) What should be done to prevent formation of photochemical smog? **(1)**

(ii) What values are possessed by Kamlesh? (any 2) **(1)**

(iii) What is classical smog? **(1)**

(iv) What are the reactive species involved in the formation of photochemical smog?

24. (i) Using molecular Orbital Theory explain why He_2 molecule does not exist?

(ii) Explain the formation of ethyne molecule (C_2H_2) on the basis of hybridisation. Draw its orbital diagram also. **(2+3=5)**

OR

(i) Distinguish between sigma and pi bond (2 points).

(ii) Using molecular orbital theory and calculating bond order compare the relative stabilities of the following species: O_2, O_2^+, O_2^-, O_2^{2-}.

25. (i) State Le Chateliers Principle.

(ii) Write the conjugate acid and base of HSO_4^-.

(iii) Define a Buffer solution.

(iv) At 450K, $Kp = 2.0 \times 10^{10}\ bar^{-1}$ for the given reaction at equilibrium

$$2\ SO_2(g) + O_2(g) \rightleftharpoons 2\ SO_3(g)$$

What is K_c at this temperature? **(1+1+1+2=5)**

OR

(i) Define a Lewis acid with an example.

(ii) Calculate the pH value of 10^{-3} M HCl solution.

(iii) What is common ion effect?

(iv) The solubility product for silver chloride is 1.2×10^{-10} at 298K. Calculate its solubility.

26. (i) Suggest a mechanism for the addition of HCl on propene.

(ii) Convert (a) n-Hexane to Benzene (b) Propene to 1-Bromopropane

(iii) Draw the cis- and trans- structures of Hex-2-ene. **(2+2+1=5)**

OR

(i) Suggest a mechanism for chlorination of Benzene.

(ii) Write IUPAC names of products obtained by the ozonolysis of Pent-2-ene.

(iii) Arrange the following in increasing order of boiling point:
n-Pentane, iso-pentane, neo-pentane.

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)
ANNUAL EXAMINATION, 2018
BUSINESS STUDIES

Time: 3 hrs. **26.02.2018**
Class: XI **M.M. : 90**

General Instructions:

1. ***Answer to questions carrying 1 mark may be from one word to one sentence.***
2. ***Answer to questions carrying 3 marks may be about 50-75 words.***
3. ***Answer to questions carrying 4-5 marks may be about 150 words.***
4. ***Answer to questions carrying 6 marks may be about 200 words.***
5. ***Attempt all parts of a question together.***

1. With which insurance the term 'assurance' is associated? **(1)**
2. Which societies are established to help small producers in selling their products? **(1)**
3. Which receipt is given by the shipping company to the exporter for carrying the goods to the importer? **(1)**
4. ABC Limited Company has captured 54% of the market share. Which type of objective is highlighted in this case? **(1)**
5. Which receipt is issued by foreign companies to raise funds from the Indian investors? **(1)**
6. In which form of public sector enterprise, private individuals can also become shareholders? **(1)**
7. In which business, goods are bought and sold through postal services? **(1)**
8. Which concept is related with the outsourcing services that require expertise of higher order? **(1)**
9. Rainbows Ltd. is a company dealing in travel and tours. Its head office is in New York, America and it has a global presence in about 20 countries.
   (a) Identify which type of company is Rainbows Ltd?
   (b) If Rainbows Ltd. decides to open its branch in Mumbai, India, then state any two benefits which will accrue to India. **(1+2=3)**
10. Identify the type of small scale unit in the following cases:
    (i) Minimum 50% of production is supplied to a parent unit.
    (ii) Investment in plant and machinery does not exceed ₹25 Lakhs.
    (iii) Export minimum 30% of its annual production by the end of 3rd year of commencement of production. **(1+1+1=3)**
11. Suresh, an Industrialist has decided to set up a dairy farm and a cheese producing unit in Haryana. He plans to deal in an extensive range of Fresh Mozzarella, Processed Cheeses, Pizza Cheese, Mozzarella & Grated Cheese for Pizza in various combinations.
    (a) Identify and explain the different kinds of industries Suresh wants to set up.
    (b) Also identify the categories to which these industries belong to. **(2+1=3)**
12. Good Earth Ltd. is a well-known company dealing in all kinds of organic products. The company sells its products through a chain of outlets located in well populated areas, which is in the vicinity of residential areas for the convenience of customers across the country.
    (a) Identify the type of retail outlet being described in the above lines.
    (b) State any two features of such retail outlet besides the one which has been mentioned in the paragraph. **(1+2=3)**
13. Vishal and Arun are first cousins. After completing a degree course in law, Vishal wishes to start a law firm jointly. However, Arun shares with Vishal that he plans to go abroad after four years to pursue a masters degree in law. Therefore, their partnership can exist only for four years. Vishal agrees with Arun's decision.
    (a) Identify and explain the type of partnership being discussed above.
    (b) Name the basis under which this type of partnership is classified.
    (c) It there any other type of partnership which can be classified under the same basis as identified in part (b) of the question? **(1+1+1=3)**
14. Shreya bought 500, 12% preference shares of XYZ Ltd. in the year 2016. The face value of each share is Rs.100. She didn't receive any dividend on them during 2016 due to insufficient profits of the company. In the year 2017, the company made surplus profits. Calculate the amount of dividend payable to her in the year 2017 assuming that she is holding
    (a) Cumulative Preference Shares
    (b) Non-Cumulative Preference Shares **(1½+1½=3)**
15. Rajan is a well known manufacturer of handicraft items in Kanpur. He has now decided to venture in to international business by exporting his products. His elder brother who is a leading exporter of ethnic wear advised him to get his firm registered with an export promotion council and always obtain a letter of credit from the importer.
    (a) Why is it necessary for Rajan to get his firm registered with an export promotion council?
    (b) Why is his elder brother insisting on obtaining a letter of credit from the importer? **(2+2=4)**

16. Rohan, Sohan and Mohan are partners in a partnership firm manufacturing air conditioners. Their firm is not registered. Recently, in order to increase the profits of the firm, Sohan decided to use substandard raw materials without the knowledge of Rohan and Mohan. As a result, many accidents were reported by the consumers and a case has been filed against the firm.
    (a) Is this wrong act of Sohan binding on Rohan and Mohan too? State the related feature.
    (b) Can Rohan and Mohan file a case against Sohan? Why? **(1+1+2=4)**
    (c) List any two values being ignored by Sohan.
17. These traders open their shops at different places on fixed days. Identify the type of retailer and state any three features of such retailer. **(1+3=4)**
18. Anjali is successfully running a bakery shop in her residential colony for the past many years. She owns the manufacturing unit, whereas the shop through which she operates is on rent. Recently, she took a loan from the bank to install air conditioners and create provision for sitting for the customers by extending the shop area. Although she buys majority of the ingredients like flour, sugar, oil on 15 days credit from the local suppliers but sales are made only in cash.
    (a) Quoting the lines, identify and explain the various external sources of finance that Anjali has employed in her business. **(2+2=4)**
    (b) State one merit of each source of finance.
19. 'Staunch Ltd' is a well known company in telecom sector in India. The company is committed to treat everyone fairly, with respect and dignity regardless of differences in positions, age, caste, gender or otherwise. It abides by all the laws governing in India and participates in the progress and integrity of the nation. It constantly reviews all its print and electronic promotional materials like advertisements, brochures, etc to make sure that they are free from any kind of misrepresentation. The company remains actively involved in social issues and activities.
    By quoting the lines from the paragraph, identify the different interest groups towards which the company is fulfilling its social responsibilities. **(4)**
20. Describe the role and functions of Chambers of Commerce. **(5)**
21. Which type of e-business transaction is highlighted in the following cases?
    (i) Employees send their daily report through e-mail.
    (ii) Purchase of security lock system by Hyundai from Autocops.
    (iii) Complaint lodged by a customer at the company's call centre.
    (iv) Sale of used books through e Bay. com.
    (v) Conducting surveys to determine customer's preference. **(5)**
22. Differentiate between Shares and Debentures on the basis of
    (a) Status (b) Rate of Return (c) Redemption
    (b) Effect on borrowing capacity (e) Degree of Risk. **(5)**
23. Taste Buds Pvt. Ltd is a popular food and beverages maker in India. It is planning to launch, two new soya based snack brands 'Mingle' and 'Tingle' in order to tap India's fast growing health cautious traditional snacks market. This strategy will help the company take on domestic major Hariram Foods International Pvt. Ltd, which is the largest brand by value in the sweet and snacks market with a 28% market share.
    (a) Define the term 'business risks'.
    (b) What type of business risk is involved in the decision of Taste Buds Pvt. Ltd? **(1+1+3=5)**
    (c) Explain briefly any three features of business risks.
24. How do small scale industries contribute to the socio-economic development of India? **(6)**

    OR

    Small Scale Sector in India faces a lot of problems in its day-to-day functioning. Explain any six such problems. **(6)**
25. Explain the following principles of Insurance with suitable examples.
    (i) Principle of Indemnity (ii) Principle of Contribution **(3+3=6)**

    OR

    Farhan is a businessman and has opened on account in which deposits are the most liquid and there is no limits on the number or amount of transactions in a day. His mother has opened an account where she can conveniently deposit the money she saves. Farhan's younger brother Sohail has opened as account wherein he will deposit Rs.1000 every month for next 2 years.
    (a) By quoting the lines from the paragraph identify the various types of bank accounts being opened by Farhan and his family members.
    (b) Describe briefly any two other types of accounts not mentioned is the above paragraph.
    (c) State any two advantages of the type of account opened by Farhan other than the one mentioned in the above paragraph. **(3+2+1=6)**

26. Mayank is a leading manufacturer of medical appliances in India. His most selling medical appliances include absorbent gauze, sterile gloves, surgical face masks, surgical caps, crepe bandages and other surgical disposables. He has recently procured an export order for these medical appliances and has obtained his IEC code number.

(a) What are the various formalities that Mayank has to complete after obtaining Export License and before applying for the reservation of shipping space?

(b) Name the document that will be issued by the shipping company once his request for reservation of shipping space is accepted. **(5+1=6)**

OR

Identify the documents highlighted in the following statements.

(i) This document shows the details of goods imported and is used by custom authorities to determine import duty.

(ii) This document is issued by the commanding officer of the ship to the exporter after the cargo is loaded on the ship.

(iii) This certificate specifies the country in which the goods to be exported were manufactured.

(iv) This document gives instruction to the staff at the port gate to permit the entry of the cargo inside the dock.

