

LOVELY PROFESSIONAL UNIVERSITY
TALENT SEARCH TEST-2010
12th Class

Time:
Total Marks:

NAME:

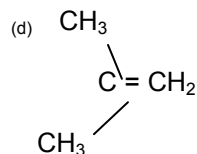
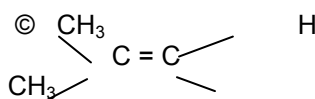
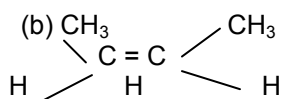
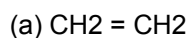
ROLL No:

Important Instructions:

1. Read the questions carefully.
2. Indicate the option with a **Tick Mark** on the option letter, either a, or b, or c, or d, or e, which you think is right.
3. No negative marking is there.
4. Questions left unanswered or answered with more than one option will not be marked.

(Chemistry)

- Q1 Which one of the following species is diamagnetic in nature:
(a) He_2^+ (b) H_2 (c) H_2^+ (d) H_2^-
- Q2 Hydrogen bomb is based on the principle of :
(a) Nuclear fission (b) Natural radioactivity (c) Nuclear fusion (d) Artificial radioactivity
- Q3 Lattice energy of an ionic compound depends upon:
(a) Charge of an ion only (b) Size of an ion only
(c) Packing of an ions only (d) Charge of an ion and size of the ion
- Q4 Which one is the conjugate base of OH^- ?
(a) O_2 (b) H_2O (c) O (d) O^{2-}
- Q5 Which one of the following method is neither meant for the synthesis nor for separation of amines:
(a) Hinsberg method (b) Hofmann method (c) Wurtz reaction (d) Curtius reaction
- Q6 Consider the ground state of Cr atom ($Z=24$). The number of electrons with the azimuthal quantum numbers $l=1$ and 2 are respectively:
(a) 12 and 4 (b) 12 and 5 (c) 16 and 4 (d) 16 and 5
- Q7 The Compound formed in the positive test for nitrogen with the hassaigne of an organic compound is
(a) $\text{Fe}_4[\text{Fe}(\text{CN})_6]_3$ (b) $\text{Na}_3[\text{Fe}(\text{CN})_6]$ (c) $\text{Fe}(\text{CN})_3$ (d) $\text{Na}_4[\text{Fe}(\text{CN})_5]\text{NOS}$
- Q8 In a first order reaction, the concentration of the reactant decreases from 0.8m to 0.4m in 15 minutes. The time taken for the concentration to change from 0.1m to 0.0025m is:
(a) 30minutes (b) 15minutes (c) 7.5 minutes (d) 60minutes
- Q9 The smog is essentially caused by the presence of ?
(a) O_2 and O_3 (b) O_2 and N_2 (c) oxides of Sulphur and nitrogen (d) O_3 and n_2
- Q10 Chloroform reacts with sodium ethoxide to form:
(a) Ethyl formate (b) Ethyl orthoformate (c) $\text{CCl}_3(\text{OH})\text{OC}_2\text{H}_5$ (d) $\text{CCl}_3(\text{OC}_2\text{H}_5)_2$
- Q11 Which one of the following is not a colligative property?
(a) osmotic pressure (b) Elevation of lip (c) Vapour pressure (d) Depression of fp
- Q12 In the electrolysis of water, one faraday of electrical energy would involve?
(a) one mole of oxygen (b) one g atom of oxygen (c) 8g of oxygen (d) 22.4 litres of oxygen
- Q13 In an adialiac system, if the work is done by the system, the temp must:
(a) increases (b) decreases (c) First increases then decreases (d) first decreases, then decreases
- Q14 The electronic configuration of molybdenum ($Z=42$) is
(a) $[\text{Ar}] 4s^2 3d^{10} 4p^5$ (b) $[\text{Kr}] 5s^{24} d^4$ (c) $[\text{Kr}] 5s^1 4d^5$ (d) $[\text{Kr}] 5s^1 5d^5$
- Q15 For an endothermic reaction, where H represents the enthalpy of the reaction in kJ/mol , the minimum value for the energy of activation will be :
(a) less than H (b) zero (c) more than H (d) equal to H
- Q16 The number of electrons shared in each outermost shell of N_2 is :
(a) 2 (b) 3 (c) 4 (d) 5
- Q17 Heating a mixture of sodium benzoate or benzoic acid and soda lime gives :
(a) Benzene (b) Methane (c) Sodium benzoate (d) Calcium benzote
- Q18 The compound which reacts with HBr obeying markonikoff rule is



