

**FIVE YEARS PLANS IN INDIA**

On 15<sup>th</sup> August 1947, India woke to a new dawn of freedom. Finally we were masters of our own destiny after some two hundred years of British. Before that British government treated as our country their COLONY under which we didn't have freedom to use our natural resources according to our beneficial but ruler had exploited our country for promoting their industrialization and treated our country as best sources of raw material by using our natural resources.(which we have discussed in previous chapter)

**Objective of this chapter:-**

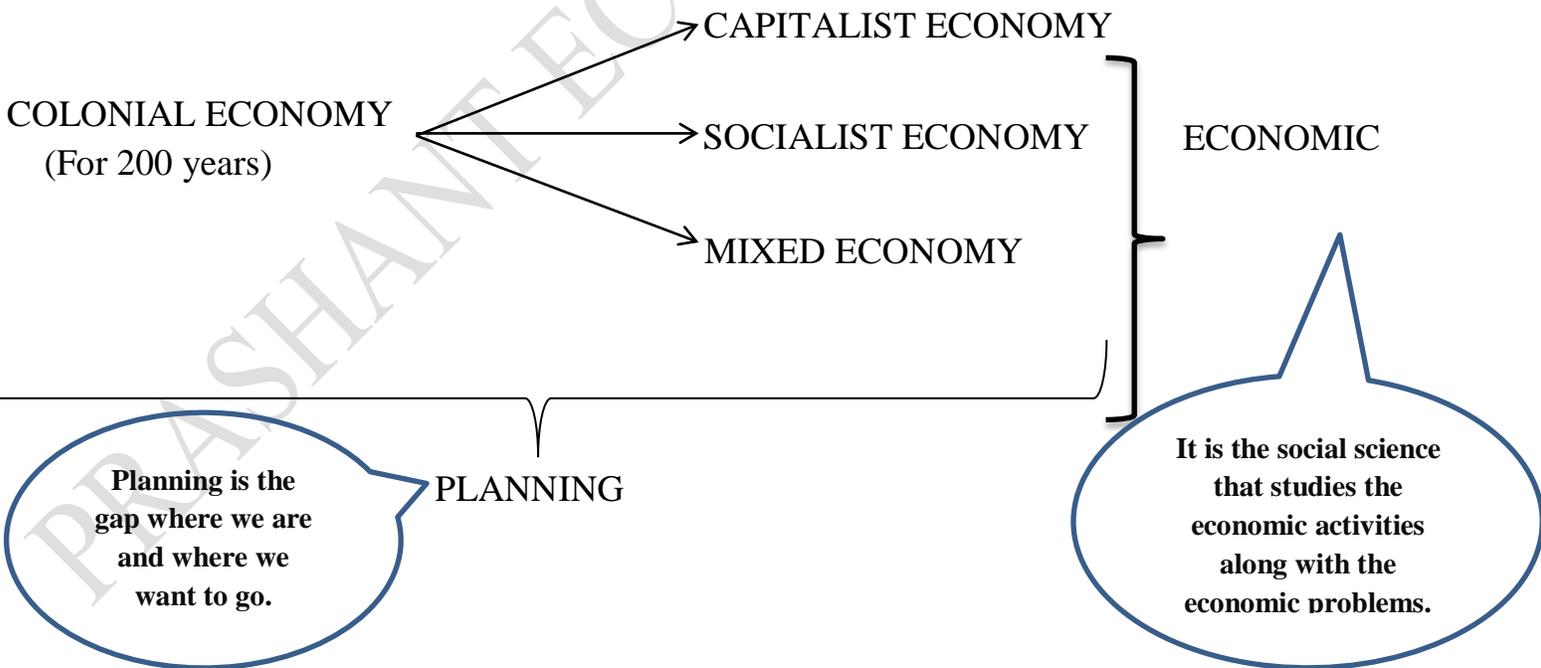
In this chapter we will discussed about how our country develop after independence. We have discussed earlier like British government introduced many facilities like railway, road etc. but they have introduced these things only for their beneficial. Now, our country was colony for Britain around 200 years and they have done exploitation under different sectors like :

*Primary sector through Zamindari system.*

*Secondary sector through decay of Handicraft industry by heavy duty on handicrafts and duty free import of British goods.*

*Tertiary sector through Discriminatory tariff policy.*

So, the objective of this chapter to familiar about different steps taken by our country to develop.



**“Economic planning means utilisation of country’s resources in different development activities in accordance with national priorities.”**

In India, the idea of economic planning became a reality with the setting up of Planning Commission on 1950, under the chairmanship of Prof. Prasanta Chandra Mahalanobis.

In February 2015, it has been replaced by 'NITI Aayog'.

## Different types of Economic systems

- 1. Capitalist :-** A Capitalist economy is defined as the one in which means of production are owned by the individuals, and the individuals are free to take their economic decision, as guided by the principle of profit maximization.

### Features of Capitalist economy:

- Central decision are guided by the market forces.
- Decisions are taken in regard with the demand and supply forces
- The State or the Government has minimum role.
- All factors of production are owned and managed by the private sector.
- Private units are guided by Maximization of Profits.
- This model is also known as Free Market Economy or Lassiez -Fairre economy

Central Problems	Solutions
1. What to Produce? (Based on <i>Demand</i> )	Economy produces those goods for which there exist more demand
2. How to Produce ? (Based on <i>Availability of factors</i> )	Depending upon the availability of factors, the economy will choose the technique of production.
3. For whom to Produce? (Based on <i>Purchasing Capacity</i> )	Production is done for those who have the purchasing power

- 2. Socialist:-** It is a planned economy based on public ownership of property and social welfare motive.