(v) On the basis of this document, customs office grants permission for the export. **(6)**

(vi) On the basis of this document, imported goods are unloaded from the carrier.

27. Explain briefly the six clauses of Memorandum of Association. **(6)**

OR

Saurabh Publications was a Private Limited Company. The publishing business was growing by leaps and bounds. The demand was huge. It required huge investment to set-up its branches and printing base all over the country. The board members were thinking to offer shares to public to meet investment requirements.

(a) Identify the form of organisation which board members are thinking of?

(b) What is the minimum and maximum number of members in such organisation?

(c) What two benefits would be denied, if this form is accepted? **(1+1+2+2=6)**

(d) What two benefits will be availed, if this form is accepted by the company?

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)

Time: 3 hrs. **ANNUAL EXAMINATION, 2018** **06.03.2018**

Class: XI **BIOTECHNOLOGY** **M.M. : 70**

General Instructions:-

1. ***Question paper consists of four sections- A, B, C & D.***
2. ***Questions 1 to 6 carry one mark each.***
3. ***Questions 7 to 14 carry two marks each.***
4. ***Questions 15 to 25 carry three marks each.***
5. ***Questions 26 to 28 carry five marks each.***

SECTION-A

1. Name a protein consisting of only one polypeptide chain. **(1)**
2. What lead to genomic revolution? **(1)**
3. Write the structure of Tryptophan. **(1)**
4. Name the cell that lay down the inorganic compound of bone. **(1)**
5. Name the plastid that give colour to flower and fruits. **(1)**
6. A disease is caused due to the deficiency of excision repair enzyme. Name the disease. **(1)**

SECTION-B

7. Enzymes help in catalysing the conversion of substrate to product. Explain the catalytic action of enzymes. **(2)**
8. State any four features of genetic code. **(2)**
9. Write the strategy used in sequencing polypeptides. **(2)**
10. State the application of biotechnology in the field of health industry and agriculture. **(2)**
11. Explain the process of cloning. **(2)**
12. Name the enzyme that reduces dinitrogen to ammonia. Write the net reaction of N_2 fixation. **(2)**
13. State the difference between transformation and transduction. **(2)**
14. Why membrane proteins are important for living organisms? **(2)**

SECTION-C

15. Draw a well labelled diagram of phloem. What are the cell types present in phloem? **(3)**
16. What are the criteria shown by cytoplasmic genes? Explain with an example. **(3)**
17. What are the major forms of RNA? How do they differ from each other? **(3)**
18. What is clonal propagation? Explain triple fusion with the help of diagram. **(3)**
19. What are the molecular events taking place on cell cycle check points? **(3)**
20. How is temperature regulated in living organisms? **(3)**
21. What are nucleosomes? State any four differences between euchromatin and heterochromatin. **(3)**
22. What is frame shift mutation? Explain the various kinds of chromosomal mutational rearrangements. **(3)**
23. Living cells have evolved a variety of mechanism to repair DNA. Explain with the help of diagram. **(3)**
24. Explain the process of transcription with the help of diagram. **(3)**
25. State the importance of biodiversity. What are the causes of its destruction? **(3)**

OR

What are stem cells? Explain the types of stem cells used in biotechnology.

SECTION-D

26. Explain the reduction of CO_2 to glucose in photosynthetic organism with the help of flow sheet.

OR

Explain the different steps in photosynthesis. Explain Z scheme by flow sheet diagram. **(5)**

27. How do genes interact to form a final outcome? Two varieties of pea plant with AAbb (white flower) and aaBB (white flower) are crossed. In F_1 plants the phenotype is purple flower with AaBb genotype. What is the ratio of purple and white flower in F_2 generation? **(5)**
28. Who proposed lac operon model? Explain lac operon in E. coli with diagram. **(5)**

OR

What is fermentation? What is the net outcome reaction of TCA cycle? Explain the generative pathway of glycolysis.

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)

DATE : 06-03-2018 | **ANNUAL EXAMINATION, 2018** | **Time : 3 Hours**

CLASS : XI | **INFORMATICS PRACTICES** | **M.M : 70**

No. of printed page : 3

General Instructions :
- All questions are compulsory.
- Programming language is Java (NetBeans) and Queries are based on MySQL
- Take necessary control name wherever it is required.

Q1. a. What is Operating System software? What role does it play in the functioning of a computer? **(2)**

b. What do you understand by denial-of –service? **(1)**

or narrate the term "Spyware".

c. Name any four communication ports. **(1)**

d. Write any four safety measures you follow to protect your computer. **(2)**

f. Write short notes on - **(2)**

a) Utility Software b) Device Driver

g. Distinguish between Real Time and Multiuser operating system software. **(2)**

Q2. What output will be generated by the following program segment -

a) **(2)**

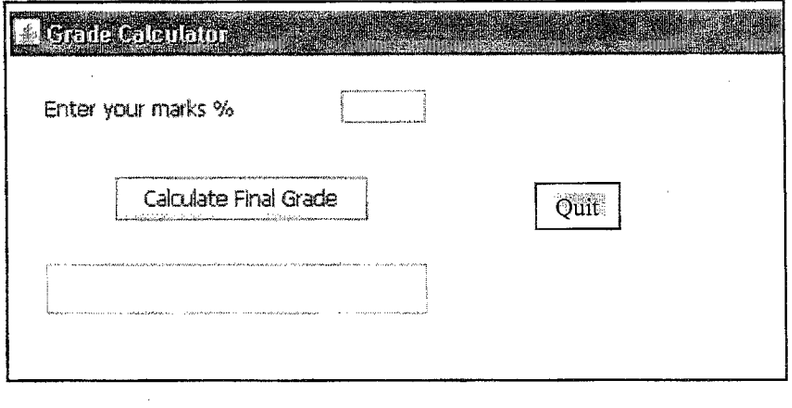
```
char ch='D'; int na=10;
 switch(ch)
{
 case 'A':      System.out.println(" Router " + na);
                na++;

 case 'B':      System.out.println(" Repeater" + na);
                na++; break;
 case 'C' :     System.out.println(" NIU " + na);
                na++;
                break;
 default :      System.out.println(" Backbone" + na);
                na++; }
                System.out.println(" Gateway" +  - -na);
```

b) **(2)**

```
int sz=25,i=10,sum=100;
        if(sz!=0)
         {
        sum=sum+i; }
        else
        {
        sum=sum-i; }
jtextField1.setText("Sum of Series " + sum+i);
```

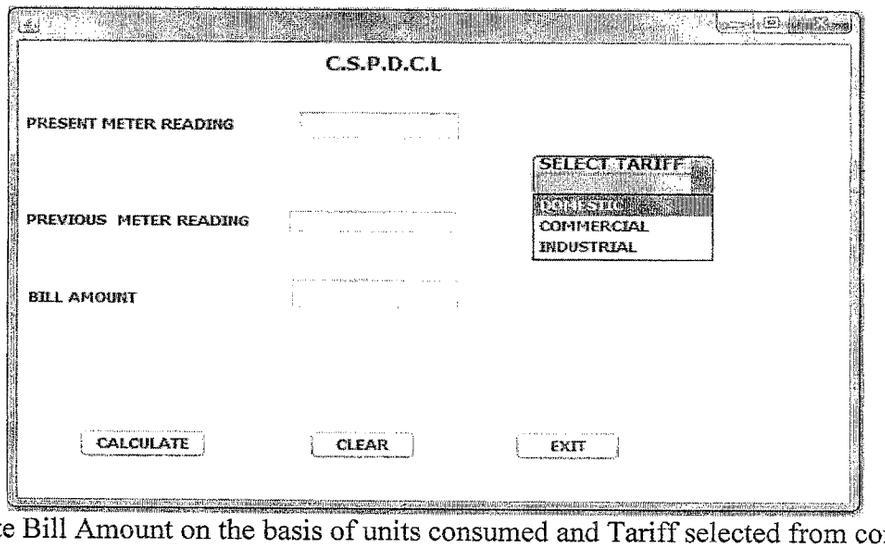
c) Develop an application in java(Netbeans) to accept Aggregate Marks of a Student and display his/her Grade as given below. Also give code for "Quit" button – **(3+1)**



Aggregate Marks	Grade
100 - 90	"A1"
89.9 - 80	"A2"
79.9 - 70	"B1"
69.9 - 60	"B2"
59.9 - 45	" C"
< 45	" D"

Q3a) Give java code to display reverse of a given integer number using while loop statement. **(3)**
(for ex. If user gives 3457 it should display 7543)

b) "C.S.P.D.C.L." has designed an application for its electricity consumer. It provides three types of tariff for which rates/unit is given below. Study the case and answer the questions given below -



i. Calculate Bill Amount on the basis of units consumed and Tariff selected from combobox - **(3+1)**
(units consumed=present meter reading- previous meter reading)

Tariff	**Rate(In Rs. Per Unit)**
Domestic	**5**
Commercial	**7**
Industrial	**12**

Also write the command to make the textfieldbox uneditable (tx3 to display " bill amount")

ii. Give code for the button **"Exit"** to quit the application **(1)**

iii. Write code for "**CLEAR**" button to clear all textfields. **(1)**

c) Rewrite the following code using switch statement - **(2)**

```
int ct;
if(ct= =1)
 System.out.println(" Class One");
else  if(ct= =2)
 System.out.println(" Class Two");
else if(ct= =3)
 System.out.println("Class Three");
else if(ct= =4)
 System.out.println("Class Four");
```

d) How many times the loop will run- **(2)**

```
int number1=1, number2=0, number3=0;
  do
  {
 number1+=5;
 number2+=3;
   }while(number2<10);
System.out.println(n+" "+ number1);
```

e) Rewrite the following code using for loop- **(2)**

```
long  no=1000, jn=100;
while( jn>10)
{ no=no + jn;
  jn=jn-5;  }
```

f) Find out syntax errors in the following java code snippet- **(2)**

```
char x=10, y=20, max
max=(x>y) ? x : y
System.println("greater one is " max ;
```

Q4. a) Compare DDL and DML statements of SQL. **(2)**

b) Ajay needs to remove all the rows(tuples) from "GADGETS" table to release the storage space. But he does not want to remove the table structure. Which statement should he use? **(1)**

c) Jena uses an **EMPLOYEE** table with following columns:
EMPID, ENAME , SALARY, DEP_NUMBER
She needs to display name of employees for whom any department Number have not been assigned. Help her by writing the query for getting the desired output. **(2)**

d) Give output of following SQL statements **(1x5=5)**

i. Select SUBSTRING("Live Every Moment", 3,6) ;
ii. Select Round(345123.8019, 2), Truncate(345123.80, -2) ;
iii. Select Year(Curdate( ));
iv. Select Mod(14,10), Sqrt(49) ;
v. Select Right("Determination", 3);

