

2022-2023 NEO 2022 – PRACTICE TEST

INSTRUCTIONS

1. This is a sixty (60) question multiple choice test. Each question is followed by answers marked A, B, C, D and E. Only one of these is correct.
2. Mark your answer to each problem on the NEO Answer Form.
Only answers properly marked on the answer form will be graded.
3. **SCORING:** You will receive 2 points for each correct answer, -1 for each incorrect answer and 0 points for each blank answer.
4. No aids are permitted other than scratch paper, graph paper, rulers, compass, protractors, and erasers. No calculators are allowed.
5. Figures are not necessarily drawn to scale.
6. Before beginning the test, your proctor will ask you to record certain information on the answer form.
7. When your proctor gives the signal, begin working on the problems. You will have 180 minutes to complete the test.
8. When you finish the exam, *sign your name* in the space provided on the Answer Form.

1. If Smith can produce 40 shoes or 30 boots per day and Jones can produce 50 shoes or 40 boots per day, Jones has a comparative advantage in producing

(a) shoes (b) boots (c) neither shoes nor boots (d) both shoes and boots.

2. Each martian has one, two or three tentacles on its head. Exactly 1% of the martian population consists of individuals with three tentacles, exactly 97% comprise of Martians with two tentacles and the remaining 2% consists of individuals with one tentacle. How many percent of Martians have more tentacles on their head than the average of the whole Martian population ?

A) 1% B) 3% C) 97% D) 98%

On a field there were 15 sheep and a certain number of shepherds. When one half of the shepherds and one third of the sheep left, there were total of 50 legs on the ground. What was the number of legs on the ground at the beginning?

A) 60 B) 72 C) 80 D) 90

3. Alicia earns N2000 per hour, of which 1.45% is deducted to pay local taxes. How many Naira per hour of Alicia's wages are used to pay local taxes?

A) 0.029 B) 0.29 C) 2.9 D) 29

4. Elections in Herbville were held. Every voter who voted for the Broccoli Party had already eaten broccoli. 90 % of the remaining voter who voted for other parties had never eaten broccoli. How many percent did the Broccoli Party get in the elections, if precisely 46% of all voters attending the elections had eaten broccoli ?

A) 40% B) 41% C) 43% D) 45%

5. All the tickets in the first row in a cinema were sold. The seats are numbered consecutively starting with 1. An extra ticket was sold for one seat by mistake. The sum of the seat numbers on all tickets sold for that row is equal to 857. What is the number of the seat for which two tickets were sold?

(A) 4 (B) 16 (C) 25 (D) 37

6. Edward has 2017 notes of the denominations N10, N50, and N100. If he puts aside one of the N100 notes, he is left with twice as many N10 notes as N50 notes and twice as many N50 notes as N100 notes. How many N100 does Edward have?

