I Pre Board Examination 2018 – 19

Time: 3:00 Hrs.   **M. M. 100**

SEC-A (READING)

Q.1   Read the passage given below and answer the questions that follow:

1. Though more than a year has passed since the E-waste (Management and Handling) Rules came into effect in May 2012, their implementation is still in a nascent stage, at least in Varanasi, one of the major cities of Uttarpradesh. In fact, the state ranks fourth among the 10 largest e-waste generating states in the country.

2. The e-state (Management and Handling)Rules 2011 mandate for safe disposal of electronic and municipal corporation to provide a site to the private firm for proper disposal of e-waste.the E-waste (Management and Handling)Rules 2011 also suggest that it is the responsibility of the municipal corporation to ensure that e-waste ,if found to be mixed with municipal solid waste ,is properly segregated ,collected and is channelized to either authorized collection centre or dismantler or recycler.

3. The research unit of the Rajya Sabha has complied a comprehensive report on a waste in India. According to the report, there are 10 states that contribute up to 70percent of the total of the e-waste generate in the country, while 65cities generate more than 60percent of the total e-waste in India. Among the largest e-waste generating states, Maharashtra ranks first followed by Tamil Nadu, Andhra Pradesh, Uttar Pradesh, West Bengal, Delhi, Karnataka, Gujarat, Madhya Pradesh and Punjab.

4. All over the world, the quantity of electrical and electronic waste generated each year, especially by computers and televisions, has assumed alarming proportions.

5. Globally, about 20-50 MT (millions tonnes) of e-waste is disposed of each year, which accounts for 5% of all municipal solid waste. A report of the United Nations predicated that by 2020, e-waste from old computers would jump by 400 percent on 2007 levels in china and by 500 percent in India. Additionally, e-waste from discarded mobile phones would be about seven times higher than 2007 levels, and, in India, 18 times higher by 2020. Such predications highlight the urgent need to address the problem of e-waste in developing countries like India where the collection and management of e-waste and the recycling process is yet to be properly regulated.

6. E-waste releases many toxic substances that are seriously health hazards. Unless suitable safety measures are taken, these toxic substances can critically affect the health of employees and others in the vicinity –who manually sort and treat the waste –by entering their body through respiratory tracts ,though the skin ,or through the mucous membrane of the mouth and the digestive tract. Therefore, the health impact of e-waste is evident. there is no doubt that it has been linked to the growing incidence of several lethal or severely debilitating health conditions , including cancer , neurological and respiratory disorders, and birth defects.

7. This impact is found to be worse in developing countries like India where people engaged in recycling e-waste are mostly in the unorganized sector, living in close proximity to dumps or landfills of untreated e-waste and working without any protection or safeguards. Many workers engaged in these recycling operations are the urban poor and unaware of the hazards associated with them.

I   On the basis of your reading of the passage, complete the statements given below with the help of options that follow: 5

(a) It is mandatory that the ……..should provide a proper e-disposal site to private firms.
      (i) municipal committee   (ii) municipal corporation
      (iii) health ministry   (iv) area counsellor

(b) After segregation, the e-waste should be ………………..
      (i) reused   (ii) reduced   (iii) recycled   (iv) resold workers

(c) By 2020, e- waste from old computers would jump by…..percent on 2007 level in India.
      (i) 300   (ii) 400   (iii) 500   (iv) 600

(d) Many workers who are engaged in these recycling operations
      (i) urban poor and unaware of the hazards associated   (ii)poor people
      (iii) urban poor   (iv) civilized people

(e) Which is the largest E-waste generate state in India?
      (i) Uttarpradesh   (ii) Maharashtra   (iii) Andhrapradesh   (iv) Tamilnadu

II   **Answer the following question briefly:**   **6**
      (i) Which state ranks fifth among to the most e-generating states?
      (ii) What is mandatory, according the e-waste rules 2011?
      (iii) What is the responsibility of Municipal Corporation?
      (iv) Why is there an urgent need to address the problem of e-waste?
      (v) Who are most likely to be affected?
      (vi) How are most likely to be affected by the hazards of e-waste?

III   **Answer the following question briefly:**   **6**
      (i) How are developing countries at a higher risk due to e-waste?
      (ii) What was the report of the research unit of RajyaSabha?
      (iii) How toxic substances are seriously health hazards?

IV   **Find words from the passage which mean the same as the following**   **3**
    (i) busy doing something (para 7)   (ii) effect (para 6)   (iii) state, affirm (para 5)

Q.2   **Read the passage given below:**

1. Color Therapy is a complementary therapy for which there is evidence dating back thousands of years to the ancient cultures of Egypt, China and India. If we define it in simple terms, Color is a light of varying wavelengths, thus each color has its own particular wavelength and energy.

2. Colors contribute energy. This energy may be motivational and encouraging. Each of the seven colors of the spectrum is associated with energy. The energy relating to each of the seven spectrum colors of red, orange, yellow, green, blue, indigo and violet resonates with the energy of each of the seven main chakras/energy centers of the body. Color therapy can help to re-balance and/or stimulate these energies by applying the appropriate color to the body.

3. Red relates to the base chakra, orange the sacral chakra, yellow the solar plexus chakra, green the heart chakra, blue the throat chakra, indigo the brow chakra (sometimes referred to as the third eye) and violet relates to the crown chakra.

4. Color therapy can be shown to help on a physical level, which is perhaps easier to quantify, however there are deeper issues around the colors on the psychological and spiritual levels. Our wellbeing is not, of course, purely a physical issue. Fortunately, many more practitioners, both orthodox and complementary are now treating patients in a holistic manner.

5. Color Therapy is a totally holistic and non-invasive therapy and, really, color should be a part of our everyday life, not just something we experience for an hour or two with a therapist. Color is all around us everywhere. This wonderful planet does not contain all the beautiful colors of the rainbow for no reason. Nothing on this earth is here just by chance; everything in nature is here for a purpose. Color is no exception. All we need to do is to heighten our awareness of the energy of color, absorb it and see how it can transform our lives.

(a)   **On the basis of your understanding of the above passage, make notes on it using headings and sub-headings. Use recognizable abbreviations (wherever necessary- minimum four) and a format you consider suitable. Also supply an appropriate title to it.**   **5**

(b)   **Write a summary of the passage in about 80 words.**   **5**

SEC-B (WRITING)

Q.3 Design **the poster** to spread awareness about the need of avoiding using polythene bag. Write interesting slogans. (Word limit: 50) **4**

OR

Water supply will be suspended for eight hour on 25 Nov for cleaning water tank. Write a **notice** to advice the residents to store water for a day. You are Karan Kumar ,Secretary , Ajanta Group Housing Society. (Word limit: 50)

Q.4 You are Saurabh /Surbhi, a resident of a posh residential complex recently your neighbor shifted to another society and put his apartment on rent. Write a letter in 120-150 word to him on behalf of all the residents of your block **complaining** about social activities of his tenant and keep a check on him. **6**

OR

You are Wasim/ Wahida of New Ashok Colony, Agra .The main road leading to the colony is in a very bad condition with potholes and open manholes. To add to the woes, there is no street light that makes the matters worse at night. Write a letter in 120-150 words to **the Editor** of the Time of India drawing attention of the authorities concerned to the problem and do seek immediate remedial action.

Q.5 Every day you read in the newspaper about the increasing rate of crimes in Delhi. You live in Delhi and feel really bad about it. As Chinar Gulati, write an **article** for your school magazine on the same topic. (Word limit 150-200) **10**

OR

Deepa /Deepak has been involved as a student volunteer in the "Adult Literacy Drive" and has been working in the slums for the last six months. He/she has to write an **article** in 150-200 words on the 'Need for a Literate Nation'.

Q.6 You are Sangeeta /Parvathi of APJ School, Noida. Your school is hoisting a Debate Competition on 'Is TV essential for mass education?' Write the **debate** in 150-200 words either for or against the motion**.** **10**

OR

You are Nitin Sharma, the newly elected Secretary of Einstein Society of Cambridge School, Nagpur. Write a **report** in 150-200 words for the school magazine about the 'plantation week 'held in your school.

SEC-C (LITERATURE TEXTBOOKS AND LONG READING TEXTS)

Q.7 **Read the extract given below and answer the questions that follow:** **4**

…the stunted, unlucky heir

Of twisted bones, reciting a fathers gnarled disease,

His lesson from his desk. At back of the dim class

One unnoted, sweet and young. His eyes live in a dream,

(a) What does the 'stunted, unlucky heir' refer to?

(b) Who is sitting at the back of the class?

(c)What do you mean by 'His eyes live in a dream'?

(d) Which word in the extract means the same as 'underdeveloped?'

OR

Aunt Jennifer's fingers fluttering through her wool

Find even the ivory needle hard to pull.

The massive weight of uncle's wedding band

 Sits heavily upon Aunt Jennifer's hand.

1. Why is it so hard for Aunt Jennifer to pull the ivory needle?

2. Which poetic device has been used in line 1?

3. What is 'uncle's wedding band'?

4. Why does the poet use 'massive weight' and 'sits heavily' for uncle's ring?

Q.8 **Answer any four of the following questions in 30-40 words each.** **12**
    (a)   What made the peddler think that he had really fallen into a rattrap?
    (b)   What is the significance of uncle's wedding band? Why does Aunt Jennifer find it?
    (c)   What were the things Zitkala Sa found objectionable and strange in the school to which she was admitted?
    (d)   Why Evans was called 'Evans the Break'?
    (e)   What does the poet wish for the slum children?
    (f)   Describe the boy who had thrown Douglas in water. What was his later reaction?

Q.9 **Answer the following questions in 120-150 words (Any 1):** **6**
  i. Throw light on the life of children working in the glass factories of Firozabad.
  ii. Resolution needs complete sacrifice of one's time, wealth and physical stake. In views of this, highlight the role of Rajkumar Shukla as resolute in the lesson 'Indigo'
  iii. What is more important –loyalty to our country or saving a person's life no matter who they are? Comment with reference to 'The Enemy'.

Q.10 **Answer the following questions in 120-150 words (Any 1):** **6**
  i. What made the peddler change his ways? (The Rattrap)
  ii. Do you find Derry a changed boy at last? How? Give examples from the story in support of your answer.
  iii. Sophie's ambitious are not rooted in reality and she carries her fantasies too far. Comment on this statement with the references to 'Going Places'

Q.11 **Answer the following questions in 120-150 words (Any 1):** **6**
  i. Compare and contrast Griffin and Kemp. Why did Kemp turn out differently than Griffin? After all, they are both scientists. Is Kemp less isolated than Griffin?
  ii. How did Griffin finally meet his end and what changes occurred in his body as he was dying?

Q.12 **Answer the following questions in 120-150 words (Any 1):** **6**
  (i) Describe the character of the Mr. Hall.
  (ii) Justify the title of the chapter "The Hunter Hunted". (The Invisible Man)

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I Pre Board Examination 2018 – 19

**Time: 3:00 Hrs.**   **M. M. 70**

Question No. 1 to 5 carry One Mark each.