Q5.a. Which keyword is used to eliminate redundant data. Give suitable example. **(1)**

b. What is DBMS ? Write name of any two DBMS Software. **(2)**

c. What is Primary Key in a DBMS Relation? Explain with suitable example. **(2)**

d. i) Create table "STORE" as per given below description - **(1)**

Column Name	S_ ID	SName	SLOC	Distance
Key Type	Primary			
Datatype	Number	Varchar	Char	Number
Length	2	20	20	4

ii) Insert a record in the above given table "STORE" as 111, 'Megastore', 'New Delhi', 150 **(1)**

iii) Add one more column Email of datatype Varchar and size 30 to the table "STORE" **(1)**

e) Distinguish "Alternate" and "Candidate" key with suitable example. **(1)**

f) What do you understand by Numeric data types supported by MySQL ? **(1)**

Q6. Given the following **Sports R**elation:Write SQL commands for questions (i) to (vi) and the output for (vii). **(1x10=10)**

Table: Sports

No	Sport_Item _Name	Cost	Quantity	DOP
1	Football	900	9	2006-05-21
2	HockeyStick	1500	3	2007-05-21
3	Net	1800	1	
4	BasketBall	2100	2	2006-06-13
5	Bat	8000	1	2009-06-13
6	TennisBall	500	5	2006-05-21
7	Soccer	2500	2	2010-01-11

(i) To select Sports Item Name purchased after '2007-10-31'.
(ii) To list the Sport Item Name, for which Date of Purchase is not available.
(iii) To list the Sport Item Name in ascending order of the date of purchase where quantity is more than 3.
(iv) To display Sport Item Name, Cost, and Quantity .
(v) To count the number of Sport Items for which cost is more than 10000.
(vi) To insert a new record in the sports table with the following data:
8,'LegGuard',1000, 5, '2010-02-02'
(vii) Give the output of following SQL command: (Include the last inserted values in part(vi))
a) Select Min(Distinct Quantity) From SPORTS;
b) Select Max(Cost) From SPORTS Where Quantity>=2;
c) Select Sum(Cost) From SPORTS Where Quantity>2 and Cost<1000;
d) Select Avg(Cost) From SPORTS Where DOP<'2009-01-01';

Q7.a) "Common People are benefited by e-Governance". Write two reasons to support this statement.**(2)**

b) Give two points which are hindrance for the improvement of "e-Business". **(2)**

c) Give Name of two popular web portals for "e-Governance " **(1)**

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)

DATE : 06-03-2018 | ANNUAL EXAMINATION, 2018 | Time : 3 Hours

CLASS : XI | HOME SCIENCE | M.M : 70

Note : All questions are compulsory. Marks for each question are indicated against it.

1) When are following emotions shown by an infant : (1) Jealousy (2) Shyness 1
2) What is centration? 1
3) How can we prevent Pertusis? 1
4) What is Makaton? 1
5) Explain protein sparing action of carbohydrates. 1
6) Draw Satin Weave. 1

7) Explain the terms : (1) Reversibility (2) Transductive reasoning 2
8) What do you understand by acquired immunity? 2
9) Explain the process of fat metabolism. 2
10) Which vitamin is known as coagulation vitamin? What happens when it is deficient? 2
11) Write four ways to conserve fuel. 2
12) Mention the obstacles faced by rural women. 2
13) Mention the barriers of communication. 2

14) Who all are considered agents of socialisation for a child? 3
15) Who are considered socially disadvantaged? 3

16) Explain oppositional defiant disorder in children. 4
17) Name the causative agent causing Tuberculosis and its symptoms. 4
18) How can a blind child be educated? 4
19) How is first aid given to an asthma patient? 4
20) Explain the following methods along with the principles : (a) Microwave Cooking (b) Braising (c) Sauteing (d) Steaming 4
21) Differentiate between psychological and physiological fatigue and ways to reduce it. 4

22) What are the principles of development? 5
23) What is the role of ICDS? 5
24) Write the principles applied to these methods : 5
    1) salting 2) blanching 3) freezing 4) sun drying 5) pasteurisation
25) Why are finishes required? Explain methods of Dyeing. 5

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)

DATE : 06-03-2018 | **ANNUAL EXAMINATION, 2018** | **Time : 3 Hours**

CLASS : XI | **MATHEMATICS** | **M.M : 100**

No. of printed pages : 2

General Instructions :

- All questions are compulsory.
- The question paper consists of 29 questions divided into three sections A,B and C. 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 6 marks each.
- All questions in section A are to be answered in one word, one sentence or as per the exact requirement of the question.
- There is no overall choice. However, internal choice has been provided in 3 questions of four marks each and 3 questions of six marks each. You have to attempt only one of the alternatives in all such questions.
- Use of calculators is not permitted. You may ask for logarithmic tables, if required.

Section-A

1. $A = \{1,3,5,6,7\},\ \ B = \{2,3,6,8\}\ and\ \ C = \{1,2,3,4\}\ then\ find\ \ A - (B \cup C).$
2. Write the contra positive of the statement: " if x is less than zero, then x is not positive."
3. Find the modulus of $\frac{-16}{1+i\sqrt{3}}$
4. Find the equation of the hyperbola with vertices at $(\pm 2,0)$, foci at $(\pm 3,0)$.

Section - B

5. Solve : $sinx + \sqrt{3}\cos x = \sqrt{2}$.
6. If p is the length of perpendicular from the origin to the line whose intercepts on the axes are a and b, then show that $\frac{1}{p^2} = \frac{1}{a^2} + \frac{1}{b^2}$
7. Solve : $5x^2 - 4ix + 9 = 0$.
8. Find all pairs of consecutive even positive integers, both of which are larger than 8, such that sum is less than 28.
9. The vertices of triangle PQR are P(2,1), Q(-2,3) and R(4,5). Find the equation of the median through the vertex R.
10. Evaluate : $\lim_{x\to 0} \frac{cos3x-1}{cos2x-1}$
11. Verify by the method of contradiction " $\sqrt{10}$ is irrational."
12. Two unbiased dice are thrown. Find the probability that neither a doublet nor a total of 10 will appear.

Section – C

13. Differentiate $\sqrt[6]{sinx}$ from first principles.

    (OR)

    Find $\frac{dy}{dx}$ if (i) $y = \frac{x}{sin^n x}$ (ii) y= cosecx.cotx .
14. For any three sets A, B and C if AUB = AUC and A∩B = A∩C, then prove that B= C.
15. Find the domain and range of the function $f(x) = \frac{1}{\sqrt{25-x^2}}$.
16. Between 1 and 31, m numbers have been inserted in such a way that the resulting sequence is an A.P. and the ratio of the 7th and the $(m-1)^{th}$ numbers is 5: 9. Find the value of m.
17. In any triangle ABC, prove that $a(\cos C - \cos B) = 2(b-c)\cos^2\left(\frac{A}{2}\right)$
18. A rod of length 12 cm moves with its ends always touching the coordinate axes. Determine the equation of the locus of a point P on the rod, which is 3 cm from the end in contact with the x - axis.

PTO

19. Using section formula, show that the three points A(-2,3,5), B(1,2,3) and C(7,0,-1) are collinear.

(OR)

Find the equation of the circle that passes through the points (1,-2), (3,0) and whose centre lies on the line $x + 2y + 5 = 0$.

20. Express the complex number $\frac{1+2i}{1-3i}$ in polar form.

(OR)

Express the complex number $\frac{i-1}{\cos\frac{\pi}{3} + i\sin\frac{\pi}{3}}$ in polar form.

21. In how many ways , can the letters of the word "PERMUTATIONS" be arranged so that (i) vowels are all together. (ii) there are always 4 letters between P and S.

22. Prove by induction that $x^{2n} - y^{2n}$ is divisible by $x+y$

23. If 4 digit numbers greater than 5000are randomly formed from the digits 0,1,3,5 and 7, what is the probability of forming a number divisible by 5 when (i) the digits are repeated. (ii) the repetition of digits is not allowed.

Section-D

24. Solve the following system of inequalities graphically: $x + 2y \leq 10$, $x + y \geq 1$, $x - y \leq 0$ $x,y \geq 0$.

(OR)

A manufacturer has 600 litres of a 12% solution of acid. How many litres of a 30% solution must be added to it so that acid content in the resulting mixture will be more than 15% but less than 18%?

25. The coefficients of three consecutive terms in the expansion of $(1 + x)^n$ are in the ratio 1:7:42. Find n

26. Find the sum of the following series up to n terms : $\frac{1^3}{1} + \frac{1^3+2^3}{1+3} + \frac{1^3+2^3+3^3}{1+3+5} + \cdots$..

27. Find the mean, variance and standard deviation for the following data :

Classes	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50-60	60-70
Frequency	3	7	12	15	8	3	2

(OR)

The mean and standard deviation of 100 observations were calculated as 40 and 5.1 respectively by a student who took by mistake 50 instead of 40 for one observation. What are the correct mean and standard deviation?

28. Let R be a relation from N to N defined by $R = \{ (a,b) : a,b \in N \text{ and } a \leq b^2\}$. Are the following true? (i) $(a,a) \in R$, for all $a \in N$ (ii) $(a,b) \in R$, implies $(b,a) \in R$. (iii) $(a,b) \in R$, $(b,c) \in R$ implies $(a,c) \in R$.

(OR)

In a survey it was found that 22 members liked product A, 25 liked product B and 28 liked product C. If 14 liked products A and B, 12 liked products C and A, 14 liked products B and C and 8 liked all the three products. Find how many liked product B only and how many liked only 2 products.

29. If $\tan\theta = -\left(\frac{4}{3}\right)$ and θ lies in quadrant IV, find $\sin\left(\frac{\theta}{2}\right)$, $\cos\left(\frac{\theta}{2}\right)$ and $\tan\left(\frac{\theta}{2}\right)$.