A 280 B 572 C 289 D 1153

NATIONAL ECONOMICS OLYMPIAD



7. Bertha has 6 daughters and no sons. Some of her daughters have 6 daughters each, and the rest have none. Bertha has a total of 30 daughters and granddaughters, and no great-granddaughters. How many of Bertha's daughters and grand-daughters have no children?
A) 22 B) 23 C) 24 D) 26
8. A company sells peanut butter in cylindrical jars. Marketing research suggests that using wider jars would increase sales. If the diameter of the jars is increased by 25% without altering the volume, by what percent must the height be decreased?
A) 10%. B) 25%. C) 36% D) 50%
9. The sum of 49 consecutive integers is 7^5 . What is their median?
A) 7 B) 7^2 C) 7^3 D) 7^4 .
10. Brenda and Sally run in opposite directions on a circular track, starting at diametrically opposite points. They first meet after Brenda has run 100 meters. They next meet after Sally has run 150 meters past their first meeting point. Each girl runs at a constant speed. What is the length of the track in meters?
A) 250 B) 300 C) 350 D) 400 .
11. Jamal wants to save 30 files onto disks, each with 1.44 MB space. 3 of the files take up 0.8 MB each, 12 of the files take up 0.7 MB each, and the rest take up 0.4 MB each. It is not possible to split a file onto 2 different disks. What is the smallest number of disks needed to store all 30 files?
A) 12 B) 13 C) 14 D) 15.
12. Mr. Earl E. Bird leaves home every day at 8:00 AM to go to work. If he drives at an average speed of 40 miles per hour, he will be late by 3 minutes. If he drives at an average speed of 60 miles per hour, he will be early by 3 minutes. How many miles per hour does Mr. Bird need to drive to get to work exactly on time?
A) 45 B) 48 C) 50 D) 50.
13. Sarah pours 4 ounces of coffee into a cup that can hold 8 ounces. Then she pours 4 ounces of cream into a second cup that can also hold 8 ounces. She then pours half of the contents of the first cup into the second cup, completely mixes the contents of the second cup, then pours half of the contents of the second cup back into the first cup. What fraction of the contents in the first cup is cream?
A) $1/4$ B) $1/3$ C) $3/8$ D) $2/5$.
14. Andy's lawn has twice as much area as Beth's lawn and three times as much as Carlos' lawn. Carlos' lawn mower cuts half as fast as Beth's mower and one third as fast as Andy's mower. If they all start to mow their lawns at the same time, who will finish first?
A) ANDY B) BETH C) CARLOS D) ANDY AND CARLOS TIE FOR FIRST .
15. Members of the NEO-IEO Soccer League buy socks and T-shirts. Socks cost N400 per pair and each T-shirt costs N1,100 more than a pair of socks. Each member needs one pair of socks and a shirt for home games and another pair of socks and a shirt for away games. If the total cost is N 345,800, how many members are in the League?
A) 77 B) 91 C) 143 D) 182 .
16. "Roundabout production" refers to (a) indirect production of consumer goods with the help of capital goods (b) the least efficient production technology (c) production of goods for local markets (d) production of goods and services in the circular flow model
17. Which is true:
a. Under competition, profit maximization by businesses is inconsistent with consumer sovereignty.

NATIONAL ECONOMICS OLYMPIAD



b. The price system gives more goods to those with more money votes.
c. The transactions in the circular flow model refers to the market where real goods and resources are exchanged for money.

A) a. B) b. C) c. D) All of the above .

18. Capital goods are (a) goods owned by the wealthy (b) goods produced to be used in the Production of consumer goods (c) financial assets of businesses (d) goods provided by the government

19. Depreciation is a process of:

- a) Allocation
- b) Valuation
- c) Both (1) and (2)
- d) None of the above

20. Country A uses sterling and has a GDP per head of £30,000. Country B uses another currency. If this is converted to sterling at the current exchange rate, its GDP per head is £5,000. Which of the following statements is false?

- a) To get a better comparison of output per head, it would be better to convert country B's currency into sterling using purchasing power parities (PPPs).
- b) If PPPs were used, it is most likely that B's output per head would seem closer than it does using exchange rates.
- c) Exchange rates generally settle so that the prices of tradable products in each country are similar.
- d) PPPs are the rates which ensure that the prices of all products in each country are similar.

21. Suppose that, over time, the share of manufacturing industry in a country's GDP falls. Which of the following statements is true?

- 1. The quantity of the goods and services produced by manufacturing industry must be falling.
 - 2. The value of the goods and services produced by manufacturing industry must be falling.
- a) Both 1 and 2 b) 1 only c) 2 only d) Neither 1 nor 2

22. Under the straight line method of providing depreciation, it:

- a) Increases every year
- b) Decreases every year
- c) Remains constant every year
- d) None of the above

23. Which of the following statements is true?

- 1. Total welfare is affected by many factors including economic welfare.
 - 2. Economic welfare refers to living standards.
- a) Both 1 and 2
b) 1 only
c) 2 only
d) Neither 1 nor 2

24. Suppose that over the course of a decade an economy had a stable population and real GNDI increased by 20%. However, an economist estimates that economic welfare increased by less than 20%. Which of the following would not be a factor that could help to explain this?