Central Problems	Solutions
1. What to Produce?	These Problems are solved on the basis of social welfare motive.
2. How to Produce ?	
3. For whom to Produce?	

### Features of Socialist economy:

- Central decision are guided by the state.
- The State or the Government has maximum role.
- No freedom to private enterprise
- This model is also known as State Economy

**3. Mixed Economy:-** It is an economy having elements of both capitalist and socialist economies.

### Features of Mixed economy :

- Factors of production are owned by the private entrepreneurs as well as the government.
- Competition exist but limited to private sector.
- Consumer sovereignty
- Both sector play their significant role in the process of production like private sector plays for profit maximization and public sector plays for Social welfare motive.

### Planning in India:-

Basis	Planning Objectives	Plan Objectives
<b>Aim</b>	They are long-term objectives to be achieved over a long period.	They are objectives to be achieved in short periods 1 to 5 years.
<b>Nature</b>	They are common to all plans.	They vary from plan to plan.
<b>Changes</b>	They aim at structural changes.	They aim at quantitative changes

### Long Period Goals :

- Growth/Economic growth
- Modernization
- Full employment
- Self-reliance
- Equity

## Short Period Goals/ Objectives :-

Plans and Period	Focus of the plan or the principal objective
1 <sup>st</sup> Plan: April 1, 1951 – March 31, 1956	Development of Agriculture
2 <sup>nd</sup> Plan: April 1, 1956 – March 31, 1961	Development of Industry
3 <sup>rd</sup> Plan: April 1, 1961 – March 31, 1966( <b>Gadgil Yojna</b> )	Make the economy independent and self-sufficiency in food grain Production
Plan Holiday (April 1, 1966 – March 31, 1969 (due to Indo-Pakistan war& failure of 3 <sup>rd</sup> Plan)	Equal priority was given to agriculture its all sectors and the industry sector.
4 <sup>th</sup> Plan: April 1, 1969 – March 31, 1974 ( <b>1971-Garibi Hatao</b> )	Growth with stability and progressive achievement of self-reliance.
5 <sup>th</sup> Plan: April 1, 1974 – March 31, 1979	Raising the living standard of weaker section of the society
Rolling Plan/Annual Plan April 1,1979- March 31,1980	<i>Continuation of the terminated 5<sup>th</sup> five year plan</i>
6 <sup>th</sup> Plan: April 1, 1980 - March 31, 1985	Poverty alleviation and Technological self-reliance
7 <sup>th</sup> Plan : April 1, 1985 – March 31, 1990	Establishment of self-sufficient economy Opportunities for productive employment
Two annual plan: April 1, 1990 – March 31, 1992	
8 <sup>th</sup> Plan : April 1, 1992 – March 31, 1997	Development of Human resources
9 <sup>th</sup> Plan : April 1, 1997 – March 31, 2002	Growth with justice and equity
10 <sup>th</sup> Plan : April 1, 2002 – March 31, 2007	Reduction of Poverty Improving the quality of life
11 <sup>th</sup> Plan : April 1, 2007 – March 31, 2012	Poverty reduction Job creation & protection of environment
12 <sup>th</sup> Plan : April 1, 2012 – March 31, 2017	Faster, More Inclusive and Sustainable Growth

### Features of Economic Policy pursued under planning till 1991

- a. Heavy Reliance on Public Sector
- b. Regulated development of Private Sector
- c. Protection of Small-scale Industry and Regulation of Large-scale Industry
- d. Development of Heavy Industry of Strategic Significance
- e. Focus on Saving and Investment
- f. Protection from Foreign Competition
- g. Import Substitution
- h. Restriction of Foreign Capital
- i. Centralised Planning

## Notes to refer:

### Long Period Goals:-

#### a. Economic growth:-

It refers to increase in the country's capacity to produce the output of goods and services within the country. It implies either a larger stock of productive capital, or a larger size of supporting services like transport and banking, or an increase in the efficiency of productive capital and services. A good indicator of economic growth, in the language of economics, is steady increase in the Gross Domestic Product (GDP).

*GDP is the market value of all the goods and services produces in the country during a year.*

#### b. Modernisation:-

To increase the production of goods and services the producers have to adopt new technology. Adoption of new technology is called modernisation.

Output can be increased either by increasing the pool of resources or by using innovative technology.

#### c. Self-reliance:-

A nation can promote economic growth and modernisation by using its own resources or by using resources imported from other nations. This policy was considered a necessity in order to reduce our dependence on foreign countries, especially for food. Otherwise, these countries had to yield to food-exporting countries (like USA) and support their political agenda. (*India was pestered to end war with Pakistan (1965) for favour of food grain supplies from USA.*)

#### d. Full employment :-

It refers to a situation when all the people who are able to work and willing to work at the market wage rate are getting work.

*Full employment does not means a situation of zero level of Unemployment.*

#### e. Equity:-

It is important to ensure that the benefits of economic prosperity reach the poor sections as well instead of being enjoyed only by the rich. Equity implies that economic growth is related to social justice. Planning in India focuses on growth with Social justice.

Equity/Equitable distribution is differ from Equal distribution. Equal distribution refers to equal treatment with different section of the society.

## Features

### 1. Heavy reliance on Public Sector:

It was indicated that before 1991 our economy mostly depend on public sector. In 1956, due to the industrial policy resolution 17 industries were reserved as public sector and 12 private sector. Through which it was realised that the objective of socialistic pattern of society could be achieved through development of Public sector.

Under colonial rule, British government has done the exploitation of our natural resources only for their benefit not for us. So, it's a responsibility of planning commission to do development with the social welfare. Then, Public Sector do work with social welfare but Private Sector do work for profit motive.

