

## **EAST POINT SCHOOL ASSIGNMENT**

### **COMMERCE DEPARTMENT**

- ACCOUNTANCY <https://youtu.be/MWFhPaFv6qI>
- BUSINESS STUDIES <https://www.youtube.com/watch?v=f7H-9ijsG6Q>
- ECONOMICS <https://youtu.be/s2GUH6p8rSA>

### **SCIENCE DEPARTMENT**

- CHEMISTRY <https://youtu.be/SGMN2a4adFw>
- PHYSICS [https://www.youtube.com/watch?v=sjup-nRrdwI&list=PLCWm8jBxm8LL8-HBIptepk9h8RGXnMRke&ab\\_channel=sachinsirphysics](https://www.youtube.com/watch?v=sjup-nRrdwI&list=PLCWm8jBxm8LL8-HBIptepk9h8RGXnMRke&ab_channel=sachinsirphysics)

### **HUMANITIES DEPARTMENT**

- LEGAL STUDIES <https://youtu.be/yJBosrSF7iE>
- PSYCHOLOGY <https://youtu.be/tubj25R-Yok>
- GEOGRAPHY <https://youtu.be/-WZ4eu2rqUU>
- HISTORY <https://youtu.be/gjNv7KxhSIE>

**ENGLISH** <https://www.youtube.com/watch?v=3zJQoQLCeNo>

### **OPTIONAL-II**

- HINDI <https://youtu.be/X5kVYaqBwFs>

### **ENGLISH**

#### **ENEMY BY PEARL S. BUCK**

1. There are moments in life when we have to make hard choices between our roles as private individuals and as citizens with a sense of national loyalty? Discuss with reference to the story you have just read.
2. Dr Sadao was compelled by his duty as a doctor to help the enemy soldier. What made Hana, his wife, sympathetic to him in the face of open defiance from the domestic staff?
3. Do you think the doctor's final solution to the problem was the best possible one in the circumstances?
4. Why had Hana to wash the wounded man herself?
5. In what context does Hana remember General Takima? What does she infer?
6. Comment on Dr Sadao's attitude to the white man in the light of the following:
  - (i) "Sadao took up his wrist, hating the touch of it."
  - (ii) "But certainly I do not want this man to live."
  - (iii) "This man will live in spite of all."
7. How did Hana react when she saw a messenger at the door in official uniform?
8. What plan did the old General suggest for getting rid of the 'man'?
9. How was the plan of the prisoner's escape executed?
10. "I wonder why I could not kill him?" What makes Dr Sadao think so?

## MATHEMATICS

### Topic: Relation and function

1. A Relation is said to be Reflexive if ----- every  $a \in A$  where  $A$  is non empty set. [1]
2. A Relation is said to be Symmetric if -----  $\forall a, b \in A$  [1]
3. A Relation is said to be Transitive if -----  $(a, c) \in R, \forall a, b, c \in A$  [1]
4. Define universal relation? Give example. [1]
5. What is trivial relation? [1]
6. Let  $T$  be the set of all triangles in a plane with  $R$  a relation in  $T$  given by  
 $R = \{(T_1, T_2) : T_1 \text{ is congruent to } T_2\}$ .  
Show that  $R$  is an equivalence relation. [4]
7. Show that the relation  $R$  in the set  $Z$  of integers given by  
 $R = \{(a, b) : 2 \text{ divides } a-b\}$ . [4]
8. Let  $L$  be the set of all lines in plane and  $R$  be the relation in  $L$  define if  
 $R = \{(L_1, L_2) : L_1 \text{ is } \perp \text{ to } L_2\}$ .  
Show that  $R$  is symmetric but neither reflexive nor transitive. [4]
9. Check whether the relation  $R$  defined in the set  $\{1, 2, 3, 4, 5, 6\}$  as  
 $R = \{(a, b) : b = a+1\}$  is reflexive, symmetric or transitive. [4]
10. Let  $L$  be the set of all lines in  $XY$  plane and  $R$  be the relation in  $L$  define as  
 $R = \{(L_1, L_2) : L_1 \parallel L_2\}$   
Show then  $R$  is on equivalence relation.  
Find the set of all lines related to the line  $Y=2x+4$ . [4]

---

## ACCOUNTANCY

### *(Liquidity Ratios)*

1. A Business has a Current Ratio of 3:1. Its net working capital is Rs.4,00,000 and its stock is valued at Rs. 2,50,000. Calculate Liquid Ratio.
2. Current Liabilities of a company are Rs.1,20,000. Its Current Ratio is 3.00 and Liquid Ratio is 0.90. Calculate the value of current liabilities, liquid assets and inventory.
3. Vinod Limited has a current ratio of 3.5:1 and quick ratio of 1.5:1. If the excess of current assets over quick assets as represented by stock is Rs.60,000. Calculate Current Assets and Current Liabilities.
4. The Current Ratio of a company is 2:1. State which of the following would improve, reduce, or not change the ratio:
  - (i) Repayment of a Current Liability
  - (ii) Purchasing goods on credit
  - (iii) Sale of office equipment for Rs.4,000 (Book Value Rs.5,000)
  - (iv) Sale of goods Rs.11,000 (Cost Rs.10,000)
  - (v) Payment of Dividend
  - (vi) Redemption of Debentures at a premium
5. A firm has Current Ratio of 4:1 and Quick Ratio of 2.5:1. Assuming inventories are Rs.22,500. Find out the total current assets and total current liabilities.
6. Vinod Limited has a Current Ratio of 3:1. If its stock is Rs.40,000 and total current liabilities are Rs.75,000. Find out its Quick Ratio.