Q.1   Does the charge given to a metallic sphere depend on whether it is hollow or solid? Give reason for your answer.

Q.2   A long straight current carrying wire passes normally through the centre of circular loop. If the current through the wire increases, will there be an induced emf in the loop? Justify.

Q.3   At a place, the horizontal component of earth's magnetic field B and angle of dip is 60°. What is the value of horizontal component of earth's magnetic field at equator?

Q.4   Name the junction diode whose I-v graph are as follow :
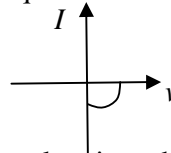
Q.5   How is the speed of em-waves in vacuum determined by the electric and magnetic fields?

Question No. 6 to 12 carry Two each.

Q.6   How does Ampere law is modified, write the modified ampere law.

Q.7   Define the distance of closest approach. An α -particle of kinetic energy "k" is bombarded on a thin gold foil. The distance of the closest approach is "r". What will be the distance of closest approach for an α -particle of double the kinetic energy?

<div align="center">OR</div>

Write two important limitations of Rutherford nuclear model of the atom?

Q.8   Find out the wave length of the electron orbiting in the ground state of hydrogen atom. Given radius = 0.53A°, velocity=2.18×10^{-6} m/s.

Q.9   Define the magnifying power of a compound microscope when the final image is formed at infinity. Why must both the objective and eyepiece of a compound microscope has short focal length? Explain.

Q.10   A carrier wave of peak voltage 12 V is used to transmit a message signal. What should be the peak voltage of the modulating a signal.

Q.11   You are given three lenses L$_1$, L$_2$ and L$_3$ each of focal length 20cm. An object is kept 40 cm. in front of as L$_1$ as shown. The final real image is formed at a focus of L$_3$. Find the separations between L$_1$, L$_2$ and L$_3$.
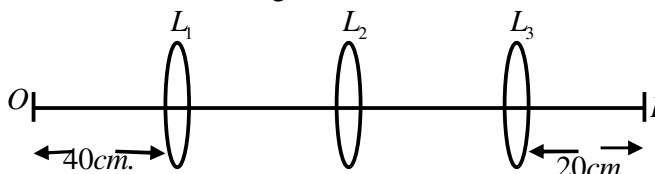
Q.12   If the angle between the pass axis of a polarizer and analyzer is 45° write the ratio of the intensities of original light and transmitted light after passing through the analyzer?

Question No. 13 to 24 carry Three each.

Q.13   (i)   Find the value of phase difference between the current and the voltage in LCR series circuit shown below. Which one leads in phase : current or voltage?

     (ii)   Without making any other change find the value of the additional capacitor C$_1$ to be connected in parallel with the capacitor C in order to make the power factor of the circuit unity.

$l = 100mH$ $C = 2\mu F$ $R = 400\Omega$
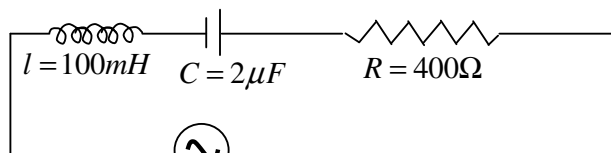
$$V = V_0 SIN(1000t + \phi)$$

Q.14   Name the two processes that take place in the formation of a p-n junction. Explain with the help of a diagram, the formation of depletion region and barrier potential in p-n junction.

Q.15 (i) Obtain the expression for the cyclotron frequency?
   (ii) A deuteron and a proton are accelerated by the cyclotron. Can both be accelerated with the same oscillator frequency? Give reason to justify your answer.
Q.16 (i) How does one explain the emission of electrons from a photosensitive surface with the help of Einstein's photoelectric equation?
   (ii) The work function of the following metals is given : Na=2.75ev, k=2.3ev, Mo=4.17ev and Ni=5.15ev. Which of these metals will not cause photoelectric emission for radiation of wavelength 3300 A° from a laser source placed 1 m away from these metals. What happens if laser source is brought nearer and placed 50cm away?
Q.17 A resistance of R draws current from a potentiometer. The potentiometer wire AB, has total resistance R°, A voltage V is supplied to the potentiometer. Derive an expression for the voltage across R when the sliding contact is in the middle of potentiometer wire.
Q.18 Define the term "Amplitude Modulation". Explain any two factors which justify the need for modulating a low frequency base-bond signed.
Q.19 A network of four 10μF capacitors is commented to a 500V supply as shown in fig. Determine the
   (i) equivalent capacitance of the network.
   (ii) Charge on each capacitor.
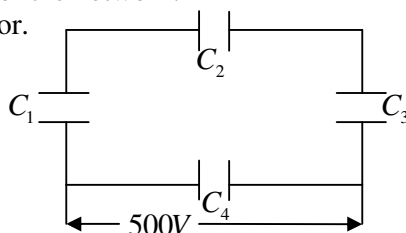
Q.20 (i) Derive the expression for electric field at a point on the equatorial line of an electric dipole.
   (ii) Depict the orientation of the dipole in (a) stable (b) unstable equilibrium in a uni for electric field?
Q.21 (i) A radioactive nucleus "A" undergoes a series of decays as given below.

$$A \xrightarrow{\alpha} A_1 \xrightarrow{\beta} A_2 \xrightarrow{\alpha} A_3 \xrightarrow{\gamma} A_4$$
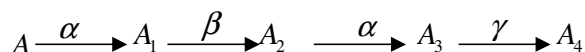
   The mass number and atomic number of A_2 are 176 and 71 respectively. Determine the mass and atomic no. of A_4 and A.
   (ii) Write any two property of nuclear force.
Q.22 Describe the working principle of moving coil galvanometer. Why is it necessary to use (a) a radial magnetic field. (b) a cylindrical soft iron core in a galvanometer? Write the expression for current sensitivity of the galvanometer.
Q.23 A ray of light incident on the face AB of a glass prism ABC and emerges out. Trace the path of ray and show that i + e = A + δ
Q.24 How is zener diode fabricated? What causes the setting up of light electric field even for small reverse bias voltage across the field? Define zener diode as votase.
Question No. 25 to 27 carry Five each.
Q.25 (i) Draw a labeled diagram of a step up transformer. Obtain the expression for the instantaneous value of the emf induced in the coil?
   (ii) A circular coil of cross section area 200cm^3 and 20 turns is rotated about the vertical diameter with angular speed of 50 rad /s in a uniform magnetic field of magnitude 3.0×10^{-2} T. Calculate the maximum value of the current in the coil.
                                    OR
   (i) Draw a labeled diagram of a step-up transformer. Obtain the ratio of secondary to primary voltage in terms of number of turns and currents in the two coils.
   (ii) A power transmission lines feeds input power at 2200V to a step-down transformer with its primary windings having 3000 turns. Find the number of turns in the secondary to get the power out put at 220 V.

Q.26 (i)   Distinguish between unpolarized light and linearly polarized light. How does one get linearly polarized light with the help of a Polaroid?

(ii) A narrow beam of unpolarised light of intensity I_0 is incident on a Polaroid P_1. The light transmitted by it is then incident on a second Polaroid P_2 with its pass axis making angle of $60°$ relative to the pass axis of P_1. Find the intensity of the light transmitted by P_2.

OR

(i)   Explain two features to distinguish between the interference pattern in young's double slit experiment with the diffraction pattern obtain due to a single slit.

(ii) A monochromatic light of wave length 500 hm is incident normally on a single slit of width 0.2 mm to produce a diffraction pattern. Find the angular width of the centre maximum obtain on the screen.

Q.27 (i)   Use Gauss's theorem to find the electric field due to a uniformly charged intimately long sheet with surface charge density σ ?

(ii) An infinitely large sheet has surface charge density σ . Obtain he expression for the amount of work done in brining a point charge Q from infinity to a point distance γ, in front of the charged sheet?

OR

(i)   Find electric potential at any point at angle θ due to electric dipole.

(ii) Obtain coulomb law of electrostatics using Gauss theorem.

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I Pre Board Examination 2018 – 19

Time: 3:00 Hrs.   **M. M. 70**

General Instructions:
 (i) All questions are compulsory.
 (ii) The question paper consists of four sections A, B, C and D.
       Section–A Q. No. 1 to 5 contains 5 questions of **1 mark** each.
       Section–B Q. No. 6 to 12 is of 7 questions of **2** each.
       Section–C Q. No. 13 to 24 is of 12 questions of **3** each.
       Section–D Q. No. 25 to 27 is of 3 questions of **5** each.
 (iii) There is no overall choice. If choice is given attempt only one of the alternatives in such questions.
 (iv) Wherever necessary, the diagrams drawn should be neat and properly labelled.

SECTION – A
Q.1   What is different between homothallic and hetrothallic?
Q.2   Write the different types of pollination.
Q.3   What is the function of leydig cells or interstitial cells?
Q.4   What is different between spermiogenesis and spermiation?
Q.5   What is the full form of ZIFT & GIFT?

SECTION – B
Q.6   Explain two laws of monohybrid crosses.
Q.7   Differentiate between repetitive DNA and satellite DNA.
Q.8   What is Miller theory?
Q.9   Name two diseased which are caused by bacteria and their causes, means of spread and symptoms.
Q.10   What somatic hybridization?
Q.11   What is BOD?
Q.12   What are the principles of Biotechnology?

SECTION – C
Q.13   Write short note on GMO (Genetically modified organism).
Q.14   What are the different steps decomposition?
Q.15   Differentiate between :
       (i)   Hypocotyle and Epicotyl   (ii) integument and testa   (iii) Coleoptile and coleorhizae
Q.16   Draw schematic representation of spermatogenesis.
Q.17   What is mutation? Explain their types with example?
Q.18   Explain :   (i) Promoter   (ii) t RNA   (iii) EXON
Q.19   What is adaptive radiation?
Q.20   What is the life cycle of HIV?
Q.21   Explain SCP (single cell protein).
Q.22   Explain the two steps of sewage treatment.
Q.23   What is Gene therapy?
Q.24   Explain Phosphorous cycle.

SECTION – D
Q.25   (i)   What are the causes of bio-diversity losses?
       (ii)   Explain narrowly utilitarian and broadly utilitarian.
                                    OR
       (i)   Write short note on commenalism.
       (ii)   Write short note on Mutualism.
Q.26   (i)   Explain process of transcription in Eukaryotes.
       (ii)   Draw structure of double structural Polynucbotide chain.
                                    OR
       (i)   Why HGP is called Mega-project
       (ii)   Methodologies of HGP.
       (iii)   Salient features of HGP
Q.27   (i)   What is Aneuploidy?
       (ii)   What is polyplordy?
       (iii)   Explain all syndrome of chromosomal disarders..
                                    OR
       Explain various events of Menstrual cycle

** ALL THE BEST **

First Pre Board Examination **2018 – 19**

Time: 3:00 Hrs.   **M. M. 100**

General Instructions :

1.   All Questions are compulsory.
2.   Please check that this Question paper contains 29 Questions.
3.   Questions 1 to 4 in **Section A** are very short Answer type Questions carrying **One** Mark each.
4.   Questions 5 to 12 in **Section B** are short Answer type Questions carrying **Two** each.
5.   Questions 13 to 23 in **Section C** are Long Answer I type Questions carrying **Four** Mark each.
6.   Questions 24 to 29 in **Section D** are Long Answer II type Questions carrying **Six** Mark each.