Q19 The heat of formation of methane at constant pressure is 18500 cal at 25°C. The heat of reaction at constant volume would be:

- (a) 19096 cal (b) 18798 cal © 182.2 cal (d) 17904 cal

Q20 Mutarotation does not occur in:

- (a) Sucrose (b) D-Glucose © L-Glucose (d) D-Fructose

(PHYSICS)

Q1 A standard exam page is 8.5 inches by 11.0 inches. An exam that is 2.0 mm thick has a volume of

- a. $1.9 \times 10^4 \text{ mm}^3$. b. $4.7 \times 10^4 \text{ mm}^3$. c. $1.2 \times 10^5 \text{ mm}^3$. d. $3.1 \times 10^5 \text{ mm}^3$.

- e. $3.1 \times 10^3 \text{ mm}^3$

Q2 If $\vec{A} = 12\hat{i} - 16\hat{j}$ and $\vec{B} = -24\hat{i} + 10\hat{j}$, what is the magnitude of the vector $\vec{C} = 2\vec{A} - \vec{B}$?

- a.42 b.22 c.64 d.90 e.13

Q3 The frictional force of the floor on a large suitcase is least when the suitcase is

- a. pushed by a force parallel to the floor. b. dragged by a force parallel to the floor.
c. pulled by a force directed at an angle above the floor.
d. pushed by a force directed at an angle into the floor.
e. turned on its side and pushed by a force parallel to the floor.

Q4 If the scalar (dot) product of two vectors is negative, it means that

- a. there was a calculator error. b. the angle between the vectors is less than 90 degrees.
c. the angle between the vectors is 90 degrees.
d. the angle between the vectors is greater than 270 degrees.
e. the angle between the vectors is between 90 and 180 degrees.

Q5 A small sphere attached to a light rigid rod rotates about an axis perpendicular to and fixed to the other end of the rod. Relative to the positive direction of the axis of rotation, the angular positions of the sphere are positive, its angular velocity is positive, and its angular acceleration is negative. The sphere is

- a. rotating clockwise and slowing down. b. rotating counterclockwise and slowing down.
c. rotating clockwise and speeding up. d. rotating counterclockwise and speeding up.
e. first rotating clockwise and then counterclockwise.

Q6 Which of the following quantities is conserved for a planet orbiting a star in a circular orbit? Only the planet itself is to be taken as the system; the star is not included.

- a. Momentum and energy. b. Energy and angular momentum.
c. Momentum and angular momentum. d. Momentum, angular momentum and energy.
e. None of the above.

Q7 A wood block is placed on top of the ice in a large bowl half full of ice. The bowl is then filled to the brim with water, with the wood block riding on top of the ice. As the ice melts,

- a. the density of the water decreases. b. the water level falls below the rim.
c. the water level rises and water spills out of the bowl. d. the water level does not change.
e. the wood block descends, causing water to spill out of the bowl.

Q8 Which statement below regarding the First Law of Thermodynamics is most correct?

- a. A system can do work externally only if its internal energy decreases.
b. The internal energy of a system that interacts with its environment must change.
c. No matter what other interactions take place, the internal energy must change if a system undergoes a heat transfer.
d. The only changes that can occur in the internal energy of a system are those produced by non-mechanical forces.

e. The internal energy of a system cannot change if the heat transferred to the system is equal to the work done by the system.