## 2. Regulated development of Private Sector:

It may be defined as regulated development of private sector was in restricted entries or so many barriers for setting up their industries. According to the Industrial Development and Regulation Act, 1948 new industries in the private sector could not be established without obtain license and registration. Similarly, MRTP Act, 1969 placed several restriction on the expansion of existing industries in the private sector.

## 3. Protection of Small-scale Industry and Regulation of Large-scale Industry:

Large scale industry was restricted through several regulation and at the same time they were providing protection to small-scale industry from competition. Many Financial institutions were developed to fulfill the need of small scale industries through which they could do development of all the regions.

Several boards (like Handloom Board and Silk Board) were established to promote the products of small-scale industries in the global market.

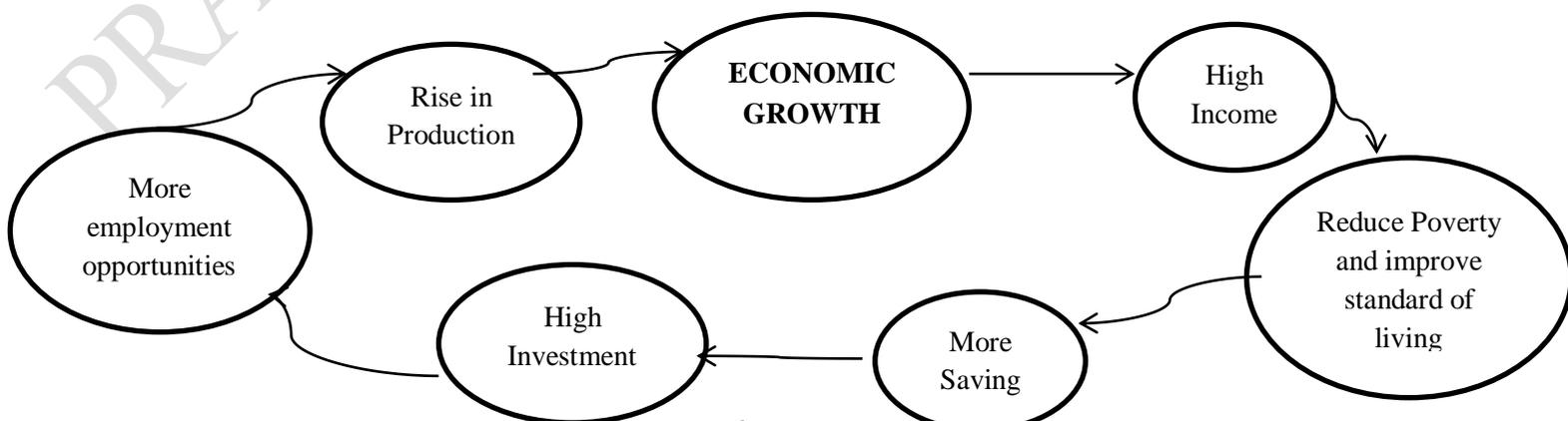
## 4. Development of Heavy Industry of Strategic significance:

There were some industries which were required to develop for developing SSI and public sector. So, at that time Industries like of electricity generation, engineering goods and iron & Steel industry were identified as of Strategic significance. These industries were to be developed on priority basis.

*Industries of strategic significance were also recognized as 'UNIVERSAL INTERMEDIARIES'*

## 5. Focus on Saving and Investment:

For doing development of our economy we should have required more amount. So planning commission identified saving and investment as the key determinants of economic growth. So, for promoting saving, they were offered high interest rate and investment was induced through subsidies and capital gains because at that there was only one objective i.e., Economic growth and it could be happened through more production.



## 6. Protection from Foreign Competition:

For providing protection to Domestic industry ( Public and SSI) they implemented various restriction like High import duties (TARIFF) and quantitative restrictions(QUOTAS) restrictions were levied on imports. Through which, the price of foreign products high as compare to domestic products.

## 7. Import Substitution:

The main objective behind this Import substitution was being the domestic production of that goods which were imported from rest of the world. Behind the basic objective to save foreign exchange and become self-reliance.

## 8. Restriction on Foreign Capital:

At that time, they were focused on the domestic investment or if they have required more fund than they believe on borrowing from rest of the world rather than FDI or FII. Foreign direct investment was controlled and regulated through Foreign Exchange Regulation Act 1973 (FERA) which was replaced by FEMA 1999. This was to minimize economic control of the domestic market by the foreign investors.

## 9. Centralized Planning:-

Programmes of growth and development at the state level were aligned to centralized planning. That is, the objectives of growth as specified at the state level did not contradict with the overall strategy of growth as specified in the Five Year Plans.

# EFFECTS OF PLANNING

Success	Failures
<ul style="list-style-type: none"><li>✓ Increase in National Income</li><li>✓ Increase in Per Capita Income</li><li>✓ Rise in Saving and Investment</li><li>✓ Institutional and Technical change in Agriculture</li><li>✓ Growth and Diversification of Industry</li><li>✓ Economic Infrastructure</li><li>✓ Social Infrastructure</li><li>✓ Employment</li><li>✓ International Trade</li></ul>	<ul style="list-style-type: none"><li>× Abject (Hopeless) Poverty</li><li>× High rate of Inflation</li><li>× Unemployment Crises</li><li>× Inadequate Infrastructure</li><li>× Skewed(Unequal) Distribution</li></ul>