**(Solvency Ratios)**

1. Assuming that the Debt Equity Ratio is 2. State giving reasons whether this ratio would increase, decrease or remain unchanged in the following cases:
  - (i) Purchaed of fixed asset on a credit of 2 months
  - (ii) Purchased of fixed asset on a long term deferred payment basis
  - (iii) Issue of new shares for cash
  - (iv) Issue of bonus shares
  - (v) Sale of fixed asset at a loss of Rs.3,000
  - (vi) Cash Received from Debtors
  - (vii) Redemption of Debentures
  - (viii) Purchased Goods on credit
  
2. Calculate (i) Debt Equity Ratio, (ii) Total Assets to Debt Ratio and (iii) Proprietary Ratio from the following:
  1. Long Term Borrowings..... Rs.1,00,000
  2. Long Term Provisions..... Rs.50,000
  3. Non-Current Assets..... Rs.1,80,000
  4. Current Assets..... Rs.45,000
  5. Current Liabilities..... Rs.25,000
  
3. Calculate Debt Equity Ratio and Proprietary Ratio from the following data:
  1. Equity Share Capital..... Rs.75,000
  2. Reserve and Surplus..... Rs.20,000
  3. Debentures..... Rs.40,000
  4. Loan from HDFC Bank..... Rs.30,000
  5. Current Liabilities..... Rs.15,000
  6. Fixed Tangible Assets..... Rs.82,000
  7. Goodwill..... Rs.48,000
  8. Current Assets..... Rs.50,000

**(Activity or Turnover Ratio)**

1. From the given information, Calculate the Inventory Turnover Ratio: Sales Rs.3,00,000; Gross profit 25% on cost; Opening stock was 1/3rd of the value of the closing stock. Closing stock was 30% of sales.
2. Rs.2,00,000 is the cost of goods sold, inventory turnover 8 times; stock at the beginning is 1.5 times more than the stock at the end. Calculate the values of opening and closing stock.
  
3. From the following information, determine the opening and closing stock:
  - Stock Turnover Ratio ..... 4 Times
  - Total Sales..... Rs.3,00,000
  - Rate of Gross Profit on Sales..... 20%
  - Closing stock is more by Rs.6,000 than the opening stock.
  
4. Revenue from operations (*Net Credit Sales*) of Vinod Limited during the year were Rs.1,80,000. If debtors turnover ratio is 4 times, calculate debtors in the beginning and at the end of the year. You are informed that closing debtors are two times in comparison to opening debtors.

## **BUSINESS STUDIES**

Q1. Google Inc. is an American multinational corporation that is best known for running one of the largest search engines on the World Wide Web (WWW). Every day, 200 million people use it. Google was named the 2014 “Best Company to Work For” by the Great Place to Work Institute and Fortune Magazine. The organization topped the list for the fifth time. The company hosts employee forums on all Fridays where there is an examination of the 20 most asked questions. Moreover, its employees can make use of any of a number of channels of expression to communicate their ideas and thoughts. Channels include Google+ conversations, a wide variety of surveys, Fixits (24 hour sprints wholly dedicated to fixing a specific problem) and even direct emails to any of the Google leaders.

In the above context:

1. Identify the type of communication barrier being overcome by Google Inc. by providing a number of channels of expression to their employees to communicate their ideas and thoughts.
2. Briefly explain any two other types of communication barriers.

Q2. Nikhil runs a small dhabba on the Jaipur highway. He is very rigid and follows a strict policy of punishment like cutting the salary, stopping increments or giving job termination threats to his workers for any kind of discrepancies in their work. He does not seek advice or opinions from his workers, as he does not have any confidence in the competence of his workers. Also, the workers are not willing to offer useful suggestions as they do not expect any motivation or incentive for taking such initiatives. As a result, the labour turnover is high and his business has been adversely affected. In the above context:

1. Name and explain the style of leadership adopted by Nikhil.
2. Identify the various human needs of workers that are being overlooked by Nikhil as per the Maslow’s need hierarchy theory of motivation.
3. Identify the type of communication barrier created by Nikhil due to which the workers suppress their need to communicate with him.

Q3. Priyank works as a banquet manager in a hotel. He feels highly motivated at his job because the work that is assigned to him frequently involves variety of challenges. He is given more autonomy and responsibility and provided with ample opportunities for personal growth and a meaningful work experience. In context of the above case:

1. Define the term ‘**motivation**’.
2. What are the measures used to motivate the employees to improve performance known as? Give its classification.
3. Identify the type of non-financial incentive being offered to Priyank.

Q4. Yash has set up a small scale manufacturing unit for making different varieties of low cost detergents. In order to market his product he has employed a team of five salesmen. Each salesman has been assigned specific areas in the city. He holds a meeting every month for determining the objectives to be achieved during the coming month. A sales target is pre-determined for each month which is mutually agreed by both Yash and his sales team. If the salesmen succeeds in reaching this target a bonus is paid out to all of them along with the monthly salary. In context of the above case:

1. What style of leadership is adopted by Yash? Explain by quoting lines from the para.
2. Name the type of non-financial incentive being offered to the salesmen by seeking their involvement in deciding the monthly targets of the firm.

## **ECONOMICS**

1. If APS is 0.9, how much will be the APC?  
(a) 0.2 (b) 0.5  
(c) 1 (d) 0.1
2. If MPC is 0.6, what will be the MPS?  
(a) 0.2 (b) 0.4  
(c) 0.9 (d) 0.5
3. If disposable income is? 1000 and consumption expenditure is? 750, the value of average propensity to save will be———.   
(a) 0.25 (b) 0.9  
(c) 0.85 (d) 0.2
4. If the saving function is  $S = -50 + 0.2Y$ , then the MPC is  
(a) 0.45 (b) 0.8  
(c) 0.65 (d) 0.25
5. There is parametric shift in the consumption line when———.   
(a) slope changes  
(b) intercept changes  
(c) APC changes  
(d) none of them
6. Guideline is the alternative name of———.   
(a) aggregate demand  
(b) aggregate supply  
(c) MPC (d) APS
7. What is the value of MPC when  $MPS = 0$ ?  
(a) 0 (b) 4  
(c) 3 (d) 1
8. If MPS is one, how much is MPC?  
(a) 3 (b) 2  
(c) 0 (d) 1

## **BIOLOGY**

### **Chp-Microbes in human welfare**

1. Match the following list of bacteria and their commercially important products.

<b>Bacterium</b>	<b>Product</b>
(i) <i>Aspergillus niger</i>	(A) Lactic acid
(ii) <i>Acetobacter aceti</i>	(B) Butyric acid
(iii) <i>Clostridium butylicum</i>	(C) Acetic acid
(iv) <i>Lactobacillus</i>	(D) Citric acid

Choose the correct match:

- (a) i—B, ii—C, iii—D, iv—A (b) i—B, ii—D, iii—C, iv—A  
(c) i—D, ii—C, iii—B, iv—A (d) i—D, ii—A, iii—C, iv—B-1
2. What would happen if oxygen availability to activated sludge flocs is reduced?  
(a) It will slow down the rate of degradation of organic matter.  
(b) The center of flocs will become anoxic, which would cause death of bacteria and eventually breakage of flocs.  
(c) Flocs would increase in size as anaerobic bacteria would grow around flocs.  
(d) Protozoa would grow in large numbers.-1

3. What for Nucleopolyhydro viruses are being used now-a-days?-1
4. Why is aerobic degradation more important than anaerobic degradation for the treatment of large volumes of waste waters rich in organic matter? Discuss.-5
5. Why are flocs important in biological treatment of waste water?3

**6. How does primary sludge differ from activated sludge**

**7. Explain various stages in anaerobic digestion during biogas formation**

The domestic sewage in large cities

- (a) Has a high BOD as it contains both aerobic and bacteria
- (b) Is processed by aerobic and then anaerobic bacteria in the secondary treatment in Sewage Treatment Plants (STPs).
- (c) When treated in STPs does not really require the creation step as the sewage contains adequate oxygen.
8. (d) Has very high amounts of suspended solids and dissolved salts

Find out the name of the microbes from which Cyclosporin A (an immunosuppressive drug) and Statins (blood cholesterol lowering agents) are obtained.