Q9 Which statement below is *NOT* an assumption made in the molecular model of an ideal gas?

- a. The average separation between molecules is large compared with the dimensions of the molecules.
- b. The molecules undergo inelastic collisions with one another.
- c. The forces between molecules are short range.
- d. The molecules obey Newton's laws of motion.
- e. Any molecule can move in any direction with equal probability.

Q10 To transmit four times as much energy per unit time along a string, you must

- a. double the frequency.
- b. double the amplitude.
- c. increase the tension by a factor of 16.
- d. do any one of the above.
- e. do only (a) or (b) above.

Q11 Equipotential surfaces associated with an electric dipole are:

- a. spheres centered on the dipole
- b. cylinders with axes along the dipole moment
- c. planes perpendicular to the dipole moment
- d. planes parallel to the dipole moment
- e. none of the above

Q12 For an ohmic substance, the electron drift velocity is proportional to:

- a. the cross-sectional area of the sample
- b. the length of the sample
- c. the mass of an electron
- d. the electric field in the sample
- e. none of the above

Q13 A 2-T uniform magnetic field makes an angle of 30° with the z axis. The magnetic flux through a 3-m^2 portion of the xy plane is:

- a. 2.0Wb
- b. 3.0Wb
- c. 5.2Wb
- d. 6.0Wb
- e. 12Wb

Q14 The rms value of an ac current is:

- a. its peak value
- b. its average value
- c. that steady current that produces the same rate of heating in a resistor as the actual current
- d. that steady current that will charge a battery at the same rate as the actual current
- e. zero

Q15 The product $\mu_0 \epsilon_0$ has the same units as:

- a. $(\text{velocity})^2$
- b. $(\text{velocity})^{1/2}$
- c. $1/\text{velocity}$
- d. $1/(\text{velocity})^2$
- e. $1/(\text{velocity})^{1/2}$

Q16 To obtain an observable double-slit interference pattern:

- a. the light must be incident normally on the slits
- b. the light must be monochromatic
- c. the light must consist of plane waves
- d. the light must be coherent
- e. the screen must be far away from the slits

Q17 Light beams A and B have the same intensity but the wavelength associated with beam A is longer than that associated with beam B. The photon flux (number crossing a unit area per unit time) is:

- a. greater for A than for B
- b. greater for B than for A
- c. the same for A and B
- d. greater for A than for B only if both have short wavelengths
- e. greater for B than for A only if both have short wavelengths

Q18 The Pauli exclusion principle is obeyed by:

- a. all particles
- b. all charged particles
- c. all particles with spin quantum numbers of $\frac{1}{2}$
- d. all particles with spin quantum numbers of 1
- e. all particles with mass

Q19 A light emitting diode emits light when:

- a. electrons are excited from the valence to the conduction band
- b. electrons from the conduction band recombine with holes from the valence band
- c. electrons collide with atoms
- d. electrons are accelerated by the electric field in the depletion region
- e. the junction gets hot

Q20 The time-averaged energy in a sinusoidal electromagnetic wave is:

- a. overwhelmingly electrical
- b. slightly more electrical than magnetic
- c. equally divided between the electric and magnetic fields
- d. slightly more magnetic than electrical
- e. overwhelmingly magnetic

(Biology)