Section A

Q.1   Write the principal value of $\cos^{-1}\left(\cos\dfrac{13\pi}{6}\right)$.

Q.2   Find the angle θ between the line $\dfrac{x-2}{3}=\dfrac{y-3}{5}=\dfrac{z-4}{4}$ and the plane $2x-2y+z-5=0$.

Q.3   If binary operation * defined on Q, is defined as $a*b=2a+b-ab, \forall b \in Q$. Then, find the value of 4*5.

Q.4   If $\Delta=\begin{vmatrix} 0 & b-a & c-a \\ a-b & 0 & c-b \\ a-c & b-c & 0 \end{vmatrix}$, then show that Δ is equal to zero.

Section B

Q.5   If $e^x+e^y=e^{x+y}$, then prove that $\dfrac{dy}{dx}+e^{y-x}=0$.

Q.6   Using differentials, find approximate value of $\sqrt{49.5}$.

Q.7   Solve for $x, 2\tan^{-1}(\cos x)=\tan^{-1}(2\cos ec x)$.

Q.8   If $\Delta=\begin{vmatrix} 3 & -2 & \sin 3\theta \\ -7 & 8 & \cos 2\theta \\ -11 & 14 & 2 \end{vmatrix}=0,$ then show that $\sin\theta=0$ or $\dfrac{1}{2}$.

Q.9   For well being of an orphanage, three trusts, A,B and C has donated 10%, 15% and 20% of their total fund `300000 and `500000,respectively. Using matrix multiplication, find the total amount of money received by orphanage by three trusts.

Q.10   Evaluate $\int_{-1/2}^{1/2}(\cos x)\left[\log\left|\dfrac{1-x}{1+x}\right|\right]dx$.

Q.11   Show that the function $f:R\to R$ defined as $f(x)=x^2$ is neither one-one nor onto.

Q.12   Sketch the region $\{(x,0):y=\sqrt{4-x^2}\}$ and X-axis. Find the area of the region using integration.

Section C

Q.13   Let S be the set of all students in a Kendriya Vidyalaya with R as relation in S, is given by
R={(S₁,S₂) : S₁ and S₂ are like minded students}
(i)   Show that R is an equivalence relation.
(ii)   Write other two equivalence classes of Sunderthis relation. (e.g.An equivalence class is "Set of honest students" represented by [honest minded]).

Q.14   By using the product $\begin{bmatrix} 1 & -1 & 2 \\ 0 & 2 & -3 \\ 3 & -2 & 4 \end{bmatrix}\begin{bmatrix} -2 & 0 & 1 \\ 9 & 2 & -3 \\ 6 & 1 & -2 \end{bmatrix}$ system of following equations

$x-y+2z=1, 2y-3z=1$ and $3x-2y+4z=2$.

Q.15   Show that $f(x)=\begin{cases} 5x-4, & if\ 0<x\le1 \\ 4x^3-3x, & if\ 1<x<2 \end{cases}$ is continuous at $x=1$.

For what value of a, the function f defined as $f(x) = \begin{cases} \dfrac{1-\cos 4x}{x^2} & \text{if } x < 0 \\ a, & \text{if } x = 0 \\ \dfrac{x}{\sqrt{16+x}-4}, & \text{if } x > 0 \end{cases}$ is continuous at $x = 0$?

Q.16 Differentiate $\tan^{-1}\dfrac{\sqrt{1-x^2}}{x}$ w.r.t. $\cos^{-1}(2x\sqrt{1-x^2})$ where $x \in \left(\dfrac{1}{\sqrt{2}}, 1\right)$.

OR

If $x = \tan\left(\dfrac{1}{a}\log y\right)$, then show that $(1+x^2)\dfrac{d^2y}{dx^2} + (2x-a)\dfrac{dy}{dx} = 0$.

Q.17 Three schools A, B and C organized a mela for collecting funds for national disaster in which they sold hand made toys, fans and mats from recycled material.
The sale price of each being `35, `80 and `60, respectively. The following table shows the number of article of each type sold

Article / School	A	B	C
Hand made toys (T)	35	45	20
Fans (F)	10	12	15
Mats (M)	60	40	50

Find the total amount of money received by selling above articles.

Q.18 Evaluate $\displaystyle\int_0^1 x(\tan^{-1} x)^2\, dx.$

Q.19 Solve the following differential equation $(\tan^{-1} y - x)dy = (1+y^2)dx.$

Q.20 Find the particular solution of the differential equation satisfying the given condition $x^2 dy + (xy + y^2)dx = 0,$ when (1)=1.

Q.21 Find the angle between the lines whose DC's are given by $3\ell + m + 5n = 0$ and $6\,m\,n - 2n\ell + 5\ell m = 0.$

Q.22 Find the probability that in 10 throws of a fair die, a score which is a multiple of 3 will be obtained in at least 7 of the throws.

OR

The sum of mean and variance of a Binomial distribution is 15 and their product is 54. Find the Binomial distribution.

Q.23 Water is dripping out at a steady rate of 1cu/s through a tiny hole at the vertex of the conical vessel, whose axis is vertical. If the slant height of water in the vessel is 4cm, then find the rate of decrease slant height, where the vertical angle of the conical vessel is $\dfrac{\pi}{6}$. Identify the value being violated in this case.

Section D

Q.24 Let $\vec{a} = \hat{i} + \hat{j} + \hat{k}, \vec{b} = 4\hat{i} - 2\hat{j} + 3\hat{k}$ and $\vec{c} = \hat{i} - 2\hat{j} + \hat{k}$. Find a vector of magnitude 6units, which is parallel to the vector $2\vec{a} - \vec{b} + 3\vec{c}$.

Q.25 Find the area of the region above X-axis included between the parabola $y^2 = ax$ and the circle $x^2 + y^2 = 2ax.$

Q.26 Find the image of the point having position vector $\hat{i} + 3\hat{j} + 4\hat{k}$ in the plane $\vec{r}.(2\hat{i} - \hat{j} + \hat{k}) + 3 = 0.$

OR

Q.27 The chances of defective screws in three boxes A,B and C are $\dfrac{1}{5}, \dfrac{1}{6}$ and $\dfrac{1}{7}$, respectively. A box is selected at random and a screw drawn from it at random is found to be defective. Then, find the probability that it came from box A.

OR

A man is known to speak truth in 75% cases. If he throws an unbiased die and tells his friend that it is a six, then find the probability that it is actually a six.

Q.28 Find the maximum and minimum values of $f(x) = \sec x + \log \cos^2 x, 0 \le x \le 2\pi$.

OR

Prove that the curve $x = y^2$ and $xy = k$ cut at right angles, if $8k^2 = 1$.

Q.29 A man has `1500 for purchasing wheat and rice. A bag of rice and a bag of wheat cost ` 180 and `120, respectively. He has a storage capacity of only 10 bags.
He earns a profit of ` 11 and ` 9 per bag of rice and wheat, respectively. Formulate the problem as an LPP, to find the number of bags of each type, he should buy for getting maximum profit and solve it graphically.

** ALL THE BEST **

I Pre Board Examination 2018 – 19

Time: 3:00 Hrs.   M. M. 70

General Instruction :

Question No. 1 to 5 carry One Mark each.
Question No. 6 to 12 carry Two each.
Question No. 13 to 24 carry Three each.
Question No. 25 to 27 carry Five each.

Q.1   What is the formula of a compound in which the element P forms CCP lattice and atoms of Q occupy

$\dfrac{2}{3}^{rd}$ of tetrahedral voids.

Q.2   Give IUPAC name of $K_3[Fe(CN)_6]$.

Q.3   Arrange in increasing order of basic strength : $C_6H_5NH_2, (C_6H_5)_3N, (C_6H_5)_2NH, NH_3$.

Q.4   Which is more acidic P - $CH_3OC_6H_5COOH$ **OR** P - $NO_2C_6H_5COOH$ and why?

Q.5   What is the order of the reaction whose rate constant has same unit as the rate of reaction?

Q.6   What type of deviation is shown by mixture of ethanol & acetone?

Q.7   (i)   Name the temperature above which micelle formation take place.

          (ii)   Why are powdered substance more effective adsorbents than crystalline forms?

Q.8   Complete the reaction :

          (i) $Cr_2O_7^{2-} + Sn^{2+} + H^+ \rightarrow$ (ii) $MnO_4^- + Fe^{2+} + H^+ \rightarrow$

Q.9   (i)   Identify $X \& Y$. $CH_3 - CH = CH_2 + HBr \rightarrow X \xrightarrow{AgNO_2} Y$.

          (ii)   Which is more reactive towards S_{N^1} & why? $CH_3CH_2CH_2Br; CH_2 = CH - CH_2Br$.

Q.10   Write (i) Kolbe's reaction   (ii) Williamson Synthesis

                                                    OR

          Differentiate antiseptic and disinfectant with the help of example.

Q.11   Draw structure of : (i) H_3PO_3 (ii) $XeOF_4$

Q.12   Identify which will undergo S_N2 Mechanism faster :

$$CH_3 - \overset{\overset{\displaystyle CH_3}{|}}{\underset{\underset{\displaystyle C\ell}{|}}{C}} - CH_3$$

          (i) $C\ell$ OR $CH_3CH_2CH_2CH_2C\ell$ (ii)   [benzene ring with $C\ell$]   OR   [benzene ring with $CH_2C\ell$]

Q.13   An element crystallizes in a FCC lattice with call edge of 400pm. The density of element is $7g\,cm^{-3}$.
          How many atoms are present in 280g of element?

Q.14 **(a)** Blood cells are isotonic with 0.9% $NaC\ell$ solution. What happens if we place blood cells in a
          solution containing. (i) 1.2% $NaC\ell$ solution   (ii) 0.4% $NaC\ell$ solution
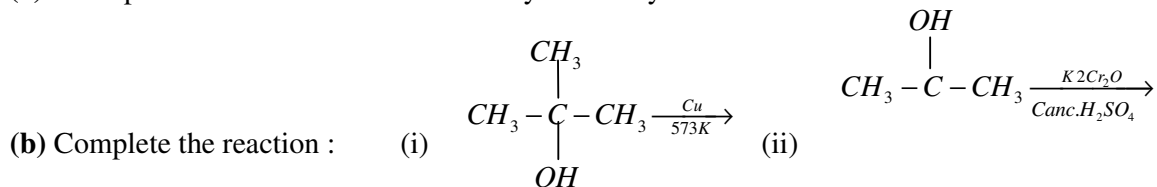
(b) When 2.56g of sulphur was dissolved in 100 g of CS_2, the freezing point lowered by 0.383k.

