29.10.19 Special Test – Economics Time: 1 Hr

STD: XII (H-J) Marks: 45

I. Choose the correct answer: 10x1=10

1. M.N.Roy was associated with _____.

   a) Congress plan   b) People's plan   c) Bombay plan

2. The chair person of NITI Aayog is _____.

   a) President   b) Prime Minister   c) Finance Minister

3. Sarvodaya plan was advocated by _____.

   a) J.P.Narayan   b) M.N.Roy   c) S.N.Agarwal

4. Long term plan is also known as _____.

   a) Progressive plan b) Perspective plan c) Non-perspective plan

5. Economic growth measures the _____.

   a) Increase in output   b) Growth of productivity

   c) Increase in nominal income

6. Planning Commission was set up in the year _____.

   a) 1951   b) 1947   c) 1950

7. The non-economic determinant of economic development is ___

   a) Natural resources   b) Capital formation

   c) Human resources

8. NITI Aayog is formed through _____.

   a) Presidential ordinance   b) Cabinet resolution

   c) None of the above

9. "Redistribution with Growth" became popular slogaer in which

   approach?

   a) Industrial approach   b) New welfare oriented approach

   c) Industrial approach

10. Which of the following country adopts indicative planning?

    a) Germany   b) France   c) Russia

II. Answer any 10 of the following: 10x3=30

11. What are the functions of NITI Aayog?

12. Define economic planning.

13. How would you break the vicious circle of poverty?

14. Distinguish between economic growth and development.

15. Describe the case for planning.

16. Distinguish between functional and structural planning.

17. Mention the indicators of development.

18. What is GNP?

19. Write a short note on NITI Aayog.

20. Define economic development.

21. What are the non-economic factors determining development?

III. Answer the following: 1x5=5

22. Describe different types of planning (Any 5)

29.10.19   Special Test – Chemistry   Time: 1 Hr

STD: XII (A-C)   Marks: 45

I. Choose the correct answer: 10x1=10

1. Which one of the following is not produced by body?
     a) DNA   b) Enzymes   c) Hormones   d) Vitamins

2. The central dogma of molecular genetic states that the genetic information flows from _____.
     a) Aminoacids → Proteins → DNA
     b) DNA → Carbohydrates → Proteins
     c) DNA → RNA → Proteins
     d) DNA → RNA → Carbohydrates

3. Insulin, a hormone chemically is _____.
     a) Fat   b) Steroid   c) Protein   d) Carbohydrates

4. Name the base present only in RNA.
     a) Adenine   b) Guanine   c) Uracil   d) Thymine

5. Match List-I with List-II

List-I	List-II	A	B	C	D
A. Vitamins	i) Stores metals such as iron	a) (iv) (iii) (i) (ii)			
B. Lipids	ii) Instant source of energy	b) (iv) (iii) (ii) (i)			
C. Proteins	iii) Normal growth and maintenance of health	c) (iii) (i) (ii) (iv)			
D. Carbohydrates	iv) Structural integrity	d) (iii) (iv) (i) (ii)			

6. Pick the strongest conjugate base among the following.
     a) Cl^- b) NO_2^- c) SO_4^{2-} d) CH_3COO^-

7. What is the decreasing order of strength of bases?
     OH^-, NH_2^-, H-C≡C and CH_3-H_2^-
     a) $OH^- > NH_2^- > H-C≡ C^- > CH_3\text{-}CH_2^-$
     b) $NH_2^- > OH^- > CH_3\text{-}CH_2^- > H\text{-}C≡C$
     c) $CH_3\text{-} CH_2 > NH_2^- > H\text{-}C≡ CH_2^- > NH_2^-$
     d) $OH^- > H\text{-}C≡ C^- > CH\text{-} CH_2^- > NH_2^-$

8. Which of the following can act as Lowery-Bronsted acid well as base?
     a) Hcl   b) SO_4^{2-} c) HPO_4^{2-} d) Br^-

9. Pick out the incorrect statement regarding Lewis acids and bases.
     a) A Lewis acid is a electron deficient molecule
     b) Lewis base is one which donates an electron pair
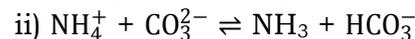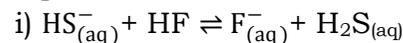   c) Lewis base is a cation   d) Both a and c

10. According to _____ concept, BF_3 acts as a acid.
     a) Bronsted   b) Arrhenius   c) Lewis   d) None of the above

II. Answer any 5 of the following: 5x3=15

11. What are Lewis acids and bases? Give two examples each.

12. Identify the acid-base pair for the following reaction in aqueous solution.
     i) $HS^-_{(aq)} + HF \rightleftharpoons F^-_{(aq)} + H_2S_{(aq)}$
     ii) $NH_4^+ + CO_3^{2-} \rightleftharpoons NH_3 + HCO_3^-$

13. Differentiate between nucleosides and nucleotides.

14. Draw the structure of: a) Adenine   b) Uracil

15. Write the classification of vitamins.

16. Differentiate between DNA and RNA.

III. Answer any 4 of the following: 4x5=20

17. Describe double strand helix structure of DNA.   (5M)

18. a) Draw the structure of deoxy ribose sugar.   (2M)
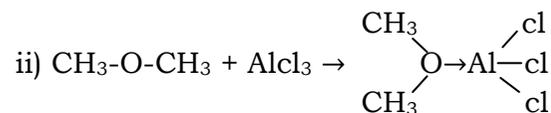   b) Describe the method of DNA finger printing.   (3M)

19. BF_3 is termed as an acid though it does not contain H^+ ions. Explain.   (5M)

20. a) What is auto ionisation of water?   (2M)
     b) Write the Limitations of Arrhenius concept.   (3M)