9.

## **CHEMISTRY**

### **Topic:- Isomerism in coordination compounds**

1. Define – Isomerism. [1]
2. What is geometric isomerism? When can a compound show. [2]
  - (1) Cis - Trans isomerism
  - (2) Fac and Mer isomerism.
3. How do optical isomer differ from each other? [1]
4. Make the cis and trans forms of the complex [2]  
 $[CrCl_2(en)_2]^+$ . Which one of these will be optically active?
5. Which isomerism is shown by a compound having ambidentate ligand? Give example. [2]
6. What is ionization isomerism? Give an example. [1]
7. How do solvate isomers differ from each other? [1]
8. Draw the geometrical isomers of  $[Cr(NH_3)_2(CN)_4]^-$ ? [1]
9. Indicate the types of isomerisms shown by the complex –  $K[Fe(H_2O)_2(en)_2Cl_2]$ ? [1]
10. Give an example of coordination isomerism? [1]

## PHYSICS CHAPTER 9<sup>TH</sup> Ray Optics

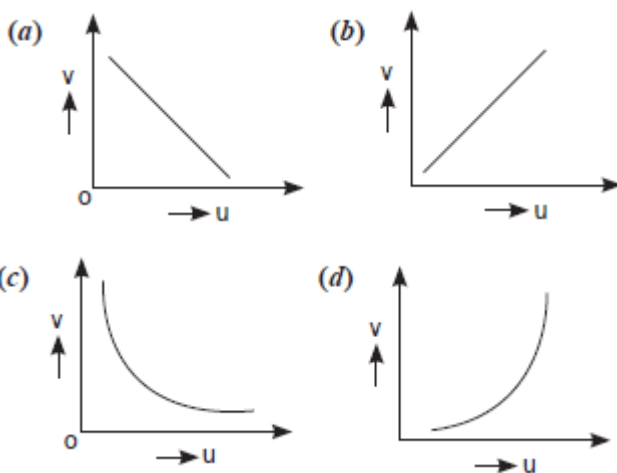
- 1 A converging lens is used to form an image on a screen. When the upper half of the lens is covered by an opaque screen.
- (a) half the image will disappear. 1
  - (b) incomplete image will be formed.
  - (c) intensity of image will decrease but complete image is formed.
  - (d) intensity of image will increase but image is not distinct.
- 2 In optical fibres, the refractive index of the core is (a) greater than that of the cladding. (b) equal to that of the cladding. (c) Smaller than that of the cladding. (d) Independent of that of cladding. 1
- 3 An object is placed at a distance of 0.5 m in front of a plane mirror. The distance between object and image will be 1
- (a) 0.25 m (b) 0.5 m
  - (c) 1.0 m (d) 2.0 m
- 4 Air bubble in water behaves as 1
- (a) sometimes concave, sometimes convex lens
  - (b) concave lens
  - (c) convex lens
  - (d) always refracting surface
- 5 We combine two lenses, one is convex and other is concave having focal lengths  $f_1$  and  $f_2$  and their combined focal length is  $F$ . Combination of the lenses will behave like concave lens, if 1
- (a)  $f_1 > f_2$  (b)  $f_1 = f_2$
  - (c)  $f_1 < f_2$  (d)  $f_1 \leq f_2$
- 6 The length of an astronomical telescope for normal vision (relaxed eye) will be (a)  $f_o - f_e$  1
- (b)  $\frac{f_o}{f_e}$
  - (c)  $f_o \times f_e$  (d)  $f_o + f_e$
- 7 The focal length of a biconvex lens of radii of each surface 50 cm and refractive index 1.5, is 1
- (a) 40.4 cm (b) 75 cm
  - (c) 50 cm (d) 80 cm
- 8 A metal coin is at bottom of a beaker filled with a liquid of refractive index =  $\frac{4}{3}$  to height of 6 cm. To an observer looking from above the surface of liquid, coin will appear at a depth 1
- (a) 1.5 cm (b) 6.75 cm
  - (c) 4.5 cm (d) 7.5 cm
- 9 Four lenses of focal lengths  $\pm 15$  cm and  $\pm 150$  cm are available for making a telescope. To produce the largest magnification, the focal length of the eyepiece should be 1
- (a) + 15 cm (b) + 150 cm
  - (c) - 150 cm (d) - 15 cm
- 10 If a convex lens of focal length 80 cm and a concave lens of focal length 50 cm are combined together, what will be their resulting power? 1
- (a) + 6.5 D (b) - 6.5 D
  - (c) + 7.5 D (d) - 0.75 D
- 11 A convex lens and a concave lens, each having the same focal length of 25 cm, are put in contact to form a combination of lenses. The power of the combination (in dioptres) is 1
- (a) zero (b) 25
  - (c) 50 (d) infinity

12 The refractive index of the material of an equilateral prism is  $\sqrt{3}$ . What is the angle of minimum deviation?  
 (a)  $45^\circ$  (b)  $60^\circ$   
 (c)  $37^\circ$  (d)  $30^\circ$  1

13 An object is immersed in a fluid. In order that the object becomes invisible, it should  
 (a) behave as a perfect reflector.  
 (b) absorb all light falling on it.  
 (c) have refractive index one.  
 (d) have refractive index exactly matching with that of the surrounding fluid. 1

14 In the formation of a rainbow, the light from the sun on water droplets undergoes  
 (a) dispersion only.  
 (b) only TIR.  
 (c) dispersion and TIR.  
 (d) scattering. 1