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)

DATE : 08-03-2018 | ANNUAL EXAMINATION, 2018 | Time: 3 Hours

CLASS :XI | PHYSICAL EDUCATION | M.M.:70

General Instructions :

i) **All questions are compulsory.**

ii) **Answers to question nos. 1 to 11, carrying 1 mark each, should be in 20-30 words.**

iii) **Answers to question nos. 12 to 19, carrying 3 marks each, should be in 75-90 words.**

iv) **Answers to question nos. 20 to 26 carrying 5 marks each, should be in 150-200 words.**

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1. Define Physical Education. (1)
2. What is sports journalism? (1)
3. Enlist the courses in Physical Education. (1)
4. Define leadership. (1)
5. What is Olympic Motto? (1)
6. What do you mean by wellness? (1)
7. What is meant by endurance? (1)
8. What do you mean by Paralympics? (1)
9. What is the meaning of physical fitness? (1)
10. What is meditation? (1)
11. What is asana? (1)
12. Enlist the objectives of physical education and explain any one of them. (3)
13. Discuss about teaching careers in physical education in detail. (3)
14. Write a short note on the Olympic Flag. (3)
15. Value Based Question :

    Ramesh had been suffering from stress, tension and anxiety for the last three years. Now, along with these problems, he is also facing severe depression. He has already consulted many doctors but has not found an appropriate solution. Ultimately he met our yoga instructor. The yoga instructor taught him to perform yogic asanas, pranayamas and yoganidra. After about three months of regular practice, he was feeling well. (1×3=3)

    a) What is yoga?

    b) What was the problem of Ramesh?

    c) What did the yoga instructor teach Ramesh to overcome his problems?
16. Discuss about any three components of wellness. (3)
17. Discuss any three components of health related physical fitness. (3)
18. What do you mean by Integrated Physical Education. (3)
19. Discuss the role of physiotherapist for students with special needs. (3)
20. Discuss the changing trends in physical education in India. (5)
21. Explain about Arjun Award in detail. (5)
22. Differentiate between Ancient and Modern Olympic Games. (5)
23. What do you mean by term 'lifestyle'? Elucidate the importance of positive lifestyle in detail. (5)
24. Discuss the components of physical fitness in brief. (5)
25. Discuss the elements of Yoga. Explain any two of them. (5)
26. Explain any five qualities of a good leader in detail. (5)

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)

DATE : 16-02-2018 | **ANNUAL EXAMINATION, 2018** | **Time: 1 ½ hrs**

CLASS : XI | **GENERAL KNOWLEDGE** | **M.M. : 100**

NAME : _____ **ROLL NO.** _____ **CLASS/SEC** _____

INVIGILATOR'S SIGNATURE _____

INSTRUCTIONS:

- **All questions are compulsory**
- **Write the correct option in the box provided.**
- **Each question carries 1 mark.**

1. Which one is the Association of Southeast Asian Nation, heads of which were the guest of honour on the Republic day 2018?
   a) SAARC b) ASEAN
   c) SAFTA d) BRICS
2. Who is the present chief minister of Karnataka?
   a) Mr. S.M. Krishna b) Mr. Kumaraswami c) Mr. Yeddyurappa d) Mr. Siddharamaiah
3. Which academy promotes and develops literature in all 22 languages of India?
   a) Sahitya Academy b) Sangeet Natak Academy c) Lalit Kala Academy d) Sanskriti Vibhag
4. What is Lakshya?
   a) Missile b) Pilotless Target Aircraft c) Fighter Plane d) Supersonic Jet
5. Which among the following is the India's first nuclear ballistic missile submarine?
   a) INS Nilgiri b) INS Chakra c) INS Shandalya d) INS Arihant
6. Which of the following ports does not have a natural harbour?
   a) Cochin b) Bombay c) Madras d) Visakhapatnam
7. Which amongst the following is the country to issue paper currency?
   a) India b) China c) USA d) Russia
8. Name the state language spoken in Goa,
   a) Malayalam b) Gujarati c) Konkani d) Tulu
9. Which one is the classical dance of Asom?
   a) Nati b) Kuchipudi c) Yakshagana d) Bihu
10. Which one was the first country in the world to host the modern Olympics?
    a) China b) Greece c) India d) Myanmar
11. What is the maximum elected strength of the Rajyasabha?
    a) 225 b) 250 c) 245 d) 252
12. 'Inquilab Zindabad' is a famous slogan. Who has given it?
    a) Iqbal b) S.C.Bose c) Bhagat Singh d) C.S.Azad
13. 'Chemotherepy' is used for the treatment of?
    a) Kidney failure b) Heart weakness c) Brain diseases d) Cancer
14. The region of a stem from which a leaf springs is?
    a) Axil b) Bud c) Node d) Intermode
15. Which chemical is used to preserve food grains?
    a) Borax b) Sodium Benzoate c) Potassium d) None of these
16. What is the cause of the colours of the rainbow?
    a) Scattering b) Dispersion c) Reflection d) Photo electric effect
17. Which one of the following is not a primary colour?
    a) Blue b) Green c) Red d) Black
18. Which one is the common refrigerant used in a domestic refrigerator?
    a) Neon b) Freon/Ammonia c) Spirit d) Liquid Sodium
19. Pedology is the study of
    a) Coins b) Numbers c) Stamps d) Soil
20. Who was the first Indian to be awarded the Oscar?
    a) Satyajit Ray b) A R Rahman c) Bhanu Athaiya d) Raj Kapoor

P.T.O.

21. Which of these awards is highest gallantary Award?
    a) Shaurya Chakra b) ParamVir Chakra c) Bharat Ratna d) Mahavir Chakra
22. Which psychologist spoke of the pleasure principle?
    a) Sigmund Freud b) Mark Twain c) Frederic Engeles d) Max Weber
23. In 'Shin Chen' cartoonseries, what is the name of Shin Chen's sister?
    a) Suzuka b) Shil Lee c)Zenny d) Hemawari
24. In an 'ektara', what is the resonator usually made of?
    a) Pumpkin b) Clay c) Plywood d) Coconut
25. Which calendar names successive years after 12 animals?
    a) Saka b) Chinese c) Gregorian d) Hebrew
26. By what common name are Muslim migrants from Myanmaar referred to in India?
    a) Rohingyas b) Khidmatgars c) Mohajirs d) Razakars
27. Who is believed to be a brother of Dhritrashtra in epic of " Mahabharata"?
    a) Bhishma b) Pandu c) Shakuni d) Drishtadyumna
28. The flag of which country bears the 13 red & white strips with 50 stars ?
    a) UK b) USA c) Australia d) Japan
29. From which state with which the 'Chikankari textile' belongs?
    a) Punjab b) Uttar Pradesh c) Himachal Pradesh d) Rajasthan
30. Name the social reformer whose ideas led to the Russian revolution and the spread of communism?
    a) Lenin b) Marx c) Brezhnev d) Gorbachev
31. Which of the following are heat radiation?
    a) UV b) IR c) Microwaves d) Gama rays
32. Which of the following legend said the quotation''The child is the father of the man'?
    a) Winston Charchil b) Bacon c) William Wordsworth d) B.Franklin
33. Name the bird that roars like a lion, hisses like a snake and kicks like a mule.
    a) Emu b) Ostrich c) Penguin d) Albatross
34. Who is the auther of the book 'THE GOD OF SMALL THINGS"?
    a) R K Narayan b) Sherlock Holmes c) Arundhati Rai d) Raja Rao
35. 'Citius,Altius,Fortius'is the official motto of ?
    a) Asian Games b) Commonwealth Games
    c) Olympic Games d) FIFA Football World cup
36. 'Buenus Aires' is the capital of?
    a) Cuba b) Argentina c) Uruguay d) Paraguay
37. What of thefollowing term is used in the game of cricket?
    a) HI b) HALLO c) BYE d) LIE
38. International Labour Day is celebrated on?
    a) APRIL 22 b) DEC 10 c) MAY 1 d)JUNE 3
39. 'The Land Of White Elephant' is?
    a) Sri Lanka b) Finland c) Thailand d) South Afrika
40. Who became the first woman recipient of 'Bharat Ratna'award?
    a) Mother Teresa b) Indira Gandhi c) SuchitraKripalani d) VijayaLaxmiPandit
41. Which of these sanctuaries is in KERALA?
    (a) Gir Sanctuary (b) Kaziranga Sanctuary
    (c) Dandeli Wildlife Sanctuary (d) Chinnar Wildlife Sanctuary
42. Name the Indian tennis player who married to Miss Universe Lara Datta.
    (a) Rohan Bopanna (b) Leander Paes (c) Mahesh Bhupati (d) Ashok Amritraj
43. Which state was the first to electrify all its villages?
    (a) Haryana (b) Kerala (c) Maharashtra (d) Tamil Nadu
44. A person having fear of fire, he has?
    (a) Microfobia (b)Misofobia (c) Pyrofobia (d) Anthrofobia
45. Which is India's second highest civilian honour?
    (a) Padma Shree (b) Padma Bhushan (c) Padma Vibhushan (d) Ashok Chakra