Calculate the formula of sulphur (S_x) Kf *for* $CS_2 = 3.83K$ *kg* mol^{-1} 2

Q.15   (i)   Why is Mn^{2+} more stable than Mn^{3+} ?

(ii)   Why does cerium show +4 oxidation state?

(iii)   Why do transition metals form complex compounds?

Q.16 **(a)** What products are obtained when methyl tent-butyl ether is treated with HI?

(b) Complete the reaction :   (i) $CH_3-\underset{\underset{OH}{|}}{\overset{\overset{CH_3}{|}}{C}}-CH_3 \xrightarrow[573K]{Cu}$ (ii) $CH_3-\underset{\underset{}{|}}{\overset{\overset{OH}{|}}{C}}-CH_3 \xrightarrow[Canc.H_2SO_4]{K2Cr_2O}$

Q.17   Explain the following with example : (i) Gel   (ii) Peptization   (iii) Adsorption

Q.18   For hydrolysis methyl acetate in aqueous solution, the following results were obtained :

T/s	0	30	60
$(CH_3COOCH_3)Mol/\ell$	0.60	0.30	0.15

Show that it follows Pseudo first order, as the concentration of water remain constant.
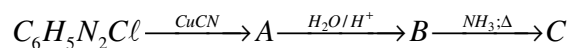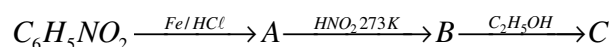
Q.19   Give reason :

(i)   The reduction of metal oxide is easier if the metal formed is in the liquid state at eh temperature of reduction.

(ii)   Lime stone is used in the manufacture of pig iron from haematite.

(iii)   Pine oil is used in the froth flotation process used to concentrate sulphide ores.

Q.20   (i)   Write IUPAC name of $[Cr(NH_3)_4Cl_2]Cl$

(ii)   What type of Isomerism is exhibited by the complex $[CO(en)_3]^{3+}$.

(iii)   Why is $[NiCl_4]^{2-}$ paramagnetic but $[Ni(CO)_4]$ is diamagnetic?

Q.21   Identify A,B & C :

$C_6H_5NO_2 \xrightarrow{Fe/HCl} A \xrightarrow{HNO_2 273K} B \xrightarrow{C_2H_5OH} C$

$C_6H_5N_2Cl \xrightarrow{CuCN} A \xrightarrow{H_2O/H^+} B \xrightarrow{NH_3;\Delta} C$

OR

(i)   Arrange in decreasing order of their basic strength is aqueous solution :

$CH_3NH_2,(CH_3)NH,(CH_3)_3N \& NH_3$.

(ii)   Explain the mechanism of formation of ether from alcohol.

Q.22   (i)   Write the name of two monosaccharides obtained on hydrolysis of lactose sugar?

(ii)   Why vitamin C cannot be stored in our body?

(iii)   What is the difference between nucleotide & nucleoside.

Q.23   Write the name & structure of monomers :   (i) Buna-S   (ii) Neoprere   (iii) Teflon
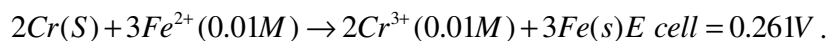
Q.24 Define : (i) Tranquilizers (ii) Anionic detergent (iii) disinfectant

Q.25 (i) How many coulombs are required to reduce 1 mole $Cr_2O_7^{2-}$ to Cr^{3+} ?

(ii) The conductivity of 0.001 M acetic acid is 4×10^{-5} s/m. Calculate the dissociation constant of acetic acid if $\lambda°m$ for acetic acid is 390 S cm^{2}mol^{-1} .

OR

(i) Calculate $E°$ cell for the reaction at 298k

$2Cr(S)+3Fe^{2+}(0.01M)\rightarrow 2Cr^{3+}(0.01M)+3Fe(s)E\ cell=0.261V$.

(ii) Using the $E°$ values of $A\ \&\ B$, predict which one is better for coating the surface of iron

$E°_{(Fe^{2+}/Fe)}=-0.44V$ to prevent corrosion. Why? $E°_{(A^{2+}/A)}=-2.37;E°_{(B^{2+}/B)}=-0.14V$.
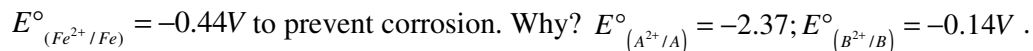
Q.26 (i) Complete the reaction : (a) $cu+dil\ HNO_3\rightarrow$ (b) $P_4+NaOH+H_2O\rightarrow$

(ii) Why does $R_3P=O$ exist but $R_3N=O$ does not?

(iii) Why is dioxygen a gas but sulphur a solid?

(iv) Why are halogen coloured?

OR

(i) Phospheous shows high tendency for catenation.

(ii) F_2 is more reactive than $C\ell F_3$ but $C\ell F_3$ is more reactive than $C\ell_2$.

(iii) Nitrogen is found in gaseous state.

(iv) Decomposition of Ozone molecule is a Spontaneous process.

(v) SF_6 is inert towards hydrolysis.

Q.27 (i) Give an example of reaction : (a) Aldol (b) Semicarbazone

(ii) Complete the reactions : (a) $CH_3COCl\xrightarrow[Pd-BaSO_4]{H_2}$

(b) $CH_3-CH=CH-CN\xrightarrow{DIBAL-H}$ (c)
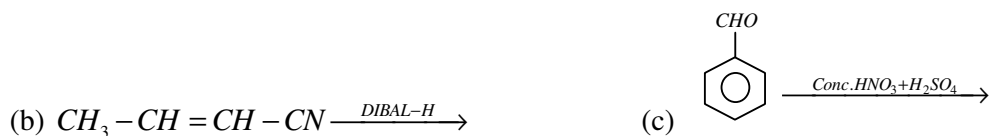
OR

(i) Write chemical reaction involved in Wolff Kisher reaction

(ii) Distinguish between – (a) $C_6H_5COCH_3\ \&\ C_6H_5CHO$ (b) $CHCOOH\ \&\ HCOOH$

(iii) Arrange in increasing order of their boiling points $CH_3CHO,CH_3COOH,CH_3CH_2OH$

(iv) Complete the reactions : $CH3MgBr\ (i)\xrightarrow{CO_2}A\xrightarrow{PCl_5}B$

$(ii)\ H_3O^+$

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I Pre Board Examination 2018 – 19

Time: 3:00 Hrs.   **M. M. 80**

A-Introductory Micro Economics

Q.1   Define Opportunity cost.   1

Q.2   When average cost falls, marginal cost---------------.   1

Q.3   AR is-------------in perfect competition market.   1

Q.4   Define fixed cost.   1

Q.5   Explain the central problem of "choice of technique".   3

<div align="center">OR</div>

Explain the central problem of what to produce.

Q.6   What is meant by elastic demand? Compare it with perfectly elastic demand.   3

Q.7   A consumer consumes only two goods X and Y Marginal Utilities of X and y are 4 and 3 respectively. Price of X and price of Y is Rs.3 per unit. Is consumer in equilibrium? What will be further reaction of a consumer? Give reason.   4

Q.8   When price of a commodity falls from Rs. 12 per unit to Rs. 9 per unit, the producer supplies 75% less   output. Calculate price elasticity of supply.   4

Q.9   Explain the "free entry and exit of firms" features of monopolistic competition   4

<div align="center">OR</div>

What is meant by price ceiling? Explain its implications.

Q.10   Explain the condition of consumer equilibrium using Indifference Curve Analysis.   6

Q.11   Explain why will a producer not be in equilibrium if conditions of equilibrium are not met.   6

Q.12   Good Y is a substitute of good X. The price of Y falls. Explain the chain effect of this change in the Market of X. (with diagram).   6

<div align="center">OR</div>

X and Y are complementary goods. The price of Y falls. Explain the chain effect of this change in the market of X (with diagram).

B-Introduction Macro-Economics

Q.13   Define stock variable.   1

Q.14   Repo rate is the rate at which ---------------.   1

Q.15   What are time deposits?   1

Q.16   If the value of APC is given as 0.75, the value of APS would be---------------.   1

Q.17   Classify the following into intermediate products and final products (give reason)   3

(a) Furniture purchased by a school

(b) Chalks, duster etc. purchased by a school

(c) Expenditure on improvement of a machine in a factory.

Q.18   An economy is in equilibrium. Find investment expenditure: 3

National income =1200

Autonomous consumption expenditure =150

Marginal propensity to consume =0.8

<div align="center">OR</div>

IN an economy, an increase in investment by Rs.100 crore leads to increase in national income by Rs.1000 crore. Find MPC.

Q.19   Explain the process of credit creation by commercial banks.   4

Q.20   Explain any four monetary measures for removing deficit demand.   4

Q.21   What is investment multiplier? Explain its working using a suitable numerical example.   4

<div align="center">OR</div>

      What is meant by aggregate demand? State its components.

Q.22   Calculate (a) Gross domestic product at MP and (b) National Income   Amt. (in crore)   6

		Amt. (in crore)
(i)	Government final consumption expenditure	4000
(ii)	Private final consumption expenditure	3500
(iii)	Gross domestic capital formation	1100
(iv)	Net export	500
(v)	Net factor income from abroad	100
(vi)	Net indirect taxes	300
(vii)	Subsides	40
(viii)	Changes in stock	80
(ix)	Consumption of fixed capital	120

Q.23   Define fixed exchange rate. How is the exchange rate determined in a flexible exchange rate system?