15 In an experiment to find focal length of a concave mirror, a graph is drawn between the magnitude of  $u$  and  $v$ . The graph looks like



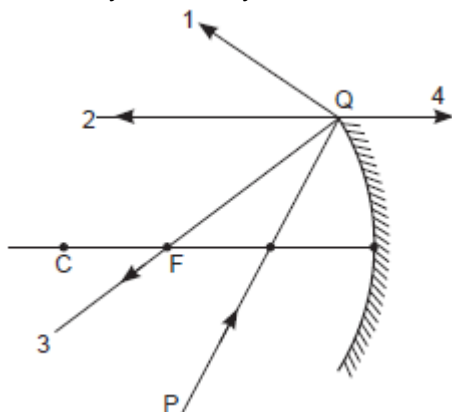
16 A convex lens of refractive index  $\frac{3}{2}$  has a power of 2.5 D in air. If it is placed in a liquid of refractive index 2 then the new power of the lens is  
 (a)  $-1.25$  D (b)  $-1.5$  D  
 (c) 1.25 D (d) 1.5 D 1

17 A ray of light incident at an angle  $\theta$  on a refracting face of a prism emerges from the other face normally. If the angle of the prism is  $5^\circ$  and the prism is made of a material of refractive index 1.5, the angle of incidence is [NCERT Exemplar]  
 (a)  $7.5^\circ$  (b)  $5^\circ$  (c)  $15^\circ$  (d)  $2.5^\circ$  1

18 A short pulse of white light is incident from air to a glass slab at normal incidence. After travelling through the slab, the first colour to emerge is  
 (a) blue (b) green  
 (c) violet (d) red 1

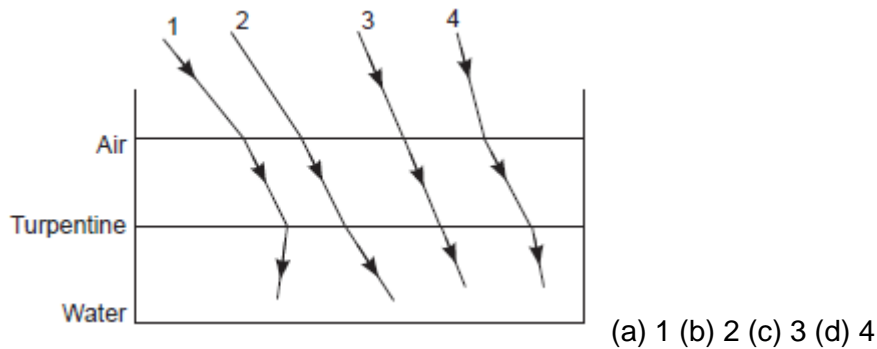


- 19 An object approaches a convergent lens from the left of the lens with a uniform speed 5 m/s and stops at the focus. The image [NCERT Exemplar]
- moves away from the lens with an uniform speed 5 m/s.
  - moves away from the lens with an uniform acceleration.
  - moves away from the lens with a non-uniform acceleration.
  - moves towards the lens with a non-uniform acceleration.
- 20 You are given four sources of light each one providing a light of a single colour – red, blue, green and yellow. Suppose the angle of refraction for a beam of yellow light corresponding to a particular angle of incidence at the interface of two media is  $90^\circ$ . Which of the following statements is correct if the source of yellow light is replaced with that of other lights without changing the angle of incidence? [NCERT Exemplar]
- The beam of red light would undergo total internal reflection.
  - The beam of red light would bend towards normal while it gets refracted through the second medium.
  - The beam of blue light would undergo total internal reflection.
  - The beam of green light would bend away from the normal as it gets refracted through the second medium.
- 21 The radius of curvature of the curved surface of a plano-convex lens is 20 cm. If the refractive index of the material of the lens be 1.5, it will [NCERT Exemplar]
- act as a convex lens only for the objects that lie on its curved side.
  - act as a concave lens for the objects that lie on its curved side.
  - act as a convex lens irrespective of the side on which the object lies.
  - act as a concave lens irrespective of side on which the object lies.
- 22 The direction of ray of light incident on a concave mirror is shown by PQ while directions in which the ray would travel after reflection is shown by four rays marked 1, 2, 3 and 4. Which of the four rays correctly shows the direction of reflected ray?



- (a) 1 (b) 2  
(c) 3 (d) 4

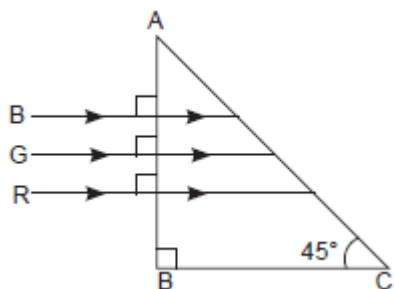
- 23 The optical density of turpentine is higher than that of water while its mass density is lower. Figure shows a layer of turpentine floating over water in a container. For which one of the four



- 24 A car is moving with at a constant speed of  $60 \text{ km h}^{-1}$  on a straight road. Looking at the rear view mirror, the driver finds that the car following him is at a distance of  $100 \text{ m}$  and is approaching with a speed of  $5 \text{ km h}^{-1}$ . In order to keep track of the car in the rear, the driver begins to glance alternatively at the rear and side mirror of his car after every  $2 \text{ s}$  till the other car overtakes. If the two cars were maintaining their speeds, which of the following statement (s) is/are correct?
- (a) The speed of the car in the rear is  $65 \text{ km h}^{-1}$ . 1
- (b) In the side mirror the car in the rear would appear to approach with a speed of  $5 \text{ km h}^{-1}$  to the driver of the leading car.
- (c) In the rear view mirror the speed of the approaching car would appear to decrease as the distance between the cars decreases.
- (d) In the side mirror, the speed of the approaching car would appear to increase as the distance between the cars decreases.
- 25 Consider an extended object immersed in water contained in a plane trough. When seen from close to the edge of the trough the object looks distorted. Which of the following is not correct.
- (a) the apparent depth of the points close to the edge are nearer the surface of the water compared to the points away from the edge.
- (b) the angle subtended by the image of the object at the eye is smaller than the actual angle subtended by the object in air. 1
- (c) some of the points of the object far away from the edge may not be visible because of total internal reflection.
- (d) water in a trough acts as a lens and magnifies the object.
- 26 A magnifying glass is used, as the object to be viewed can be brought closer to the eye than the normal near point. This results in
- (a) a larger angle to be subtended by the object at the eye and hence viewed in greater detail. 1
- (b) the formation of a real inverted image.
- (c) increase in the field of view.
- (d) infinite magnification at the near point.
- 27 An astronomical refractive telescope has an objective of focal length  $20 \text{ m}$  and an eyepiece of focal length  $2 \text{ cm}$ . Which one of the following is not correct?
- (a) The length of the telescope tube is  $20.02 \text{ m}$ .
- (b) The magnification is  $1000$ . 1
- (c) The image formed is inverted.
- (d) An objective of a larger aperture will increase the brightness and reduce chromatic aberration of the image.
- 28 Virtual image formed by convex mirror has magnification \_\_\_\_\_ . 1