## HOLIDAY HOMEWORK

### SUBJECT – PHYSICS

#### CLASS – 11

- 1) Is physics more of a philosophy or more of a mathematical science?.
- 2) Is physics is related to society?
- 3) State various types of forces in nature.
- 4) Define technology.
- 5) Name four physical devices widely used in medical diagnosis.
- 6) Why do we call physics as an exact science?
- 7) What are errors? Explain two types of errors?
- 8) What is the difference between 4.0 & 4.000?
- 9) Which of the distance measurements is most precise & why?  
(i) 500.0 m (ii) 0.0005 m (iii) 6.00 m
- 10) What is meant by significant figures? How are these counted?
- 11) Define the terms (i) mean absolute error. (ii) Relative error and (iii) percentage error. How are they calculated?
- 12) A physical quantity P is related to four observables a, b, c and d as follows:-  
 $P = a^3b^2 / (\sqrt{cd})$ . The percentage errors of measurement in a, b, c and d are 1%, 3%, 4% and 2% resp. What is the percentage error?
- 13) What is meant by unit?
- 14) Define light year.
- 15) Differentiate between fundamental and derived units. Give examples also.
- 16) Define parallax and parallax angle.
- 17) Find the number of significant figures in the following results: (i)  $2.924927 \times 10^8$  m/s  
(ii) 3.0120 s
- 18) The sides of a rectangle are  $(10.5 \pm 0.2)$  cm and  $(5.2 \pm 0.1)$  cm. Calculate its perimeter with error limits.  **$(31.4 \pm 0.6)$  cm.**
- 19) Explain (i) absolute error (ii) mean absolute error (iii) relative error (iv) percentage error (v) random error
- 20) The mass of a box measured by a grocer's balance is 2.3 kg. Two gold pieces 20.15 g and 20.17 g are added to the box.  
(i) What is the total mass of the box? **2.3 kg**  
(ii) The difference in masses of the pieces to correct significant figures. **0.02 g**
- 21) 5.74 g of a substance occupies 1.2 cm<sup>3</sup>. Express its density to correct significant figures. **4.8 g/cm<sup>3</sup>.**
- 22) If displacement of a body  $s = (200 \pm 5)$  m and time taken by it  $t = (20 \pm 0.2)$  s, then find the percentage error in the calculation of velocity. **3.5%**
- 23) If the error in the measurement of mass of a body be 3% and in the measurement of velocity be 2%. What will be the maximum possible error in the calculation of kinetic energy. **7%**
- 24) The length of a rod as measured in an experiment was found to be 2.48m, 2.46m, 2.49m, 2.50m and 2.48m. Find the average length, absolute error and percentage error. Express the result with error limit.  **$(2.48 \pm 0.01)$ m  $(2.48\text{m} \pm 0.40\%)$**

- 25) A physical quantity is measured as  $Q = (2.1 \pm 0.5)$  units. Calculate the percentage error in (1)  $Q^2$  (2)  $2Q$ . **48% and 24%**
- 26) When the planet Jupiter is at a distance of 824.7 million km from the earth, its angular diameter is measured to be 35.72 inches of arc. Calculate diameter of Jupiter.  **$1.4287 \times 10^5$  km**
- 27) A laser light beamed at the moon takes 2.56s and to return after reflection at the moon's surface. What will be the radius of lunar orbit?  **$3.84 \times 10^8$  m.**
- 28) The error in the measurement of radius of a sphere is 2%. What would be the error in :  
(a) Volume of sphere (b) Surface area of sphere.

# Chapter.1 (Economics and Economy)

## EXERCISE

### 1. Objective Type Questions

#### A. Multiple Choice Questions: Choose the Correct Answer

- Which of the following is not concerned with the problem of choice?  
(a) Excessive income (b) Alternative use of resources  
(c) Unlimited wants (d) Limited (scarce) resources
- Principal characteristics of resources are:  
(a) they are scarce in relation to our needs (b) they have alternative uses  
(c) both (a) and (b) (d) none of these
- In which of the following situations, does scarcity arise?  
(a) Supply of resources > Demand for resources  
(b) Supply of resources < Demand for resources  
(c) Supply of resources = Demand for resources  
(d) None of these

- Economic problem arises due to the fact that:  
(a) resources are scarce (b) human wants are unlimited  
(c) resources have alternative uses (d) all of these
- The resources for satisfying human wants are:  
(a) limited (b) unlimited  
(c) available at zero prices (d) none of these
- Scarcity of resources exists:  
(a) at the micro level (b) at the macro level  
(c) micro as well as macro level (d) none of these
- Positive economics involves statements which are:  
(a) verifiable (b) not verifiable  
(c) may or may not be verifiable (d) none of these
- A statement which does not offer any suggestion is known as:  
(a) positive statement (b) normative statement  
(c) both (a) and (b) (d) none of these
- Normative economics deals with:  
(a) facts (b) opinions  
(c) both (a) and (b) (d) none of these
- Which of the following is the example of economic activity?  
(a) Production (b) Consumption  
(c) Exchange (d) All of these
- Who controls economic activities under centrally planned economies?  
(a) Industrialists (b) Private firms  
(c) Government (d) Consumers
- The government does not interfere in the process of decision-making under:  
(a) market economy (b) centrally planned economy  
(c) mixed economy (d) all of these
- Consumer is sovereign under:  
(a) controlled economy (b) free economy  
(c) mixed economy (d) both (b) and (c)

#### Answers

1. (a) 2. (c) 3. (b) 4. (d) 5. (a) 6. (c) 7. (a) 8. (a) 9. (b) 10. (d)  
11. (c) 12. (a) 13. (d)

#### B. Choose appropriate word and fill in the blank

- Choice is the outcome of \_\_\_\_\_ (scarcity/decision-making)
- Study of economy as a whole is called \_\_\_\_\_ economics. (macro/micro)
- Microeconomics studies the economic activities of \_\_\_\_\_ units. (individual/non-economic)
- \_\_\_\_\_ economics relates to the study of economic issues which are subject to verification. (Positive/Normative)