- Q1. A spike of unisexual flower is found in
A) Amaranthus B) Mulberry C) Wheat D) Bottle brush
- Q2. The role of double fertilization in angiosperms is to produce
A) Endosperm B) Integuments C) Cotyledons D) Endocarp
- Q3. Seeds are called products of sexual reproduction because they
A) Are formed by fusion of gametes B) Give rise to new plants
C) Can be stored for long time D) Are formed by fusion of pollen tubes
- Q4. Progesterone is a
A) Carbohydrate B) Protein C) Steroid D) Sterol
- Q5. Identical twins result from
A) One egg and one sperm B) One egg and two sperms
C) Two eggs and one sperm D) Two eggs and two sperm
- Q6. Which one is exception to Mendel's principle of dominance
A) Wild pea B) Mirabilis C) Garden pea D) Maize
- Q7. Number of chromosomes can increase or decrease due to
A) Mutation B) Genetic repetition C) Nondisjunction D) All of these
- Q8. Teminism is related to
A) Termination of transcription B) Termination of replication
C) Central Dogma reverse D) Gene expression
- Q9. Khorana first deciphered the triplet codons of
A) Serine and isoleucine B) Cysteine and valine
C) Tyrosine and tryptophan D) Phenylalanine and methionine
- Q10. Tryptophan operon is
A) Repressible system B) Inducible system
C) Controlled by regulator gene D) Controlled by three structural genes
- Q11. The human genome project officially began on
A) Oct 1990 B) Oct 1991 C) Oct 1989 D) None
- Q12. Animals of cold countries have shorter ears. This is
A) Allen's law B) Cope's law C) Bergmann's law D) Dollo's law
- Q13. A person has developed interferon in his body. He seems to carry an infection of
A) Tetanus B) Malaria C) Measles D) Typhoid
- Q14. Which organism serves as a biofertilizer
A) Azolla B) E. coli C) Spirogyra D) Cassia
- Q15. Which one of the following is the best source of quantitative protein
A) Wheat B) Maize C) Rice D) Bajra
- Q16. Which is not a cancer causing virus
A) Myxovirus B) Rubeola virus C) SV-40 virus D) All the above
- Q17. Which one of the microorganism is used for production of citric acid in industries
A) Lactobacillus bulgaricus B) Penicillium citrinum
C) Aspergillus niger D) Rhizopus nigricans
- Q18. A phenomenon that becomes harmful due to pollution is
A) Global warming B) Greenhouse effect
C) Ecological balance D) Desertification
- Q19. The first commercially grown genetically modified whole food crop was
A) Brinjal B) Potato C) Tomato D) Soyabean
- Q20. Pedosphere is corresponding to
A) Water B) Air C) Soil D) None

(Economics)

- Q1. Part of the reason that Michael Jordan earns millions of dollars each year while school teachers may earn \$30,000 is because
- a) The supply of superstar basketball players is very low, while the supply of competent teachers is much larger.
- b) Demand for Michael Jordan's talents is very high since he can generate so much revenue

for a firm.

- c) Consumers enjoy basketball to the point that they are willing to spend lots of money and time attending games and watching commercials.
- d) All of the Above

Q2 If a sin tax is placed on sales of alcohol

- a) the demand curve shifts to the left.
- b) the demand curve shifts to the right.
- c) the supply curve shifts to the left.
- d) the supply curve shifts to the right.

Q3 The difference between microeconomics and macroeconomics is that

- a) Microeconomics deals with more specifically defined units, and macroeconomics addresses highly aggregated concepts.
- b) Microeconomics involves mathematical relationships, and macroeconomics is predominantly a verbal analysis.
- c) Microeconomics deals with the principle of scarcity, and macroeconomics deals with the problem of poverty.
- d) Microeconomics deals with highly aggregated markets, and macroeconomics focuses on narrowly defined units

Q4 A subsidy to peanut farmers would have which of the following effects

- a) Increase peanut outputs
- b) Increase the price of peanuts
- c) Cut the price of peanuts
- d) A and B above

Q5 A and C above In 1972 the price of fishmeal increased sharply. Soybeans are a substitute product for fishmeal. Meanwhile, some of the best Arkansas and Louisiana soybean fields were flooded. What would then have happened to the quantity of soybeans sold?

- a) Quantity sold rose
- b) Quantity sold fell
- c) Quantity sold rose, then fell
- d) Quantity sold fell, then rose
- e) Can't tell from supply and demand analysis

Q6 Which of the following effect the demand of commodity

- a) Firm name
- b) Firm cost
- c) Income of consumer
- d) Technology

Q7 Quantity demanded and quantity supplied at equilibrium is equal

- a) True
- b) False
- c) It depend on nature of demand
- d) It depend on nature of equilibrium

Q8 The ----- is the demand curve of all persons participating in the market for that particular product.