NATIONAL ECONOMICS OLYMPIAD



- a) Household production (excluding owner-occupied property) increased by less than 20%.
- b) Output by the underground economy increased by less than 20%.
- c) Leisure time increased by less than 20%.
- d) Prices increased by more than 20%.

25. Depreciation to machinery is debited to:

- Profit and loss a/c
- Machinery a/c
- Depreciation a/c
- Expenses and loss a/c

26. Which of the following statements is false?

- a) Even in the worst recorded cases of hyperinflation, the price level always took at last a week to double.
- b) Some people lose out if actual inflation turns out to be below the rate they expected.
- c) Some people lose out if actual inflation turns out to be above the rate they expected.
- d) Some people lose out if actual inflation turns out to be equal the rate they expected.

27. Which of the following statements is false?

- a) The GDP deflator is a price index that covers all goods and services included in GDP.
- b) The RPI is a price index that covers a wide range of goods and services bought by households.
- c) The CPI is a price index that covers a wide range of goods and services bought by households.
- d) The CPI generally rises more quickly than the RPI.

28. Suppose there is excess supply in a market and the price decreases. Which of the following combinations of events will occur?

- a) There will be a fall in quantity supplied and a rise in quantity demanded.
- b) There will be a fall in quantity supplied and a rise in demand.
- c) There will be a fall in supply and a rise in quantity demanded.
- d) There will be a fall in supply and a rise in demand.

29. Suppose there is a decrease in supply in a market where the supply curve slopes upwards and the demand curve slopes downwards. Which of the following would not occur?

- a) An excess supply.
- b) A fall in price.
- c) A fall in supply.
- d) A fall in the equilibrium level of expenditure.

30. Suppose a market is in equilibrium, and then the demand increases. Which of the following would be shown on a graph that illustrated the effects?

- a) An excess demand at the initial equilibrium price.
- b) An excess demand at the new equilibrium price.
- c) An excess supply at the initial equilibrium price.
- d) An excess supply at the new equilibrium price.

31. In which of the following situations would real GDP increase while the price level stayed the same?

- a) The aggregate demand and aggregate supply curves both shifted up by the same amount.
- b) The aggregate demand and aggregate supply curves both shifted right by the same amount.
- c) The aggregate demand curve stayed put but aggregate supply shifted right.
- d) The aggregate demand curve shifted right but the aggregate supply curve stayed put.

32. Suppose Countries C and D use only labour as an input and produce only tables and tents. In A, a worker in a week could produce 4 tables or 2 tents. In B, a worker in a week could produce 6 tables. Initially the countries do not trade, and then trade opens up. Under which circumstances will country C export tables?

- a) Under no circumstances.
- b) If a worker in country D could produce fewer than 3 tents a week.
- c) If a worker in country D could produce 3 tents a week.
- d) If a worker in country D could produce more than 3 tents a week.

33. Suppose two countries E and F use many inputs. Country E exports tractors and imports televisions. Assuming there are no economies of scale, which of the following statements is true?

- a) If the countries did not trade, then E would have a lower opportunity cost for tractors.
- b) Even though there is trade, E has a lower opportunity cost for tractors.
- c) E is sure to produce no televisions while F is sure to produce no tractors.
- d) Neither country can consume at a point outside its production possibility frontier.

34. Which of the following statements is false?

- a) Two countries may benefit from trade, even if their production possibility frontiers have identical shapes, if preferences differ in the two countries.
- b) Two countries may benefit from trade, even if their production possibility frontiers have identical shapes, if industries have substantial economies of scale.
- c) When two countries benefit from the opening up of trade, all citizens in each country will benefit.

d) Differences in the degree of human capital offer one reason why two countries may have production possibility frontiers that differ in shape.

