

National Institute of Open Schooling
Senior Secondary – Economics (318)
Lesson – 17 Production Function
Worksheet – 17

1. Make a visit to a production unit nearby your location and collect information from other sources regarding input/resources to be used for the production of goods and services. On the basis of the collected information, list out the inputs used by the production and classify them into primary and secondary inputs with explanation in brief.

Units of labour	0	1	2	3	4	5	6
TPP	0	50	110	150	180	180	150
MPP	–	–	–	–	–	–	–
APP	–	–	–	–	–	–	–

2. Calculate APPs and MPPs of a factor from the following table of TPPs schedule.
3. On the basis of the above given table, draw diagrams of TPP, MPP and APP and also mark the stages of production.
4. On the basis of the above schedule, explain the reasons behind the second stage of production i.e. marginal diminishing returns to a factor. Why does a producer prefer to operate production in this stage only?
5. On the basis of the schedule, MPP becomes zero and negative but APP is positive and doesn't touch the x-axis. Draw diagrams and discuss the relationship between MPP and APP.
6. When a producer starts a production unit for a short period he/she finds that there is a proportional relation between fixed factor and variable factor of production. On the basis of the given description, explain the concept of law of variable proportion with the help of diagrams and schedules.
7. On the basis of Q6, answer the following questions:
 - Difference between fixed factor and variable factor of production.
 - When TPP is maximum and MPP is equal to zero. Why?
 - What happens with MPP and APP when TPP declines?
 - What decision shall be taken by a producer just after attaining the first stage of production and why?
 - What do you mean by variable proportion?

8. Complete the following table.

Units of labour	0	1	2	3	4	5	6
TPP	0	20	–	–	88	–	–
MPP	–	–	22	–	–	17	–
APP	–	–	–	22	–	–	20

9. An Entrepreneur has started a production unit by utilizing fixed and variable inputs for producing a certain level of output during a short period, but later on he/she wants to change the production unit at large scale. Take the situation into consideration and explain how the entrepreneur should plan to do so?

10. How do these below mentioned assumptions contribute to the operation of law of variable proportion?

- No Change in the technology of production.
- Units of variable factors are equally efficient.
- The different factor ratio produces different levels of output.