46. In which state is India's first Marine National Park located?
(a) Gujarat (b) Kerala (c) Goa (d) Tamil Nadu
47. Which state of India you are offered a sweet feast named 'GHEVER'?
(a) Haryana (b) Tripura (c) Uttar Pradesh (d) Rajasthan
48. Who originally drafted the Indian Penal Code?
(a) Macaulay (b) Hastings (c) Minto (d) Cornwallis
49. Which tradition of the Republic Day officially denotes the end of the festivities?
(a) Jets fly-past (b) Elephants March (c) Beating Retreat (d) President' s Buggy leaves
50. The prime minister of India having shortest tenure?
(a) H D Devegauda (b) L K Advani (c) G L Nanda (d) A B Vajpai
51. Following what military operation did Goa become part of the Indian Union in 1961?
(a) Operation Parakram (b) Operation Vijay (c) Operation Pawan (d) Operation Balidan
52. Name the first European to attack India ?
(a) Marco Polo (b) Alexander the Great (c) Albuquerque (d) Vasco da gama
53. In Regvedic terms the original inhabitants of India are?
(a) Aryans (b) Dasyus (c) Gramini (d) Jana
54. Christian Dior, Papa Meilland, Queen Elizabeth, Oklahoma- What are these names of?
(a) Perfume (b) Bone China (c) Roses (d) Apples
55. Edith Head, Madeleine Vionnet and Mary Quant- what do these ladies have in common?
(a) Fashion Designers (b) Renowned ballerinas (c) Film Actresses (d) Renowned Sopranos
56. Which stroke is the fastest in swimming?
(a) Freestyle (b) Backstroke (c) Breaststroke (d) Butterfly
57. Which is the world's oldest railway station?
(a) Victoria (b) Osaka (c) Liverpool (d) Leningrad
58. Which state is the 'SPICE GARDEN OF INDIA'?
(a) Asom (b) Maharashtra (c) Kerala (d) Bihar
59. Which Jalandhar-born veteran athlete is the poster boy of PETA?
(a) Milkha Singh (b) Fauja Singh (c) JyotiRandhawa (d) None of these
60. The Metro-Man of Delhi was succeeded by Mangu Singh on 31st December, 2011. Who is famous as "Metro-Man" of Delhi?
(a) Sridharan (b) Srinivasan (c) Sanmukham (d) Srivardhan
61. Name the district of Chhattisgarh with minimum population.
(a) Raipur (b) Kavardha (c) Jashpur (d) Korba
62. Which district has the lowest area?
(a) Dhamtari (b) Dantewara (c) Sarguja (d) Bastar
63. What is Chhattisgarh's rank in the country according to area?
(a) 2nd (b) 10th (c) 9th (d) 5th
64. Associated Cement Company Limited is located in-
(a) Jamul (b) Baikunthpur (c) Alkatra (d) Gopal Nagar
65. Chitrakoot waterfall is on the river-
(a) Kanger (b) Mahanadi (c) Indravati (d) SabriNadi
66. Which of the following places is called the "Prayag" of Chhattisgarh?
(a) Dongargarh (b) Ratanpur (c) Rajim (d) Champaranya
67. Name the first newspaper of CG.
(a) Mahakaushal (b) Chhattisgarh Mitra (c) HariBhumi (d) DainikMitra
68. Which one of the following is the old name of Bastar?
(a)Heerapur (b) Jallapur (c) Rampur (d) Dandkaranya
69. Where is the Deorani-Jethani temple?
(a) Bilaspur (b) Raipur (c) Rajnandgaon (d) Raigarh
70. Raipur is located on –
(a)Arpa (b) Shivnath (c) Kharoon (d) Mahanadi
71. Bodh GhatHydel project is in-
(a) Korba (b) Raigarh (c) Dhamtari (d) Bastar
72. From the point irrigated land percentage in Chhattisgarh is -
(a) 28 (b) 25 (c) 20 (d) 22

73. Name the hottest place in Chhattisgarh,
(a) Champa (b) Bilaspur (c) Korba (d) Durg

74. Number of Rajysabha members from CG are-
(a) 4 (b) 5 (c) 6 (d) 3

75. Who was the first C.M. of undivided Madhya Pradesh?
(a) Motilal Vora (b) Vidya Charan Shukla (c) Pt. Ravi Shankar Shukla (d) Shyama Charan Shukla

76. The first Asian Games were held in-
(a) 1950 (b) 1951 (c) 1952 (d) 1953

77. Rovers Cup is associated with-
(a) Football (b) Hockey (c) Lawn Tennis (d) Chess

78. Green Park Stadium is located in which city?
(a) Kolkata (b) Kanpur (c) Jaipur (d) Delhi

79. The 2008 Olympics were held in-
(a) Athens (b) England (c) Beijing (d) Atlanta

80. Dola Bannerjee is associated with which sport?
(a) Athletics (b) Cricket (c) Chess (d) Archery

81. In IPl matches, the man who scores the maximum number of runs receives-
(a) Purple cap (b) Red cap (c) Yellow cap (d) Orange cap

82. Bausch and Lomb championships are related to which sport?
(a) Shooting (b) Motor sports (c) Badminton (d) Tennis

83. The term "short and long rest" is associated with-
(a) Basketball (b) Body Building (c) Bridge (d) Billiards

84. PankajAdvani is related to which sport?
(a) Chess (b) Billiards (c) Hockey (d) Badminton

85. "Gyan Peeth" award is given to the person related to -
(a) Literature (b) Science (c) Sports (d) Medicine

86. Who was the first Sikh to command Indian Army?
(a) Gen. Bikram Singh (b) Gen. V.K Singh (c) Gen. J.J. Singh (d) Gen J.K. Singh

87. Which Indian movie is nominated for Oscar 2018 in foreign language category?
(a) Dangal (b) Bahubali 2 (c) Newton (d) Jolly LLB 2

88. What is the winter capital of the state of Jammu &Kashmir?
(a) Ladakh (b) Pahalgam (c) Srinagar (d) Jammu

89. Who is the chairman of'NITI Aayog'?
(a) Narendra Modi (b) Prof. Ved Prakash (c) Dr. K.Radhakrishnan (d) Dr. Rajiv Kumar

90. Who is the Defense Minister of India?
(a) SushmaSwaraj (b) Nirmala Sitaraman (c) ArunJetli (d) NarendraModi

91. Name the cabinate minister of school education & tribal development in C.G. Govt. ?
(a) P. P. PANDEY (b) RAMAN SINGH (c) KEDAR B. KASHYAP (d) B.M. AGRAWAL

92. The youngest MP in LokSabha, DushyantChautala is from the Loksabha constituency ?
(a) Hisar (b) Bhivani (c) Ambala (d) Jhajjar

93. Who has announced that Youth Sports centre will be built at Alipur, Delhi?
(a) Dr. Harsh Vardhan (b) Ravi Shankar Prasad (c) Vijay Goel (d) Anant Geete

94. Who has been appointed as Comptroller and Auditor General of India?
(a) Rajiv Mehrishi (b) Prashant Kumar(c) Amir Subhani (d) Hrusikesh Panda

95. Which firm will help implement Karnataka government's 'Ksheera Bhagya' Scheme?
(a) Flipkart (b) Amazon (c) Snapdeal (d) Ajio

96. Which one is the only district in India that shares its boundary with 5 states?
(a) Raipur (b) Ranchi (c) Sonbhadra (d) Gonda

97. Who has been declared ICC player for the year 2018 ?
(a) M.S. Dhoni (b) Steve Smith (c) Hashim Amla (d) Virat Kohli

98. Which team win the Ranji Trophy final in the year 2017 ?
(a) Mumbai (b) Railways (c) Delhi (d) Gujarat

99. National Girl Child Day is observed on??
(a) 3 JAN (b) 8 JAN (c) 12 JAN (d) 24 JAN

100. Which Indian American is appointed as the US Ambassador to the UN?
(a) Bobby Jindal (b) Kamala Harris
(c) Nikki Haley (d) Kumar P Barve

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)

DATE : 01-03-2018 | Annual Examination, 2018 | Time : 3 Hours

CLASS : XI | COMPUTER SCIENCE | M.M : 70

No. of printed page : 3

Note:

1. **All questions are compulsory.**
2. **Answer questions sequentially.**

I.

1. _____ **MB = 1 TB.** 1
2. Write any two strengths and weaknesses of Computer. 1
3. Convert $(10110111.01)_2$ to Decimal. 1
4. Represent **-69** in two's complement form (1 byte representation) 1
5. What is Cache Memory? Why is it considered crucial for a microprocessor's performance? 2
6. Convert $B2F_{16}$ to octal . 2
7. Name any 2 types of job scheduling and explain in detail one example each type of scheduling. 2

II.

1. Differentiate between Syntax and Logical error. When is each type of error likely to be found. 2
2. Mention any four characteristics of a good program. 2
3. What is the use of comments? What is the purpose of writing prologues? 2
4. Define Program maintenance . Also mention its kinds. 2
5. Draw a flow chart to find the roots of a quadratic equation $ax^2+bx+c=0$ (where **a,b** and **c** are input by the user) 2
6. Write an algorithm to print the multiplication table of a given number n up to 10 steps. 2

III.

1. What is the difference between a class and an object ? 1
2. Given **unsigned int m= 1 , n= 5;** 1
   Predict the result of following expressions :
   a) m && n b) **! m**
3. **Evaluate**
   a) **cout<< x++<<"\n"<<++x<<"\n"<<x;** 1
   (Given x =60)
   b) 1

```
#include<iostream.h>
void main( )
{
    int a, b, c=100;
    cin>> a;
    b= c+a>175?40:20;
    cout<<b;
}
```

   If value of **a** entered is **i) 200** **ii) 500**

4. Rewrite the following using if ..else statements into of switch..case statement 2

```
char code;
cin>>code;
if (code =='A')
        cout<<"Accountant";
else
        if(code=='C' || code=='G')
         cout<<"Grade IV";
        else
         if(code=='F)
          cout<<"Financial Advisor";
```

5. What are Logical operators in C++. Illustrate with a code. 2

6. **WAP** to input a number ; if the number is odd and positive , print its square root. Otherwise print n^5. 3

7. What is type conversion? What is meant by implicit and explicit type conversion, illustrate with example? 3

IV.

1. Name the header file for **a) atoi( ) b) strcmp( )** 1

2. Observe the following program and give the correct output from the given outputs i) to iv) 1

```
#include<iostream.h>
#include<stdlib.h>
void main( )
{
  randomize( );
  int Game[]={10,16};
  int p;
  int turn=random(2)+5;
  for(int i=0;i<2;i++)
{
      p=random(2);
      cout<<Game[p]+turn<<"#";
}
```

i) 15#22# ii) 22#16# iii) 16#21# iv) 21#22#

3. Explain the use following functions with appropriate example of C++ program 2

i) ceil( ) ii) floor( )

4. Predict the output of the following (Assuming all header files included) 2

a)
```
for (int i=1;i<10;i++);
cout<<i;
```

b)
```
int s=0,i=0;
while(i++<5)
    s+=i;
cout<<s;
```

5. What are Actual and Formal parameters? Illustrate with example. 2

6. How is Call by Value method different from Call by reference method of function? Explain with example. 2

7. Give the output of the following code: 2

```
#include<iostream.h>
int n=5;
int main( )
{
    int n=20;
    {
        int a=10* :: n;
        cout<<" n= "<< n<<" ,::n= "<<::n<<endl;
    }
    cout<<" n= "<< n<<" ,::n= "<<::n<<endl;
return 0;
}
```

8. WAP to find whether the entered string is a palindrome or not. 2

9. Write the use of **typedef** command in C++. Give example. 2

10. Differentiate Local variable and Global variable with suitable example. 2

11. Write definition for a function sumfun() in C++ with two parameters **double** x and **int n.** The function should return a value of double type and should perform sum of the following series: 3

$$x - \frac{x^2}{3!} + \frac{x^3}{5!} - \frac{x^4}{7!} + \frac{x^5}{9!} \text{ upto } n \text{ terms.}$$

12. WAP which uses function **raised( )** to raise a number **x** raised to power **n**. The function takes **int** values for **x** and **n** and returns the result. Use default value of **2** for **n** to make the function calculate squares when this argument is omitted. Write a **main ()** to get the value of **x** and **n** from the user and to display the calculated result. 3

13. Declare a structure 3

```
struct complex
{
    int real;
    int imag;
};
```

to represent complex number (a number having real part and imaginary part).
Write **C++ functions** to add, subtract and product of two complex numbers.