      6

Q.24   Explain how the govt. can use the budgetary policy in reducing inequalities in economy.   6

<div align="center">OR</div>

  Explain:

  (a)Revenue deficit   (b) Primary deficit   (c) Fiscal deficit

<div align="center">*****</div>

First Pre Board Examination 2018 – 19

Time: 3:00 Hrs.   **M. M. 80**

Part - A
Accounting for Not-for-Profit Organisations, Partnership Firms and Companies

Q.1   Geeta, Sunita and Anita were partners in a firm sharing profits in the ratio of 5:3:2. On 1-1-2015, they admitted Yogita as a new partner for 1/10ᵗʰ share in the profits. On Yogita's admission, the Profit and Loss Account of the firm was showing a debit balance of ₹20,000 which was credited by the accountant of the firm to the capital accounts of Geeta, Suntia and Anita in their profit sharing ratio. Did the accountant give correct treatment? Give reason in support of your answer.   1

Q.2   How will you treat the following items while preparing final accounts of non-trading concern :   1
       (i)   Specific Donation   (ii)   Honorarium   (iii)   Legacy

Q.3   Amit and Sumit are partners sharing profits in ratio 2:3. Their fixed capitals were ₹50,000 and ₹ 1,20,000 respectively. Interest on capital @ 10% p.a. was omitted during 2017. Pass the necessary adjustment entry.**1**

Q.4   In which ratio do the remaining partners acquire the share of profit of the retiring partner?   1

Q.5   On 1-1-2016, the first call of ₹3 per share became due of 1,00,000 equity shares issued by Kamini Ltd. Karan, a holder of 500 shares did not pay the first call money. Arjun, a shareholder holding 1000 shares paid the second and final call of `5 per share along with the first call.
       Pass the necessary journal entry for the amount received by opening 'Calls-in-arrears, and 'Calls-in-advance' account in the books of the company.   1

Q.6   The firm of Ravi and Mohan was dissolved on 31.3.2013. According to the agreement, Ravi had agreed to undertake the dissolution work for an agreed remuneration of ₹2,000 and bear all realization expenses. Dissolution expenses were ₹1,500 and the same were paid by the firm.
       Pass necessary journal Entry for the payment of dissolution expenses.   1

Q.7   Madhu and Neha were partners in a firm sharing profits and losses in the ratio of 3:5. Their fixed capitals were ₹4,00,000 and ₹6,00,000 respectively. On 1-1-2016, Tina was admitted as a new partner for ¼th share in the profits. Tina acquired her share of profit from Neha. Tina brought   ₹4,00,000 as her capital which was to be kept fixed like the capitals of Madhu and Neha. Calculate the goodwill of the firm on Tina's admission and the new profit sharing ratio of Madhu, Neha and Tina.
       Also, pass necessary journal entry for the treatment of goodwill on Tina's admission considering that Tina did not bring her share of goodwill premium in cash.   3

Q.8   Calculate the amount of sports material to be debited to Income and Expenditure Account of Capital Sports Club for the year ended 31-3-2017 on the basis of the following information: 3

Particulars	1-4-2016	31-3-2017
	(`)	(`)
Stock of Sports Material	7,500	6,400
Creditors for Sports Material	2,000	2,600

       Amount paid for sports material during the year was `19,000.

Q.9   Z Ltd. purchases machinery from K Ltd. Z Ltd. paid K Ltd. as follows :   3
       (i)   By issuing 5,000 equity shares of ₹10 each at a premium of 30%.
       (ii)   By issuing 1,000,8% Debentures of ₹100 each at a discount of 10%.
       (iii) Balance by giving a promissory note of ₹48,000 payable after two months.
              Pass necessary journal entries for the purchase of machinery and payment to K Ltd. in the books of Z Ltd.

Q.10 On 1ˢᵗ October, 2015, X Ltd. issued 20,000, 10% Debentures of ₹100 each at a discount of 5% redeemable at per on 31ˢᵗ March, 2018.   3
       Compute the amount of discount to be written off each year and prepare Discount on Issue of Debentures A/c for 3 years.

Q.11 Ram, Mohan and Sohan were partners sharing profits and losses in the ratio of 5:3:2. On 31ˢᵗ, March 2017, their Balance Sheet was under :   4

Liabilities	(₹)	Assets	(₹)
Capital A/cs : (`)		Land	1,25,000
Ram 1,50,000		Patents	30,000
Mohan 1,25,000		Machinery	1,50,000
Sohan 75,000	3,50,000	Stock	1,90,000
Creditors	1,55,000	Cash at Bank	40,000
Workmen's Compensation Reserve	30,000		
	5,35,000		5,35,000

Sohan died on 1st August, 2017. It was agreed that :

(i)   Goodwill of the firm is to be valued at ₹1,75,000.

(ii)   Machinery be valued at ₹1,40,000; Patents at ₹40,000; Land at ₹1,50,000 on this date.

(iii)   For the purpose of calculating Sohan's share in the profit of 2017-18; the profits should be taken to have accrued on the same scale as in 2016-17, which were ₹75,000.

(iv)   Sohan mentioned in his will that amount payable to his legal representatives should be used for welfare of the society.

Prepare Revaluation A/c and Sohan's Capital A/c.

Suggest any two ways by which the amount payable to Sohan's legel representative may be utilized for the welfare of the society.

Q.12   Kanika and Gautam are partners doing a dry cleaning business in Lucknow, sharing profits in the ratio 2:1 with capitals ₹5,00,000 and ₹4,00,000 respectively. Kanika withdrew the following amounts during the year 2015 to pay the hostel expenses of her son.   4

	(₹)
1st April	10,000
1st June	9,000
1st November	14,000
1st December	5,000

Gautam withdrew ₹15,000 on the first day of April, July, October and January to pay rent for the accommodation of his family. He also paid ₹20,000 per month as rent for the office of partnership which was in a nearby shopping complex.

Calculate interest on drawings @ 6%p.a.

Q.13   (A) From the following Receipts and Payments Account of Sonu Sports Club and from the given additional information prepare Income & Expenditure Account for the year ending 31 Dec. 2016 and the Balance Sheet as on that date.   6

Receipts and Payments Accounts
for the year ending 31st December, 2016

Receipts	(₹)	Payments	(₹)
To Balance b/d	1,90,000	By Salaries	3,30,000
To Subscriptions	6,60,000	By Sports Equipment	4,00,000
Toe Interest on Investments		By Balance c/d	
@8% p.a. for full year	40,000		1,60,000
	8,90,000		8,90,000

Additional Information's :

(i)   The club had received ₹ 20,000 for subscription in 2015 for 2016.

(ii)   Salaries had been paid only for 11 months.

(iii)   Stock of Sports Equipments on 31st December, 2015 was ₹3,00,000 and on 31st December, 2016 ₹6,50,000.

(B)   Does it promote any value?

Q.14   Following is the Balance Sheet of Abha and Binay as at 31st March, 2014 :   6

Liabilities		(₹)	Assets		(₹)
Creditors		13,000	Bank		15,000
Employees Provident Fund		8,000	Debtors	22,000	
Workmen's Compensation Fund		15,000	Less : Provision for Doubtful Debts	1,000	21,000
Capitals :			Stock		10,000
Abha	55,000		Plant & Machinery		60,000
Binay	30,000	85,000	Goodwill		10,000
			Profit & Loss		5,000
		1,21,000			1,21,000

Chitra was admitted as a partner for ¼ share in the profits of the firm. It was decided that :

(i)   Bad Debts amounted to ₹1,500 will be written off.

(ii)   Stock worth ₹8,000 was taken over by Abha & Binay at book value in their profit sharing ratio. The remaining stock was valued at ₹2,500.

(iii)   Plant & Machinery and goodwill were valued at ₹32,000 and ₹20,000 respectively.

(iv)   Chitra brought her share of goodwill in cash.

(v)   Chitra will bring proportionate capital and the capital of Abha and Binay will be adjusted in their profit-sharing ratio by brining in or paying off cash as the case may be.

Prepare Revaluation Account and Partner's Capital Accounts & Balance Sheet.

Q.15 On March 31st, 2014, the balances in the capital accounts of Saroj, Mahinder and Umar after making adjustments for profits and drawings etc. were ₹80,000, ₹60,000 and ₹40,000 respectively. Subsequently, it was discovered that the interest on capital and drawings has been omitted. 6

* The profit for the year ended 31st March, 2014 was ₹80,000.
* During the year, Saroj and Mahinder each withdrew a ₹24,000 in equal installments in the end of each month and Umar withdrew ₹36,000.

- The interest on drawings was to be charged @5%p.a. and interest on capital was be allowed @10%p.a.
- The profit sharing ratio among partners was 4:3:1 showing your working clearly pass the necessary rectifying entry.

Q.16 R.K.Ltd. invited applications for issuing 80,000 equity shares of `10 each at a premium of ₹35 per share. The amount was payable as follows : 8

On Application - ₹8 (including ₹5 premium) per share
On Allotment - ₹12 (including ₹10 premium) per share
On First and Final Calls – Balance

Applications for 75,000 shares were received and allotment was made to all the applicants. Rahim, a shareholder who was allotted 3,000 shares failed to pay allotment money and his shares were immediately forfeited. Afterwards, the first and final call was made. Suhani who held 3,000 shares failed to pay final call. Her shares were also forfeited. All the forfeited shares were reissued for a sum of ₹62,000 as fully paid up.
Pass necessary journal entries for the above transactions in the books of R.K.Ltd.

OR

Sargam Ltd. Invited applications for issuing 80,000 equity shares of ₹100 each at a premium. The amount was payable as follows : 8

On Application - ₹20 per share
One Allotment - ₹60 (including premium) per share
On first and Final Call-₹40 per share

Applications for 1,20,000 shares were received. Allotment was made on pro-rata basis to all the applicants. Excess money received on applications was adjusted on sums due on allotment. Sitaram, who had applied for 6,000 shares failed to pay the allotment and call money and Harnam did not pay first and final call on 800 shares allotted to him. The shares of Sitaram and Harnam were forfeited. 4,200 of these shares were reissued for ₹100 per share as fully paid up. The re-issued shares included all the forfeited shares of Harnam.
Pass necessary journal entries for the above transactions in the books of Sargam Ltd.

Q.17 Leena, Madan and Naresh were partners in a firm sharing profits and losses in the ratio of 2:2:3. On March 31,2015, their Balance Sheet was as follows : 8

Liabilities	(₹)		(₹)
Trade Creditors	1,60,000	Land and Building	10,00,000
Bank Overdraft	44,000	Machinery	5,00,000
Long-term Debts	4,00,000	Furniture	7,00,000
Employees P.F.	76,000	Investments	2,00,000
Capitals :		Closing Stock	8,00,000
Leena 12,50,000		Sundry Debtors	4,00,000
Madan 8,00,000		Bank	80,000
Naresh 10,50,000	31,00,000	Deferred Advertisement Expenses	1,00,000
	37,80,000		37,80,000

On March 31st,2015, Madan retired from the firm and the remaining partners decided to carry on the business. It was decided to revalue assets and liabilities as under :
(i) Land and Building be appreciated by ₹ 2,40,000 and Machinery be depreciated by 10%.
(ii) 50% of Investments were taken over by the retiring partner at book value.
(iii) An old customer, Mohit whose account was written off as bad debt had promised to pay ₹ 7,000 in settlement of his full debt of ₹10,000.
(iv) Provision for doubtful debts was to be made at 5% on debtors.
(v) Closing stock will be valued at market price which is ₹ 1,00,000 less than the book value.
(vi) Goodwill of the firm be valued at ₹5,60,000 and Madan's share of goodwill be adjusted in the accounts of Leena and Naresh. Leena and Naresh decided to share future profits and losses in the ratio of 3:2.
(vii) The total capital of the new firm will be ₹32,00,000 which will be in the proportion of the profit sharing ratio of Leena and Naresh.

(viii) Amount due to Madan was settled by accepting a bill of exchange in his favour payable after 4 months.