- 29 Optical denseness of a medium is measured in terms of \_\_\_\_\_ . 1
- 30 Minimum angle of incidence in the denser medium for which angle of refraction becomes  $90^\circ$  is called \_\_\_\_\_ . 1
- 31 Relation between critical angle and refractive index is \_\_\_\_\_ . 1
- 32 Optical fibre works on the principle of \_\_\_\_\_ . 1
- 33 The splitting of white light into its constituent colours when it passes through a glass prism is called \_\_\_\_\_ . 1
- 34 Blue colour of sky is due to phenomenon of \_\_\_\_\_ of sunlight. 1
- 35 A double convex lens of refractive index  $\mu_1$  is immersed in a liquid of refractive index  $\mu_2$ . The lens will act as transparent plane sheet when  
 (a)  $\mu_1 = \mu_2$                       (b)  $\mu_1 > \mu_2$  1  
 (c)  $\mu_1 < \mu_2$                       (d)  $\mu_1 = \frac{1}{\mu_2}$
- 36 When a ray of light enters from one medium to another, then which of the following does not change? 1  
 (a) Frequency (b) Wavelength  
 (c) Speed (d) Amplitude
- 37 A diver at a depth 12 m inside water ( $\mu = 4/3$ ) sees the sky in a cone of semi-vertical angle  
 (a)  $\sin^{-1} \frac{4}{3}$                       (b)  $\tan^{-1} \frac{4}{3}$  1  
 (c)  $\sin^{-1} \frac{3}{4}$                       (d)  $90^\circ$
- 38 The astronomical telescope consists of objective and eyepiece. The focal length of the objective is  
 (a) equal to that of the eyepiece. 1  
 (b) shorter than that of eyepiece.  
 (c) greater than that of eyepiece.  
 (d) five times shorter than that of eyepiece.
- 39 If focal length of objective lens is increased then magnifying power of  
 (a) microscope will increase but that of telescope decrease. 1  
 (b) microscope and telescope both will increase.  
 (c) microscope and telescope both will decrease.  
 (d) microscope will decrease but that of telescope will increase
- 40 A microscope is focussed on a mark on a piece of paper and then a slab of glass of thickness 3 cm and refractive index 1.5 is placed over the mark. How should the microscope be moved to get the mark in focus again? 1  
 (a) 2 cm upward  
 (b) 1 cm upward  
 (c) 4.5 cm downward  
 (d) 1 cm downward

41 A beam of light consisting of red, green and blue colours is incident on a right angled prism. The refractive index of the material of the prism for red, green and blue wavelengths are 1.39, 1.44 and 1.47 respectively. The prism will



1

- (a) separate the red colour part from the green and blue colours.
- (b) separate the blue colour part from the red and green colours.
- (c) separate all the three colours from one another.
- (d) not separate the three colours at all.

42 Dispersion of light is caused due to

- (a) wavelength (b) intensity of light
- (c) density of medium (d) none of these

1

43 Sparkling of diamond is due to

- (a) reflection.
- (b) dispersion.
- (c) total internal reflection.
- (d) high refractive index of diamond.

1

44 A passenger in an aeroplane shall

- (a) never see a rainbow.
- (b) may see a primary and a secondary rainbow as concentric circles.
- (c) may see a primary and a secondary rainbow as concentric arcs.
- (d) shall never see a secondary rainbow.

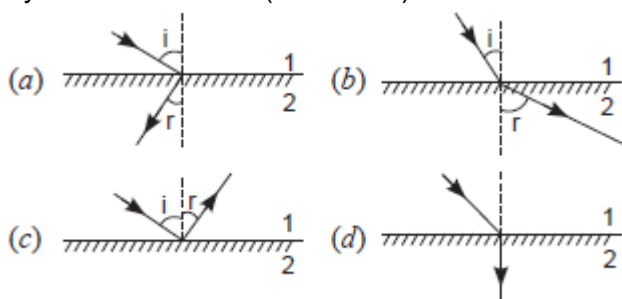
1

45 The phenomena involved in the reflection of radiowaves by ionosphere is similar to

- (a) reflection of light by a plane mirror.
- (b) total internal reflection of light in air during a mirage.
- (c) dispersion of light by water molecules during the formation of a rainbow.
- (d) scattering of light by the particles of air.

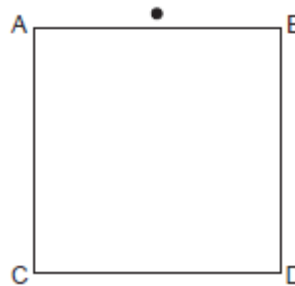
1

46 There are certain material developed in laboratories which have a negative refractive index. A ray incident from air (medium 1) into such a medium (medium 2) shall follow a path given by



1

47 A rectangular block of glass ABCD has a refractive index 1.6. A pin is placed midway on the



face AB When observed from the face AD, the pin shall

- (a) appear to be near A.
- (b) appear to be near D.
- (c) appear to be at the centre of AD.
- (d) not be seen at all.

48 Branch of physics that deals with the study of nature, production and propagation of light is known as \_\_\_\_\_.

49 Angle subtended by the boundary of the spherical mirror at its centre of curvature C is known as \_\_\_\_\_.

50 The vertical plane passing through the principal focus and perpendicular to the principal axis is called \_\_\_\_\_.

## **HISTORY**

### **SAMPLE QUESTION PAPER HISTORY(027) CLASS-XII**

Time Allowed:3hrs.