14. WAP to do the following : 3

i) Read an integer X
ii) Determine the number of digits n in X
iii) Form an integer Y that has the number of digits n at ten's place and the most significant digit of X at one's place
iv) Output Y

15. WAP to read a m x n matrix of integer and then display original matrix and then print the matrix as given example 4

$$\begin{bmatrix} 1 & 2 & 3 \\ 6 & 5 & 4 \\ 7 & 8 & 9 \end{bmatrix}_{3\times3} \qquad \begin{bmatrix} 1 & 2 & 3 \\ 6 & 5 & \\ 7 & & \end{bmatrix}_{3\times3}$$

ORIGINAL **OUTPUT**

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)

DATE : 01-03-2018 | **ANNNUAL EXAMINATION, 2018** | **Time : 3 Hours**

CLASS : XI | **ECONOMICS** | **M.M : 80**

No. of Pages Printed : 2

General Instructions–

A. All Qs. in both the sections are compulsory.

B. Qs.no. 1 – 4 and 13 – 16 are multiple choice questions carrying 1 mark each.

C. Qs. nos. 5 – 6 and 17 – 18 are short answer type questions carrying 3 marks each. Answer to them should not normally exceed 60 words each.

D. Qs. nos. 7 – 9 and 19 – 21 are also short answer type questions carrying 4 marks each. Answer to them should not normally exceed 70 words each.

E. Qs. nos. 10 – 12 and 22 – 24 are long answer questions carrying 6 marks each. Answer to them should not normally exceed 120 words each.

F. The above word limit is not applicable in case of numerical questions.

SECTION – A [STATICTICS]

1) When data is classified on the basis of time, it is known as ---------- (1)

a) conditional classification b) geographical classification

c) chronological classification d) quantitative classification

2) Rank correlation is a superior method of analysis in case of ---------- distributions such as those relating to virtue,wisdom or ignorance. (1)

a) qualitative b) quantitative c) data d) none of these

3) Who among the following, is engaged in an economic activity ? (1)

a) a farmer growing wheat for self consumption. b) a farmer buying books for his children

c) a person going to a temple d) both (a) and (b)

4) Statistics in singular sense means (1)

a) statistical data b) statistical methods c) statistical investigation d) all of these

5) The government and policy makers use statistical data to formulate suitable policies of economic development. Illustrate with the help of two examples. (3)

6) Construct a pie-diagram to represent the cost of construction of a house in Bhilai. (3)

Items :-	Labour	Bricks	Cement	Steel	Timber
Expenditure (in %) :-	25	15	20	15	10

OR

Prepare a frequency distribution by inclusive method taking class interval of 7 from the following data :-

28,17,15,22,29,21,23,17,18,12,7,2,9,4,6,1,8,3,10,15,20,16,12,8,4,33,27,21,15,9,3,36,17,18,9,2,4, 6,32,31,29,18,14,13,19,15,11,9,7,1,5,37,32,28,26,20,20,19,25, & 20

7) How is histogram constructed and how does it differ from a frequency polygon ? (4)

8) Calculate the value of median and third quartile (Q3) from the following data :- (4)

Marks :-	30-35	35-40	40-45	45-50	50-55	55-60	60-65
No.of students:-	14	16	18	23	18	8	3

9) What is an index number? Mention the uses of indexes numbers. State any two points that would take into consideration while selecting base year. (1+1+2)

OR

What is linear positive correlation? Give a numerical example of it .How does correlation help in forecasting ?

PTO

10) Explain briefly any three methods of collecting primary data with their merits and demerits. (6)

11) Calculate standard deviation from the following data :- (6)

More than :-	0	10	20	30	40	50	60	70
Cumulative frequency :-	100	90	75	50	20	10	5	0

OR

Determine the missing frequency when Mode=36 and total frequency is 30.

Class interval :-	10 -20	20-30	30-40	40-50	50-60
Frequency :-	?	5	12	?	2

12) Calculate coefficient of rank correlation from the following data and interpret the result. Why does rank correlation coefficient differ from Pearsonian correlation coefficient ? (4+2=6)

X :-	48	33	40	9	16	16	65	24	16	27
Y :-	13	13	24	6	15	4	20	9	6	19

SECTION – B

13) Major contribution to the GDP of the country on the eve of independence was from :- (1)

a) agriculture b) industry c) services d) foreign trade

14) Which of the following is not a method of privatization ? (1)

a) Disinvestment b) Sale of PSUs to private sector

c) Contraction of PSUs d) Sale of PSUs to government

15) As a part of globalization process, tariff rates were --------- in India. (1)

a) raised b) lowered c) not changed d) abolished

16) The main objective of Regional Rural Bank is to provide credit to--------- (1)

a) weaker sections in rural areas b) weaker sections

c) industrial areas d) agricultural areas

17) Explain growth with equity as a planning objective. (3)

18) Poverty is one of the most important problem faced by Indian economy today. In this context state which human value is needed to deal with the problem of poverty. (3)

OR

"India is going to be a knowledge based economy in near future".Discuss.

19) Briefly discuss the main features of international trade on the eve of independence. (4)

OR

Briefly discuss the industrial development pattern on the eve of independence.

20) What is global burden of diseases? Discuss the main drawbacks of our health care system. (4)

21) Explain the need and type of land reforms implemented in the agricultural sector (4)

22) What is the difference between cost-push and demand –pull inflation? Briefly explain any two monetary measures to control inflation. (2+4=6)

23) What do you mean by distress sale? Briefly discuss the measures taken by the government to overcome the problems of agricultural marketing. (2+4=6)

24) Which factors in 1991 initiated the need for economic reforms in India? Discuss briefly the various financial sector reforms introduced in the new economic policy of 1991. (2+4=6)

OR

What do you mean by unemployment? Explain the following terms related with workers and employment. a) work force b) labour force c) work force participation rate

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)

DATE : 01-03-2018 | **ANNUAL EXAMINATION, 2018** | **Time : 3 Hours**

CLASS : XI | **BIOLOGY** | **M.M : 70**

General Instructions :

1) All questions are compulsory.
2) The question paper consists of 5 sections A,B,C, D & E. Section A contains 5 questions of 1 mark each. Sec. B is of 5 questions of 2 marks each. Sec C. is of 12 questions of 3 marks each. Sec. D contains one value based question of 4 marks, whereas Sec. E is of 3 questions of 5 marks each.
3) There is no overall choice, however, an internal choice has been provided in one question of 2 marks, one question of 3 marks and 3 questions of 5 marks weightage. A student has to attempt only one of the alternatives in such questions.
4) Wherever necessary, the diagrams drawn should be neat and properly labelled.

SECTION A

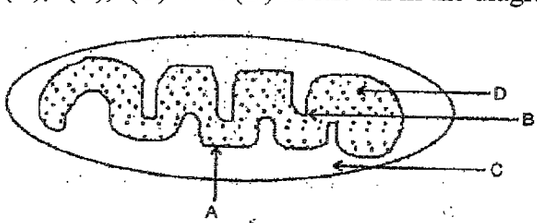
1) Man has double circulation. Name the two circulations. 1
2) Mention the enzymes that hydrolyse proteins in an acidic medium. 1
3) What is the lifecycle with diploid adult and gametic meiosis called? 1
4) Define the term telocentric. 1
5) Draw the diagram of a conjoint closed vascular bundle. 1

SECTION B

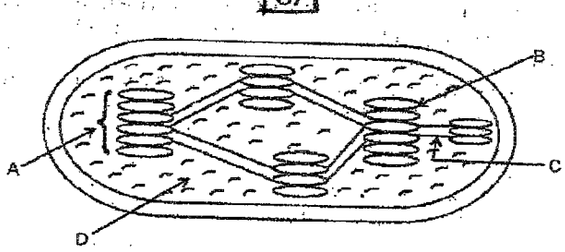
6) Which one of the plant growth regulators would you use if you are asked to : 2
   a) Induce immediate stomatal closure in leaves.
   b) Promote nutrient mobilization.
   c) Induce parthenocarpy.
7) Draw the diagram of eye showing : 2
   i) cornea ii) Aqueous chamber iii) retina iv) blind spot
8) Distinguish anaphase of mitosis from anaphase I of meiosis 2
9) Fill in the blanks at (A), (B), (C) and (D). 2

Action potential reaches at axon terminal
↓
Vesciles release—(A)—filled in vesicles
↓
Chemical present in synaptic cleft bind to –(B)--
↓
Binding opens the –(C)--
↓
New potential generated in –(D)--

10) Fill in the blanks at (A), (B), (C) and (D) as shown in the diagram. 2



Or



PTO

SECTION C

11) What is the basis of biological classification? Mention the significance of creation of botanical garden and zoological park. 3

12) A snake, a crocodile and a chameleon, all belong to the same class of Phylum Chordata. Name the class and also write four important features. 3

13) Give the function of the following in cockroach : 3

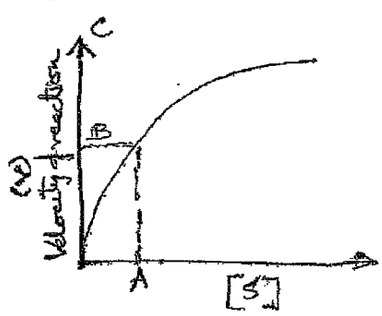
a) Ootheca b) spermatheca c) hepatic cacca

14) The complex permanent tissues in plants are made of more than one type of cells, which work together as a unit Xylem and Phloem are examples of complex tissues. 3

a) What are the functions of the Xylem?

b) Name the conducting elements of xylem and differentiate between them.

15) a) Study the following curve showing the effect of substrate concentration on the rate of reaction and answer the questions that follow. 3



(i) What does A represent? Define it.

(ii) What do B and C represent?

(iii) Why is there an increase in reaction rate with increase in substrate concentration?

16) Give reasons : 3

a) Thyroxine is referred to as T_4

b) Catecholamines are called emergency hormones.

c) PTH is called a hyper calcemic harmone.