5. \_\_\_\_\_ is a system by which people of an area earn their living. (Economy/Economics)  
 6. In \_\_\_\_\_ economy, private sector dominates the economic activity. (market/mixed)

**Answers**

1. scarcity    2. macro    3. individual    4. Positive    5. Economy    6. market

**C. State whether the following statements are True or False**

1. Scarce means are called wealth. (True/False)  
 2. Study of microeconomics assumes that macro variables remain constant. (True/False)  
 3. Macroeconomics studies economic problems at the level of the economy as a whole. (True/False)  
 4. Normative statements involve value judgement. (True/False)  
 5. In centrally planned economy, economic decisions are driven by the motive of profit maximisation. (True/False)

**Answers**

1. True    2. True    3. True    4. True    5. False

**D. Concept-based Objective Questions**

1. Define economics.  
**Ans.** Economics is a science of human behaviour concerned with allocation of scarce resources/ means in such a manner that consumers can maximise their satisfaction, producers can maximise their profits and the society can maximise its social welfare.
2. Define scarcity.  
**Ans.** Scarcity is a situation when demand for resources exceeds its supply.
3. State the two characteristics of resources.  
**Ans.** (i) Resources are scarce in relation to the goods we wish to produce for the satisfaction of human wants, and  
 (ii) Resources have alternative uses.
4. What is the problem of choice?  
**Ans.** Problem of choice is the problem of allocating scarce resources to alternative uses.
5. Why does the problem of choice arise?  
**Ans.** Problem of choice arises because:  
 (i) resources are limited in relation to our wants, and  
 (ii) resources have alternative uses.
6. What is meant by an economy?  
**Ans.** Economy is a system by which people of an area earn their living.
7. Define microeconomics.  
**Ans.** Microeconomics is that branch of economics which studies economic problems (or economic issues) at the level of an individual—an individual firm, an individual household or an individual consumer.

8. Define macroeconomics.

Ans. Macroeconomics is that branch of economics which studies economic problems (or economic issues) at the level of the economy as a whole.

9. State one principal difference between microeconomics and macroeconomics.

Ans. Microeconomics studies economic activities (focusing on scarcity and choice) of individual units while macroeconomics studies economic activities at the level of the economy as a whole.

10. What is meant by positive economics?

Ans. Positive economics is that branch of economics which deals with such issues which are verifiable.

11. What is meant by normative economics?

Ans. Normative economics is that branch of economics which deals with such issues which involve value judgement, and are not verifiable.

12. State one example of positive economics.

Ans. 21% of population in India is below poverty line.

13. State one example of normative economics.

Ans. Farmers should always be granted subsidies to ensure good returns on their investment.

### E. Reason-based Objective Questions

Read the following statements carefully. Write True or False with a reason.

1. Economic problem and scarcity of resources are not related to each other.

Ans. False. Economic problem arises because of scarcity of resources. Hence, the two are related to each other.

2. Scarcity exists even when certain goods are available at zero price.

Ans. True. Scarcity is a situation when demand for a good exceeds its supply even at a zero price.

3. A free medicine given to the patients in hospitals is not a scarce commodity.

Ans. False. Although medicine is available at zero price, yet it is a scarce commodity. Because, it involves some opportunity cost.

[Note: A good is not scarce only when: (i) it is available at zero price, and (ii) it involves no opportunity cost.]

4. Lack of scarcity implies lack of economic problem.

Ans. True. Scarcity is the root cause of economic problem. Lack of scarcity definitely implies lack of economic problem.

5. If there were no choices in resource allocation, economics would not have existed.

Ans. True. If there were no alternative choices in resource allocation, there would be no economic problem. Accordingly, economics would not have existed.

6. All resources are not equally scarce all the time.

Ans. True. It is possible that some resources are more scarce than the others at a point of time. In India, for example, labour is certainly less scarce than capital.

7. Problem of resource allocation would not arise if resources had no alternative uses.

Ans. True. Problem of resource allocation arises because resources have alternative uses. Where is the problem if a piece of land can only be used for the production of rice? Grow rice and relax!

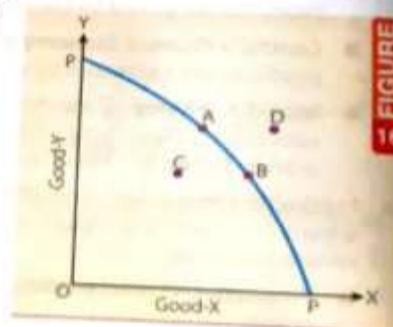
# Chapter:2 ( Central Problems of an Economy)

## EXERCISE

### 1. Objective Type Questions

#### A. Multiple Choice Questions: Choose the Correct Answer

- Economic problem arises due to:
  - limited wants
  - scarce means
  - alternative uses
  - both (b) and (c)
- Slope of production possibility curve is:
  - a straight line
  - convex to the point of origin
  - concave to the point of origin
  - none of these
- The problem of 'what to produce' relates to:
  - the choice of technique
  - distribution of income
  - market value of the goods and services
  - the choice of goods and services
- Which of the following is related to the problem 'how to produce'?
  - Factoral distribution of income
  - The choice of technique
  - The choice of product
  - None of these
- In the diagram alongside (Fig. 16), inefficient use of resources is shown by:
  - points 'A' and 'B'
  - point 'D'
  - point 'C'
  - points 'C' and 'D'
- When an economy is operating on the PPC, it indicates:
  - potential output > actual output
  - potential output = actual output
  - potential output < actual output
  - none of these
- In Fig. 16, the unattainable combination of output is shown by:
  - point 'A' and 'C'
  - point 'B' and 'C'
  - point 'A', 'B' and 'C'
  - point 'D'
- Increase (growth) of resources implies that production possibility curve:
  - shifts to the right
  - shifts to the left
  - rotates to the right
  - none of these
- The opportunity cost of 100 kg of rice produced on a land which can also produce 80 tonnes of wheat is:
  - 100 kg of wheat
  - 80 tonnes of wheat
  - 8,000 tonnes of wheat
  - none of these