21. a) Explain Lowry-Bronsted Theory.   (3M)
     b) Identify the Lewis acid and the base in the following reaction.   (2M)
      i) $CaO + CO_2 → CaCO_3$
      ii) $CH_3\text{-}O\text{-}CH_3 + Alcl_3 →$

$$\begin{array}{c} CH_3 \\ \diagdown \\ O→Al\text{—}cl \\ \diagup \quad \diagdown \\ CH_3 \quad\quad cl \end{array} \quad cl$$

29.10.19   Special Test – Physics   Time: 1 Hr

STD: XII (D,E)   Marks: 45

I. Choose the correct answer: 9x1=9

1. A ray of light strikes a glass plate at an angle 60^0. If the reflected and refracted rays are perpendicular to each other, the refractive index of the glass is _____.

     a) $\sqrt{3}$ b) $\frac{3}{2}$ c) $\frac{\sqrt{3}}{2}$ d) 2

2. A plane glass is placed over a various coloured letters (violet, green, yellow, red). The letter which appears to be raised more is _____.

     a) red   b) yellow   c) green   d) violet

3. When light is incident on a soap film of thickness 5×10^{-5}cm, the wavelength of light reflected maximum in the visible region is 5320 A^0. A refractive index of the film will be _____.

     a) 1.22   b) 1.33   c) 1.51   d) 1.83

4. If the velocity and wavelength of light in air is V_a and λ_a and that in water is V_w and λ_w then the refractive index of water is

     a) $\frac{V_w}{V_a}$ b) $\frac{V_a}{V_w}$ c) $\frac{\lambda_w}{\lambda_a}$ d) $\frac{V_a\lambda_a}{V_w\lambda_w}$

5. The speed of light in an isotropic medium depends on _____.

     a) its intensity   b) its wavelength

     c) the nature of propragation

     d) the motion of the source with respect to medium

6. An object is placed infront of a convex mirror of focal length of f and the maximum and minimum distance of an object from the mirror such that the image formed is real and magnified

     a) 2f and c   b) c and α c) f and o   d) None

7. An air bubble in glass slab of refractive index 1.5 (near normal incidence) is 5cm deep when viewed from the opposite face. The thickness of the slab is _____.

     a) 8 cm   b) 10 cm   c) 12 cm   d) 16 cm

8. Light transmitted by Nicol prism is _____.

     a) partially polarised   b) unpolarised

     c) plane polarised   d) elliptically polarised

9. First diffraction minimum due to a single set of width 1.0×10^{-5}cm is at 30^0. Then wavelength of light used is, _____.

     a) 400 A^0 b) 500 A^0 c) 600 A^0 d) 700 A^0

II. Answer any 4 of the following: 4x2=8

10. Write the cartesian sign convention in spherical mirror.

11. Define optical path.

12. What are the characteristics of refraction?

13. Define Huygen's principle.

14. Define critical and total internal reflection.

15. Difference between polarised and unpolarised light.

III. Answer any 4 of the following: 4x4=16

16. Write a short note on Malu's law.

17. Explain Brewster's law with diagram.

18. Mention any 6 uses of polaroids.

19. A monochromatic light of wavelength of 500nm strikes a grating and produces fourth order bright line at an angle of 30^0. Find the number of slits per centimeter.

20. Explain the proof for laws of reflection using Huygen's principle.

21. Derive an expression for the radius of illumination using Snell's window.

IV. Answer any 2 of the following: 2x6=12

22. Derive an expression for the acceptance angle in optical fibre.

23. Derive an equation for refraction at a single spherical surface.

24. Derive an expression for Lens maker's formula and Lens equation.

29.10.19   Special Test – Commerce   Time: 1 Hr

STD: XII (F,G)   Marks: 45

I. Choose the correct answer: 10x1=10

1. The Chairman of the district forum is _____.

     a) District judge   b) High Court judge

     c) Supreme Court judge

2. The International Organisation of Consumers Unions was first

   established in _____.

     a) 1965   b) 1960   c) 1987

3. Complaints can also be filed by the _____.

     a) Central and State Govrnment   b) A group of consumers

     c) Both (a) and (b)

4. A consumer has to be protected against _____.

     a) Defect and defencies of product

     b) Unfair and restrictive trade practices   c) All the above

5. The _____ of a state consumer protection council is judge of

   a High Court.

     a) Chairman   b) Member   c) None of the above

6. The National Consumer Disputes Redressal Commission at the

   apex is situated _____.

     a) New Delhi   b) Bombay   c) Chennai

7. Members of state consumer protection council should not

   exceed _____.

     a) 10   b) 5   c) 7

8. Formal written complaint of employees is called _____.

     a) Grievance Arbitration   b) Employee ownership

     c) Grievance

9. The State Commission may reverse or confirm the orders

   passed by the _____.

     a) District forum   b) Central Commission

     c) National Commission

10. Expand CWF.

II. Answer any 5 of the following: 5x2=10

11. How to register the complaints?

12. What do you meant by Redressal Mechanism.

13. Explain District Forum.

14. What do you know about National Commission?

15. Explain the meaning of the term State Commission.

16. Explain the appellate forum of State Commission.

III. Answer any 5 of the following: 5x3=15

17. Write a note on the voluntary consumer organisation.

18. Write the Gandhiji Quotes about customer.

19. Who are the members of the national commission?

20. What is the pecuniary jurisdiction of the state commission?

21. Does District forum exceeds the claim limit of Rs.20 lakhs?

     Explain the condition.

22. Is consumer protection necessary?

IV. Answer the following: 2x5=10

23. What are the functions of the National Commission?

24. Explain the functions of District forum.