17) Explain the structure of a sarcomere. 3

18) How is the nucleic acid fraction of our food digested? 3

19) a) Represent diagrammatically the progressive reduction of nitrogen into ammonia.

b) Name any one amino acid in which sulphur is present and its deficiency has its effect on flowering. 3

20) Fill in the blanks at (A), (B), (C), (D), (E) and (F) and complete the flow chart – 3

J G cells release –(A)—when there is fall in –(B)— or low availability of water in the body.

↓

Released chemical converts –(C)— in blood to Angiotensin I and then Angiotensin II.

↓

Angiotension II increases blood pressure by constriction of –(D)—

↓

Angiotension II also activates adrenal cortex to release –(E)—

↓

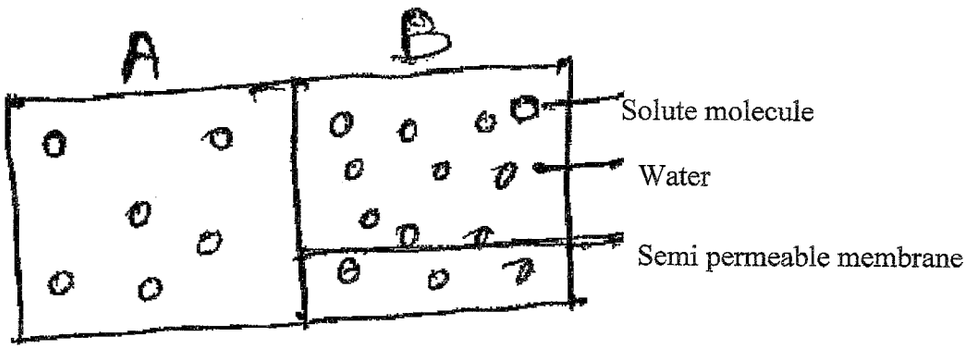
It causes reabsorption of Na^+ and water causing rise in –(F)—

21) a) What is the duration of one cardiac cycle? 3

b) Where are bicuspid and tricuspid valves located in human? What is their function?

c) Which part of the human heart is considered as pacemaker? Why is it called so?

22) 3



In the figure there are two chambers A and B containing solutions that are separated by a semi permeable membrane.

(a) Solution of which chamber has a lower water potential?

(b) Solution of which chamber has a lower solute potential.

(c) In which direction will osmosis occur?

(d) Which solution has a higher solute potential?

(e) At equilibrium which chamber will have lower water potential?

(f) If one chamber has a Ψ of -2000 k Pa and the other has -1000 k Pa, which is the chamber that has the higher Ψ?

(OR)

(a) How can you revert a freshly plasmdysed cell to its original state?

(b) What will happen to the pressure potential of a plant cell, if it is kept in a hypertonic solution.

(c) What is meant by mass flow?

(d) What is symplast?

SECTION D

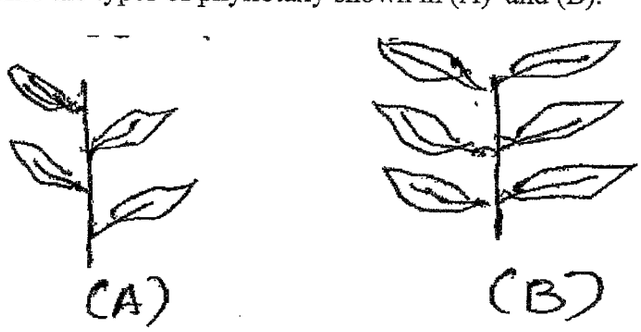
23) In a tour to a place at high altitude (mountains) a person complains about dizziness and vomiting sensation. Subash a college student offers him some cotton to plug his ear and also explains to him the reason and comforts him. 4

a) How is ear involved in this discomfort? Explain in detail.

b) What values are shown by Subhash?

SECTION E

24) a) Name the types of phyllotaxy shown in (A) and (B). 5



b) What is the nature of ovary in hypogynous and epigynous flowers?

c) Differentiate between apacarpous and syncarpous ovary.

d) What is pericarp? Name its three different regions and label them in Mango.

(OR)

a) What is periderm? How does periderm formation take place in dicot stems?

b) Differentiate between parenchyma and sclerenchyma.

25) Where does Kreb's cycle occur in a cell? 5
Write the reactions of the cycle with the help of a schematic representation only.

(OR)

Describe the components of ETS and the formation of ATP using proton gradient in mitochondria.

26) Where does non-cyclic photophosphorylation take place? Describe it. Why is it called so? 5

(OR)

Explain the various forms in which carbon dioxide is transported in the blood.

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DELHI PUBLIC SCHOOL, BHILAI (C.G.)
ANNUAL EXAMINATION, 2018
ENGINEERING GRAPHICS

DATE : 01-03-2018 | **Time: 3 Hours**
CLASS :XI | **M.M : 70**

General Instructions :

i) **Attempt all questions.**
ii) **Use both sides of the drawing sheet, if necessary (only one sheet is provided).**
iii) **Missing and mismatching dimensions, if any, may be suitably assumed.**
iv) **Follow first angle method of projection.**

1. Write the following sentence in single stroke letters of height 10mm. (4)
"RAIPUR IS THE CAPITAL OF CHHATTISGARH"

2. Construct a triangle given the altitude = 55 mm and two base angles = 40° and 65°. (4)

3. Draw a sine curve for a circle of diameter 40mm showing intervals of 30°. (8)

OR

Draw an ellipse whose semi-major axis is 45mm and semi-minor axis is 30mm by intersecting arc method.

4. Draw projections of following points and lines on the same xy line.
(a) A point G is 30mm above the H.P. and 40mm behind the V.P. (2)
(b) A point H 20mm below the H.P. and 25 mm infront of V.P. (2)
(c) A line PQ of length 60mm, if it's one end is 15mm above the H.P. and 10mm infront of V.P. the line is parallel to H.P. and inclined at 30° to the V.P. (4)
(d) A line RS of length 80mm, parallel to the V.P. and inclined at 45° to the H.P., one end being 20mm behind the V.P. and contained by H.P. (4)

5. A thin hexagonal plate of 25mm sides is inclined at 45° to the H.P. and perpendicular to V.P. Two of its parallel edges are parallel to V.P. Draw projections, if its nearest corner is 10mm above the H.P. and the nearest edge is 15mm infront of V.P. (6)

6. Draw the projections of cylinder 50mm diameter and axis 60mm long has its axis parallel to H.P. and inclined at 45° to the V.P. (8)

7. A cone of 60 mm base diameter and axis 80mm long is resting on its circular base on the H.P. it is cut by a section plane inclined at 60° to the H.P., perpendicular to V.P. and meets the axis at a point 30mm below its apex. Draw the front view and sectional top view. Draw the true shape of section. (8)

8. Draw the front view, top view and the side view for the machine block given in fig. A (7)

9. (a) Draw an isometric scale which can convert true length upto 80mm. (3)
(b) Draw the isometric projection of a regular pentagon of side 40mm in the V.P. and show the direction of viewing. (5)

10. Draw the complete development of a triangular pyramid of base edge 30mm and height 60mm, when it is resting on its triangular base on H.P. and an edge of the base parallel to V.P. (5)

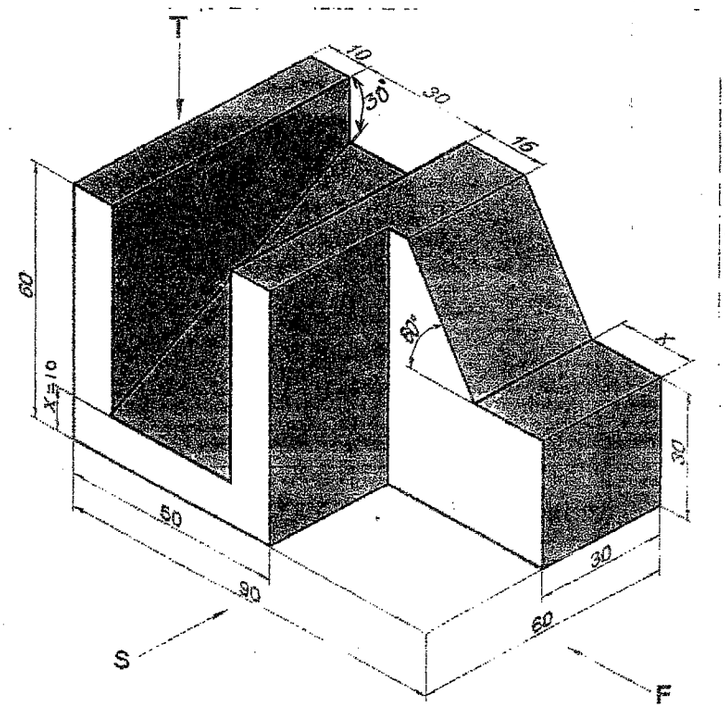

fig.(A) ISOMETRIC VIEW

DELHI PUBLIC SCHOOL, BHILAI (C.G.)

DATE : 23-02-2018 | **ANNUAL EXAMINATION, 2018** | **Time: 3 Hours**

CLASS : XI | **ENGLISH CORE** | **M.M. :80**

General Instructions :

- **The paper is divided into 3 sections :**
  - **Section A : Reading Comprehension** — **20 Marks**
  - **Section B : Writing Skills and Grammar** — **30 Marks**
  - **Section C : Literature : Text books and Long Reading Text** — **30 Marks**
- **All sections are compulsory.**
- **Separate instructions are given for each section and question. Follow these instructions carefully.**
- **Do not exceed the word limit.**

SECTION A : READING SKILLS — 20 marks

1. Read the passage given below and answer the questions that follow: — **12 marks**

1. More than 40 species of dolphins and porpoises thrive, but several groups are dwindling, threatened by over fishing, accidental capture, pollution and damage to their habitat. When a dolphin school is sighted near Oshima, the village fleet of two dozen fishing vessels stems out to form an arc behind the animals. Hanging over the sides of the vessels are metal pipes, whose bottoms flare like trombones.

2. To steer the dolphin school, fishermen bang the pipes with hammers and drive the nervous dolphins back towards Futo and finally into the harbour, which is then closed off with a net. However, due to excessive fishing, the dolphin populations are declining. But the fishermen of Futo speculate that the increased boat traffic is a factor in the dolphin's scarcity. The fishermen of Futo are men trying to wrest a living from the sea and they are being battered by forces beyond their control or understanding.

3. Dolphins are not fish but mammals, smaller relatives of the great whales. Some dolphins are among the most intelligent animals on the planet as their memory capacity matches our own and they can follow remarkably complicated directions. They are also capable of developing ties with human beings. To many, the familiar bottlenose dolphin has come to be cherished.