35. Which of the following must always be equal?

- a) Actual saving and actual investment in a two-sector economy
- b) Planned saving and planned investment in a two-sector economy
- c) Actual saving and actual investment in a four-sector economy
- d) Planned saving and planned investment in a four-sector economy

36. Which of the following statements is correct in the case of a four-sector economy?

- a) G equals all planned government spending.
- b) I equals planned spending on new capital goods.
- c) T equals all planned receipts from taxes.
- d) C is less than disposable income minus planned saving.

37. Suppose that one month, injections in a four-sector economy are greater than withdrawals. Which of the following statements is false?

- a) Planned spending will be greater than output.
- b) Actual investment will be less than planned investment.
- c) Planned investment must exceed planned saving.
- d) Output is likely to be increased.

38. Suppose we draw the consumption function for a two-sector economy, with disposable income, Y_{DIS} , on the horizontal axis and planned consumption, C , on the vertical axis.

Suppose we also add a 45° line through the origin, and find that the consumption function intersects this at a Y_{DIS} equal to £1,000 billion a year. Which of the following statements is false?

- a) The slope of the consumption function at any level of Y_{DIS} shows the value of MPC_{DIS} at that level of Y_{DIS} .
- b) If Y_{DIS} in the economy was £1,000 billion a year, planned consumer spending would also equal £1,000 billion a year.
- c) If Y_{DIS} in the economy was less than £1,000 billion a year, planned saving would be negative.
- d) The consumption function must be a straight line.

39. Depreciation is necessary to calculate:

- Net profit
- Net financial position
- Tax
- None of the above

40. Which of the following factors might cause a country's consumption function to shift upwards?

- a) A fall in share prices.
- b) A fall in interest rates.
- c) Expectations that the economy will soon go into a recession.
- d) Households deciding to be thriftier.

41. Depreciation of plant is recorded in the:

- Profit and loss a/c
- Trading a/c
- Assets a/c
- Balance sheet

42. Suppose banks desire a ratio of reserves to deposits, r , of 4%. And suppose the public desire a ratio of cash to deposits, d , of 2%. Which of the following is correct?

- 1. The bank deposit multiplier is 25.
- 2. The money multiplier is 17.
- a) Both 1 and 2. b) 1 only. c) 2 only. d) Neither 1 nor 2.

43. Which of the following statements is false?

- a) Financial intermediaries offer risk transformation and maturity transformation.
- b) The Bank of England may act as a lender of last resort.
- c) A bank can increase its capital adequacy ratio by switching some funds from advances to buying more company shares.
- d) A bank can increase its capital adequacy ratio by selling some company shares and lending the proceeds as mortgages.

44. Which of the following would not shift the money demand curve to the right?

- a) A move which means that all workers who were in the past paid weekly will in future be paid monthly.
- b) A rise in incomes.
- c) A rise in wealth.
- d) A fall in the interest rate.

45. Which of the following statements is true?

- 1. The supply curve for sterling on the foreign exchange markets must slope upwards to the right.
- 2. The demand curve for sterling on the foreign exchange markets must slope downwards to the right.

- a) Both 1 and 2
- b) 1 only
- c) 2 only
- d) Neither 1 nor 2

46. Which of the following would cause sterling to depreciate against the US dollar, other things being equal?

- a) A fall in incomes in the US.
- b) News which suggests that prospects for UK firms are improving.
- c) A rise in interest rates in the UK.
- d) An expected rise in the value of sterling.

47. Which of the following exchange rate regimes best describes the situation for both sterling and the euro?

- a) A fixed exchange rate regime.
- b) An adjustable peg exchange rate regime.
- c) A managed float routine.
- d) A floating exchange rate regime.