- a) Market demand
- b) Market supply
- c) Market demand curve
- d) Market supply curve

Q9 The ----- of a good or service is the amount of the good or service offered for sale at a given price, holding other factors constant.

- a) Quantity demanded
- b) Market demand
- c) Market supply
- d) Quantity supplied

Q10 A ----- is a shift in the entire demand curve because of a change in a factor other than the goods own price.

- a) Change in quantity demanded
- b) Change in quantity supplied
- c) Change in demand
- d) Change in supply

Q11 A ----- is the set of arrangements that a society uses to allocate scarce goods.

- A) World
- b) Economic system
- c) Demand schedule
- d) Supply schedule

Q12 'Ceteris Paribas' means

- a) Very high demand
- b) Low demand
- c) Other thing remain constant
- d) Other thing are variable

Q13 'Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses' this definition is given by _____

- a) K.E. Boulding
- b) Robbins
- c) Karl marx
- d) Pereto

Q14 If there is a fixed factor and variable factor the law should be

- a) Law of variable proportion
- b) Law of increasing return to scale
- c) Law of diminishing marginal utility
- d) Law of equi-marginal utility

Q15 Third stage of production begin when

- a) TP starts falling
- b) TP starts rising
- c) TP remains constant
- d) MP starts falling

Q16 The marginal product is

- a) The extra input obtained from employing an additional unit of a factor
- b) The extra output obtained from employing an additional unit of a factor
- c) The extra profit obtained from employing an additional unit of a factor
- d) The extra loss obtained from employing an additional unit of a factor

Q17 The external dis-economies of scale experienced by a firm include the

- a) Supply of suitable skilled labour in the area (shortage)
- b) Growth of firms processing its waste materials
- c) Development of research Bureau servicing the industry
- d) None of the above

Q18 In the long run

- a) Price is equal to maximum average total cost
- b) Price is greater than average total cost
- c) Price is equal to minimum average total cost
- d) Price is equal to minimum average cost

Q19 A change in factor price means

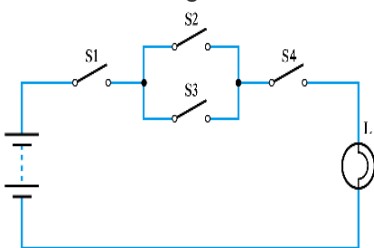
- a) Alter the optional factor proportion
- b) Alter the long run cost curve position
- c) Alter the short run cost curve position
- d) Alter the price level

Q20 The producer is producing 1000 units of a commodity spending Rs 15000 on the whole. He finds the demand increasing. So he produces additional 1000 units spending Rs 27000 on the whole. Now the marginal cost is

- a) Rs 12000
- b) Rs 12
- c) Rs 10
- d) Rs 1000

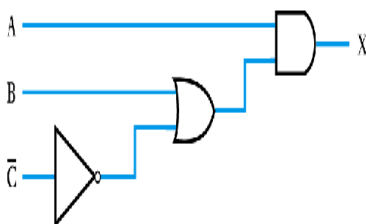
(Computer Science)

Q1 What logic function corresponds to the following arrangement?



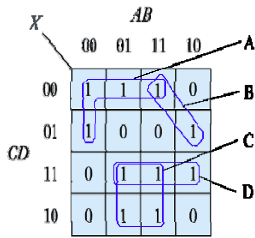
- 1. $L = (S1 \text{ OR } S2) \text{ AND } (S3 \text{ OR } S4)$
- 2. $L = S1 \text{ AND } (S2 \text{ OR } S3) \text{ AND } S4$
- C) $L = (S1 \text{ AND } S2) \text{ OR } (S3 \text{ AND } S4)$
- D) $L = S1 \text{ OR } (S2 \text{ AND } S3) \text{ OR } S4$

Q2 What Boolean expression describes the output X of this arrangement?