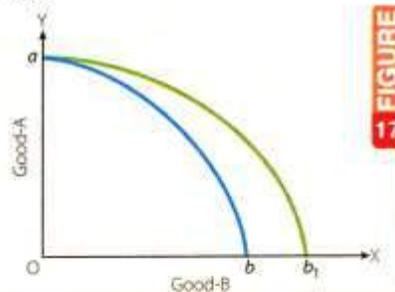


10. The following table shows the production possibility of cricket bats and sarees of an imaginary economy:

Production of Cricket Bats (in thousand)	0	1	2	3	4	5
Production of Sarees (in lakh)	75	70	62	50	30	0

If the production of cricket bats is increased from 3 thousand to 4 thousand, what is the opportunity cost that the economy has to bear?

- (a) Zero (b) 8 lakh sarees  
 (c) 30 lakh sarees (d) 20 lakh sarees
11. Concavity of PPC implies:  
 (a) increasing slope (b) decreasing slope  
 (c) constant slope (d) none of these
12. In Fig. 17, rotation of the PPC from  $ab$  to  $ab_1$  shows:  
 (a) increase in resources  
 (b) decrease in resources  
 (c) improvement in technology of Good-A  
 (d) improvement in technology of Good-B



17 FIGURE

13. The shape of transformation curve is changed by:  
 (a) opportunity cost (b) total cost  
 (c) marginal opportunity cost (d) none of these
14. When some resources are shifted from Use-1 to Use-2 (given technology), the marginal rate of transformation:  
 (a) increases (b) decreases  
 (c) remains constant (d) is zero
15. Output of Good-X decreases by 500 units and output of Good-Y increases by 500 units, when some resources are shifted from the production of Good-X to production of Good-Y. The marginal opportunity cost is:  
 (a) 0.2 (b) 0.75  
 (c) 0.8 (d) 1.0

### Answers

1. (d) 2. (c) 3. (d) 4. (b) 5. (c) 6. (b) 7. (d) 8. (a) 9. (b) 10. (d)  
 11. (a) 12. (d) 13. (c) 14. (a) 15. (d)

### B. Choose appropriate word and fill in the blank

- Problem of choice is the basis of \_\_\_\_\_ (economic problem/social problem)
- Problem of how to produce is concerned with \_\_\_\_\_ (allocation of scarce resources/choice of technique of production)
- \_\_\_\_\_ is driven by the forces of supply and demand. (Market economy/Centrally planned economy)

At the macro level, these are (i) Problem of fuller utilisation of resources, and (ii) Problem of growth of resources.

**5. Why do central problems arise?**

**Ans.** The central problems arise basically because of the fact that the resources are scarce and have alternative uses.

**6. What is meant by production possibility curve?**

**Ans.** Production possibility curve (or transformation curve) is a curve showing different possible combinations of a set of two goods which can be produced with the given resources and given technology.

**7. Write the assumptions of production possibility curve.**

**Ans.** The basic assumptions of production possibility curve are:

- (i) Resources are given.
- (ii) The given resources are fully and efficiently utilised.
- (iii) Technique of production remains constant.

**8. Give the properties of production possibility curve.**

**Ans.** The basic properties of production possibility curve are as under:

- (i) It slopes downward from left to right.
- (ii) It is concave to the point of origin, pointing to increasing marginal rate of transformation or increasing marginal opportunity cost.

**9. What does slope of PPC show?**

**Ans.** Slope of PPC shows marginal opportunity cost.

**10. When can PPC be a straight line?**

**Ans.** When marginal opportunity cost or marginal rate of transformation is constant.

**11. Give one reason for a rightward shift of the production possibility curve.**

**Ans.** Increase in the resources leads to rightward shift of the production possibility curve.

**12. Define opportunity cost.**

**Ans.** Opportunity cost is the value of a factor in its next best (or second best) alternative use.

**13. Define marginal rate of transformation.**

**Ans.** Marginal rate of transformation (or marginal opportunity cost) is the ratio between loss of output of Good-Y and gain of output of Good-X when some resources are shifted from Good-Y to Good-X.

### E. Reason-based Objective Questions

Read the following statements carefully. Write True or False with a reason.

1. Central problems of an economy are found only in those economies which are not governed or regulated by the government.

**Ans.** False. Every economy faces the central problems, though these are solved differently in different economies. Because, scarcity is the root cause of central problems, and scarcity of resources is common to all economies.

2. Problem of resource allocation is automatically solved in a free economy (capitalist economy).

**Ans.** True. In a free economy, problem of resource allocation finds its solution through the market forces of supply and demand.