Prepare Revaluation Account, Partner's Capital Accounts and Balance Sheet of the firm after Madan's retirement.

OR

A,B and C were partners sharing profits in the ratio 3:1:1. There Balance Sheet on March 31,2009, the date on which they dissolve their firm, was as follows :   8

Liabilities		(₹)		(₹)
Capitals :	(₹)		Sundry Assets :	17,000
A	27,500		Stock	7,800
B	10,000		Debtors	
C	7,000	44,500	24,200	23,000
Loan		1,500	Less : Provisions for D.D	1,000
Creditors		6,000	1,200	3,200
		52,000	Bills Receivables	52,000
			Cash	

It was agreed that :

(i) A to take over Bills Receivables at ₹800, debtors amounting to ₹20,000 at ₹17,200 and creditors of ₹6,000 were paid by him.

(ii) B is to take over all the stock for ₹ 7,000 and some assets at ₹ 7,200 (being 10% less than the book value)

(iii) C to take over remaining sundry assets at 90% of the book value and assume the responsibility of discharging loan together with accrued interest of ₹300.

(iv) The expenses of realization were ₹270.

The remaining debtors were sold to a debt collecting agency at 50% of the book value.

Prepare Realisation A/c, Partners' Capital A/cs and Cash A/c.

Part – B Analysis of Financial Statements

Q.18 State the primary objectives of preparing a Cash Flow Statement?   1

Q.19 Hider Ltd., a mutual fund company invested ₹5,00,000 in shares of Prayag Ltd. It received divided of ₹45,000 during the year. How will it be depicted in the Cash Flow Statement?   1

Q.20 (a) Under which sub-headings, will the following items be placed in the Balance Sheet of a company as per Schedule III, Part I of the Companies Act, 2013 :

   (i)   Capital Reserves   (ii)   Bonds   (iii)   Loans repayable on demand
   (iv) Vehicles   (v)   Goodwill   (vi)   Loose Tools

   (b) State any one objective of Financial Statement Analysis.   3+1=4

Q.21 From the following Statement of Profit and Loss of Sun Ltd. for the years ended 31st March, 2015 and 2016, prepare a Common Size Statement :   4

Particular	Note No.	2015-16 (₹)	2014-15 (₹)
Revenue from Operations		30,00,000	20,00,000
Expenses		12,00,000	10,00,000
Other Income		3,60,000	4,00,000
Income Tax		50%	40%

Q.22 (i) From the following information, calculate Inventory Turnover Ratio.   2+2=4

   Revenue from Operations ₹4,00,000; Average Inventory ₹55,000; The rate of Gross Loss of Revenue from Operations was 10%.

   (ii) From the following information, calculate Interest Coverage Ratio.

   Profit after interest and tax   -   ₹4,97,000
   Rate of Income Tax   -   30%
   12% Debentures   -   ₹ 6,00,000

Q.23 Following is the Balance Sheets of Akash Ltd. as at 31-3-2014.   6

Particulars	Note No.	2013-14 (₹)	2012-13 (₹)
I. EQUTY AND LIABILITIES			
(1) Shareholder Found			
(a) Share Capital		15,00,000	14,00,000
(b) Reserves and Surplus	1	2,50,000	1,10,000
(2) Non-current Liabilities			
Long term Borrowings		2,00,000	1,25,000
(3) Current Liabilites			
(a) Short-term borrowing	2	12,000	10,000
(b) Trade Payables		15,000	83,000
(c) Short-term Provisions	3	18,000	11,000
Total		19,95000	17,39,000
II. ASSETS			
(1) Non-current Assets			
Fixed Assets		18,60,000	16,10,000
(i) Tangible Assets	4	50,000	30,000
(ii) Intangible Assets	5		
(2) Current Assets		8,000	5,000
(a) Current Investments		37,000	59,000
(b) Inventories		26,000	23,000
(c) Trade Receivables		14,000	12,000
(d) Cash and Cash Equivalents		19,95,000	17,39,000
Total			

Notes to Accounts

Particular	2013-14 (₹)	2012-13 (₹)
1. Reserves and Surplus		
Surplus (Balance in Statement of Profit and Loss)	2,50,000	1,10,000
2. Short-term Borrowings		
Bank-Overdraft	12,000	10,000
3. Short-term Provisions		
Provision for Tax	18,000	11,000
4. Tangible Assets		
Machinery	20,00,000	17,00,000
Accumulated Depreciation	(1,40,000)	(90,000)
5. Intangible Assets		
Patents	50,000	30,000

Additional Information's :
  (i)   Tax paid during the year amounted to ₹ 16,000.
  (ii)   Machine with a net book value of ` 10,000 (Accumulated Depreciation ₹ 40,000) was
       sold for ₹2,000.
  Prepare Cash Flow Statement.

** ALL THE BEST **

I Pre Board Examination 2018 – 19

Time: 3:00 Hrs.   **M. M. 70**

Q.1 **(a)** Write the type of c++tokens(keywords and user defined identifiers) from the following: 2
    (i)else   (ii)Long   (iii)4queue (iv)_count

(b) Write the names of correct header files, which must be included to compile the code
successfully.   1

```
void main()
{        ofstream  fin("wish.txt");
         char txt2[]="goodday";
         strupr(txt2);
}
```

(c) Rewrite the following code after removing all the syntactical errors with each correction
underlined   2

```
Typedef count int;
void main()
{        count c;
         cout<<"enter the count";
         cin>>c;
         for(k=1;k<=c;k++)
         cout<<c "*" k<<endl;
}
```

(d) Find the output of the following c++ program code   2

```
void decider(int&k, int L=70)
{        if(k>L)
         k-=L;
         else
           k+=L;
}
void main()
{        int m=100, n=40;
         decider(m,n);
         cout<<m<<"#"<<n<<endl;
         decider(m);
         cout<<n<<"#"<<m<<endl;
}
```

(e) Find and write the output of the following c++ code   2

```
#define modify(N)  N*3+10;
void main()
{        int LIST[]={10,15,12,17};
         int *p=LIST,c;
         for(c=3;c>=0;c--)
            LIST[c]=modify(LIST[c]);
         for(c=0;c<=3;c++)
         {    cout<<*p<<":";
         p++;
         }
}
```

(f) Find and write the output of the following c++ code   3

```
void revert( int&num, int last=2)
{        last=(last%2==0)?last+1:last-1;
         for(int c=1;c<=last;c++)
         num+=c;
}
```

```
void main()
{       int A=20, B=4;
        revert(A,B);
        cout<<A<<"&"<<B<<endl;
        B--;
        revert(A,B);
        cout<<A<<"#"<<B<<endl;
        revert(B);
        cout<<A<<"#"<<B<<endl;
}
```
Q.2   **(a)** Differentiate between data hiding and data encapsulation in context of OOPS. Also give
        suitable example.   2
        (b) Observe the following C++ code and answer the questions (i) and (ii):
```
class GAME
{       intPcode,Round,Score;
        public:
        GAME()                    //Member Function 1
        { Pcode=1; Round=0; Score=0;}
        GAME(GAME G) //Member Function 2
        {  Pcode=G.Pcode+1;
          Round=G.Round+2;
          Score=G.Score+10;
        }
};
void main()
{       _____  //statement1
        _____  //statement2  }
```
(i) Which oops feature is illustrated by the member functions 1 and 2 together in class GAME? 1
(ii) Write statement1 and 2 to execute member function 1 and 2 respectively.   1
        (c) Write the definition of class Frame in c++ with following description: 4
Private members:
-FID   //type integer
-Height   //type float
-Width   //type float
-Amount   //type float
-GetAmount()   //Member function to calculate and assign amount as 10*Height*Width
Public members:
-GetDetail()   // A function to allow user to enter values of FID,Height,Width and call GetAmount().
-DispDetail() //To display values of all data members
(d) Answer the questions (i) to (iv) based on following code: 4
```
class digital                                    class print
{   int ID;                                      {    int PID;
    protected:                                        protected:
    float amount;                                     float amount;
int seconds;                                     intsqinch;
    public:                                           public:
    digital();                                        print();
    void register();    void display();               void get();
};                                                    void display();
                                                 };
class media : public print, private digital      void main()
{   int MID;                                     {
    public:                                           media M;   //statement 1
    media();                                          _____ //statement 2
    void enter();                                }
    void show();
};
```

(i)Which type of inheritance is illustrated in above code?

(ii) Write the names of all member functions which are directly accessible by the object of class media?

(iii) What will be the order of execution of constructors when object M of class media is declared?

(iv) Write statement 2 to call function display() of class print() from object of class media.

Q.3   **(a)** Write the definition of a function MIXER(int A[], int N) in c++, which should multiply 2 to the odd values present in the array and multiply 3 to the even values in array. the entire content of array A having N elements should change without using any other array.   2

(b) Write the definition for a function TOPBOTTOM(int A[][5], int N, int M), which finds and displays sum of the values in topmost row and sum of values in bottommost row of matrix A.(N= no. of rows, M= no. of columns).   3

(c) Let DATA[20][15], is a two dimensional array, which is stored in the memory along the row with each of its element occupying 2 bytes. Find the location of the element DATA[10][5] if the element DATA[15][10] is stored at 15000.   3

(d) Write the definition of a member function AddPacket() for a class queue in c++, to remove/ delete a packet from a dynamically allocated queue of packets considering the following code is already written as a part of the program.   4

```
struct packet
{      int PID;
       char address[20];
       packet * link;
};
class queue
{      packet * front *rear;
       public:
       queue(){ front=NULL; rear=NULL;}
       voidAddPacket();
       voidDeletePacket();
       ~queue();
};
```

(e) Convert the following infix expression to its equivalent postfix expression, showing the stack contents for each step:

U*V+(W-Z)/X   2

Q.4**(a)**A text file named MATTER.TXT conations some text. Write function definition for HashDisplay() in c++ that would display the entire content such that every character is separated by symbol   2

(b) Write a function TotalTeachers() in c++ to read each object of a binary file SCHOOL.DAT, find the total number of teachers whose data is stored in the file and display the same   3

```
class school
{      intscode;
       charsname[20];
       int NOT      ; // number of teachers
       public:
       void display()
       {      cout<<scode<<"#"<<sname<<"#"<<NOT;}
       int RNOT()
       {      return NOT;}
};
```

(c) Find the output of the following c++ code considering that the binary file PRODUCT.DAT exists on the disk with a list of data of 350 products   1

```
class PRODUCT
{      intpcode, charpname[20];
       public:
       voidentery(); void display();
};
```

```
void main()
{        fstream in;
         in.open("PRODUCT.DAT",ios::in|ios::binary);
         PRODUCT P;
         in.seekg(0,ios::end);
         cout<<"Total count:"<<in.tellg()/sizeof(P)<<endl;
         in.seekg(70* sizeof(P));
         in.read((char*)&P,sizeof(P));
         in.read((char*)&P,sizeof(P));
         cout<<"At product:"<<in.tellg()/sizeof(P)+1;
         in.close();
}
```