48. The main aim of providing depreciation is:

- a) To calculate net profitcorrect
- b) To show previous profit
- c) To satisfy the tax department
- d) To reduce tax

49. Depreciation arises due to:

- Wear and tear
- Reduction in the value of assets
- Increase in the value of liabilities
- Reduction in capital

50. The total amount of depreciation of an asset cannot exceed its:

- Scrap value
- Market value
- Depreciation value
- None of these

51. Which of the following is a shortcoming of the simple multiplier model that the *AS-AD* model overcomes?

1. The multiplier model ignores the fact that a rise in planned spending which causes a rise in output will also lead to a rise in incomes and the demand for money, and so in turn lead to a rise in the interest rate.

2. The multiplier model ignores the fact that a rise in injections leads to a rise in prices which will cause people to reduce their spending plans.

a) Both 1 and 2 b) 1 only c) 2 only d) Neither 1 nor 2

52. Currency depreciation occurs when:

- The value of the currency falls
- The value of the currency rises

- Inflation falls
- The balance of payment improves

53. Which of the following arguments for a sloping *AD* curve is unconvincing?

- a) A rise in the price level in a country will tend to lead to a fall in the real value of exports and a rise in the real value of imports.
- b) A rise in the price level in a country will lead to lower real spending because it will lead to lower real wealth.
- c) A rise in the price level in a country will reduce the real value of firms' profits, causing them to reduce planned investment.
- d) A rise in the price level in a country will lead to lower real spending because it will lead to a higher interest rate.

54. Which of the following statements about the *IS* curve is false?

- a) It shows that the lower is the interest rate, the higher is the equilibrium level of output.
- b) The more responsive planned spending is to changes in the interest rate, the more interest elastic is the *IS* curve.
- c) A fall in the interest rate will shift *IS* to the right.
- d) An increase in exports will shift *IS* to the right.

55. Which of the following statements about the *LM* curve is false?

- a) An increase in the demand for money will shift *LM* right.
- b) An increase in the supply of money curve will shift *LM* right.
- c) It shows that the higher is the level of output, the higher is the equilibrium rate of interest.
- d) The more interest elastic is the demand for money, the more interest elastic is the *LM* curve.

56. Suppose that a country is in short-run equilibrium at the point where its aggregate demand curve intersects its aggregate supply curve. Then aggregate demand falls. Which of the following does not help to explain why output may then move to a lower short-run equilibrium level?

- a) Nominal wages may be sticky downwards.
- b) Prices may be sticky upwards.
- c) Individual producers may mistakenly believe that they alone have faced a fall in demand, and so may demand less labour.
- d) Individual workers may mistakenly believe that while nominal wages have fallen, the price level has not.

57. The difference between gross investment and net investment is:

- A) Depreciation
- B) Acceleration
- C) Deceleration
- D). Capital investment

NATIONAL ECONOMICS OLYMPIAD



58. Which of the following statements about a country's long-run aggregate supply curve, *LAS*, is true?

- a) It is vertical throughout its length at the output which would be produced if there were no unemployment.
- b) It is vertical throughout its length at the output which would be produced if there were only natural unemployment.
- c) It slopes forwards at low price levels and is then vertical.
- d) It slopes forwards at all price levels.

59. Suppose an economy is in short-run and long-run equilibrium where its *AD*, *SAS* and *LAS* curves intersect. Then there is an improvement in technology which leads to a higher demand for labour, so increasing the level of natural employment and the level of potential output. Which of the following statements about the new long-run equilibrium position is false?

- a) The new *LAS* curve will be to the right of the original *LAS*.
- b) The price level will be lower than it started.
- c) The real wage will be higher than it started.
- d) The new *SAS* curve will be to the left of the original *SAS*.

60. Mary divides 2015 successively by 1, 2, 3 and so on, up to and including 1000. She writes down the remainder for each division.

What is the largest of these remainders?

- (A) 1008 (B) 215 (C) 671 (D) 1007

INTERNATIONAL ACADEMY FOR THE GIFTED LTD/GTE

House No. 13, Abdulrahman Mora Road, Kado Estate, Abuja
P. O. BOX 9199 Wuse Zone 3, Abuja, FCT., Nigeria
+2349033358913; +234-8035694849 Website: www.iagifted.org