- a) $X = (A.B) + C$
- b) $X = A + (B.C)$
- c) $X = A + B + C$
- d) $X = A.(B + C)$

Q3) In the Karnaugh map shown below, which of the loops shown represents a legal grouping?



- a) A (b) B (c) C (d) D
- Q4 Which of the following statement is wrong?
 a) `ss=12.25;` b) `5+5=a;` c) `st='m' * 'b';` d) `is ='A'+10;`
- Q5 What will be the value of 'x' after execution of the following program?

```
# include <iostream.h>
# include <conio.h>
void main()
{
int x=!0*10;
cout<<x;
}

```

 a) 0 b) 1 c) 10 d) None of the above.
- Q6 Which of the following is not a property of constructor
 a) address of constructor cannot be copied
 b) an object of class with a constructor cannot be a member a union
 c) constructor cannot be inherited
 d) all of the above
- Q7 When the same constructor with different number and types of argument initialize an object with valid and initial value, then it is
 a) overloaded constructor b) static constructor
 c) dynamic constructor d) all of these
- Q8 Two main measures for the efficiency of an algorithm are
 a. Processor and memory b. Complexity and capacity
 c. Time and space d. Data and space
- Q9 The Worst case occur in linear search algorithm when
 a. Item is somewhere in the middle of the array
 b. Item is not in the array at all
 c. Item is the last element in the array
 d. Item is the last element in the array or is not there at all
- Q10 The Average case occur in linear search algorithm
 a. When Item is somewhere in the middle of the array
 b. When Item is not in the array at all.
 c. When Item is the last element in the array
 d. When Item is the last element in the array or is not there at all
- Q11 1. _____ operation can be visualized as a horizontal partition of the relation into two set of tuples.
 a) JOIN b) PARTITION c) SELECT d) PROJECT
- Q12 The JOIN operation where we keep all the tuples in relation R, or all those in relation S, or all those in both relations regardless of whether or not they have matching tuples is called _____ join.
 a) outer b) external c) inner d) related
- Q13 With SQL, how can you return all the records from a table named "Persons" sorted descending by "FirstName"?
 a) `SELECT * FROM Persons SORT 'FirstName' DESC`
 b) `SELECT * FROM Persons ORDER BY FirstName DESC`
 c) `SELECT * FROM Persons ORDER FirstName DESC`
 d) `SELECT * FROM Persons SORT BY 'FirstName' DESC`
- Q14 _____ operation can be visualized as a horizontal partition of the relation into two set of tuples.
 a) JOIN b) PARTITION c) SELECT d) PROJECT
- Q15 The JOIN operation where we keep all the tuples in relation R, or all those in relation S, or all those in both relations regardless of whether or not they have matching tuples is called _____ join.

- a) outer b) external c) inner d) related
- Q16 With SQL, how can you return all the records from a table named "Persons" sorted descending by "FirstName"?
- a) SELECT * FROM Persons SORT 'FirstName' DESC
 b) SELECT * FROM Persons ORDER BY FirstName DESC
 c) SELECT * FROM Persons ORDER FirstName DESC
 d) SELECT * FROM Persons SORT BY 'FirstName' DESC
- Q17 Choose the correct statement.
- a) Use of goto statement enhances the logical clarity of a code.
 b) Use of goto makes the debugging task easier.
 c) Use goto when you want to jump out of nested loop.
 d) Never use goto
- Q18 which of the following are true regardless of implementation?
- a) Sizeof(int) is not less than sizeof(long) b) Sizeof(short) equals sizeof(int)
 c) Sizeof(int) equals sizeof(unsigned) d) Sizeof(double) is less than sizeof(float)
- Q19 A function abc is defined as
 Void abc(int x=0, int y=0)
 {
 Cout<< x << y;
 }
 Which of the following function calls is/are illegal? (Assume h,g are declared as integers)
- a) abc() b) abc(h) c) abc(h,h) d) None of the above
- Q20 The following C++ code results in
 #include<iostream.h>
 Void main(main)
 {
 Cout<< (int i=5) << (int i=6);
 }
 a) Compilation error b) Run time error
 c) Link time error d) None of the above