Q.5**(a)** Observe the following table and answer the following questions(i) and (ii)   2
TABLE: Product

Pno	Name	Qty	PurchaseDate
101	Pen	102	12-12-2011
102	Pencil	201	21-02-2013
103	Eraser	90	09-08-2010
109	Sharpener	90	31-08-2012
113	Clips	900	12-12-2011

(i)Write names of the most appropriate columns, which can be considered as candidate keys.
(ii) What is the degree and cardinality of above table?
(b) Write SQL queries for (i) to (iv) and find the outputs for (v) to (viii),which are based on following
tables: 6

ACCOUNT

ANO	ANAME	ADDRESS
101	Nirja	Bangalore
102	Rohan	Chennai
103	Ali	Hyderabad
104	Rishabh	Chennai
105	Simran	Chandigarh

TRANSACT

TRNO	ANO	AMOUNT	TYPE	DOT
T001	101	2500	Withdraw	2017-12-21
T002	103	3000	Deposit	2017-06-01
T003	102	2000	Withdraw	2017-05-12
T004	103	1000	Deposit	2017-10-22
T005	101	12000	Deposit	2017-11-06

(i)To display details of all transactions of type deposit from table TRANSACT.
(ii)to display the ANO and AMOUNT of all deposits and withdrawals are done in month of october2017.
(iii)to display the last date of transaction from the table TRANSACT for account having ANO as 103.
(iv)To display all ANO,ANAME,DOT of those persons from table ACCOUNT and TRANSACT who have
done transactions less than or equal to 3000.
(v) SELECT ANO, ANAME FROM ACCOUNT WHERE ADDRESS NOT IN('CHENNAI', 'BANGALORE');
(vi)SELECT DISTINCT ANO FROM TRANSACT;
(vii) SELECT ANO, COUNT(*), MIN(AMOUNT) FROM TRANSACT GROUP BY ANO HAVING
COUNT(*)>1;
(viii) SELECT COUNT(*), SUM(AMOUNT) FROMTRANSACT WHERE DOT<='2017=06=01';
Q.6**(a)** State any one absorption law of Boolean algebra and verify it using truth table.   2
(b) Draw a logic circuit of the following Boolean Expression: (U'+V).(V'+W')   2
 (c) Derive a canonical POS expression for a Boolean function F, represented by the following truth table: 1

X	Y	Z	F(X,Y,Z)
0	0	0	1
0	0	1	1
0	1	0	0
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	1

(d) Reduce the following Boolean expression to its simplest form using K-Map: 3
$G(U,V,W,Z)=\sum(3,5,6,7,11,12,13,15)$

Q.7**(a)** Differentiate between Bus Topology and Star Topology of networks. What are the advantages and disadvantages of Star Topology over Bus Topology?   2

(b) Classify each of the following Web Scripting as client side scripting and server side scripting: 2
        (i)JavaScripting   (ii)ASP (iii)VB Scripting   (iv) JSP

(c) Write the expanded names for the following abbreviated terms: 2
        (i)SMTP   (ii) VoIP   (iii) GSM   (iv)WLL

(d)CASE STUDY QUESTION:

Ayurveda training educational institute is setting up its center in Hyderabad with four specialized departments for orthopedics, Neurology and Pediatrics along with an administrative office in separate buildings. The physical distances between these departments and administrative office is given as follows. You as a network expert have to answer the queries represented as below questions (i) to (iv).

Shortest distance between various locations in meters:

Administrative Office to Orthopedics Unit	55
Neurology Unit to Administrative Office	30
Orthopedics Unit to Neurology Unit	70
Pediatrics Unit to Neurology Unit	50
Pediatrics Unit to Administrative Office	40
Pediatrics Unit to Orthopedic Unit	110

Numbers of computers installed at various locations:

Pediatrics Unit	40
Administrative Office	140
Neurology Unit	50
Orthopedic Unit	80

ADMINISTRATIVE OFFFICE

ORTHOPEDIC UNIT

PEDIATRICS UNIT

NEUROLOGY UNIT
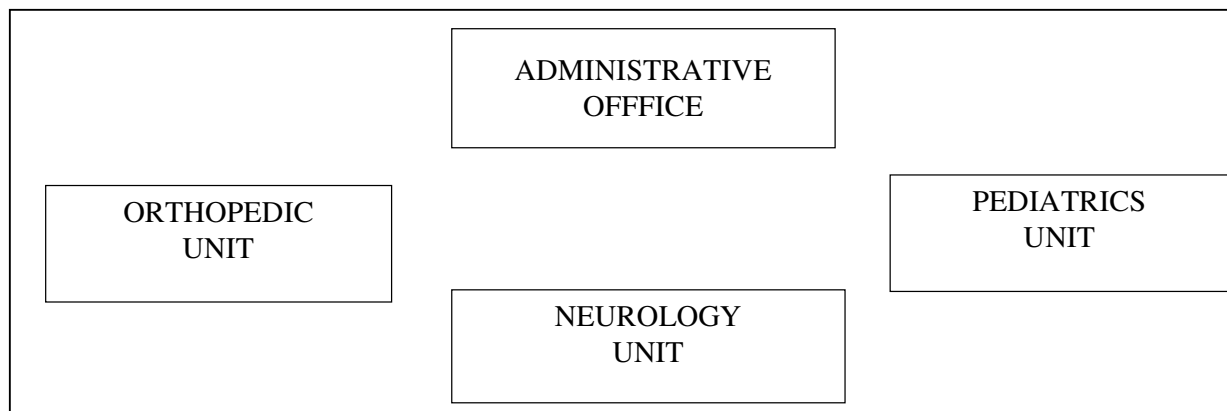
(i)   Suggest the most suitable location to install the main server of this institution to get efficient connectivity.   1

(ii)   Suggest the best cable layout for effective network connectivity of the building having the server with all the other buildings.   1

(iii)   Suggest the devices to be installed in each of these buildings for connecting computers installed within the building out of the following: 1

- Gateway
- Modem
- Switch

(iv)   Suggest the topology of the network and network cable for efficiently connecting each computer installed in each of the buildings out of the following: 1
    Topologies: Bus topology, Star topology
    Network cable: Single Pair Telephone cable, Coaxial cable, Ethernet cable

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I Pre Board Examination 2018 – 19

Time: 3:00 Hrs.   **M. M. 80**

Q.1   What did Taylor want to communicate through mental revolution?   1

Q.2   What is meant by span of management?   1

Q.3   Super Fine Rice Ltd. has the largest share of 55% in the market. The company"s policy is to sell only for cash. In 2015, for the first time company"s number one position in the industry has been threatened because other companies started selling rice on credit also. But the managers of Super Fine Rice Ltd. continued to rely on it"s previously tried and tested successful plans which didn"t work because the environment is not static. This led to decline in sales of Super Fine Rice Ltd. The above situation is indicating two limitations of planning which led to decline in it sales. Identify these limitations.   1

Q.4   Why is it said that directing takes place where ever superior-subordinate relationship exists?   1

Q.5   When is financial leverage favourable?   1

Q.6   ABC Ltd. issued prospectus for the subscription of its shares for ` 500 crores in 2008. The issue was oversubscribed by 20 times. The company issued shares to all the applicants on pro-rata basis. Later SEBI inspected the prospectus and found some misleading statement about the management of the company in it. SEBI imposed a penalty of ` 5 crores and banned its three executive directors for dealing in securities market for three years.
Identify the function and its type performed by SEBI in the above case.   1

Q.7   Ronit Raj, a marketing manager is a patient of diabetes for which he takes medicines regularly. One day, on his tour to Patna, he met with an accident and was hospitalised. Due to doctors" negligence a delicate nerve of his right leg was cut rendering hum crippled throughout his life. Identify the consumer right that has been violated by the doctors under the Consumer Protection Act, 1986 in the above situation.   1

Q.8   Sirajuddin purchased a car for `15 lacs from an automobile company and found that its airbags were defective. After many complaints with the company that went unheard, he filed a case in the District Forum. He was not satisfied with the orders of the District Forum. He then appealed before the State Commission and on being dissatisfied with the orders of State Commission, he appealed before the National Commission. Sirajuddin was not satisfied with the orders of National Commission.
Suggest him the highest authority where he could appeal against the decision of the National Commission.   1

Q.9   State the main aspects in the concept of planning?   3

Q.10 How does controlling help in "**Judging accuracy of standards" and "Ensuring order and discipline**."   3

Q.11 M/s Beta Ltd. deals in consumer goods. It employs 100 workers and 10 operative managers who give guidance and support to the workers while operating the machinery. The company has a policy of granting leave as per the requirement of the workers. Workers are generally granted leave on festivals and special occasions. Recently on Puja festival, it received a big order. Workers are keen to take Puja holidays while management is pressing hard for overtime. This matter was placed before the Personnel Manager who called the meeting of operative managers and workers to inform them about the changes in the incentive plan which states payment of double wages for working overtime and triple wages for working on holidays. Workers without any pressure voluntarily took limited holidays and were able to increase their earning by working overtime and on holidays.
During Board of Directors meeting, Personnel Manager was asked to update the management for achieving higher output, meeting timely supplies without any confrontation with workers. Personnel Manager replied, "I just used a carrot with no sticks approach".
By quoting the lines from above paragraph state any two elements of directing.   3

Q.12 Money market is essentially a market for short-term funds". In the light of this statement, state any three features of money market.   3

Q.13 Grahak Shakti", an N.G.O. organized a workshop to discuss various issues relating to consumers. During the discussion, one of the members drew attention towards exploitation of consumers due to defective and unsafe products, adulteration, black marketing, hoarding etc. To this another member argued that consumers themselves are responsible as they do not raise collective voice against the exploitation. The Chairperson of the organization was of the opinion that it was also the duty of the businessman to take care of the interests of various stakeholders. Business organizations earn money by selling goods and services to consumers. So the interests of the stakeholders have to be well taken care of.