Max. Marks:80

#### **General Instructions:**

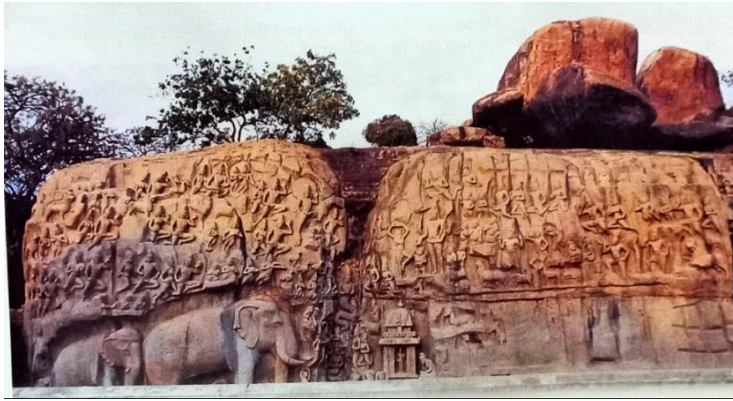
- Answer all the questions. Some questions have internal choice. Marks are indicated against each question.
- Question number 1 to **20** (Part-A) are objective type questions carrying **1** mark should be one word or one sentence each.
- Answer to questions carrying **3** marks (Part-B Question **21** to **24**) should not exceed 100 words each.
- Answer to questions carrying **8** marks (Part-C Question **25** to **27**) should not exceed 350 words each.
- Question numbers **28** to **30** (Part -D) are Source based questions carrying 6 marks each.
- Question number **31** (Part-E) is a **Map question** that includes identification and location of significant test items. Attach the map with the answer book.

<b>PART- A</b>		
1	<p>Consider the following statements regarding the identification of Shiva, a figure represented on Harappan seals:</p> <ol style="list-style-type: none"> <li>1. It is shown in the form of Gajapati</li> <li>2. It is shown seated in Yogic posture.</li> <li>3. It is surrounded by animals.</li> <li>4. It is shown with a female figure identifiable with Parvati.</li> </ol> <p>Which of the above are correct reasons for identifying the figure with Shiva?</p> <ol style="list-style-type: none"> <li>a. 1 and 4</li> <li>b. 2 and 3</li> <li>c. 2 and 4</li> <li>d. 3 and 4</li> </ol>	1
2	Name any two centres for making shell objects in the Harappan Civilisation.	1
3	Define a votive inscription.	1
4	Differentiate between polygyny and polyandry.	1
5	<p>Choose the correct option :</p> <p>Buddhism grew rapidly both during the lifetime of the Buddha and after his death as</p> <p>A. Buddha and his disciples taught in Prakrit.  B. Importance was given to rituals in Buddhism. C. People were dissatisfied with existing social practices.  D. Only men were allowed into the Sangha.</p>	1
6	The special officers appointed to spread the message of Dhamma by Asoka were known as _____	1

7	From among the following which one depicts the correct meaning of the term Jins-i-kamil concerning crops in Mughal India? A. Paddy crop B. Perfect crop C. Pulses D. Crop grown in the arid zone	1
8	The Manusmṛiti is one of the best known legal text of early India , written in Sankrit and Compiled between ----- a. Second century b. Third century c. Fourth century d. Fifth century	1
9	Identify which of the following aspects is NOT common to both Bhakti movement and Sufi movement? A. Personal love for God B. Worship of idols C. Mysticism D. Visit to holy shrines	1
10	Define the meaning of Chaitya?	1
11	With which of the following responsibilities Mir Bakshi was the officer in Akbar's reign? A. Revenue Collection B. Payment of salaries C. Head of the military administration D. Head of Nobility	1
12	Find out from the following pairs which one is correctly matched: A. Akbar Nama : Abdul Hamid Lahori B. Badshah Nama : Zahiruddin Babur C. Humayun Nama : Gulbadan Begum D. Babur Nama: Abul FazlAllami	1
13	Mention one reason why Qandahar was a bone of contention between the Safavids and the Mughals.	1
14	Give the meaning of the term 'Antyaja'.	1
15	Cite one reason for mapping of the cities by the colonial government.	1
16	Consider the following events: 1. Cabinet Mission 2. Cripps Mission 3. Khilafat Movement 4. Pakistan Resolution The correct chronological order of these events is: a. 4, 3, 2, 1 b. 4, 3, 1, 2 c. 3, 4, 1, 2 d. 3, 4, 2, 1	1

17	<p>Indicate which of the following options is NOT correct.          People gave evasive answers to the census officials as          A.They were suspicious of census operations.          B. They thought that enquiries were being conducted to impose new taxes.          C. They were not willing to give any information regarding the women of their household.          D. They were claiming identities associated with lower status.</p> <p style="text-align: center;">OR</p> <p>The Lottery Committee in Calcutta was formed by the British keeping in mind certain objectives. Identify which of the following statements is NOT correct about the Committee.          A. The Lottery Committee commissioned a new map of the city so as to get a comprehensive picture of Calcutta.          B. The Committee undertook road building activities in the Indian part of the city.          C. The Committee built houses for the labouring poor.          D. The Committee cleared the river bank of encroachments.</p>	1
18	<p>Consider the following statements regarding the establishment of British East India Company in Bengal:</p> <p>I. The Permanent Settlement had come into operation in 1793.          II. In 1797 there was an auction in Burdwan, during which a number of mahals (estates) held by the Raja of Burdwan were being sold.          III. The estates of those who failed to pay were to be auctioned to recover the revenue.</p> <p>Which of the following statement(s) is/are correct?          a. Only I          b. I and II          c. I and III          d. I, II and III</p>	1
19	<p>Assertion (A) : Mahatma Gandhi thought Hindustani would be the ideal language of communication between diverse communities.          Reason (R) : It could unify Hindus and Muslims and the people of the North and the South.</p> <p>a. Both A and R are true and R is the correct explanation of A.          b. Both A and R are true but R is not the correct explanation of A.          c. A is true but R is false.          d. A is false but R is true.</p>	1
20	Identify the following image and write its name.	1





OR

Identify the following image and write its name.



**Question For Visually Impaired candidates only** : In lieu of Question number 20.

The first woman to be ordained as a Bhikkhuni was\_\_\_\_\_.

OR

In Jainism the teachers who guide men and women across the river of existence are called\_\_\_\_\_.

**PART-B**

21

State any three elements that historians considered while analysing the Mahabharata.