## Chapter: 3 (Consumer's Equilibrium:- Utility Analysis)

### EXERCISE

#### 1. Objective Type Questions

##### A. Multiple Choice Questions: Choose the Correct Answer

- In which analysis can utility be measured in definite numbers such as 1, 2, 3, 4, etc.?  
(a) Cardinal utility analysis                      (b) Ordinal utility analysis  
(c) Both (a) and (b)                              (d) None of these
- Ordinal concept of utility expresses utility in terms of:  
(a) units    (b) level of satisfaction  
(c) constants                                      (d) none of these
- Want-satisfying power of a commodity is called:  
(a) consumption                                  (b) utility  
(c) production                                      (d) value addition
- Formula for calculation of marginal utility is:  
(a)  $MU_n = TU_n - TU_{n+1}$                       (b)  $MU_n = TU_{n+1} - TU_{n-1}$   
(c)  $MU_n = TU_n - TU_{n-1}$                       (d) none of these
- When only one unit of the commodity is consumed:  
(a)  $MU = TU$                                       (b)  $MU > TU$   
(c)  $MU < TU$                                       (d) none of these
- Which of the following equations is incorrect?  
(a)  $MU = TU_{n+2} - TU_{n+1}$                       (b)  $MU = \frac{TU}{Q}$   
(c)  $MU = TU_n - TU_{n-1}$                       (d)  $TU = \Sigma MU$
- If the consumer consumes only one commodity 'X', he will be in equilibrium when:  
(a)  $MU_x < P_x$                                       (b)  $MU_x = P_x$   
(c)  $MU_x > P_x$                                       (d) none of these  
[Here,  $MU_x$  = Marginal utility of the commodity-X (in terms of money);  $P_x$  = Price of commodity-X.]
- When marginal utility is negative, total utility is:  
(a) zero    (b) diminishing  
(c) maximum                                      (d) minimum
- Law of Diminishing Marginal Utility states that when more and more units of a commodity are consumed, marginal utility:  
(a) begins to increase                              (b) remains constant  
(c) begins to decrease                              (d) becomes zero
- When total utility is maximum, marginal utility becomes:  
(a) zero    (b) unity  
(c) positive    (d) negative

8. What is the meaning of consumer's equilibrium?

Ans. A consumer is in a state of equilibrium when he maximises his satisfaction by spending his given income on different goods and services.

9. What is meant by marginal utility of money?

Ans. Marginal utility of money refers to utility that the consumer expects to obtain from a standard basket of goods which he or she can buy for a rupee.

### E. Reason-based Objective Questions

Read the following statements carefully. Write True or False with a reason.

1. TU is the sum total of MU from all units of consumption of a commodity.

Ans. True. Because marginal unit starts from the 1st unit and ends with the nth unit (last unit consumed by the consumer). So that,  $TU = \Sigma MU$ .

2. Total utility will increase even when marginal utility decreases.

Ans. True. We know,  $TU = \Sigma MU$ . Accordingly, TU will increase so long as MU is positive, even when it is decreasing.

3. Total utility is maximum when marginal utility starts declining.

Ans. False. When marginal utility starts declining, total utility increases at a diminishing rate. Total utility is maximum when marginal utility is zero.

4. Total utility starts diminishing when marginal utility begins to diminish.

Ans. False. Total utility diminishes only when marginal utility is negative.

5. MU must diminish as more and more standard units of a commodity are continuously consumed.

Ans. True. MU must diminish as more and more standard units of a commodity are continuously consumed. This is in accordance with the law of diminishing marginal utility.

6. Measurement of utility in cardinal numbers is a serious limitation of utility analysis.

Ans. True. It is assumed that consumer expresses utility in terms of cardinal numbers like 1, 2, or 4. This is a serious limitation of utility analysis, because this assumption is wide away from the real life situation.

7. Consumer equilibrium can be determined only if the law of diminishing marginal utility holds good.

Ans. True. Because, if the law of diminishing marginal utility does not hold good (or if MU tends to increase) why should the consumer ever stop or reduce the consumption of any commodity?

8. A consumer strikes his equilibrium when:  $\frac{MU_x}{P_x} = MU_M$  in case of two commodities.

Ans. False. A consumer strikes his equilibrium when:  $\frac{MU_x}{P_x} = \frac{MU_y}{P_y} = MU_M$  in case of single commodity only.

9. A consumer strikes his equilibrium when  $MU_x = MU_y = MU_M$ , in case of two commodities and when  $P_x$  and  $P_y$  are not equal.

Ans. False. In case  $P_x$  and  $P_y$  are not equal, a consumer strikes his equilibrium when:  $\frac{MU_x}{P_x} = \frac{MU_y}{P_y} = MU_M$ .

4. Total utility is maximum when marginal utility is \_\_\_\_\_ (zero/maximum)  
 $MU_x >$
5.  $MU_x < P_x$  \_\_\_\_\_ ( $P_x/P_y$ )
6. Total utility \_\_\_\_\_ when marginal utility is decreasing but positive. (increases/decreases)
7. Marginal utility is \_\_\_\_\_ when total utility diminishes. (positive/negative)

#### Answers

1. marginal utility    2. increases    3. diminishes    4. zero    5.  $P_x$   
 6. increases    7. negative

#### C. State whether the following statements are True or False

1. Total utility is the sum total of marginal utilities. (True/False)
2. Total utility decreases when marginal utility is negative. (True/False)
3. Law of demand is based on the law of diminishing marginal utility. (True/False)
4. A consumer strikes his equilibrium by equating price of the commodity with total utility derived from the commodity. (True/False)
5. In case of consumption of two commodities, equilibrium is attained when rupee worth of satisfaction is same across both the goods. (True/False)

#### Answers

1. True    2. True    3. True    4. False    5. True

#### D. Concept-based Objective Questions

##### 1. Who is a consumer?

Ans. A consumer is an economic agent who uses goods and services for the direct satisfaction of his/her wants.

##### 2. What is meant by utility?

Ans. Utility refers to the want-satisfying capacity of a commodity.

##### 3. What is meant by cardinal measurement of utility?

Ans. Cardinal measurement of utility refers to the measurement (or expression) of utility in terms of units like 1, 2, and 3.

##### 4. What is meant by ordinal measurement of utility?

Ans. Ordinal measurement of utility refers to the measurement (or expression) of utility in terms of some ranks like high or low.