(Political Science)

- Q1 Who is called the architect of Indian constitution?
 (a) Dr. Rajender Prasad (b) Dr. Sachidanand Sinha
 (c) Jawahar Lal Nehru (d) Dr. B. R. Ambedkar
- Q2 The constitution of India was implemented on:
 (a) January 26, 1949 (b) January 26, 1950
 (c) November 26, 1949 (d) August 15, 1947
- Q3 The words, Socialist, secular, Integrity were inserted in Indian Constitution in year.
 (a) 1950 (b) 1966 (c) 1976 (d) 1978
- Q4 How many types of emergencies are provided under Indian Constitution?
 (a) 2 (b) 3 (c) 4 (d) 5
- Q5 Presently how many fundamental rights are their in Indian Constitution?
 (a) 5 (b) 6 (c) 7 (d) 8
- Q6 The total number of members of Lok Sabha is:
 (a) 250 (b) 500 (c) 550 (d) 545
- Q7 In Panchayati Raj Institutions the recent percentage of reservation for women is:
 (a) 30% (b) 33% (c) 50% (d) 55%
- Q8 Who is the chief election Commissioner of India?
 (a) B.B. Tondon (b) Naveen Chawla (c) M.S. Gill (d) M. Krishnamurthi
- Q9 In India we have type of citizenship:
 (a) Dual (b) Single (c) Both (d) State
- Q10 How many members are nominated by Indian President in Lok Sabha?:
 (a) 2 (b) 3 (c) 10 (d) 12
- Q11 Which party system is working in India?
 (a) Single Party (b) Bi-Party (c) Multy party (d) None of these
- Q12 UPA stands for:
 (a) Union Police Authority (b) United Progressive Alliance

- (c) United Political Alliance (d) United Political Agency
- Q13 European Union has its total membership:
(a) 15 (b) 20 (c) 25 (d) 30
- Q14 The best example of Single party system in world is :
(a) USA (b) UK (c) India (d) China
- Q15 The office of Punjab Public Service Commission is situated in:
(a) Patiala (b) Chandigarh (c) Jalandhar (d) Mohali
- Q16 Who is the first citizen of India?
(a) Prime Minister (b) Chief Justice of Supreme Court
(c) President (d) Speaker of Lok Sabha
- Q17 Which of following is not the fundamental right:
(a) Right of Equality (b) Right of Freedom
(c) Right of Education (d) Right of Food
- Q18 Who is the deputy chairperson of Rajya Sabha:
(a) M. Hamid Ansari (b) K. Rahman Khan
(c) Charanjit S. Dhillon (d) Najma Heptula
- Q19 Who is the foreign minister of India:
(a) P. Chiddambaram (b) A.K. Antony (c) Pranav Mukherjee (d) S.M. Krishna
- Q20 Money bill can be introduced only in:
(a) Lok Sabha (b) Rajya Sabha (c) Joint meeting (d) Any House

(Physical Education)