4. Whales, dolphins and porpoises together make up the order known as Cetacea. For the past two decades, dolphins and porpoises around the world have come under intense pressure. It has been observed that a million or more dolphins and porpoises of different species are dying each year in nets and the tragedy is that most are not even wanted, but are the bycatch of fishermen seeking other prey, usually fish or squid.

5. In the remote open sea, two vast and very different fisheries kill large numbers of dolphins. One is the yellowfin tuna seine (vertical-net) fishery and the other is the drift-net fishery. In seining, dolphin schools are actively sought by fishermen because they act as signals for the tuna that often swim beneath them. Tuna tend to crowd beneath surface objects and scientists speculate that travelling with a dolphin school may help the tuna locate food as well as giving them protection from predators.

6. The fishermen circle both dolphins and tuna with a mile-long, curtain-like net, close off the net bottom to form a teacup shape, then attempt to separate the fish from the mammals, an imperfect manoeuvre in which thousands of dolphins die each year. When the seine fishery started in the late 1990s, it killed more than a quarter of a million dolphins a year. But the fishermen themselves eventually found ways to reduce the indiscriminate carnage, maneuvering their ships and nets to release the dolphins while trapping the tuna.

7. The oceanic drift-net fishery, a far larger industry, lays out unimaginable lengths of net into the open sea every night, especially in chilly Northern and Southern waters. The nets of almost invisible synthetic fibre hang like silent walls. Nearly everything that swims into them gets entangled and dies.

8. Modern nets are made of nylon, impervious to rot and nearly as strong as steel. If sections are torn free in storms, as frequently happens, they may continue to catch everything that encounters the mesh, even after months at sea. They become 'ghostnets' and nobody can count the animal life they destroy.

9. Other, more insidious dangers face dolphin populations. The open oceans still seem quite clean, but severe pollution threatens many coastlines and bays, especially in the Mediterranean, Black, North and Baltic Seas. Agricultural runoff and industrial waste have introduced toxic chemicals and the remains of civilisation, fragments of fishing gear, polystyrene cups, plastic bags and kitchen trash from ships' galleys are found on the beaches.

10. Four Cetacean species may be close to extinction. Two are dolphins living in the cloudy waters of lowland rivers whose valleys are dense with people, the Indus river dolphin of Pakistan and the baiji of the Chang Jiang (Yangtze River) of Central China. Another is a small, sweet-faced porpoise living only in the upper Gulf of California, in Mexico. The fourth is the black dolphin found along the rocky coastline of Chile.

a) On the basis of your understanding of the above passage, answer each of the questions given below with the help of the options that follow. **(1×4=4)**

(i) A suitable title of the passage would be

(a) My Adventures in the Sea (b) The Adventure Island

(c) What is a Dolphin? (d) The Extinction of Dolphins

(ii) Dolphin population face danger because of

(a) the climate (b) the global warming (c) pollution (d) excessive fishing

(iii) The main 'catch' from which the fishermen are earning their livelihood is

(a) arranging the nets (b) fish or squid (c) dolphins (d) porpoises

(iv) Tuna often swim beneath the dolphins as

(a) they are small (b) they like dolphins (c) they are scared of dolphins

(d) it gives them protection

b) Answer the following questions briefly. **(1×6=6)**

(i) What do the fishermen do to drive the nervous dolphins into the harbour?

(ii) Why are dolphins able to follow complicated directions?

(iii) Which type of dolphin is cherished by people?

(iv) What is the 'intense pressure' faced by dolphins and porpoises?

(v) Why are modern nets called 'ghostnets' ?

(vi) Name any two Cetacean species of dolphins which may be close to extinction.

c) Find words from the passage which mean the same as each of the following

(i) attacked and badly damaged (para-2) **(1×2 = 2)**

(ii) unwanted marine creatures caught in nets while fishing for another species (para-4).

2. <u>Read the following passage carefully and answer the questions that follow</u> : **8 marks**

1. 'There is no need to define morality, let man be simply compassionate.' This sentence expresses the basic essence of morality: the extent to which it relies on compassion for its definition. For when we think about it, is not that truly human feeling of compassion the basis of all morality?

2. Morality rests for its very meaning on the concepts of 'good' and 'bad' where 'good' refers to all thoughts and deeds that do not aim at or accomplish any harm or injury or do not involve an attempt to inflict sufferings on others. Thus morality is based on man's ability to understand, feel kindness and sorrow for and identify himself with the sufferings of his fellow men. So only compassion can give rise to moral thoughts and feelings.

3. Depriving a person of what is his or what must belong to him—what is called stealing—for selfish ends, taunting or insulting others through words or actions for the purpose of self-gratification, violence expressed verbally or as acts of torture, killing etc.—for the sake of violence, contradict morality as well as an inner feeling of kindness and compassion.

4. When we talk about social morality of any kind, what comes into play is our ability to feel for the well being of our society. A certain moral code of conduct is ultimately necessary to ensure that the society does not fall prey to degeneration of values, which would lead to rampant sufferings and ultimately chaos. It is a concern to help the society by safeguarding it from unwanted ills and malaises and ensuring its well-being. Society's concerns are our concerns: anything capable of causing a detrimental impact on it in the short term or in course of time is ultimately bound to affect us and our children.

5. There is the need to realize that man must continue to feel compassion for the sake of himself as well as the society. But like any other human trait, compassion ought to be continually exercised if it is to remain a dominant force. Unfortunately, in modern society what we witness is a complete lack of kindness and sympathy between fellow beings. One can only shake one's head and say that just like other cherished values even compassion is getting eroded in the hustle and bustle of the mechanical existence of these times. What remains is material values that look only towards immediate personal gains and in the process rid man of whatever 'humanness' is left in him.

a) On the basis of your reading of the above passage, make notes on it using headings and sub-headings. Use recognizable abbreviations, wherever necessary. Supply an appropriate title to it **(5)**

b) Write a summary of the above passage in about 80 words. **(3)**

SECTION B : WRITING SKILLS AND GRAMMAR **30 marks**

3. Draft a poster on the theme of saving the girl child, keeping in mind the initiative of the prime minister regarding a girl child. (Word limit 50) **(4)**

OR

You are Karan/Karuna of M 114, Mall Road, Delhi. You are a civil engineer and have recently returned from Dubai. You are looking for a suitable job in India. Draft an advertisement for the classified columns of a National Daily in about 50 words. Give details of your qualifications, experience, nature of job and expected remuneration.

4. As a regular commuter by bus from Bhilai to Raipur, you have witnessed rash driving by the bus drivers daily without exception. Write a letter in about 120 to 150 words to the Editor of *The Times of India* drawing the attention of the General Manager, Chhattisgarh Transport Corporation to the problem and suggesting some ways to curb it. You are Priti/Prakash of Sector-1, Bhilai. **(6)**

OR

As Principal of R.K.Secondary school, Charbagh, Lucknow, write a letter in 120 to 150 words to the Tata Computer Mall ordering twenty computers for the Computer Lab of the school. You need some accessories as well. Invent all the necessary details.

5. Computer and video games have become popular with children today. As a result, outdoor games seem to have no place in their lives any more. You are Satish/Sakshi. You had an opportunity of playing Hide-n-Seek when you visited your cousins in a small town, You decide to write an article for the school magazine on your experiences about the joys of playing outdoor games. (150 to 200 words) **(10)**

OR

You have secured 95% marks in English. Your English teacher has persuaded you to share the secret of your success with your schoolmates. You decide to deliver a speech in the morning assembly on how you have prepared for the English Examination, giving some suggestions to the students. Write the speech in 150 to 200 words.

6. The following passage has not been edited. There is one error in each line. Identify the error and edit it. **(1×4=4)**

a. Economics is nothing but a way to solving problems of
b. allocation of resources. Human want are graded in nature.
c. This means that a poor person will be more concern about
d. procurement of food for his surviving rather than anything else

	Incorrect	Correct
a.	----------	----------
b.	----------	----------
c.	----------	----------
d.	----------	----------

7. Rearrange the following words / phrases into meaningful sentences. **(1×3=3)**

a) on adequate / and /depends / preparation / indomitable / success / determination / an

b) because of / Delhi / earthquakes / its location / prone to /is

c) toys / expensive / inundated /with / are / nowadays / children

8. Do as directed. **(1×3=3)**

a) Will we ever forget those happy days of childhood? (From active to passive)

b) The students were told by others where to go. (From passive to active)

c) The stranger said to me, "Can you tell me the way to St.John's Hospital?"(change into reported speech)

SECTION C – LITERATURE : TEXT BOOKS and LONG READING TEXT **30 marks**

9. Read the following extract and answer the questions that follow: **(1×3=3)**

And who art thou? Said I to the soft falling shower,
Which, strange to tell, gave me an answer, as here translated:
I am the poem of Earth, said the voice of the rain,
Eternal I rise impalpable out of the land and the bottomless sea.

a) Who is 'I' referred to in the first line?

b) How does the rain describe itself?

c) What figure of speech is used in the third line?

OR

This child is built to my design
Yet what he loves I cannot share.
Silence surrounds us.

a) What is the meaning of the first line?

b) What kind of relationship exists between father and son?

c) Find an expression which shows the desolation the father feels.

10. Answer any <u>three</u> of the following questions, each in 30 to 40 words: **(3×3=9)**

a) Carter had to take a drastic decision regarding the mummy. What was it ? How did he justify it?

b) What was the Green Movement ? How did it become popular all over the world?

c) Einstein was not happy in his lodgings. What disturbed him about the place?

d) What is the poet trying to discover in the poem 'Childhood'? How does the poet view the adult in contrast to the child as he grows up?

e) George, Dorris and Cyril were all ungrateful. How?

f) What efforts does Andrew make to revive the baby? Does he succeed?

11. Answer the following question in 120 to 150 words: **(6)**

Vikram Seth, in his poem 'The Tale of the Melon City' has made a brilliant use of satire, reflecting upon the political and social scenario of the country. Explain.

(OR)

What kind of a teacher do you think Crocker-Harris was? Do you think Taplow hated him? Why?

12. Answer the following question in 120 to 150 words. **(6)**

What were the reactions of Mr. Otis, Mrs. Otis and the twins to the various appearances of the ghost?

13. Answer the following question in 120 to 150 words. **(6)**

Virginia's attitude towards the ghost was different from the rest of the family members.

Attempt a character sketch of Virginia in this light.

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