##### 5. Define total utility.

Ans. Total utility is the sum total of utility derived from the consumption of all the units of a commodity.

##### 6. Define marginal utility.

Ans. Marginal utility refers to the additional utility due to the consumption of an additional unit of a commodity.

##### 7. State the law of diminishing marginal utility.

Ans. Law of diminishing marginal utility states that as more and more units of a commodity are consumed, marginal utility derived from every additional unit must decline.

11. When TU is increasing at a diminishing rate, MU must be:  
 (a) increasing (b) decreasing  
 (c) constant (d) negative
12. Marginal utility of a particular commodity at the point of saturation is:  
 (a) zero (b) unity  
 (c) greater than unity (d) less than unity
13. Consuming two goods, a consumer attains equilibrium when:  
 (a)  $\frac{MU_1}{P_1} > \frac{MU_2}{P_2}$  (b)  $\frac{MU_2}{P_2} > \frac{MU_1}{P_1}$   
 (c)  $\frac{MU_2}{P_1} = \frac{MU_2}{P_2}$  (d)  $\frac{TU_1}{P_1} > \frac{TU_2}{P_2}$
14. Initially  $\frac{MU_X}{P_X} = \frac{MU_Y}{P_Y}$ . With a fall in the price of Y, the consumption of the commodity-Y:  
 (a) diminishes (b) increases  
 (c) remains constant (d) becomes zero
15. A consumer will purchase more of Good-Y than Good-X, only when:  
 (a)  $\frac{MU_X}{P_X} = MU_M$  (b)  $\frac{MU_X}{P_X} < \frac{MU_Y}{P_Y}$   
 (c)  $\frac{MU_Y}{P_Y} = MU_M$  (d)  $\frac{MU_X}{P_X} > \frac{MU_Y}{P_Y}$
16. With the increase in consumption by one unit of the commodity, TU increases from 150 to 180, then marginal utility is:  
 (a) 50 (b) 1.2  
 (c) 30 (d) 0.833
17. The consumer is in equilibrium and is consuming commodity-X only. The marginal utility from last unit consumed of commodity-X = 50 utils and  $MU_M = 10$ . Find the price of the commodity-X.  
 (a) ₹ 5 (b) ₹ 40  
 (c) ₹ 10 (d) ₹ 4

### Answers

1. (a) 2. (b) 3. (b) 4. (c) 5. (a) 6. (b) 7. (b) 8. (b) 9. (c) 10. (a)  
 11. (b) 12. (a) 13. (c) 14. (b) 15. (b) 16. (c) 17. (a)

### B. Choose appropriate word and fill in the blank

- Utility derived from an additional unit of a good is called \_\_\_\_\_.  
 (total utility/marginal utility)
- As we consume more and more units of a commodity, its total utility \_\_\_\_\_ at diminishing rate.  
 (increases/decreases)
- When consumption of a commodity increases, then marginal utility \_\_\_\_\_.  
 (diminishes/increases)



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## **Class 11 English**

### **Holiday Homework**

**Note: This holiday home-work is to be done in your English register.**

#### **1. Advertisement.**

1. Baluni Public School, Agra requires cricket coaches. Draft a suitable advertisement in not more than 50 words for the 'Situation Vacant' column.
2. You wish to shift your new residence at Mohali. You are now wanting to sell your MIG flat. Draft an advertisement.
3. You want to sell a car. Draft an Advertisement for the same.

#### **2. Notice.**

You are the Sports Captain of your school. You have been asked to inform the students about the Sports Day. Draft a notice in not more than 50 words .

#### **3. Poster Designing/ Drafting a Poster.**

As an educationalist , you have noticed that the present generation have lost the habit of reading. Design a poster highlighting importance of reading.

#### **4. Letter Writing.**

Write a letter to the Editor of 'Amar Ujala' Agra. Telling him about the problems caused due to Stray Animals in your area.

#### **5. Article.**

Write an Article in 150-200 words stressing on the benefits of meditation. You are Ankit Madan.

## **6. Speech.**

Write a speech in 150-200 words on the topic 'Discipline shapes the future of a student.'

## **7. Debate.**

'A career counsellor is the best person to guide you in the choice of the career'. Write a debate in 150-2000 words either for or against the motion.



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**SUBJECT TEACHER: - DESH DEEPAK KULSHRESHTHA**  
**PGT (PHYSICAL EDUCATION)**  
**CLASS: - 11<sup>TH</sup> SCIENCE/COMMERCE**  
**TOPIC: - “ASSIGNMENT SUMMER VACCATION”**

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**PART A**

- Q1. Write a detailed note on the scope of “Physical Education”?**
- Q2. Discuss whether Physical Education is an art or a science?**
- Q3. How does Physical Education contribute to the achievement of the aim and objectives of general education?**
- Q4. What do you know about the concept of physical education in modern times?**
- Q5. How is “Sports for all” a need of today?**
- Q6. Discuss career options in detail?**
- Q7. Briefly account of the ancient Olympic Games with oath and important function of International Olympic Council, explain the development of values through Olympic movement and formation and objectives of Indian Olympic association?**

**PART B**

- Q8. How can health threat be prevented through life style change, component physical fitness & wellness? Discuss in details.**
- Q9. Which principles are required to be followed to make the adapted physical education effective? Explain.**
- Q10. Explain it?**
- a) Role of speech language pathologist for special need children?**
  - b) The role of yoga in sports and importance of yoga?**
  - c) Do and Don'ts for Adventure Activities?**
  - d) What do you mean by BMI? Write down the scale of BMI.**
  - e) Explain the structure of heart with the help of diagram.**
  - f) The developmental characteristics during early childhood.**
  - g) The physical methods of doping? Define methods prohibited in sports.**