(a) State three points that highlight the need for consumer protection as discussed in „Grahak Shakti"s workshop. 3

Q.14 State any four functions of operational management. 4

Q.15 Ramdas, aged 49 is working in an aviation company. He is the senior most employee in his division. He is even senior to the division manager, Kanaputti. Ramdas is considered one of the most committed, capable and hard-working employees. As a result of his abilities and seniority, he generally received the work assignments of his choice. Although there was no formal designation of various „special" projects assigned to Ramdas, he handled them as a matter of routine. A problem developed when an able and intelligent person Nagarjuna, aged 33, was appointed by Kanaputti. Nagarjun"s previous three years" experience in the closely related work, made it possible for him to catch on to the routine work of his new job more rapidly than was customary for a new employee. On several occasions, Kanaputti noticed the tension developing between the two employees. However, he didn"t want to get involved in their personal issues as long as the work was completed effectively and efficiently by them. One day, the tension between them reached the boiling point and Ramdas complained to Kanaputti stating that his duties were being largely taken over by Nagarjun. Kanaputti issued the order stating the clear allocation of the jobs and related duties between the two. He further clarified the working relationship between them by specifying who was to report to whom. This helped in reducing the workload, enhancing productivity and removing ambiguity.

a. Identify and state the step of organizing process which has not been carried out properly and contributed to this problem.
b. State the two steps of the organizing process which have been taken by Kanaputti to respond to the complaint of Ramdas.
c. Also state two points of importance of organizing as reflected in the above case. 4

Q.16 Human Resource Management includes many specialized activities and duties which the human resource personnel must perform. In the light of this statement, explain any four such duties performed by Human Resource Manager. 4

Q.17 Resolutions Pvt. Ltd. is a publishing company. Its book on Business Studies for class XII is in great demand. As a result, the employees in the marketing department are always racing against time. The employees have to work overtime and on holidays to cater to the demand.
Managers in the marketing department are under stress as they have to handle more than two territories. The work stress has led to dissatisfaction among the employees and managers.
(a) Name and explain the step of staffing process which has not been performed properly.
(b) State the next two stages immediately following the step identified in part „a". 2+2=4

Q.18 Unicon Securities Pvt. Ltd" was established to deal in securities. It was registered as a stock broker with National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) to trade in securities listed at these exchanges. It is also a depository participant with CDSL and NSDL. In the first three years, it developed its business successfully. After that the composition of Board of Directors changed. Some customers complained to the customer care centre of the company that shares purchased by them and for which the payment has been duly made, were not transferred to their D"mat Accounts by „Unicon securities Pvt. Ltd" . The executive of customer care centre promised the aggrieved customers that their shares will be transferred to their respective D"mat Accounts very soon. But the company delayed the matter and didn"t transfer the shares of the customers to their D"mat Accounts. This eroded investors confidence and multiplied their grievances.

a. Identify the step of trading procedure in a stock exchange which has not been followed by „Unicon Securities Pvt. Ltd" .
b. Name the Apex statutory body of capital market to whom customer can complain to redress their grievances.
c. Write two values not followed by Unicon Security Pvt. Ltd.   1+1+2=4

Q.19   Time Line" watch manufacturing company is a renowned company marketing watches. It performs various activities like, market analysis, product designing or merchandising, packaging, warehousing, branding, pricing, promotion and selling. The company maintains good customer relations through various follow up activities. This helps the company in procuring repeat sales orders.
(a) Name the concept related to the activities mentioned in the above paragraph.
(b) Explain any two features of the concept identified in part (a)   4

Q.20   Naman and Govind after finishing their graduation under vocational stream decided to start their own travel agency which will book Rail Tickets and Air Tickets on commission basis. They also thought of providing tickets within ten minutes through the use of internet. They discussed the idea with their Professor Mr. Mehta who liked the idea and suggested them to first analyse the business environment which consists of investors, competitors and other forces like social, political etc. that may affect their business directly or indirectly. He further told them about the technological improvements and shifts in consumer preferences that were taking place and hence they should be aware of the environmental trends and changes which may hinder their business performance. He emphasised on making plans keeping in mind the threat posed by the competitors, so that they can deal with the situation effectively. This alignment of business operations with the business environment will result in better performance.
(i)   Identify and state the component of business environment highlighted in the above Para.
(ii) State any two features of business environment as discussed by Professor Mehta with Naman and Govind.
(iii) Also state two points of importance of business environment as stated by Professor Mehta in the above situation.   1+2+2=5

Q.21   Shan Spices Ltd." are the manufacturer of different food specific spices like Rajmaa Masala, Cholley Masala, AalooParantha Masala etc. Mr. Raghav, the owner of the company has created different departments for purchase, production, marketing, finance and human resource. There are thirty employees working in the organisation. Planning is of paramount importance to the company as Mr. Raghav believes that effective planning leads to achievement of organisational objectives. So in order to make employees focus on objectives, he issued instructions that during working hours only official matters will be discussed. He made certain rules and code of conduct for the employees to follow, according to which employees are not allowed to visit and talk to the employees of other departments except for official work. He emphasised on work performance which resulted in smooth functioning of the organisation.
a. Identify and state the type of organisation mentioned in the above para.
b. State one feature of the concept identified in part (1) as mentioned in the above para.
c. What was the purpose behind the formulation of rules for the employees that restricted their personal communication with the employees of other departments?
d. State two values violated by Mr. Raghav.   5

Q.22   Describe briefly „Maslow"s need hierarchy theory" of motivation?   5

Q.23   Briefly explain work study techniques that help in developing standards to be followed throughout the organization.   6

Q.24 A business that doesn"t grow dies", says Mr. Shah, the owner of Shah Marble Ltd. with glorious 36 months of its grand success having a capital base of `80 crores. Within a short span of time, the company could generate cash flow which not only covered fixed cash payment obligations but also create sufficient buffer. The company is on the growth path and a new breed of consumers is eager to buy the Italian marble sold by Shah Marble Ltd.

To meet the increasing demand, Mr. Shah decided to expand his business by acquiring a mine. This required an investment of `120 crores. To seek advice in this matter, he called his financial advisor Mr. Seth who advised him about the judicious mix of equity (40%) and Debt (60%). Mr. Seth also suggested him to take loan from a financial institution as the cost of raising funds from financial institutions is low. Though this will increase the financial risk but will also raise the return to equity shareholders. He also apprised him that issue of debt will not dilute the control of equity shareholders. At the same time, the interest on loan is a tax deductible expense for computation of tax liability.

After due deliberations with Mr. Seth, Mr. Shah decided to raise funds from a financial institution.

(a) Identify and explain the concept of Financial Management as advised by Mr. Seth in the above situation.

(b) State the four factors affecting the concept as identified in part „a" above which have been discussed between Mr. Shah and Mr. Seth. 2+4=6

Q.25 Coconut Joy Ltd." are the manufacturer of vegetarian frozen dessert food products made with coconut milk, agave syrup and other certified ingredients. The founders of the company Lovely and Lalita originally developed this treat to meet their own needs but found that their friends and families around were also keen to use the products. It was not only the vegetarians, but also those who could not get enough environment friendly sustainable food, that appreciated the product.

It did not take long for Lovely and Lalita to recognise the potential of their little venture. In the beginning they started from their home with the product being sold through local family parties that enable guests to personally meet the owner. This helped to establish strong connections with the prospective buyers and the company could put the product on shelves of natural food store. The company used all marketing activities to grow and expand. The company began sponsoring booths at festivals, drawing attention to its newly created vegetarian products. It also disseminated relevant information to media about its products and the people who helped in building the company's reputation. Lovely and Lalita were invited for an interview with one of the leading TV channels in which they talked about their environment friendly vegetarian products. To show its gratitude to customers, local business and government officials who supported the company from the beginning, „Coconut Joy Ltd." hosted a gala event and involved all of them to raise funds for a few local NGO"s. The company also asked its fans and customers to send songs and poetry conveying their impression about „Coconut Joy"s Ltd." products.

(a) Identify and explain the communication tool used by „Coconut Joy Ltd".

(b) Briefly explain the role of the tool identified in „a" above. 2+4=6

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I Pre Board Examination 2018 – 19
Time: 3:00 Hrs.   **M. M. 70**

Q.1   Explain the procedure for giving Bye   1
Q.2   Define adventure sports.   1
Q.3   Define healthy weight.   1
Q.4   What is knock-knee?   1
Q.5   State food supplement.   1
Q.6   What do you mean 'Cardiac output'?   1
Q.7   Explain the term 'Meharch'.   1
Q.8   What do you mean by 'Motor Fitness'?   1
Q.9   What is projectile?   1
Q.10   Explain the 'personality'.   1
Q.11   What do you mean 'Loco motor Ability'?   1
Q.12   Define 'Sports Medicine'. Write there Aims and Objects.   1+2=3
Q.13   Distinguish between intramural and extramural programmes.
                                                                  1½+1½=3
Q.14   Discuss the nutritive component of diet.   3
Q.15   Explain the process for creating or making leaders through Physical
       Education.   3
Q.16   Briefly discuss the deformities of spinal curvature.   3
Q.17   What do you mean by 'AAPHER' Fitness Test? Explain
       administration of any three items of this test.   3
Q.18   Explain any three physiological factors determining strength.   3
Q.19   Discuss any three types of coordinative abilities.   3
Q.20   Discuss in detail about female Athletes triad.   5
Q.21   Discuss the factors affecting motor development in detail.   5
Q.22   "Vitamins are essential for our metabolic process" What happens if
       we devoid our diet of vitamins?   5
Q.23   Mention any five advantages of correct posture.   5
Q.24   What do you mean by coping strategies? Discuss its types in detail.5
Q.25   What is friction? Explain it types is it advantages or
       disadvantageous in the field of sports? Give your views.   5
Q.26   What is a league tournament? Draw a fixture of six teams using
       round – Robin methods.   5
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Code. No. 12/Fine Art/NLCS/12
I Pre Board Examination 2018 – 19
Time: 3:00 Hrs.   **M. M. 40**

Q.1   Describe the origin and development of the Rajasthan or Pahari school of Miniature painting.   **5**

Q.2   Appreciate any of the following miniature paintings, based on its-   5
(a) Name of the artist / sub-school   (b) Medium & technique
(c) Subject matter and   (d) composition
(i)   Krishna lifting Mount Goverdhana (Mughal School)
(ii)   Chand Bibi playing Polo (Chaugan) (Deccan School)

Q.3   How far has its painter been successful in depicting the subject matter of any of the paintings of the Bengal School included in you course of study? Submit your reasons on the basis of the aesthetical parameters.   **5**

Q.4   Give appropriate reasons as to why do you like or dislike the contemporary (Modern) Indian sculptures.   **5**

Q.5   Write a note on the compositional arrangements in the Rajasthani or Pahari miniature paintings.   **5**

Q.6   (a)   Mention he name of the painter of each of the following Mughal Miniatures.   3
            (i)   Falcon on a bird rest.
            (ii)   Jahangir holding the picture of Madonna.
            (iii)   Babar crossing the river sone.
        (b)   Mention the name of the sub-school of each of the following Deccani Miniature.   **2**
            (i) Dancers   (ii) Chand Bibi playing polo (Chaugan)

Q.7   What symbolizes each of the following, used in our National Flag?   **5**

(I)   India Saffron   (ii) White   (iii) India Green
(iv)   Ashoka wheel (v) 24 spokes in Ashoka wheel

Q.8   Mention the name of the artist of each of the following art-work of the contemporary (Modern) Indian art, included in your course of study.   **5**
(i) Untitled (a painting)   (ii) Figure (a sculpture)
(iii)   Birth of poetry (a painting)   (iv) Whirlpool (a graphic paint)
(v)   Man, Woman and tree

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