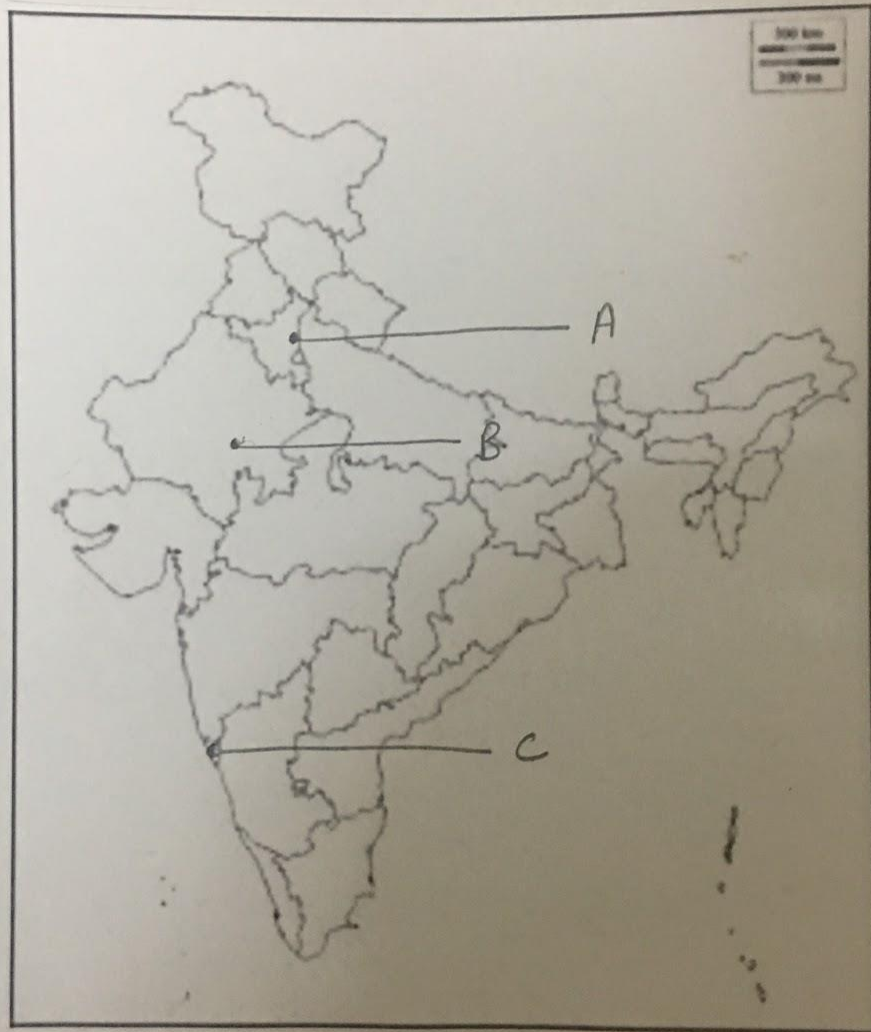
3

22	"Buildings or architectural remains are a source for reconstruction for temple architecture." Justify the statement with reference to the Vitthala temple of Vijayanagara Empire.	3
	<b>OR</b>	
	"Krishnadeva Raya's rule was characterised by expansion and consolidation". Justify with suitable arguments.	
23	Show how the power of the Jotedars within a village was more effective than that of the Zamindars.	3
24	Explain the grievances of the Indian sepoy against the British rule before the revolt of 1857 with examples.	3
	<b>PART- C</b>	
25	"Historians often try to understand the meaning of sculpture by comparing it with textual evidence." Evaluate the statement in the context of Sanchi Stupa.	8
	<b>OR</b>	
	"Amaravati was discovered before Sanchi yet it had lost its glory and was an insignificant little mound." In the light of the above statement justify why Sanchi survived but Amaravati did not?	
26	Describe the relations between the state and the Bhakti and Sufi traditions.	8
	<b>OR</b>	
	Describe the teaching of Baba Guru Nanak and its relevance in today's world.	
27	Explain how the coming of Gandhiji broadened the base of the Indian National Movement.	8
	<b>OR</b>	
	Explain how the partition of India was a culmination of communal politics that started developing in the opening decades of the 20 <sup>th</sup> century.	
	<b>PART- D</b>	
28	Evidence of an "invasion"  Deadman Lane is a narrow alley, varying from 3 to 6 feet in width....At the point where the lane turns westward, part of a skull and the bones of the thorax and upper arm of an adult were discovered, all in a very friable condition, at a depth of 4 ft 2 in. The body lay on its back diagonally across the lane. Fifteen inches to the west were a few fragments of a tiny skull. It is to these remains that the lane owes its name. From John Marshall, Mohenjodaro and the Indus Civilisation, 1931.	2+2+2=6

	<p>a. Why is the lane called the Deadman Lane?  b. State the conclusions that scholars and archaeologists draw from this information?  c. Give reasons to justify that the earlier interpretations can sometimes be reversed?</p>	
29	<p style="text-align: center;">Clearance of forests for agricultural settlements</p> <p>This is an excerpt from a sixteenth-century Bengali poem, Chandimangala, composed by Mukundaram Chakrabarti. The hero of the poem, Kalaketu, set up a kingdom by clearing forests:</p> <p>Hearing the news, outsiders came from various lands.</p> <p>Kalaketu then bought and distributed among them</p> <p>Heavy knives, axes, battle-axes and pikes.</p> <p>From the north came the Das (people).</p> <p>One hundred of them advanced.</p> <p>They were struck with wonder on seeing Kalaketu</p> <p>Who distributed betel-nut to each of them</p> <p>From the south came the harvesters</p> <p>Five hundred of them under one organiser.</p> <p>From the west came Zafar Mian,</p> <p>Together with twenty-two thousand</p> <p>men. Sulaimani beads in their hands</p> <p>They chanted the names of their pir and paighambar (Prophet).</p> <p>Having cleared the forest</p> <p>They established markets.</p> <p>Hundreds and hundreds of foreigners</p> <p>Ate and entered the forest.</p> <p>Hearing the sound of the axe,</p> <p>Tigers became apprehensive and ran away, roaring.</p> <p>a. What forms of intrusion into the forest does the text suggest?</p>	2+2+2=6

