Answer Booklet

Instructions: There are three sections in this exam. Section A is compulsory. You have to choose between sections B & C and answer only one of them. You may not mix sections. Time allotted for the exam is one hour. This is a closed book/notes exam. Please show the details of your work if you wish to receive partial credit. Remember that the length of your answer is not a substitute for clarity. Only exams written in ink will be re-graded on request. Please do not forget to write your name on the answer booklet. Good luck!

Answers for Section A

1. B

2. A

3. B

4. C

5. B

6. D

7. C

8. A

9. A

10. D
Answers for Section B OR ALTERNATELY Section C

Section B

2. a). **Macroeconomics is the study of the economy as an aggregate, i.e. how is the economy doing on the whole?** It studies things like: Is average income of people in our country increasing? Are more goods and services being produced on the whole in our economy? What is the employment situation in the country like? Are prices rising are falling on the whole (is there inflation in the economy?)

(The students need to answer only what is in bold above to earn full points. It does not matter if they do not write the rest. If, however, they write the rest, and not the part in bold, then give them full credit only if they write all the things that are there in the part not in bold type).

b). The three big questions macroeconomists are trying to answer are:

1. What is the standard of living in the economy & how to improve it?
2. What is the cost of living in our country (is it rising or falling) and how do we regulate it?
3. Measurement of fluctuations in the economy & how to control these fluctuations?

c). (i) $ 1, 100, 000 = C+I+G+X-M

(ii). Expenditure Approach.

Expenditure Approach & Income Approach (though there is not enough information to use the latter here, please do not penalize if students do not mention that).

The answer would not change no matter which approach you used, since all expenditure in the domestic economy by any agent accrues as income to some other agent.

(If a student answers for the last part that there is not enough information to use the income method, so the GDP cannot be calculated by it in this problem, so the question is irrelevant, then give the student full points for the last part too.

(iii). See answer to problem 5(c) in Parkin chapter 4, done at the very end of page 488 in Parkin’s textbook.

(iv). $ 1, 100, 000 - $ 20000

2. (a). Because Nominal GDP is measured using current dollars, while real GDP is measured using constant dollars. So real GDP is able to measure the rise in the production in the economy more accurately as it takes into account the effect of price rise in the economy. As the nominal GDP does not do that, it though it may show that there has been a rise in the value of goods &
services produced (due to price rise), it may not be necessarily true that the production level of the economy has increased. *(Something to this effect, the answers do not need to be verbatim, so long as the idea is there).*

(b). Money wages & prices.

(c). Potential level of output.

(d). *(I had made a typo in numbering this problem in the test, please ignore if students have made a mistake in numbering here).*

(i). (p1, Y1). Yes.

(ii). (p2, Y2). No.

(iii). (p3, Y1). Yes.

(iv). The price level is higher (there has been inflation: *it is ok if students just say price level is higher, they don’t need to mention inflation too*) in the equilibrium in (iii) than in (i).

*(Students need to mention both the price and the quantity level in their description of equilibrium if they have to get full points)*

Section C

3. (a).  

1. \( L_S = 5 \times L_D \)  

2. \( L_D^* = 5 \times L_D^* = 5 \times \left( \frac{1}{4} \left( \frac{p}{W} \right)^2 \right) \)  

3. \( Y_S^* = 5 \times Y_S^* = 5 \times \left[ \frac{1}{2} \left( \frac{p}{W} \right) \right] \)  

4. \( Y_D^* = 5 \times Y_D^* = 5 \times 16 \left( \frac{W}{p} \right) \)  

5. \( \Pi^*/p = 5 \times \left[ \frac{1}{4} \left( \frac{p}{W} \right)^2 \right] \)  

(6). Equating aggregate demand and supply in the goods & services market (remembering that the demand side would contain the profits of firms as profits have not been redistributed to households):  

\[ 5 \times 16 \left( \frac{W}{p} \right) + 5 \times \left[ \frac{1}{4} \left( \frac{p}{W} \right)^2 \right] = 5 \times \left[ \frac{1}{2} \left( \frac{p}{W} \right) \right] \]

Solving this gives \( W^*/p^* = 1/8 \)

(7). This is demonstrated by showing that the above equilibrium real wage rate satisfies the labor market clearing condition: \( 5 \times \left[ \frac{1}{4} \left( \frac{p}{W} \right)^2 \right] = 5 \times 16 \) (Aggregate labor demand = Aggregate labor supply).

(8). 160 units.

(9). 10 units. This is termed as the Potential Output level.

3. (b). No. This is because each of these firms produces 2 units of output, and the total output of the economy is thus \( 5 \times 2 = 10 \) units. However, if we take the aggregate production function of the economy to be \( Y_S = L_D^{1/2} \), with \( L_D \) being the aggregate labor usage, \( Y_S = (20)^{1/2} \), which is 4.47 and not 10.