- Q1 R.E Morgan and G.T Adamson are associated with.
a. Circuit training b. Pace run c. Iso-kinetic d. Non of these
- Q2 Vo₂ max. is associated with.
a. Recovery b. Cardio-Vascular Endurance c. Vital capacity d. Strength endurance
- Q3 Volume of oxygen consumed in the post exercise phase.
a. VO₂ max b. Oxygen debt c. Tidal Volume d. Vital capacity
- Q4 Endurance is concerned with
a. Slow twitch b. Fast twitch c. white muscle fiber d. Non of these
- Q5 In isotonic contraction development of strength is not systematic because of
a. Angle of pull b. Red muscle fiber c. Joint structure d. white muscle fiber
- Q6 Tension develops without changing the length of the muscles.
a. Iso-metric b. Iso-kinetic c. Iso-tonic d. Non of these
- Q7 Electro-magnetic and Hydraulic machines are used in.
a. Iso-metric b. Iso-kinetic c. Iso-tonic d. Non of these
- Q8 Which of the following is an example of resistance of own body.
a. Wrestling b. Rowing c. Running d. Weight training
- Q9 Fartlek training is associated with
a. Endurance b. Speed c. Strength d. Flexibility
- Q10 In prolonged exercises fatigue occurs due to
a. Lactic acid b. Sweating c. Increased heart rate d. Stitch
- Q11 Acceleration Run Method is used for the development of
a. Endurance b. Speed c. Strength d. Flexibility
- Q12 Percentage of White Muscle Fiber enhances
a. Endurance b. Speed c. Strength d. Flexibility
- Q13 IAAF is associated with
a. Athletics b. Archery c. Arm wrestling d. Non of these
- Q14 United Nations head quarter is situated at
a. Geneva b. New York c. Tokyo d. Paris
- Q15 FINA is associated with
a. Swimming b. Football c. Athletics d. Hockey
- Q16 Pan Hellenic National Festival is associated with

- a. Olympic Games b. Asian Games c. Common wealth Games d. SAARC Games
- Q17 Exercise done in the presence of oxygen is called
 a. Aerobic b. Anaerobic c. so-metric d. Iso-kinetic
- Q18 What was the heart rate of five time Wimbledon champion Bjorn Borg?
 a. 72 b. 56 c. 45 d. 38
- Q19 The amount of blood pushed out of the Left Ventricle into the Aorta in one spurt is called?
 a. Stroke volume b. Vital Capacity c. Tidal Volume d. Pulse pressure
- Q20 Sprain is an injury to the.
 a. Ligament b. Muscle fiber c. Tendon d. Bone

(Aptitude)

- Q1) When $x - 1/x = 5$, find the value of $x^2 + 1/x^2$
 (A) 9 (B) 27 (C) 81 (D) 7 (E) 15
- Q2) $22\frac{1}{2}\%$ of a number is 45, what percent of that number is 90/
 (A) 25% (B) 65% (C) 30% (D) 45%
- Q3) At what time will the train reach city X from city Y?
 I. The train crosses another train of equal length of 200 metres and running in opposite directions in 15 seconds.
 II. The train leaves city Y and 7.15 a.m. for city X situated at a distance of 558 km.
 III. The 200 metres long train crosses a signal pole in 10 seconds.
 A. I only B. II only C. III only D. I or III only
 E. All I, II and III are required.
- Q4) The present ages of three persons in proportions 4 : 7 : 9. Eight years ago, the sum of their ages was 56. Find their present ages (in years).
 A. 8, 20, 28 B. 16, 28, 36 C. 20, 35, 45 D. None of these
- Q5) On selling an article for Rs. 240, a trader loses 4%. In order to gain 10%, he must sell that article for:
 (A) Rs 264 (B) Rs 273.20 (C) Rs 275 (D) Rs 280
- Q6) How many like tennis only and not cricket?
 (A) 35 (B) 25 (C) 30 (D) 20 (E) 15
- Q7) The ratio between the length and the breadth of a rectangular park is 3 : 2. If a man cycling along the boundary of the park at the speed of 12 km/hr completes one round in 8 minutes, then the area of the park (in sq. m) is:
 (A) 15360 (B) 153600 (C) 30720 (D) 307200
- Q8) In 100 m race, A covers the distance in 36 seconds and B in 45 seconds. In this race A beats B by:
 (A) 20 m (B) 25 m (C) 22.5 m (D) 9 m
- Q9) Write the " Odd one out " out of the following:
 (A) Chair (B) Sofa Set (C) Carpet (D) Bench (E) Stool
- Q10) If + means \div , \div means $-$, $-$ means \times and \times means $+$, then—
 $64 + 8 \div 6 - 4 \times 2 = ?$
 (A) 34 (B) 16 (C) -14 (D) 24 (E) None of these