	<p>b. Evaluate the concept of jangli in the context of the source?</p> <p>c. Analyse any two effects of foreign intrusion on the lives of forest dwellers.</p>	
30	<p style="text-align: center;">We have never asked for privileges</p> <p>Hansa Mehta of Bombay demanded justice for women, not reserved seats, or separate electorates.</p> <p>We have never asked for privileges. What we have asked for is social justice, economic justice, and political justice. We have asked for that equality which alone can be the basis of mutual respect and understanding, without which real cooperation is not possible between man and woman.</p> <p>a. Hansa Mehta did not demand reserved seats for women. Give reasons.</p> <p>b. What could be the basis of mutual respect among men and women?</p> <p>c. Explain the ways in which the women can be empowered economically?</p>	2+2+2=6
	<b>PART- E</b>	
31	<p>(31.1) On the given political outline map of India, locate and label the following with appropriate symbols:</p> <p>a. Dholavira, a mature Harappan site OR Ujjayini, capital of Avanti</p> <p>b. Azamgarh, a centre of Revolt of 1857 OR Masulipatnam, a city under British control in 1857</p> <p>c. Amritsar</p> <p>(31.2) On the same outline map three places have been marked as A, B, C which are territories under Babur, Akbar and Aurangzeb. Identify them and write their correct names on the lines marked near them.</p> <p>Note : The following questions are for the <b>Visually Impaired Candidates</b> only in lieu of Q. No.31.</p> <p>(31.1) Name any three centres of Indian National Movement. OR Name any three territories under Babur.</p> <p>(31.2) Name any three Buddhist sites.</p>	<p>1+1+1=3</p> <p>3</p> <p>3+3=6</p>

Q.31.1 Map for Q. No, 31  
Q.31.2 (31.1) 4(31.2)



## **GEOGRAPHY**

Human settlements

Sample paper

### **1mark**

1. Mention 2 characteristics of linear pattern of rural settlement in world. (2019)
2. Write any 2 features of rectangular pattern of rural settlement. ?2013

### **3marks**

3. What is healthy city? Explain its basic features. 2016
4. Differentiate between rural and urban settlement in the world. 2017

### **5marks**

5. Explain any five factors that affect the location of rural settlement in the world. SQP 2012.

## **PSYCHOLOGY**

1. Differentiate groups from:
  - Crowd
  - Teams
  - Audience (4)
2. Briefly explain the stages given by Tuckman. (4)
3. What is groupthink and who gave this term? (3)
4. Explain the minimal group paradigm experiment. (3)
5. Which phenomenon was demonstrated by Latane? Explain how it was demonstrated. (4)
6. Membership of a club is an example of which type of group? (1)
7. Informal groups are based on explicitly stated rules. (True/False)
8. Explain by giving example message characteristics in attitude change. (3)
9. Explain different sources of prejudice. (6)
10. Explain the ABC component of attitude. (4)

## **LEGAL STUDIES**

- Q1. What are the powers of Lok Adalat
- Q2. Explain the concept of Legal Aid in context of social justice and Human Rights
- Q3. Mention the criteria for giving Free Legal Aid Services?

**CH 10**

**PLANNING AND DEVELOPMENT  
POLITICS OF PLANNED DEVELOPMENT**

1. Villagers of which state protested against the POSCO plant?
  - a) Orissa
  - b) Chhattisgarh
  - c) Meghalaya
  - d) Bihar
2. Write **True** or **False**:

The iron resources lie in some of the most underdeveloped and predominantly tribal district of some states
3. What were the fears of tribal population of Orissa and environmentalist about setting up industries in tribal areas?
4. Mention the various interests associated with Orissa Reserved Iron Resource.
5. Why does the Central government insist on setting up of industry in the State of Orissa?
6. What was the fear of the environmentalists about setting up of industries?
7. Which are the various considerations that should form the basis for setting up an industry?

**POLITICAL CONTESTATION**

1. Who are Leftists and Rightists in Indian politics?
2. Give an example of:
  - a) Leftist Party
  - b) Rightist Party
  - c) Centrist Party

## NITI AAYOG

1. Name the commission which replaced planning commission?
  - a. NITI Aayog
  - b. Reserve Bank of India
  - c. Start-up commission
  - d. Hazari commission
2. Why was the Planning Commission replaced?
3. The Prime Minister of India- Narendra Modi talked about the abolition of Planning Commission on \_\_\_\_\_, 2014.
4. Who is the ex-officio chairperson of the NITI Aayog?
5. \_\_\_\_\_ appoints the Vice- Chairperson of the NITI Aayog.
6. Correct the given statement and rewrite:  
The first Vice- Chairperson of the NITI Aayog was Arvind Kejriwal.
7. Who is the current Vice-Chairperson of the NITI Aayog?
8. What is the main objective of NITI Aayog?
9. Which institute has been called the "Think Tank of the Union government"?
10. Which approach does the NITI Aayog follow?

### **OPTIONAL II**

#### **HINDI**

1. पाठ के आधार पर हर की पौड़ी पर होने वाली गंगा आरती का भावपूर्ण वर्णन करें।
2. गंगा पुत्र के लिए गंगा मैया ही जीविका और जीवन है- इस कथन के आधार पर गंगा पुत्रों के जीवन का वर्णन करें।
3. पुजारी ने लड़की के हम को युगल अर्थ में लेकर क्या आशीर्वाद दिया और पुजारी द्वारा आशीर्वाद देने के बाद लड़का और लड़की को अटपटा क्यों महसूस हुआ।

#### **FMM**

- Q1.** Explain the circuit breakers.
- Q2.** Explain the investigation process in case of violation of provisions of insider regulations.
- Q3.** Classify the types of derivative contracts.
- Q4.** What is a transaction cycle? Explain with the help of a diagram.



SUBJECT: IP and CS

Topic : NETWORKING

Descriptive Explain with example (Unsolved)

1. What is the network?
2. Explain type of network.
3. What do you understand by network structure?
4. What do you understand by Network Protocol?
5. What do you understand by Network devices?
6. What do you understand by Network Channels?
7. What do you understand by Network layers?
8. What is called resource sharing in network? Explain using example.
9. What is the use of Switch & Router in network?
10. What is the use of MAC Address?
11. What is called Cloud Storage? Explain with Example.
12. What is called Access Point?
13. What is the use of IoT? Explain it.
14. Explain Network devices using example.
15. Explain Communication Channels using example.
16. Explain type of cable with its features.
17. What is the use of WiFiRouter?

Differentiate between Explain with example (Unsolved)

1. Node and client
2. Star and bus
3. Hardware and software
4. P2P and SMPT
5. P2P and client server
6. LAN and MAN
7. Wire and wireless computer network
8. Microwave and radio waves
9. MAC and IP address
10. Switch and Router
11. Hub and Switch
12. Offline and online storage
13. IPv4 and IPv6
14. HTTP and HTT

**Video links**

<https://youtu.be/68GX50R-vIM>

<https://youtu.be/bCyCs3Ukdo>

